

# LIMES XX

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VOLUME I



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**2<sup>nd</sup> – 9<sup>th</sup> September 2018**

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*These proceedings are dedicated to the memory of  
C. Sebastian Sommer,  
dear friend and colleague,  
man who dedicated his entire life to the Roman limes.*

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**Proceedings of the 24<sup>th</sup> International  
Congress of Roman Frontier Studies**  
**2<sup>nd</sup> – 9<sup>th</sup> September 2018**  
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# LIMES XXIII

## Session 1 Fortifications Fortifying our frontiers



Session organisers / Chairpersons:

Rebecca Jones, Historic Environment Scotland

Nemanja Mrđić, Institute of Archaeology Belgrade

### **Introduction**

**F**ortifications and fortification elements along the Limes are the focus of this session. Military infrastructure and fortifications are the essence of the frontier, the base around everything formed and further developed. Either artificial (walls) or natural barriers (rivers) with forts behind connected by network of roads, with small settlements to service and support life of soldiers. For more than seventy years this was the light-motive of the congress. As the congress grew and developed all aspects of frontier were taken more and more into consideration helping us to understand unique nature of limes. But, no matter what was studied the core of the frontier remained unchanged, system of fortifications is still the focus of the research of what we now as the edge of Empire.





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# **Crumbled stones and burnt wood – results of the excavation on the Raetian Limes in Laimerstadt (Bavaria)**

## **ABSTRACT**

In 2015 a gas pipeline was planned to cross the Raetian limes at Laimerstadt near Ingolstadt (Bavaria, Germany). During the excavation Raetian Wall was found in an allegedly good condition, phases of decay of a heritage could be seen and reconstructed. Furthermore, the steps by which this wall was built without any foundation can be reconstructed because of the good preservation. The palisade's trench was filled with two layers of charcoal which were caused by burning wood. Reddened soil indicates a hot, burning fire. At the time of excavation this caused confusion, especially because the standing posts did not seem to be burnt like the wood lying in the trench. After all analyses are finished many details for the reconstruction can be shown: For example, it is likely that the palisade was built in some kind of framework, and then burnt standing in the trench in order to conserve the wooden parts which were intended to be underground. The procedure of burning and filling can be reconstructed by looking at the the layers.

**KEY WORDS: RAETIAN LIMES, PALISADE, RAETIAN WALL, ROMAN BUILDING-MATERIAL, WOODWORKING**

**D**uring the XXIII Limes Congress 2015 in Ingolstadt, the participants were given the chance to visit a site at the Raetian limes in the forest of Laimerstadt, located 25 km north-east of Ingolstadt (Bavaria, Germany). The features – especially the burnt wood in the palisade trench – led to some discussions, even though the excavation was still in progress. Therefore, we are pleased to be able to present the results of the fieldwork and our research.<sup>1</sup>

The site is located halfway between the watchtowers WP 15/41 and WP 15/42 in a woodland area. The debris of the wall to the east is well preserved and easy to see. So are some of the watchtowers, before the wall reaches its end at the Danube 3.7 km to the east at Hienheim. (Fig. 1)

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<sup>1</sup>Preliminary reports have already been published: Heising, Kopecky-Hermans *et al.* 2015 and Schaflitzl, Leicht *et al.* 2016. This article is based on the results of the final report which was not printed at the time it was written. It is now published Heising, Schaflitzl 2021.

The excavation which took place in 2015 was necessary, because at this point a gas pipeline was planned to cross the Raetian limes. Nearby an old pipeline crossed the limes in the 1970s without any archaeological supervision. Therefore, in order to best protect this heritage asset, there had to be better knowledge about the amount of destruction which the Limes had already suffered.

On the LIDAR-Laserscan image (Fig. 1) you can see a smoothed pathway crossing the Limes from north to south. This pathway is considered to be the remains of the construction work from 40 years earlier. Elsewhere the wall is hard to see. Only east of the hollow way you can recognise the 10 m broad debris very well, just as it was described in the ORL<sup>2</sup>. The path of the palisade trench was also not visible in the western area, but if it followed the path of the known parts, it seemed to be possible that it would cross the wall right at the site. Since this does not happen at this “Streckenabschnitt”, this needed to be also verified<sup>3</sup>.

Therefore, an excavation took place in order to see what could be determined. While the excavation company investigated the devastated area, the opportunity was taken to investigate a better-preserved part of the wall during a teaching excavation by the University of Freiburg im Breisgau<sup>4</sup>.

### The excavation

The fieldwork started on the 20<sup>th</sup> of July and was finished after an extremely dry and hot summer on the 19<sup>th</sup> of November 2015<sup>5</sup>.

For a better understanding of the features and the conservation of the monument, we decided to divide the area into three segments, which cut the wall at an angle of 90° in order to get as much information as

possible from the profiles. As it happened all of the profiles showed a different state of preservation (Fig. 2). Segment 1 is the nearest to the existing pipeline. Here only the lowest part of the wall and the debris survived the work with heavy machines, although it was still affected. In segment 2 the debris was much higher, but the wall was destroyed by a robber trench which was also likely had been dug in the 1970s. In segment 3 the wall and debris remained untouched. The palisade trench was found 6 m north of the wall (Fig. 3). A massive colluvium protected it from damage, so it was well preserved in all of the sondages. Due to the good conditions, segments 2 and 3 were reduced to a small sondage and afterwards covered with a geotextile and filled with sand in order to protect the monument.

### The palisade

Second to the building of the wooden watchtowers, the palisade is the oldest part of the fortification of the Raetian Limes. Franz Herzig was able to determine the building of the palisade around the year 160 AD by analysing different timber found at the Limes<sup>6</sup>. K. v Popp mentions that a special feature of Strecke 15 was that the palisade trench could still be seen as a ditch which is 2-3 m broad and 0.5 m deep. In this section of the Hienheimer Forst the palisade is not a direct line, but slightly curved, avoiding the watchtowers<sup>7</sup>. The wall, however, was a line, which cut the position of the wooden watchtowers, but not the palisade<sup>8</sup>.

In the 2015 excavation the palisade trench ran – as far as could be seen – almost parallel to the wall.

The Romans dug the trench (feature 16) 150 – 160 cm deep into a pre Roman colluvium (feature 17-2) and loamy and sandy layers (features 21-1 – 21-3) (Figs. 4 and 5). The trench has sloping sides, so it is 64-70 cm broad on the bottom and approximately 90 - 100 cm on

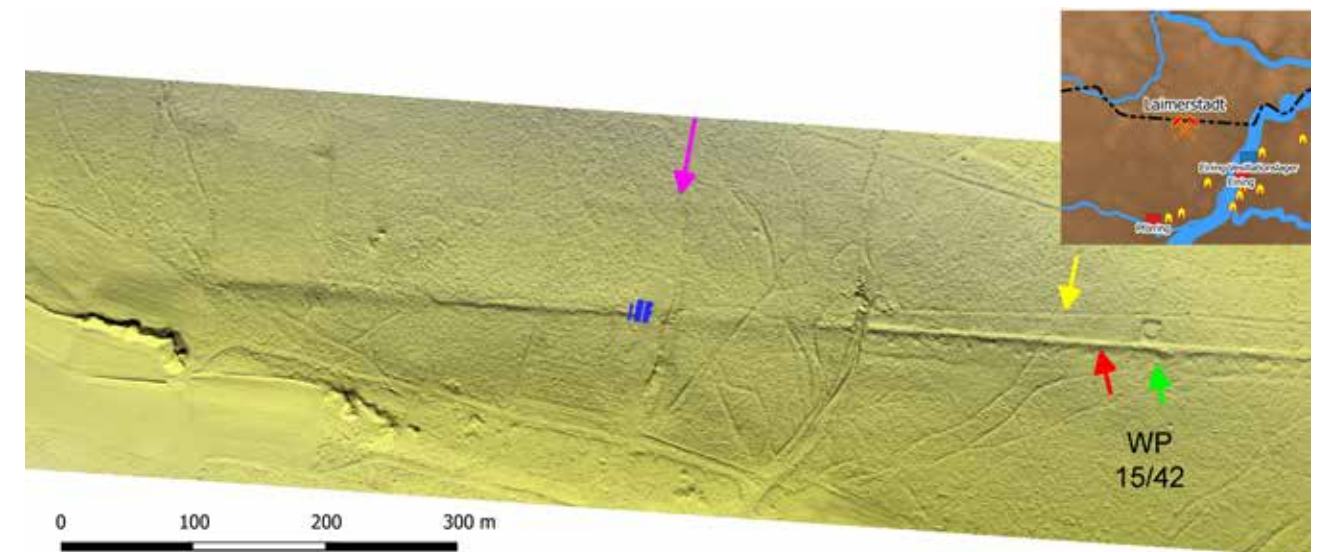


Fig. 1 - Location of the site. Blue: site; yellow: palisade trench; red: Raetian wall; green: wooden and stone watchtower; magenta: path of the pipeline.



Fig. 2 - drone-photography with mentioned profiles and Segments. (Photo: Fa. X-Cavate)

top. The lowest fill (feature 16-20) is sterile and like the surrounding soil divided with layers of iron sedimentation. On top of this lies a 8–18 cm thick, very light grey

band (feature 16-12) which includes a little amount of charcoal and tiny pieces of burnt loam. At this layer, the traces of the probable postholes begin. Their fill is

<sup>2</sup>ORL A Strecke 15, 16.

<sup>3</sup>ORL A Strecke 15, 22.

<sup>4</sup>It was a joint work between the excavation company ADA GbR at Weißenburg (site director: M. Leicht; site technician A. Schaflitzl; measurement: A. Alamsha; site worker: R. Preda, T. Olah, D. Tentis, S. David) and the University of Freiburg im Breisgau, Abteilung für Provinzialrömische Archäologie des Instituts für Archäologische Wissenschaften (site director: A. Heising; students: D. Grethlein, M. Heuermann, B. Kaiser, R. Nashan, L. Schönmann).

<sup>5</sup>The team of the University was at the site from 17.8.2015 to 13.9.2015

<sup>6</sup>Czys, Herzig 2008, 191.

<sup>7</sup>ORL A Strecke 15, 16.

<sup>8</sup>ORL A Strecke 15, 22.



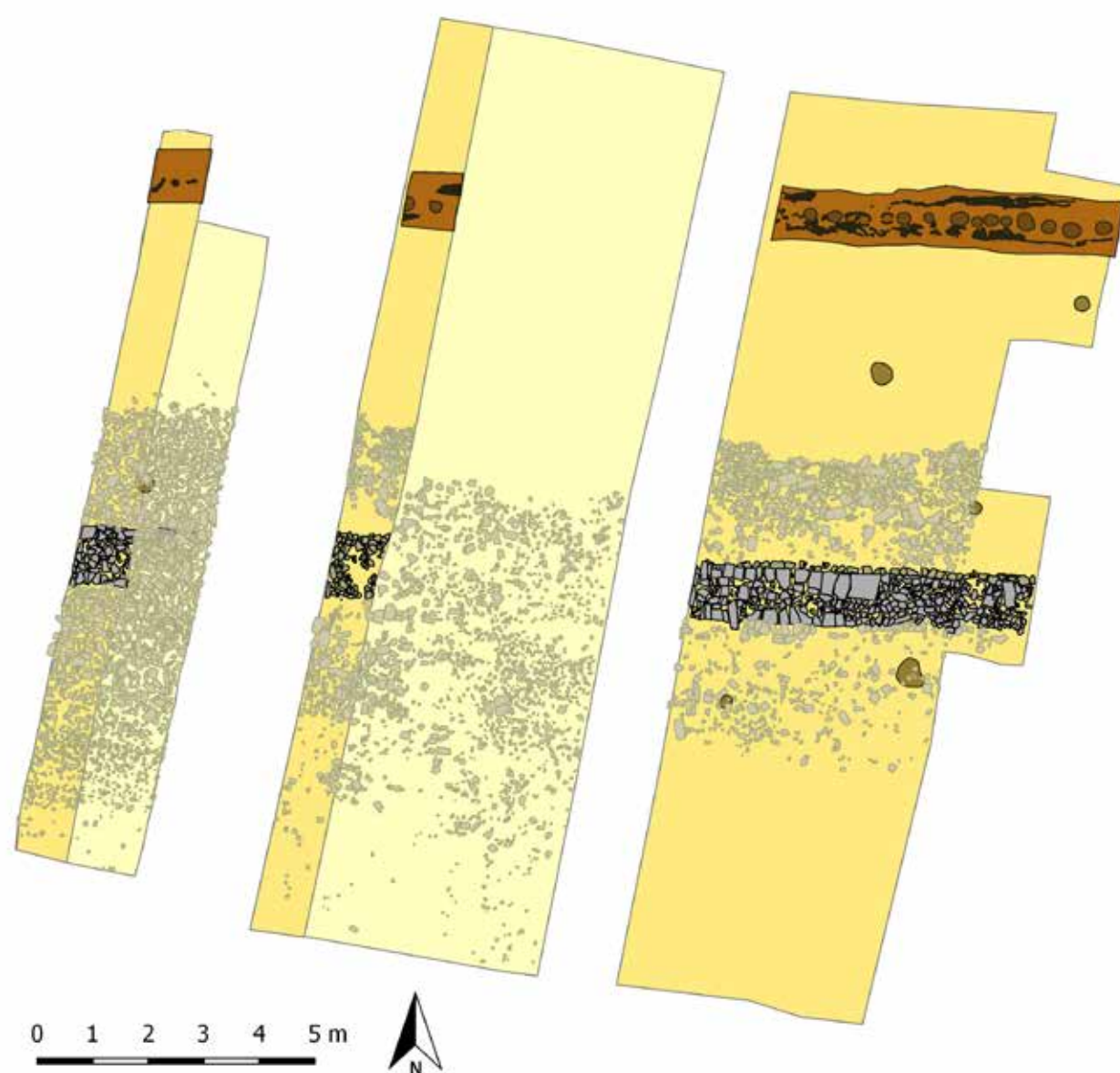


Fig. 3 - Map of the archaeological features. (A. A. Schaflitzl)

comparatively loose and includes many small pieces of charcoal and burnt loam. The posts do not stand side by side, but have a gap of 10-30 cm in between. From time to time, these features are bordered with a ribbon of charcoal. This indicates that they belong to posts that have been charred in order to make them stand strong in the soil, which is often the case on the Limes<sup>9</sup>. Next, and between the posts, there is a layer which also includes charcoal and loess with burnt loam (feature

16-11). On top of this lies a small band of compact charcoal, which is visible on both sides of the posts, but not in every single profile. The next layers also consist of thick fillings, which are divided into feature 16-4 and feature 16-5. The first is a fill with charcoal and a large amount of burnt loam. Feature 16-5, on the other side, is a massive layer of carbonized wood, which was burnt here in situ and the heat caused the surrounding soil to turn a reddish colour (Fig. 6). These charcoal

<sup>9</sup>ORLA Strecke 1, 34. Experiments by reconstructing of the palisade at Kipfenberg with oak trunks shows, that they were hardly charable even when they are not fresh cut. The letters of 19<sup>th</sup> century military officers (see footnote below and Popp 1894, 223) may indicate that this burning procedure enlarged the duration of soft wood. So maybe this is a hint for the type of wood, which was used at the palisade and may explain why not everywhere in the palisade trenches coals were found.

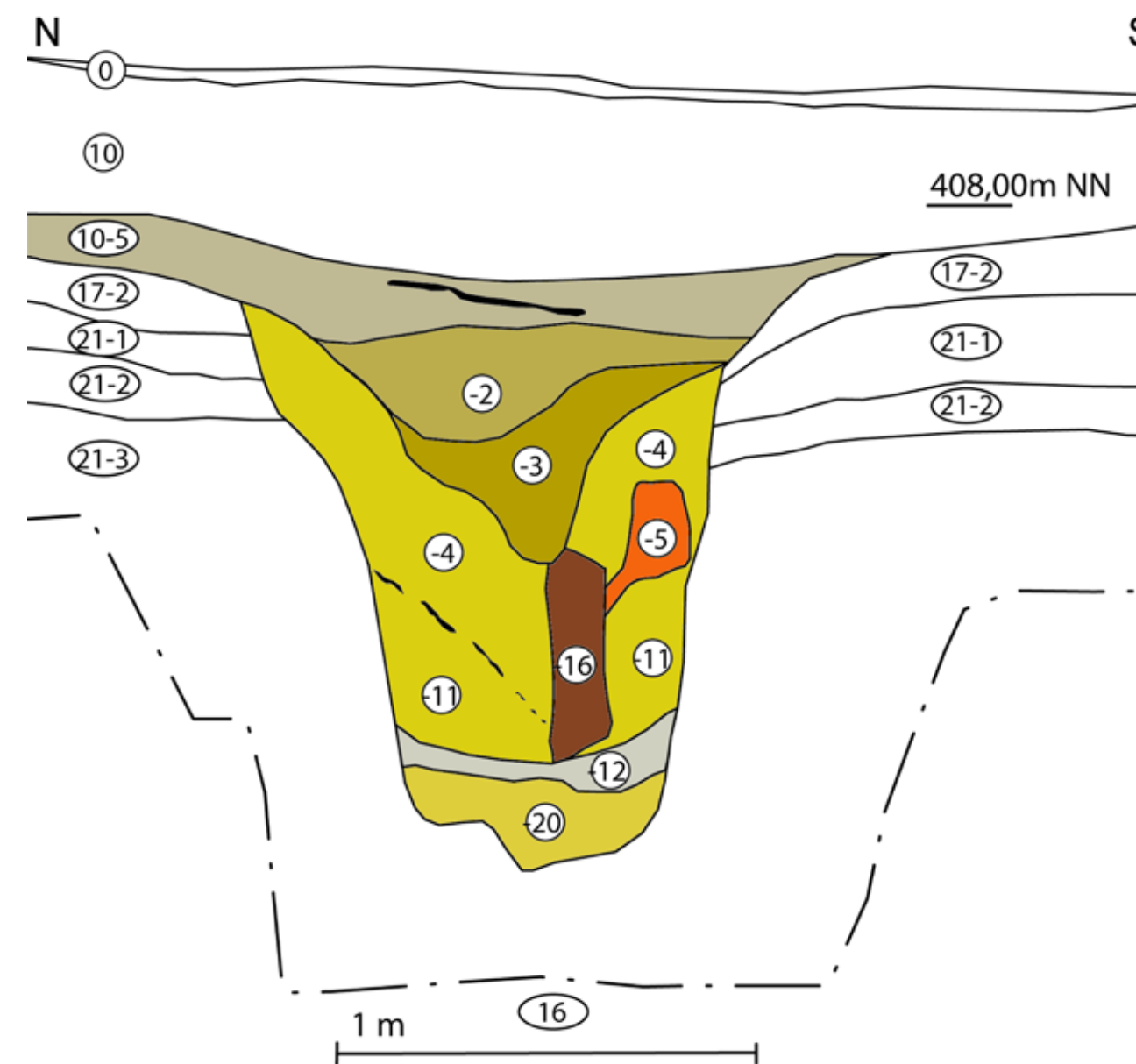


Fig. 4 - Profile 1b in the palisade trench (feature 16) and its different layers (geological layers are uncoloured). (A. A. Schaflitzl)

layers also occur on both sides of and around the posts but never stratigraphically on top of the single post. Therefore, the post must have stood in situ while the other wood was burning. Dendrological analysis shows that the charcoal is from different worked woods like oak and pine lying in many layers<sup>10</sup>. These features (16-4 and 16-5) are not easy to distinguish from each other, but both reach up to the top of the trench. So it is likely that both belong to the same filling process, only that in 16-4 the charcoal/wood did not have such a heat as in the area of 16-5. In the middle of the

trench a light grey, funnel shaped layer 16-1 can be seen, which includes agglomerations of charcoal and can be separated into 3 different horizons only in the eastern profile. This feature is the result of natural processes as soil washed into the ditch after the palisade had rotted and the wall abandoned. All features north of the wall were covered by a 1 m to 1.5 m thick layer of post Roman colluvium which can be divided in at least 3 events (feature 10).

<sup>10</sup>Herzig 2015, 2.

### Interpretation – a suggestion of what happened

Firstly, the Romans dug a trench as tall as a man and between 2 and 3 Roman feet wide (Fig. 7-I). The bottom of the trench was levelled which is indicated by the lowest layer (feature 16-20). Then trunks of different tree species were used to build the palisade. In order to interpret the features and reconstruct the way of building a palisade it can be helpful to look for examples in more recent history. Military engineers of the 19<sup>th</sup> century used posts connected with a rope top by top, which they put into the ground at an interval of 8 m to 12 m as orientation to place the other posts in a line. The 20-30 cm thick trunks were set 1/3 of the 3-4 m length into the trench and were charred in the lower part in order to keep the palisade from rotting. Depending on the type of wood used it should last for a maximum of 50 years<sup>11</sup>. They suggest keeping a gap of 15-20 cm between the posts<sup>12</sup>. A junction of the posts with a crossbar 50 cm from the bottom makes it hard to pull out single poles. In combination with the gaps filled with earth, it is a very stable construction.

Massive posts with a cut out at a height of 50 cm to 60 cm have been found during the excavations of Wilhelm Kohl in 1895 at the Wörnitzwiesen at Weiltlingen, where wood was very well preserved.<sup>13</sup> He also found a crossbar that had been carbonised (sic!) and because of that and its dimensions, it was, in his opinion, too small to have any use. He also describes that the posts are charred all around even in the cut outs.<sup>14</sup> Because it makes no sense to carbonise a way too small crossbar, it seems that they did not use them for main fixation like for inhibiting a pulling out.

Our suggested reconstruction is that the posts were joined in some kind of frame construction with at least two crossbars, one on the bottom and one on the top.

This framework enables the use of posts which are not exactly the same length and getting an upper closure anyway. It is then also possible to use trunks which were not perfectly straight – they were forced upright anyway. The trunks were – depending on the diameter – used whole or split into two or more pieces.<sup>15</sup> These segments could have been held in place by some back brace. This is suggested by a posthole (feature 28), where the post was inclined towards the palisade. The length of a segment can not be determined, because no second one was found. This may indicate that it is more than 5.8 m (maybe 20 roman feet) broad, which is the width of the first sondage. During reconstruction works at Pfahlbuck at Kipfenberg (Bavaria), it was found that one segment built out of two oak trunks has a weight of approx. 750-900 kg, which would make a 6 m broad segment very heavy. Here a study of W. Kohl may help: he reports that at the Wörnitzwiesen on a one metre length of palisade there were always two posts and two gaps<sup>16</sup>. So maybe only the guide pile was fixed and the next segments were joined standing. Some flat stones lying on the bottom of the ditch in places where a post is suspected may indicate either a pivotal point for erecting a segment or a measurement point.

After erecting and joining an indeterminate length of palisade the Romans started to throw rubbish wood, branches etc. into the trench and burn it<sup>17</sup> (Fig. 7-III). In this way, the uncharred piles get surrounded by their charcoal layer. Only this would make it possible for the crossbar to also be burnt. This fire was extinguished by filling the trench with soil, which at the same time fastens the construction (Fig. 7-IV). The grey layer 16-12 (Figs. 4 and 5), where only very small pieces of charcoal can be determined, indicates that at first the ditch was filled with highly flammable and low charcoal producing materials like branches, maybe also hay and straw<sup>18</sup>. They then filled the trench, but stopped

<sup>11</sup>This suggest officers of the royal Bavarian Ingenieur-Corps and Inspektion der Festungen (Popp 1894, 223).

<sup>12</sup>General Andrae former Inspekteur of the I. Ingenieur-Inspektion in Berlin gives a guideline how the Prussians build palisades (ORL A Strecke 1, 38).

<sup>13</sup>ORL A Strecke 13, Tafel 11, Abb. 4; Limesblatt 1896, Sp. 483f.

<sup>14</sup>Limesblatt 1896, Sp. 486.

<sup>15</sup>This can be seen at many sites where posts were preserved in wood (cf. Czych, Herzig 2008; and unpublished manuscripts of Wilhelm Kohl).

<sup>16</sup>Limesblatt 1896, Sp. 484.

<sup>17</sup>Preserved big branches can be seen on some photographs of the palisade at Mönchsroth (I want to thank J. Obmann (Munich) for this information).

<sup>18</sup>The carbonized bud of a deciduous tree found at Laimerstadt in 2015 indicates the use of different branches. Of course also thicker branches could be used but were burnt more complete.

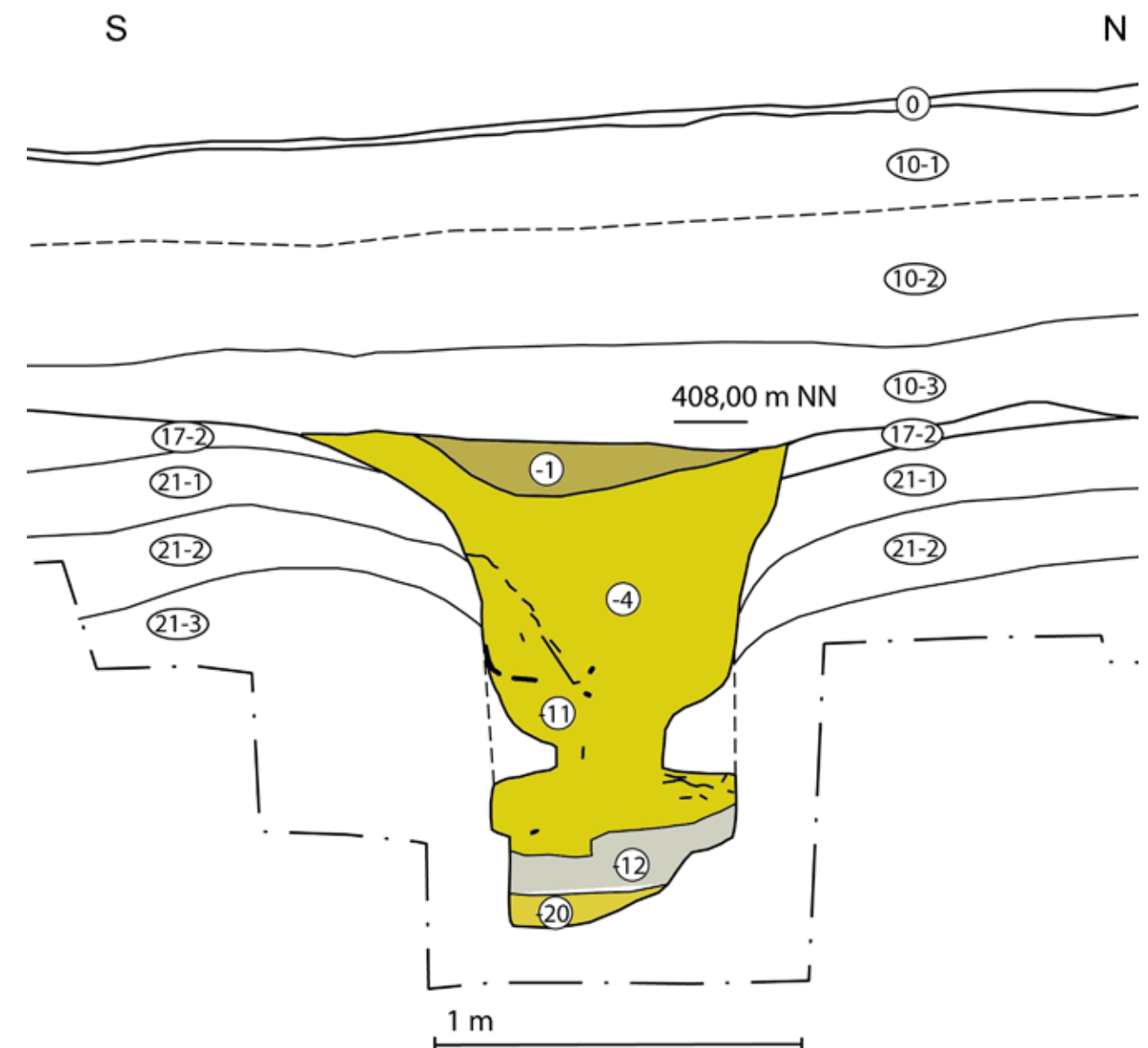


Fig. 5 - Profile 4b in the palisade trench (feature 16) and its different layers (geological layers are uncoloured). (A. A. Schaflitzl)

halfway (layer 16-11). Maybe because the fire did not char enough of the posts, they stopped and filled in flammable material again (Fig. 7-V). This time thicker wood (unused planks, remains from cleaving the trunks) was thrown in and set alight. The upper parts of the trench sides were already dried out and preheated by the first fire, so that the second fire now roasted the soil, turning it a reddish colour (feature 16-5). This fire must have been extinguished much faster by covering it with soil, so that the remaining wood was enclosed in the soil and conserved (filling feature 16-4). The last infill was piled up to the palisade centre in order to work as water drainage (Fig. 7-VI).

The last layers in the profile (feature 16-2) consist of the natural in-washed materials after the palisade had rotted and the soil deposited.

All was covered with a colluvium in post Roman era, which also buried parts of the wall that was the reformation of this section of the Limes.

### The wall

The wall, which lies 6 m behind the palisade (Fig. 3), was in an allegedly good condition, across the whole site all phases of monument decay can be seen and





Fig. 6 - Palisade trench in segment 1 showing the in situ burnt section. The charcoal layers exclude the posts.  
(photo: Fa. ADA)

reconstructed. According to the dendrological investigations of a wooden substructure at Dambach, it is likely the wall was built in the year AD 206/207<sup>19</sup>. The best preserved parts were found in sondage 3. Here the profiles (Figs. 8 and 9) show the complete story of this monument: The lowest layers belong to pre-Roman colluvia as also seen in the palisade profiles (feature 17-1, 17-2).

Some small postholes filled with charcoal (features 25, 26, 27, 29) were found north and south of the wall. The postholes lay 80-120 cm away from the wall and may have belonged to scaffolding for the wall<sup>20</sup>. With no clear affiliation to any layer, due to heat reddishly burnt, is feature number 20, which may be the remains of a fireplace or a field forge. On top of the colluvia – preserved under the debris of the wall – is a very thin layer loaded with many small pieces of charcoal (feature 30). This may be evidence of the clearance of the area before the wall was built. It is also possible

the charcoal pieces are the remains of older activities, perhaps of the building of the palisade.

After cleaning the surface, a building pit of maximum 10-15 cm depth and 1.2 m width was dug. The material was thrown on both sides, which is demonstrated by the dumped layer (feature 23). It is bigger in profile 6 and missing in profile 5 due to a post hole nearby (feature 25).

Into this, one layer of the foundation was set. There was no systematic construction in it – some of the stones laid flat, some were inclined, layered and filled with smaller stones to get a flat surface. It seems this was done without any mortar. The foundation is 10-15 cm high and 1.2 m wide, so they were aiming for the measurement of 4 Roman feet.

The wall itself was erected on top of the foundation layer and with 1 m smaller than the foundation. The

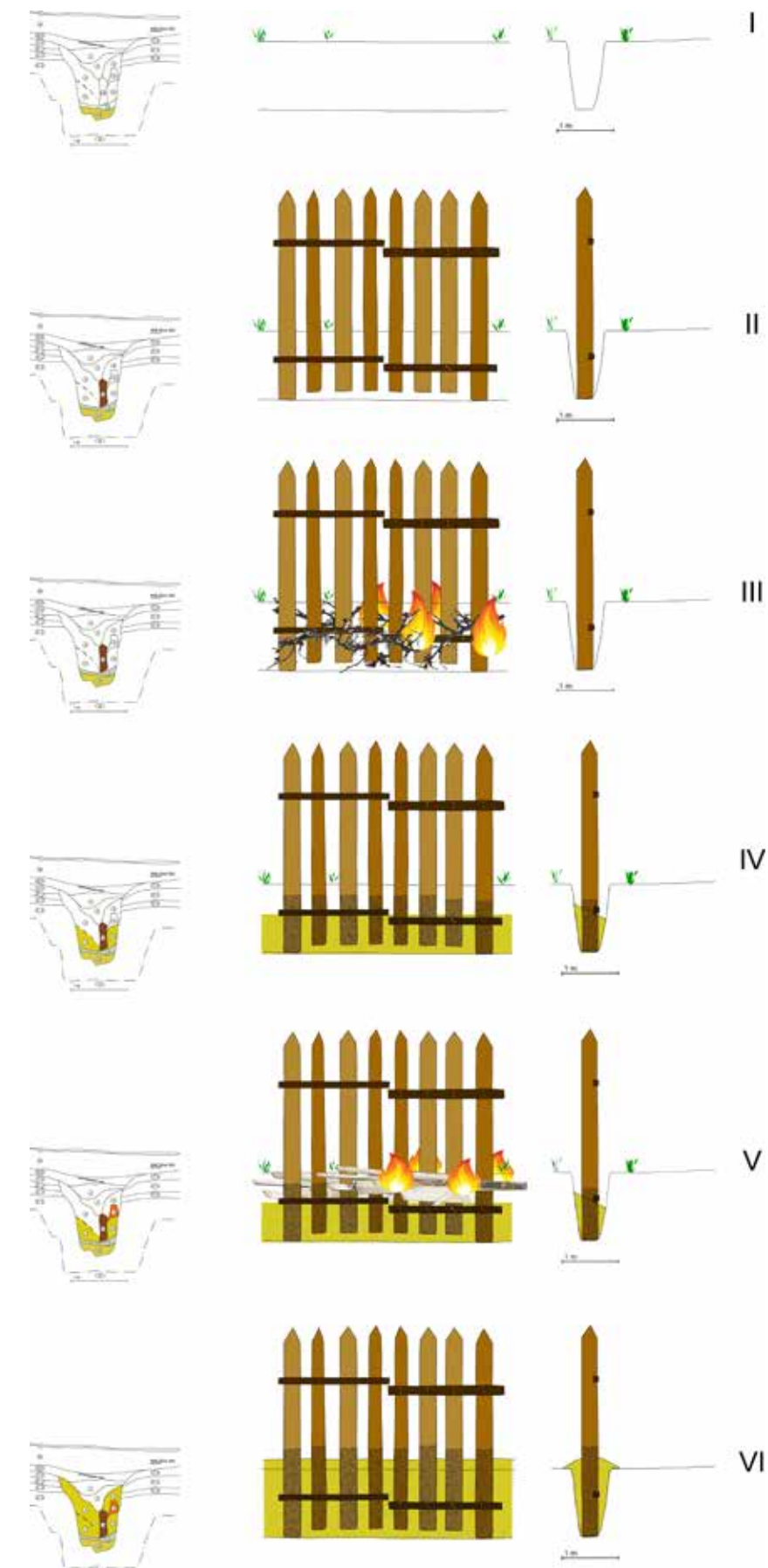


Fig. 7 - Genesis of the layers in the palisade trench. Left: Layers in the profile; right: the reconstruction of the possible actions lead to this order. (A. A. Schaflitzl)

<sup>19</sup>Czys, Herzig 2008.

<sup>20</sup>Remarkable is that they seem to be burned down to the ground before the rest rotten in the soil and charcoal was washed in the filling.





Fig. 9 - Profile 6a in the Raetian wall (geological layers are uncolored). (A. A. Schaflitzl)

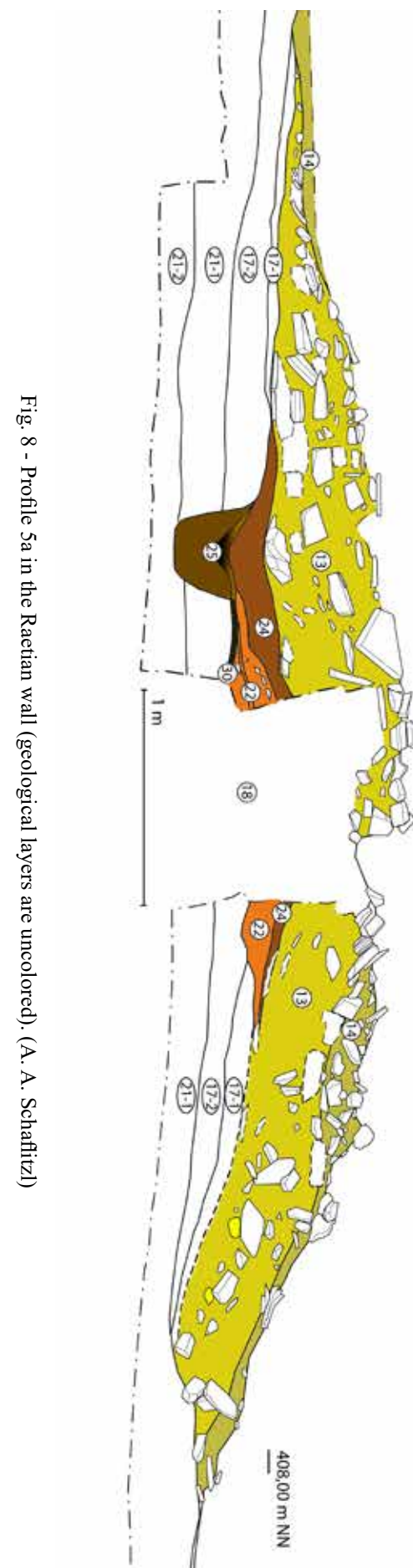


Fig. 8 - Profile 5a in the Raetian wall (geological layers are uncolored). (A. A. Schaflitzl)



Fig. 10 - Photo to the east in segment 3, showing profile 5a, the debris and the wall. (photo: A. Heising, University of Freiburg)

wall was not set exactly in the middle of the foundation, so the external face of the wall jutted out a maximum of 20 cm. On the internal face (the side facing into the Roman Empire) this jut was only 3 cm. Building stones of different size and quality were used. The measurements vary between slabs of 50 cm and blocks of 10 cm. Bigger ones were preferred to build the outside shell. They were not only set in layers, but also upright in the wall, so no systematic layers can be determined. On the best preserved part of the wall 5 layers were preserved to a height of 75 cm. The different limestones were connected with a sandy mortar that occasionally included small fragments of brick and slack, which may originate from the process of burning the chalk. Due to the acidic soil, which also dissolved the limestones of bad quality, only larger fragments of mortar, mostly from the interior of the wall, were preserved. Because of this no statement about the treatment of the wall surface can be made.

The wedge-shaped layer feature 22 is 0.5 m wide and on both sides of the wall. It consists of sand, mortar

nuggets and small flakes of limestones and indicates the building activities.

The wall stood for a long period of time without any further building activities taking place which can be determined in the archaeological features<sup>21</sup>. Before the wall broke down, a 5-10 cm thick humus layer formed in what was likely a natural soil building process (feature 24). After an undetermined amount of time the shell and the core of the wall separated due to water and frost action - the shells crumbled. In the end, it formed an 8.4 m wide and 0.6 m high debris pile, which covered all features (Fig. 10). The former stone blocks were then split by further erosion processes into smaller plates. The degraded wall acted as a trap for sediments washed down the small hill from the north, so the debris was covered by a 1.5 m high colluvium<sup>22</sup>. This can also be seen in the LIDAR-scan, where the wall is hard to see. Only east of a hollow way, where the water went through, can a clear line be seen. However, this covering by the colluvium protected this part of the debris from erosion processes and stone robbery.

<sup>21</sup>Due to the small layers in feature 22 it is possible there are also parts of the wall plaster from the decline process included in the feature.

<sup>22</sup>This is why all features occur so smoothed in the LIDAR-scan.

Therefore, the debris can be used for calculating the original height of the wall, which is approximately 2.4 m (= 8 Roman feet). The calculations of H. Kerscher and C. S. Sommer at a location 70 m away from watchtower 15/43, not far from our site, reconstruct a height of 2.81 m by using the LIDAR-scan data of the debris<sup>23</sup>.

After the archaeological excavation works were finished, it was possible to arrange for the path of the new pipeline to be repositioned nearer to the 1970s pipeline. This meant that only the already affected parts of the wall had to be removed. The sondages with the well preserved parts were covered with geo-textile and filled in with sand, so these sections are best conserved for the future.

Therefore, in these small sondages, many remarkable observations can be made about the skills of the Roman military engineers and craftsmen who built the 550 km long border. The palisade was not designed as a fortification for eternity and was replaced approximately 50 years later – which is the lifespan for a wooden palisade suggested by 19<sup>th</sup> century military engineers – by a stone wall which “cements” the border in a longer lasting way.

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## Zusammenfassung

Beim Limeskongress 2015 in Ingolstadt konnten auf den Exkursionen auch eine Grabung im Hienheimer Forst bei Laimerstadt besucht werden, bei der diverse Beobachtungen zur Bauweise der hölzernen Palisade aber auch der Mauer gemacht werden konnten. Anhand der Befunde und der zahlreich aufgefundenen Holzkohlen konnte heraus gearbeitet werden, dass die Römer Holzstämme aus Konservierungsgründen in den unteren Bereichen ankohlten. Dies geschah erst nach dem Aufstellen – wahrscheinlich in zusammengesetzten Segmenten – indem im Palisadengraben wiederholt ein Feuer entzündet wurde, bei dem die Holzreste als Brennmaterial dienten. Das Ablöschen geschah zeitgleich mit dem Verfüllen des Grabens und dem Fixieren der Palisadenstämme.

Auch zur Raetischen Mauer konnten konstruktive Details beobachtet werden. Diese wurde mit nur einer kleinen Fundamentlage in unregelmäßigen Lagen aufgeschichtet und mit Mörtel verbunden. Von den Arbeiten zeugen die Auswurfhaufen und Bauhorizonte an der Mauer. Nach dem Verfall der Mauer fungierte der Schuttkegel als Sedimentfalle, was dazu führte, dass die Palisadenreste und Teile der Mauer bis 1,5 m unter einem Kolluvium konserviert wurden. Die Ergebnisse der Grabungen zeigen, wie auch in kleinen und vermeintlich schlecht erhaltenen Schnitten durchaus wichtige Hinweise zur Rekonstruktion den Limes gemacht werden können.

<sup>23</sup>Kerscher, Sommer 2008, 88. Sommer 2017, 646ff.





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# Our ditches are missing! Camps without defences\*

## ABSTRACT

Two recent developer-funded excavations in Scotland have uncovered an array of Roman ovens seemingly without any perimeter defences. These challenge the previously assumed notion that camps in frontier areas like Scotland were routinely protected by perimeter ditches, sometimes quite large in places. That in turn leads to the need to reappraise our existing assumptions about stray Roman ovens – often assumed to be of local Iron Age construction but rarely radiocarbon dated. Are we missing an array of camps with untraceable perimeter defences?

**KEY WORDS: CAMPS; OVENS; DITCHES; SCOTLAND**

## Introduction

Scotland, at the very north-western extent of the Roman empire, is home to a large number of temporary camps, currently the largest number known from any province, although more are being found elsewhere all the time (e.g. Costa-García *et al* 2018). One of the reasons for such a high figure is a long history of recording these sites including through aerial survey (Jones 2005), another is due to their sizeable perimeter defences – ramparts and ditches – enabling them to be identified almost two thousand years later.

Across the island of Great Britain over 500 camps have been identified (Fig. 1), many known through aerial survey, and more are being recognised through other forms of survey as well as through excavation. But a glance at the map shows that more are known in the north and west of the country – areas which saw a sizeable military presence and / or repeated periods of active campaigning. There has always been a paucity in the south and east of Britain, areas which were thought to have been conquered relatively quickly which explains the lack of military sites. This is an area with a wealth of cropmarkings revealing sites from other periods, so the paucity needs to be explained. Perhaps

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Fig. 1 - Map of Britain showing distribution of Roman camps (naming non-Scottish ones mentioned in text)

camp defences were constructed which haven't left their mark in the landscape, with perimeters of sites delineated by ramparts unaccompanied by ditches. It is possible that the construction of a perimeter ditch on a camp was not standard practice in the early part of the Claudio-Neronian period when the army was in southern Britain but was by the time of the Flavian activities in the north (Jones 2012, 106).

### Classical sources

Ancient authors refer to camp defences in various ways, but most suggest the use of a rampart often with a ditch. Hyginus, writing in the late first or early second century refers to the use of ditch, rampart, stakes, stockade and weapons in camp fortifications, with ramparts utilising 'turf, stone, rocks or rubble' in their ramparts, depending on available materials (*de munitionibus castrorum*: 48–50). The late fourth century author Vegetius wrote a military treatise suggesting that there were different types of fortification of a camp, but when there was no pressing danger, lifted turves created a ditch in front of a turf wall rampart (Vegetius *Epitoma Rei Militaris* I.24). Tacitus, writing about Germanicus' exploits in Germany, remarked that he pitched camp with earthworks to front and rear and palisades on his flanks (Annals I.50). It is possible that this was highlighted because this was unusual practice, with earthworks around all four sides more the norm. It is usually assumed that perimeter defences were constructed when Roman soldiers were operating in unconquered or insecure territory, hence one reason for so many camps recorded in Scotland (Fig. 2). If the camp was originally contained within defences that were slight or without a ditch, then little might survive to be detected today.

Additional defences for camps, such as a breastwork or palisade, are attested in classical literature (Gilliver 1993), but leave little or no archaeological trace. Both Livy (XXXIII: 5) and Vegetius (*Epitoma* I.21, 24; III.8) refer to a palisade atop the rampart, and Varro refers to V-shaped or forked sticks on a camp wall (*de Lingua Latina* V.117). The *pilum murale* (or *pila muralia*) found at Great Chesters on Hadrian's Wall could also have been used to form some sort of an additional defence around a temporary camp (Bennett 1982). The provision of a central 'grip' or 'waist' in the middle of these sharpened stakes (or *valli*) has given rise to the suggestion that they could have been lashed together in

the form of a caltrop, but it would equally have made them easier to carry. They were also sharpened at both ends and could have pointed out towards the enemy rather than just arranged as a palisade.

A strong palisade placed somewhere on the rampart of a camp would be expected to leave a trace in the upstanding remains where these survive to a sufficient height, although this is rarely tested. Possible stake holes have been identified (Jones 2011, 43) although if caltrops were used giving a barbed-wire effect, the archaeological evidence might be slight or non-existent. Forked branches and other brushwood could have been used to provide additional defences around a camp. Caesar reported that he utilised large forked branches above the palisade of his siege camp at Alésia and dug *lilia* in front (*de Bello Gallico* VII.72–3).

No evidence has been uncovered for any *lilia* constructed outside temporary camps, although admittedly there have been very few excavations of areas outside temporary camps. Pits are visible on aerial photographs at some sites (for examples, see Jones 2011, 44) but none confidently identified as the type of defensive pits recorded on the frontiers of Hadrian's Wall and the Antonine Wall.

### New camps recorded through excavations

In 2010, excavations at Ebbsfleet in Kent, on the south-eastern tip of Britain, uncovered a large ditch, 5m wide and 2m deep enclosing a large area; pottery from the 1<sup>st</sup> century BC was found in the ditch. Further research has suggested that an area of some 20 hectares was enclosed, and a fragment of an iron *pilum* was recovered. Similarities to the ditches of Alésia has led the excavators to speculate that this site represented the landing point of Caesar's invasion of Britain in 54BC (Fitzpatrick 2018).

The recovery of this site raises the possibility that there are others to be found, although does not disprove the suggestion that the use of ditches was uncommon in the Claudio-Neronian period in Britain, as these remains appear to be significantly earlier. Given that Caesar's invasions were the first by the Romans in Britain, it is no surprise that he needed to deploy strong defences for his camp. If subsequent Roman forces felt more secure in the territory, then this could be argued as justification for lesser defences.



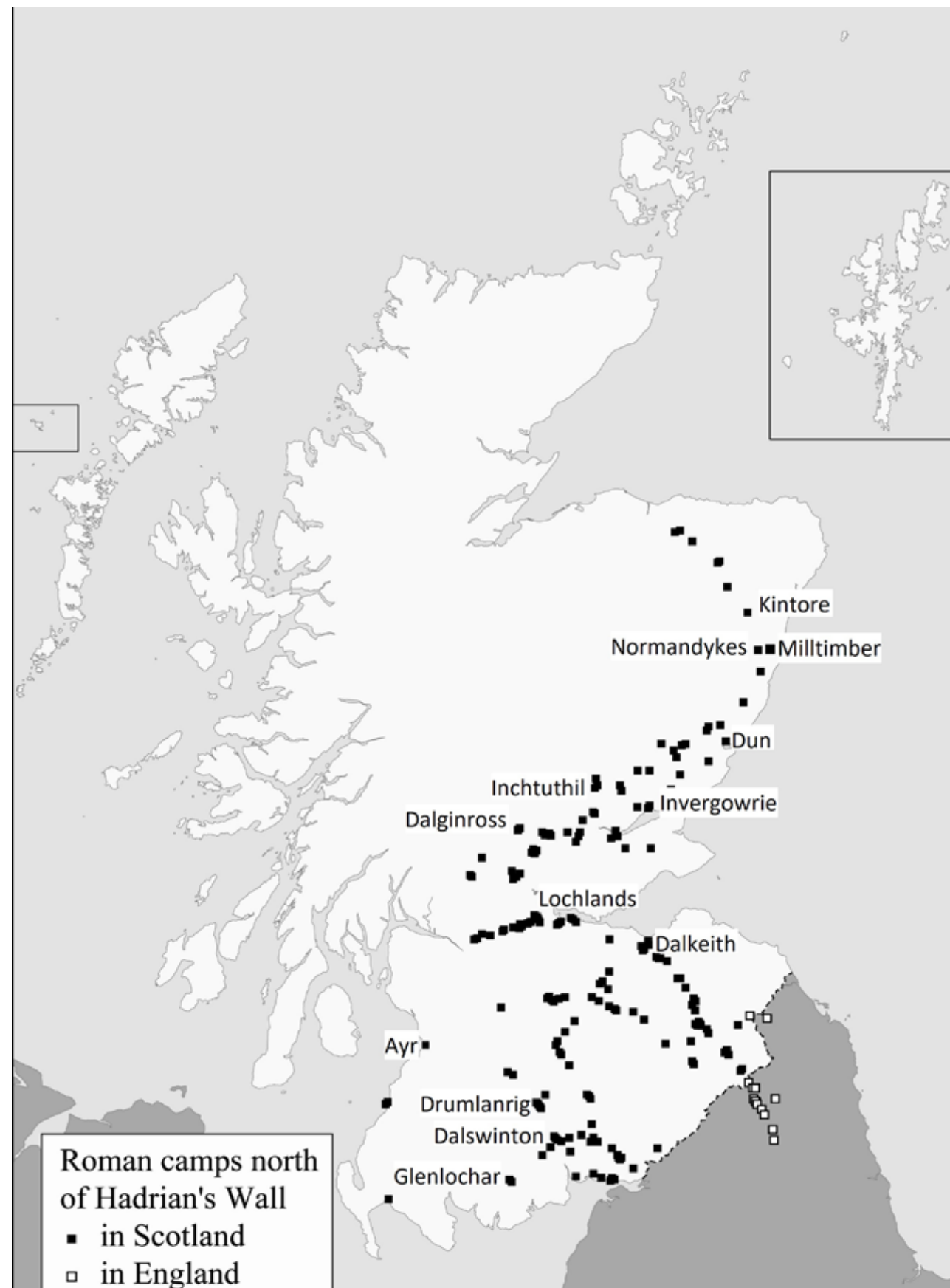


Fig. 2 - Map of Scotland showing distribution of Roman camps (naming those mentioned in text)

Other gaps across the country (Fig. 1) may relate to detection techniques. Areas of land which have been improved but left under pasture rather than crop will be less responsive to techniques such as aerial survey (unless parched in exceptionally dry summers) but geophysical survey and excavation can be profitable.

Following excavations at Kintore (Cook and Dunbar 2008) and more recent excavations on camps in the Czech and Slovak Republics (e.g. Komoróczy *et al* 2018) it is recognised that internal structures such as ovens and pits can be found within camps and can provide significant information about the activities of the armies on the move (Komoróczy *et al* forthcoming). Two recent excavations in Scotland and one in Wales have discovered clusters of Roman ovens without an enclosing ditch. In all three cases, it is assumed that a previously unrecorded camp has been found.

#### Milltimber, Aberdeenshire

Due to the construction of a new bypass road around Aberdeen in north eastern Scotland, in 2014, Headland Archaeology undertook an excavation at a stretch of the road line at the point where it crossed the River Dee at Milltimber. In the course of the excavations, 90 ovens were found, leading to the conclusion that a previously unrecorded camp lay at this point (Dingwall *et al* 2019).

Milltimber lies around 3km east of the large Roman camp (44 hectares) of Normandykes, known since the turn of the 19<sup>th</sup> century (Jones 2011, 285–6). Both lie on the north side of the River Dee, with Normandykes on a higher ridge but Milltimber at a good crossing point next to the river. Normandykes is undated but is the same size as the extensively excavated camp of Kintore which lies around a day's march to the north. Given that Kintore is interpreted as being of Flavian construction, the same is assumed of Normandykes. Small-scale excavations along a forest track through the camp in 2006 recorded possible ovens but they were not recognised as such at the time and no material was sampled for radiocarbon dating.

At Milltimber, Headland Archaeology's excavations revealed 13 groups of ovens, built in clusters of between five to eight (Fig. 3). All were found in association with former watercourses or palaeochannels that were by then completely dry and were thought to have

been covered in vegetation – most were dug into the banks. The ovens were generally keyhole-shaped in plan rather than figure of eight – the round part forming the head where material was burnt and food cooked, and the long part or neck of the structure providing access, where fuel could be fed into the oven and ash and charcoal could be raked out in order to keep the head itself clear of debris after each firing (Fig. 4). Most of the bowls were 1.2 - 1.4m in diameter (up to 1.9m for the largest) and up to 0.8m deep although some were truncated by later agriculture. In the oven chambers, a mixture of material, such as gorse, broom, heather, birch, hazel, oak was burnt; seemingly any combustible material that was close to hand. Remnants of turf material found in the upper layers of collapse in the ovens could have been part of a rough domed superstructure (Dingwall *et al* 2019, 136).

Dating evidence from the ovens suggested that these may be Flavian in date. Once it was realised that a camp was the likely interpretation for the site, trenches were extended to try and locate a perimeter ditch, but none was found.

Discussions around the likely function of so many Roman ovens in a seemingly undefended site a long way north during the conquest phase in the first century have led to speculation that soldiers travelled from nearby Normandykes to find a suitable piece of land to use for the ovens. The Romans could have dominated the landscape around their camp, but given that ovens were probably located within Normandykes, why travel 3km down a hill in territory beyond the frontier to build ovens? Another suggestion has been that the River Dee may have been navigable and Roman boats could have come this far up. If the two arms of the Roman military machine were meeting up intermittently, as is noted in Tacitus (*Agricola* 25), "might it be possible that the navy would arrive at the rough location (e.g. the next major river crossing) ahead of the army and have to arrange provisions for themselves without the normal defences that the army were specifically set up to construct quickly and with the minimum of fuss?" (Dingwall *et al* 2019, 138.) Whilst possible, the site is a long way upstream and lies over 10km from the coastline. If closer to the coast this argument would be more persuasive, but there are camps at locations which are likely stopping places for the fleet, most notably at Dun on the North side of the Montrose Basin, but also in some places on the Solway (Jones 2018).

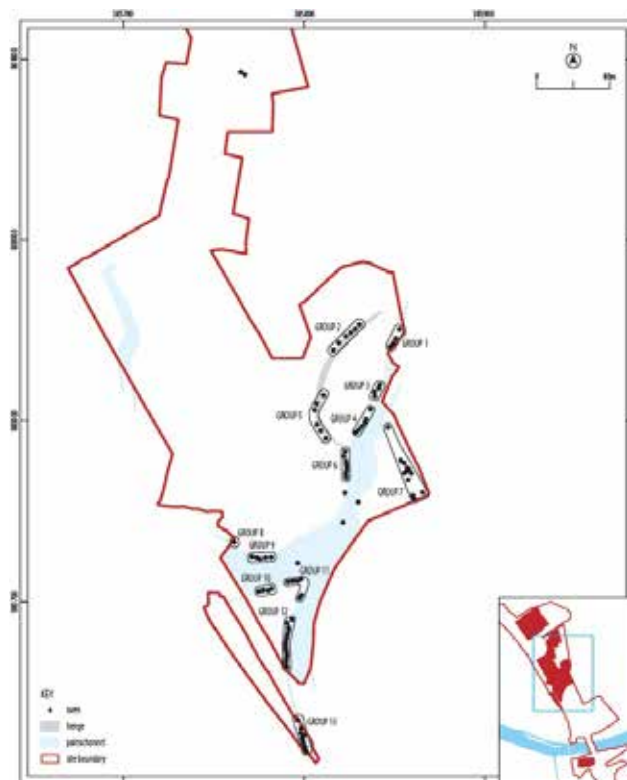


Fig. 3 - Plan of the excavations at Milltimber, showing the 13 different groups of ovens (copyright: Headland Archaeology)

## Ayr, South Ayrshire

On the other side of Scotland in the south-west of the country, in 2015, GUARD Archaeology discovered another camp during excavations on a raised beach on the north side of the River Ayr (Arabaolaza 2019). Again, close to a likely river crossing, the excavators identified some 26 fire-pits which were subsequently interpreted as Roman ovens, probably from a Roman camp (Fig. 5). The area excavated was not large enough to include any perimeter of the camp, but some of the features appeared to lie in two parallel rows, suggestive of an organised layout, perhaps not dissimilar to the rows of ovens occasionally recorded from the air in some camps in northern Britain (Jones 2014). These rows were about 30m apart (around 100 Roman feet), wider than that recorded at Dalginross in Perthshire. This is only slightly narrower than the 33-35m (almost 120 Roman feet) recorded between rows at the camp of Moss Side in Cumbria (Jones 2014, 179), equating to the *actus* used by Roman surveyors (Dilke 1971, 82-4).

For the fire-pits themselves, these were mostly figure-of-eight structures with fire-pits at one end and ash pits

for the rake out at the other. Some were single oval fire-pits although may have been truncated. These smaller pits ranged from 1m to 1.4m in length and 0.7m to 1.25m in width. None were very deep, with the maximum depth only 0.25m, and they formed no discernible pattern (Arabaolaza 2019). For the longer bipartite examples, these ranged from around 1.2m to 2.8m in length and 0.7m to almost 1.9m in width. The deepest was 0.7m in depth, and the ash pits were often deeper than the ovens. One had a stone lined base (Fig. 6); the remainder were dug into the natural sand and gravel subsoil (Fig. 7). Burnt clay fragments, some with wood impressions were recovered, probably indicating the demolished superstructures.

Botanical analysis indicated the use of scrub as fuel with oak, hazel, alder and birch recorded. Some fills produced grain, mostly barley, although one burnt grain was radiocarbon dated to the Bronze Age, and spelt wheat was also recorded. The other radiocarbon dates were in the Roman period and a Flavian date seems likely for the occupation of the site (Arabaolaza 2019). No perimeter or enclosing ditch was recorded, but if it existed it could have been outwith the excavated area which was relatively small.

## Ysgol yr Hendre, Caernarfon, Wales

Just outside the Roman fort of *Segontium* in Caernarfon, in north-western Wales, excavations by the Gwynedd Archaeological Trust in 2010 revealed more figure-of-eight pits (Kenney, Parry 2013). 18 such features had the familiar two-chamber construction recorded elsewhere and were interpreted as Roman ovens with a fire pit at one end and a deposit of charcoal – a rake out – at the other (Fig. 8). These ovens ranged in length from 1.4m to 2.98m and in width from 0.65m to 2m; they were 0.12m to 0.58m deep although some were heavily truncated. Some ovens revealed heat affected clay which may indicate a clay lining. In one, cobblestones were embedded into a heat-affected clay lining. One oven had a fill of silt with charcoal on top of which was soil, interpreted as forming part of a dome superstructure, perhaps the remains of turves. The few small finds included a nail, a small fragment of possible Roman pottery and some burnt bone.

Again, no ditches were recorded, but the investigated area covered around 0.7 ha, so it is likely that any perimeter defences were outwith the excavated area. Some

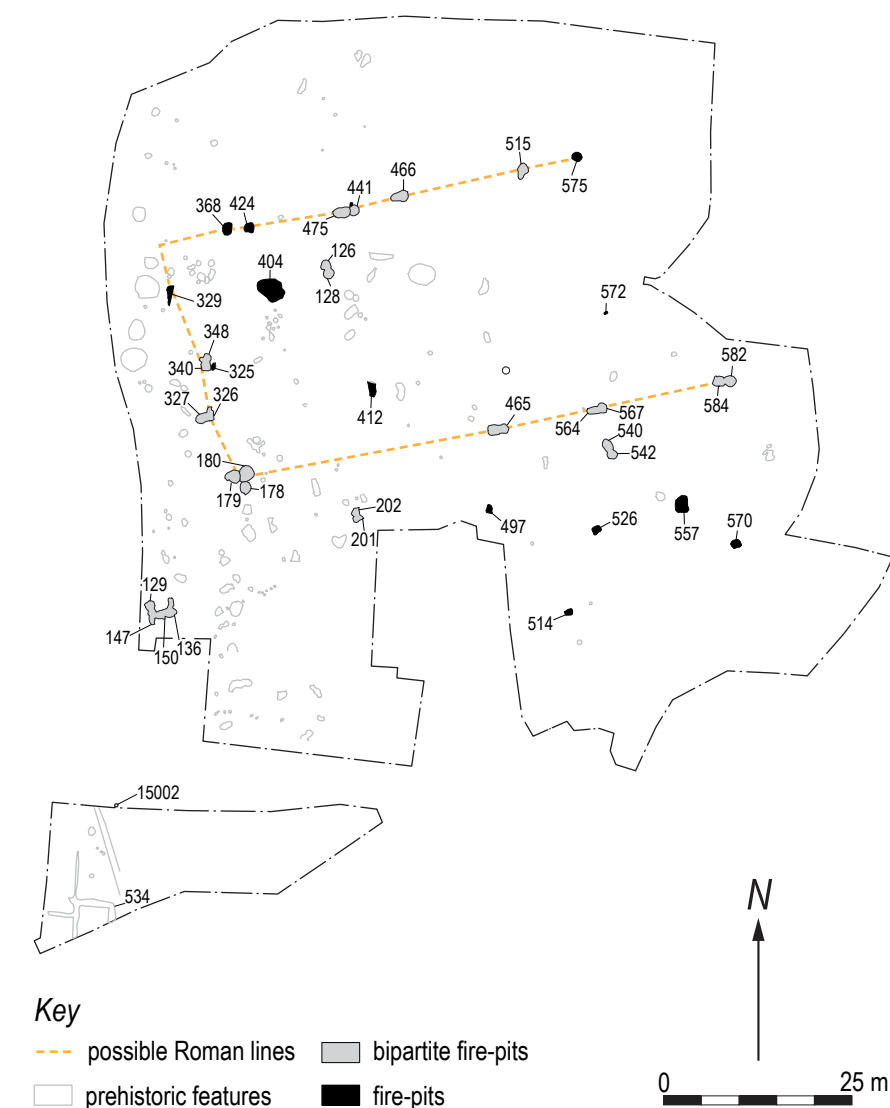


Fig. 5 - Plan of the excavations at Ayr, showing the identified ‘fire-pits’ and possible Roman lines  
(copyright: GUARD Archaeology)

regularity in the ovens could be detected, with most around 15-20m apart, some almost in a rough line but it is difficult to discern a clear pattern.

Fuel identified for use in the ovens appears to have been oak with some hazel, ash, willow and elm. Bayesian statistical analysis of the radiocarbon dates taken from charred fuel and cereal grains suggested that they were used over a short period of time and were roughly contemporary. The timespan given, AD 65-80, overlaps with the foundation of the nearby Roman fort in around AD 77 (Casey, Davies 1993, 10). It was therefore proposed that the remains were those of a construction camp for the nearby fort. Leather fragments thought to be from tent panels were identified during excavations on the fort (Boon 1975; 1975), and these could have originated from the camp site.

## Aerial Survey evidence

Some pit-type features have been recorded outside Roman forts. A study of the plateau on which the fortress of Inchtuthil (Perthshire) is sited in Scotland reveals that it is covered in pit features, both within and outside the camps recorded there. Inside the large camp, pits can be seen in regular rows, interpreted as a possible ‘street’ between tent rows (Fig. 9). The longest, measuring some 220m, is close to the 720 Roman feet (213 m) that Hyginus allocated to a cohort (Jones 2014, 176). Excavations on nine of these pits in the interior of the large camp recorded a small amount of pottery and sheep ribs, so they have been interpreted as rubbish pits (Frere 1985). However, other recorded pits around the perimeter and elsewhere in the camp and across the plateau may be the remains of Roman



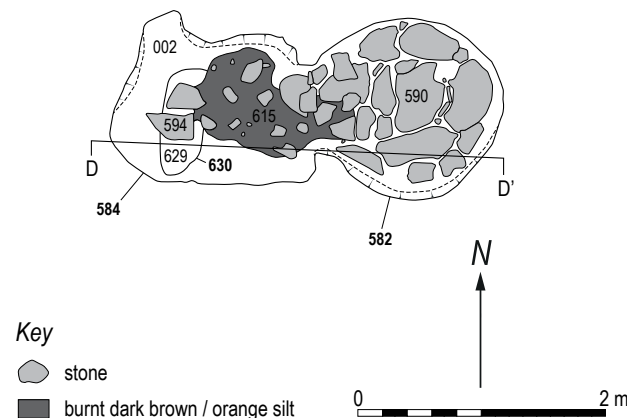


Fig. 6 - Plan of the stone-lined oven at Ayr (copyright: GUARD Archaeology)

ovens, rubbish pits and latrines.

At Drumlanrig in Dumfriesshire, a series of pits is recorded on air photographs running in a line parallel to, and outside, the perimeter ditch of the camp lying south of the Roman fort (Jones 2011, 186). The modern British army, when in temporary encampments, digs pits for latrines outside the camp entrance, visible from the entrance for security; internal latrines only being used at night-time (*pers. comm.* Col. McCluskey). Could this be an ancient equivalent?

Within camps, features interpreted as possible pits and ovens are recorded through aerial survey at various sites, including parallel lines at Dalginross in Perthshire where their length again matches some of the proposals by Hyginus (Jones 2014, 176–8). Just to the south of Hadrian's Wall at Moss Side, further rows of pit features can be identified, again forming defined streets and aligned on the side entrances of the camp (Jones 2014, 178–9). At Glenlochar, in Dumfriesshire, pits throughout the interior of one of the camps south of the fort bear none of the regularity seen at Inchtuthil and Dalginross (Jones 2011, 215–6; Jones 2014, 178).

Remote sensing at Dalswinton has identified a scattering of features within the large camp on the haugh-land. The magnetic signature of the geophysical survey means that many of these have been interpreted as likely ovens (Hanson *et al* 2019).

### Excavated evidence

At the camp at Dalkeith (Smeaton), south-east of Edinburgh, aerial survey had revealed only the perimeter ditch and entrances, but two bipartite pits - possible ovens - were identified during excavations in advance of road building, one just inside the perimeter of the camp and the other only 1m outside. Both were of similar dimensions, 2.7 / 2.85m in length, 1.5 / 1.45m in width and 0.55 / 0.33m in depth. Both contained charcoal rich deposits, charred cereal grains and evidence of baking. A third similar feature also outside the camp contained no evidence of burning. The two ovens produced very different dates through radiocarbon dating, with the oven inside the camp dating to within the known range of Roman military activity and that outside to the 5<sup>th</sup> – 7<sup>th</sup> centuries AD. The excavators concluded that both ovens were unrelated to the presence of a Roman camp (Dunwell, Suddaby 2010, 61).

Further road schemes in the vicinity of Edinburgh have seen more bipartite pits excavated in the vicinity of Roman sites. South-west of Dalkeith, at Melville Nurseries, near the Flavian Roman fort of Elginhaugh (Hanson 2007), two features were excavated close to a palisaded enclosure and revealed to be of similar character to Roman field ovens. One of the features comprised bipartite pits, 2.5m in length and 1.3m in width; the other was similar but damaged by a later drain. They were filled with layers of charcoal, ash and burnt sand. Species identified included hazel, birch and scrub growth. Radiocarbon dates from both suggested a possible Flavian date. Despite the distance from the Roman fort, the likelihood that they were military field ovens remains (Raisen, Rees 1996).

Do the ovens at Melville Nurseries indicate a missing camp to the west of the fort, accompanying those to the south (Eskbank: Jones 2011, 201–2) and east (Lugton: Jones 2011, 267)? Or do they indicate military dominance of the surrounding landscape around the Flavian fort?

Other bipartite pits found in the vicinity of Roman sites include three 'dumb-bell' shaped pits excavated some 800m from the camp at Invergowrie on the west side of Dundee. These had charcoal in their fill and the sub-soil around the pits showed signs of scorching leading to their interpretation as cooking pits of field ovens (Gibson, Tavener 1989).



Fig. 7 - Photograph of an oven at Ayr (copyright: GUARD Archaeology)

At Camelon, north of the Antonine Wall, 'fire-pits' were excavated west of the fort in the Lochlands 'Three Bridges' area where numerous camps have been recorded. Although originally thought to be possible *busta* or cremation pyres (Breeze, Rich-Gray 1980), ovens and possible kilns were subsequently recorded there suggesting possible industrial activity (Bailey 2000; Jones 2011, 257–62). The earlier recorded 'fire-pits' also fit this interpretation and some of the features excavated could be the remnants of ovens.

A seemingly random bipartite field oven was recorded at Cowiehall Quarry near Stirling in 1999 but two further bipartite pits were recorded 30m to the east in 2007 (Strachan 1999; Gordon 2007). Whilst no camps are known in the immediate vicinity, the site is just over 4km from the Roman road and close to where the English army may have camped at the Battle of Bannockburn in 1315. A second century date has been suggested for the site at Cowiehall (Gordon 2007), and it is highly likely that we are missing camps in this general area, on the line of the principle Roman road to the north. Some 3.5 km to the west another 'dumbbell'-shaped pit 2.4m in length and 0.7-1.2m in width with charcoal flecks in the bottom was recorded through excavation. It cut

through a palisaded homestead and both a medieval iron knife and a sherd of Iron Age pottery were found in its fill leaving its dating in question (Rideout 1996).

Are all these stray examples evidence for the local Iron Age communities using a style usually attributed to the Roman military? This question is further complicated by the recording of 'figure-of-eight' pits with evidence for burning at Iron Age sites at Dalladies, Kincardineshire and Newmills, Perthshire (Watkins 1980a; 1980b), although these specific features were not radiocarbon dated. Given the apparent similarities, is it possible that there are some Roman military ovens in seemingly contemporary settlements? Or were these of a type also used by the local communities and how easy would it be to tell the difference? Other examples of burning-pits have been recorded at several Bronze Age and Iron Age settlement sites (e.g. Barclay 1983) so a detailed look at morphology and dating is required. Further analysis of any samples that exist from these and other previously excavated sites may provide radiocarbon dates and help to further understand the nature of these features. It seems unlikely that the local Iron age community would adopt and copy a seemingly Roman-style oven, and 90 together, as at Milltimber,





Fig. 8 - Photograph of an oven at Ysgol yr Hendre (copyright: Gwynedd Archaeological Trust)



Fig. 9 - Aerial view of the fortress and camps at Inchtuthil, showing the rows of pits within the camp and the other pits scattered across the plateau (Crown copyright: Historic Environment Scotland)

surely indicates a Roman presence of some nature.

### Conclusions

If some of the examples given here of bipartite ovens do relate to the Roman military, is this evidence for soldiers utilising the wider landscape around their bases, whether these bases were temporary camps more permanent forts? But there is a big difference between utilising the landscape immediately outside, for example digging latrine pits a short distance from the entrance, as opposed to travelling some distance to build ovens;

presumably the resultant food would then be brought back for consumption within the security of the camp. It is possible that we simply missing camp perimeters – the focus was on a rampart (or even palisade) and perhaps no ditches were deployed, or any that were, were only constructed on one or two sides with the rampart / palisade delimiting the other sides.

The excavations at Milltimber have thrown open the question of whether camps in frontier zones required a perimeter ditch and demonstrated that Kintore is not unique in the large number of Roman ovens recorded.



Milltimber, Ayr and Ysgol yr Hendre have all been identified as camps of some description through the discovery of ovens, emphasising the need to continue to look fully within camp interiors. They also open questions about seeming Roman military-style ovens found elsewhere in Britain; further research is required.

### Acknowledgements

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### **Zusammenfassung**

#### **Die Gräben fehlen!**

#### **Lager ohne Verteidigungsanlagen**

Bei zwei kürzlich durch Bauträger finanzierten Ausgrabungen in Schottland wurden eine Reihe römischer Öfen entdeckt, die anscheinend nicht von Verteidigungsanlagen umgeben waren. Diese stellen die bisher angenommene Annahme in Frage, dass Lager in Grenzgebieten wie Schottland routinemäßig durch Umwehrungsgräben geschützt wurden, die teilweise große Flächen einschlossen. Dies wiederum führt zu der Notwendigkeit, unsere bisherigen Überlegungen zur Verteilung römischer Brennöfen neu zu überdenken - von denen oft angenommen wird, dass es sich um lokale eisenzeitliche Konstruktionen handelt, von denen es aber nur selten Radiokarbondaten gibt. Fehlt uns etwa eine Reihe von Lagern mit nicht auffindbaren Umwehrungsanlagen?

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# Understanding the design of the Antonine Wall

## ABSTRACT

This paper assesses the alternative models currently proposed for the original design of the Antonine Wall. It argues that there is sufficient stratigraphic evidence of a pattern in the structural relationships between the Wall and its various garrison posts to confirm that there was a major change of plan during the construction process. This resulted in the addition of a series of secondary forts, several of which can be shown to replace primary fortlets, and a concomitant delay in the construction programme. An explanation is offered for this rapid change of design, which resulted in one of the most intensively garrisoned frontiers in the Roman Empire.

**KEY WORDS:** ANTONINE WALL, FRONTIER DESIGN, PRIMARY FORTS, SECONDARY FORTS, FORT SPACING, FORT-LETS

There are currently two models to explain the close distribution of forts along the Antonine Wall (Fig.1). The first is that it was a coherent, unitary design with garrisons intelligently positioned in a flexible response to local conditions (Robertson 1960, 27; Graafstal *et al* 2015; Symonds 2018, 144–46). The second, originally proposed by John Gillam, is that it was the result of a major change from an original plan, broadly modeled on Hadrian's Wall, that saw additional forts replacing many of a planned regular sequence of fortlets (Gillam 1976).

Gillam's radical hypothesis was rapidly and successfully tested by a search for more of his predicted fortlets (e.g. Keppie, Walker 1981; Hanson, Keppie 1978), prompting its widespread acceptance (Hanson, Maxwell 1986, 104–112; Breeze 2006, 81–95; Robert-

son 2015, 39). The recent challenge to this consensus arises from a re-assessment of the strategic positioning of all the forts and the apparent primacy of their locations in relation to the planning of the Wall line (Poulter 2009, 117–24; Graafstal *et al.* 2015, 63–5). It is entirely logical that the position of forts and fortlets planned from the outset should have been influenced by strategic concerns about the control of movement and that these locations would have then determined the line followed by the linear barrier. However, it does not follow that all the forts on the Antonine Wall were, therefore, primary, since some may simply have replaced primary fortlets on or close to the same location, as Gillam suggested.

That this did, indeed, occur can now be demonstrated in at least three, and probably four, cases. Firstly, at





Fig. 1a - Plans of the Antonine Wall: a. phase 1 with primary forts and fortlets; (by kind permission of Prof. David Breeze).

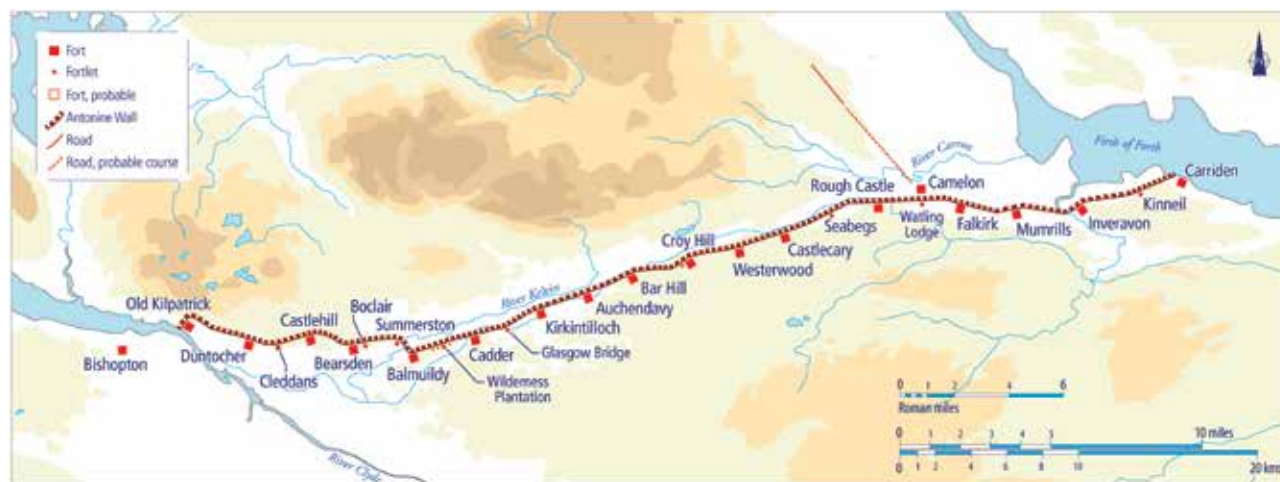


Fig. 1b - Plans of the Antonine Wall: b. phase 2 with the addition of secondary forts (by kind permission of Prof. David Breeze).

Duntocher, a fortlet which was constructed originally as a freestanding structure was replaced by a very small fort with an attached annexe and nearby bath-house (Robertson 1957, 16–67; 91–100; Keppie 2004) (Fig. 2). Only then did the turf rampart reach the site, indicating that this change of plan must have occurred before the construction of the Wall was completed. In this context it is important to note that this most westerly sector of the running barrier was probably the last to be built. This is evidenced by the Distance Stones, which indicate that the four miles (6.4 km) of Wall from Castlehill to the Clyde were divided into much shorter legionary sectors in order to speed up its completion (Keppie 1979, 7). Secondly, at Croy Hill both the rampart base and the turf superstructure of the fortlet were clearly contemporary with the Wall (Hanson, Keppie 1978; Hanson forthcoming, ch. 3) (Fig. 3). However, the close juxtaposition of a small

fort to the east makes no sense if the two installations were part of single strategic design. Moreover, it is clear that the fort was a secondary addition. Not only does it overlie the site of an enclosure of Antonine date that was occupied for some time (Macdonald 1932, 265 pl. X; Hanson 1977 and forthcoming, ch. 2), but it was structurally secondary to the Wall at both its north-west and north-east corners, despite attempts to suggest otherwise (Macdonald 1932, 247; 251–61 pl. X *contra* Graafstal *et al.* 2015, 56–58). Thirdly, the existence of a fort at Castlehill, long postulated in antiquarian accounts (Keppie 1980), was confirmed from the air in 1947. More recently, resistivity survey has identified a U-shaped single-ditched enclosure in the north-west corner of the fort (Fig. 4), which was presaged in antiquarian accounts. The dimensions of the enclosure are very similar to those of the ditch surrounding the fortlet at Kinneil, while magnetometer survey in the same area

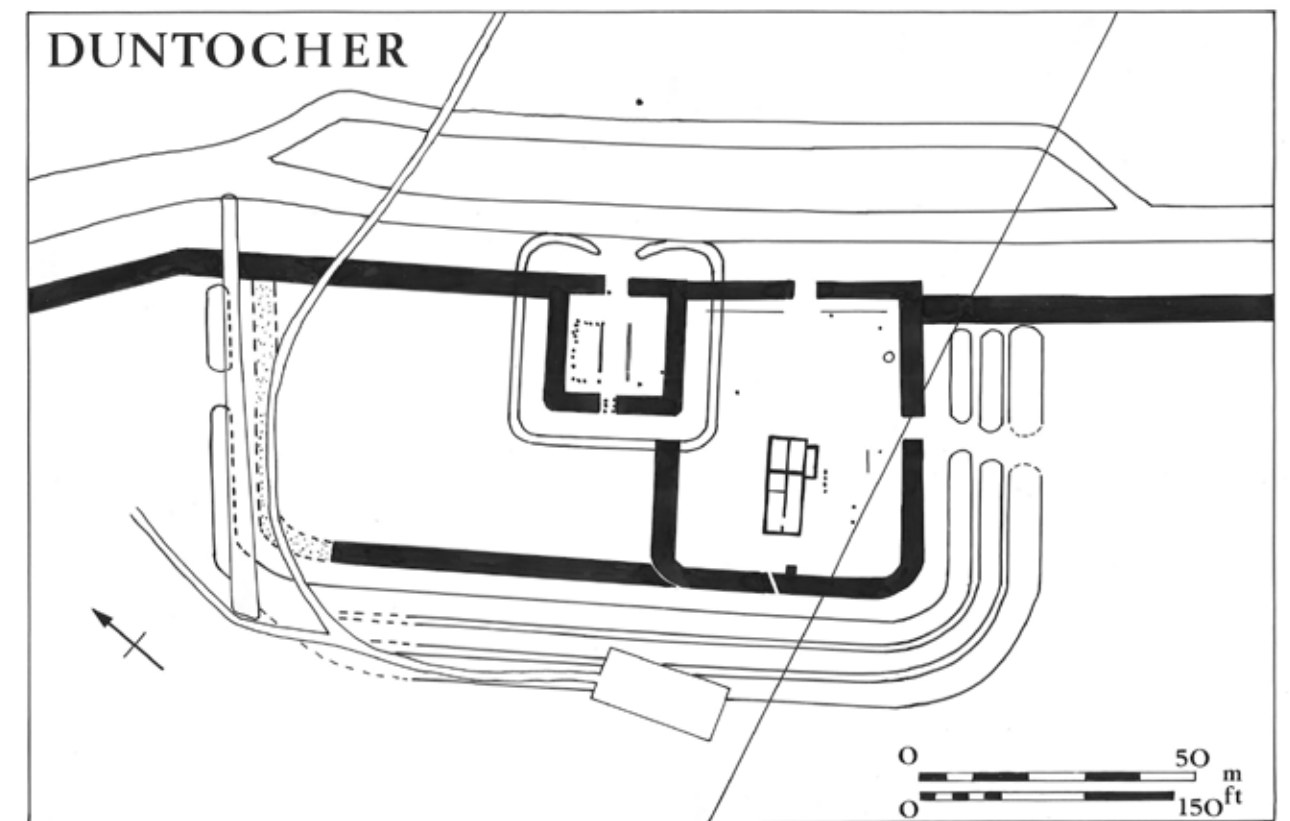


Fig. 2 - Plan of the Roman fortlet and fort at Duntocher based on the excavated evidence (by kind permission of Prof. Lawrence Keppie and the Glasgow Archaeological Society).

indicates that the fort was a later addition to the Wall (Hanson, Jones forthcoming). Finally, the existence of a fortlet at Bar Hill is an essential strategic requirement, otherwise the garrison of the adjacent fort, the only one on the Wall line not attached to the running barrier, would have been cut off from access to the north. The presence of a possible fortlet-shaped platform behind the Wall directly to the west of the fort has been noted (Symonds 2018, 142), though not yet tested, and again the fort seems to have been a secondary addition to the Wall. As at Croy Hill, it overlies a small, rectangular enclosure of Antonine date that had been occupied for some time before being deliberately infilled to accommodate the construction of the fort (Macdonald, Park 1906, 11–15; 38; Keppie 1985, 51–58).

All of the six fortlets that have been excavated can be shown to have been built either earlier than or at the same time as the Antonine Wall rampart, indicating that they were part of its original design. Cleddans, like Duntocher (Fig. 2), was built as a freestanding structure against which the Wall rampart later abutted (Keppie, Walker 1981, 154–55). As at Croy Hill (Fig. 3), the ramparts of the fortlet and the Wall at Wilderness Plantation, Kinneil and Seabegs Wood were of one

build (Wilkes 1974, 53 Fig 4; Keppie, Walker 1981, 144; 150–51; Bailey, Cannel 1996, 307–08). There are also strong hints that some of the fortlets rapidly went out of use or changed their function. At Kinneil the north gate was apparently dismantled and a hearth constructed over the road (Bailey, Cannel 1996, 314–15; 342–3), while a secondary layer of cobbling sealing their interiors has been recorded within all the fortlets that were sufficiently well-preserved for the evidence to survive (Robertson 1957, 23–27; Wilkes 1974, 57 Fig. 2; Keppie, Walker 1981, 146; Bailey, Cannel 1996, 315; 342–4; Hanson forthcoming, ch. 3).

The stratigraphic relationship between forts and the Wall is less consistent. Some are clearly earlier than or contemporary with the Wall rampart, suggesting that they too were part of the original design. Old Kilpatrick at the western end of the Wall was originally built as a freestanding enclosure with all four corners rounded, though the layout of its ditches indicated that the subsequent arrival of the Wall rampart was anticipated (Macdonald 1932, 220–330). The northern corners of the only two stone-built forts, at Balmuildy and Castlecary, were squared to facilitate their later integration into the linear barrier, the former also being provided with



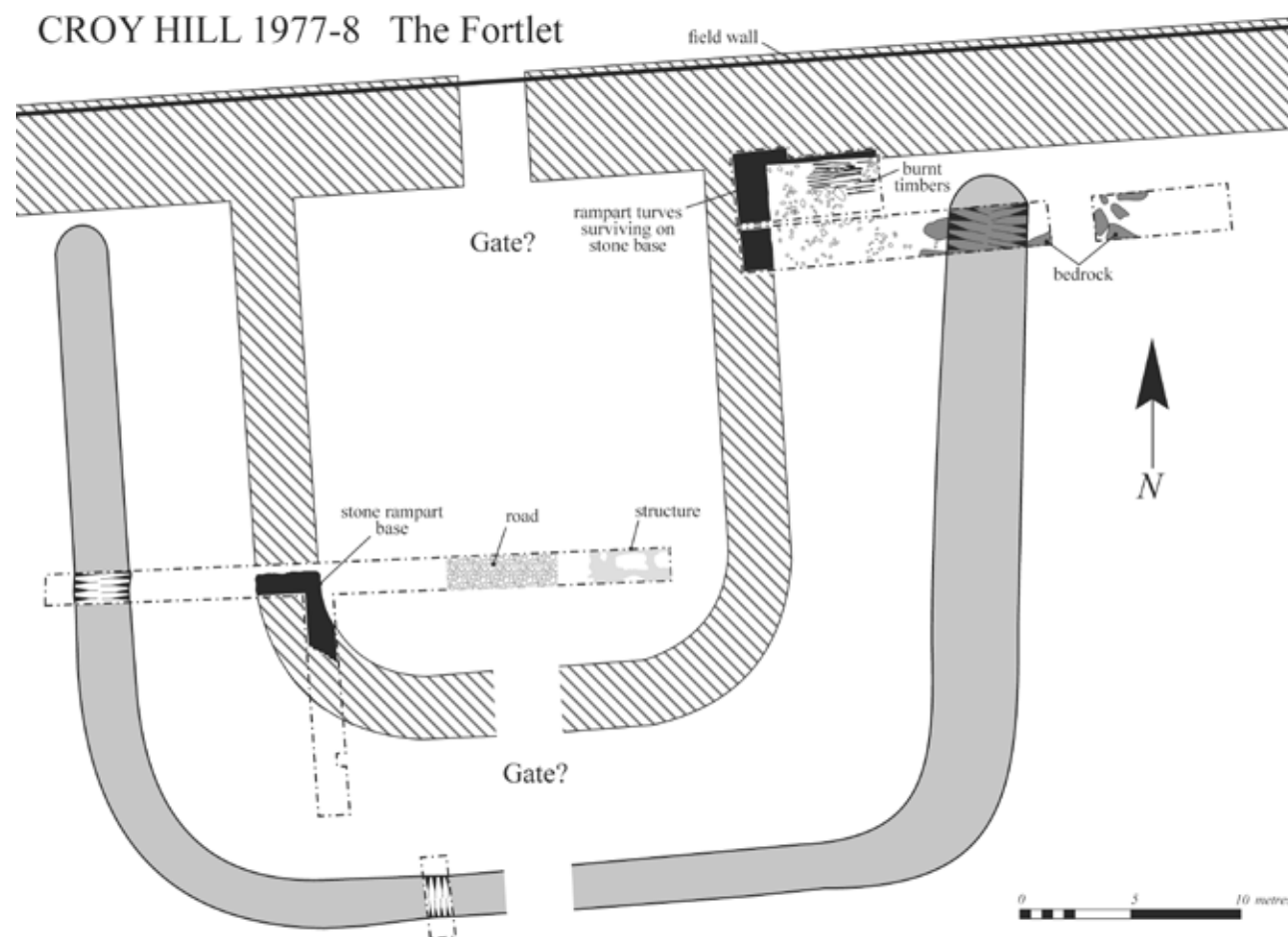


Fig. 3 - Plan of the Roman fortlet at Croy Hill (drawn by Lorraine McEwan).

short wing walls (Miller 1922, 6–7; Christison *et al.* 1903, 278 pl. I; Robertson 2015, 78). At Mumrills the Wall markedly changes direction to accommodate the site (Macdonald, Curle 1929, 399–400; 406), creating what have also been referred to as wing walls, though subsequent examination of the defences revealed that the rampart on the eastern side of the fort appeared to have been added to the Wall rampart (Steer 1961, 95 Fig. 2). Finally, geophysical evidence indicates that the fort at Auchendavy was part of the original design of the Wall. As at Mumrills, the Wall shows marked changes of alignment to accommodate its position, the north-west corner seems to have been provided with a wing wall and a causeway was left undug across the Wall ditch (Jones *et al.* 2006, 12–14 and Fig. 2.6; Jones, Leslie 2015, 319–20). It is surely not without significance that those forts that can be shown to have preceded or be contemporary with the construction of the linear barrier are some of the largest known along the line (1.1–2.6ha internally) and are also spaced some 7.1–9.2 Roman miles (10.5–13.6 km) apart (Fig. 1a), similar to the distances between the forts on Hadrian's

Wall (Breeze, Dobson 2000, 50–51; Hanson, Maxwell 1986, 112).

On the other hand, several forts have produced evidence that they were constructed after the Wall rampart was laid out. It has been suggested that these structural relationships have no relevance to the conceptual planning of the Wall because of contradictions within them have been noted at a small number of sites, so that the simplest solution would be to assume that all forts were primary unless proven otherwise (Graafstal *et al.* 2015, 56–62). It is argued here, however, that these stratigraphic relationships are sufficiently consistent to highlight a significant general pattern. Thus, the forts at Croy Hill, Castlehill and Bar Hill have already been shown to be secondary. Excavation at the north-west corner of the fort at Westerwood indicated that it too was a later addition, as its rampart base abutted and overlapped the rear of the Wall (Macdonald 1933, 280). The simplest explanation for the two stretches of cobble foundation recorded to the rear of the Wall at Inveravon is that both relate to the rampart of a small

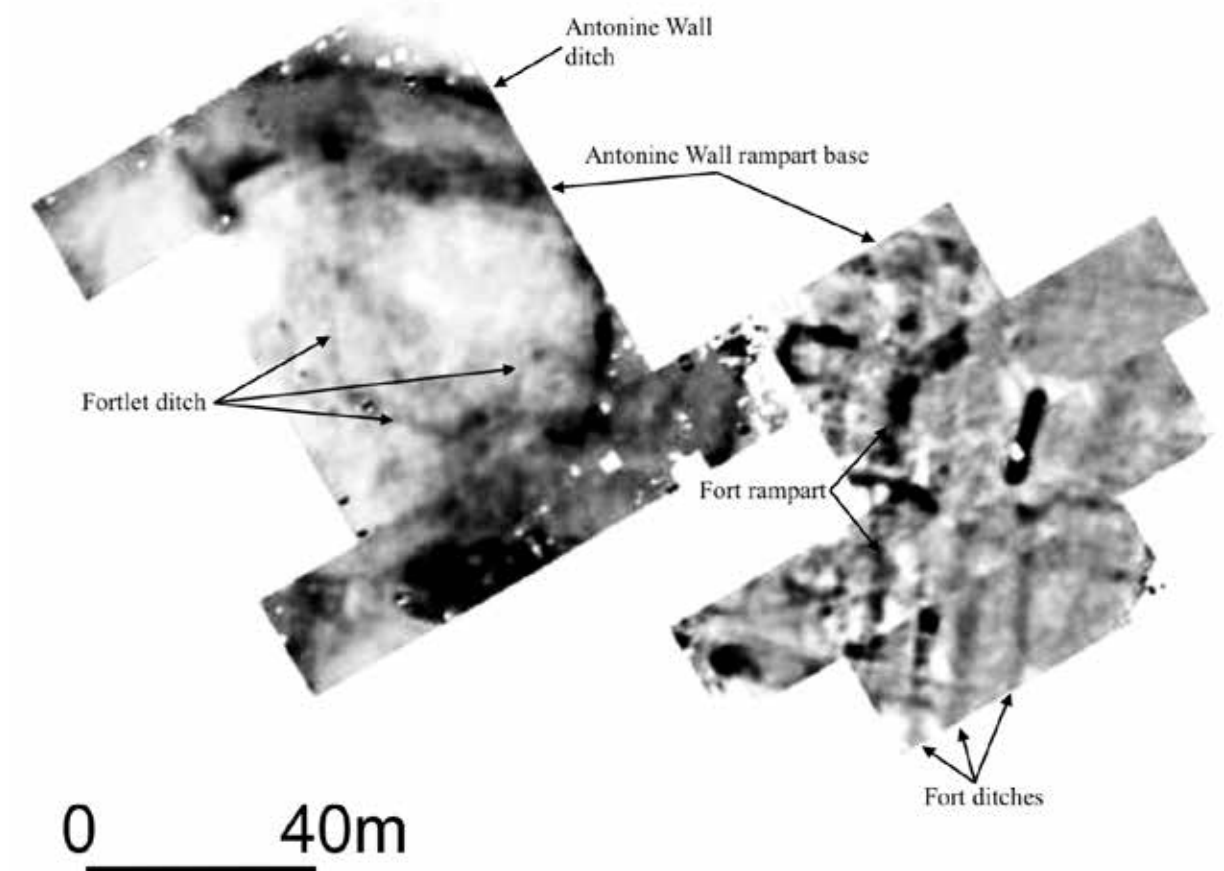


Fig. 4 - Annotated resistivity survey plot of the north-west corner of the fort at Castlehill showing the ditched enclosure (by kind permission of Dr. Richard Jones).

fort (*contra* Dunwell, Ralston 1995, 528–30; 535–46; 567–70), and there is no doubt that it was a secondary addition. Only at two further sites is the structural relationship ambiguous. While the kerbstones at the rear of the Wall continued past the junction with the north-west rampart of the fort at Cadder, suggesting it was secondary, a causeway had been provided across the Wall ditch (Clarke 1933, 9–10; 16). Similarly, at Rough Castle the base of the fort rampart butted against the south side of the Wall, yet the fort was provided with an original causeway. In addition it has been claimed that one photograph from the early excavations suggests that the turf superstructure of fort and Wall was of one build, though a second photograph makes clear that they were not (Buchanan *et al.* 1905, 455; 459 Figs 7 and 12). These minor ambiguities at a very small

number of sites should not be allowed to undermine the overall pattern of primary and secondary forts. Finally, it is surely not insignificant that these putatively secondary installations include the six smallest forts on the Wall (0.2–0.9ha internally).

The hypothesis that the Antonine Wall underwent strategic revision and structural change while it was being built better fits the general pattern of frontier development, as it shows both continuity and amendment from the stage that had been reached on the Hadrianic frontier by that time.<sup>1</sup> It should not be forgotten that the troops that built the Antonine Wall were still making changes to Hadrian's Wall when the re-occupation of Scotland was set in train. In this context it is important to emphasise that Gillam was not

<sup>1</sup>A more detailed analysis of the evidence in support of this hypothesis and fuller consideration of its implications will be published in Hanson forthcoming b.

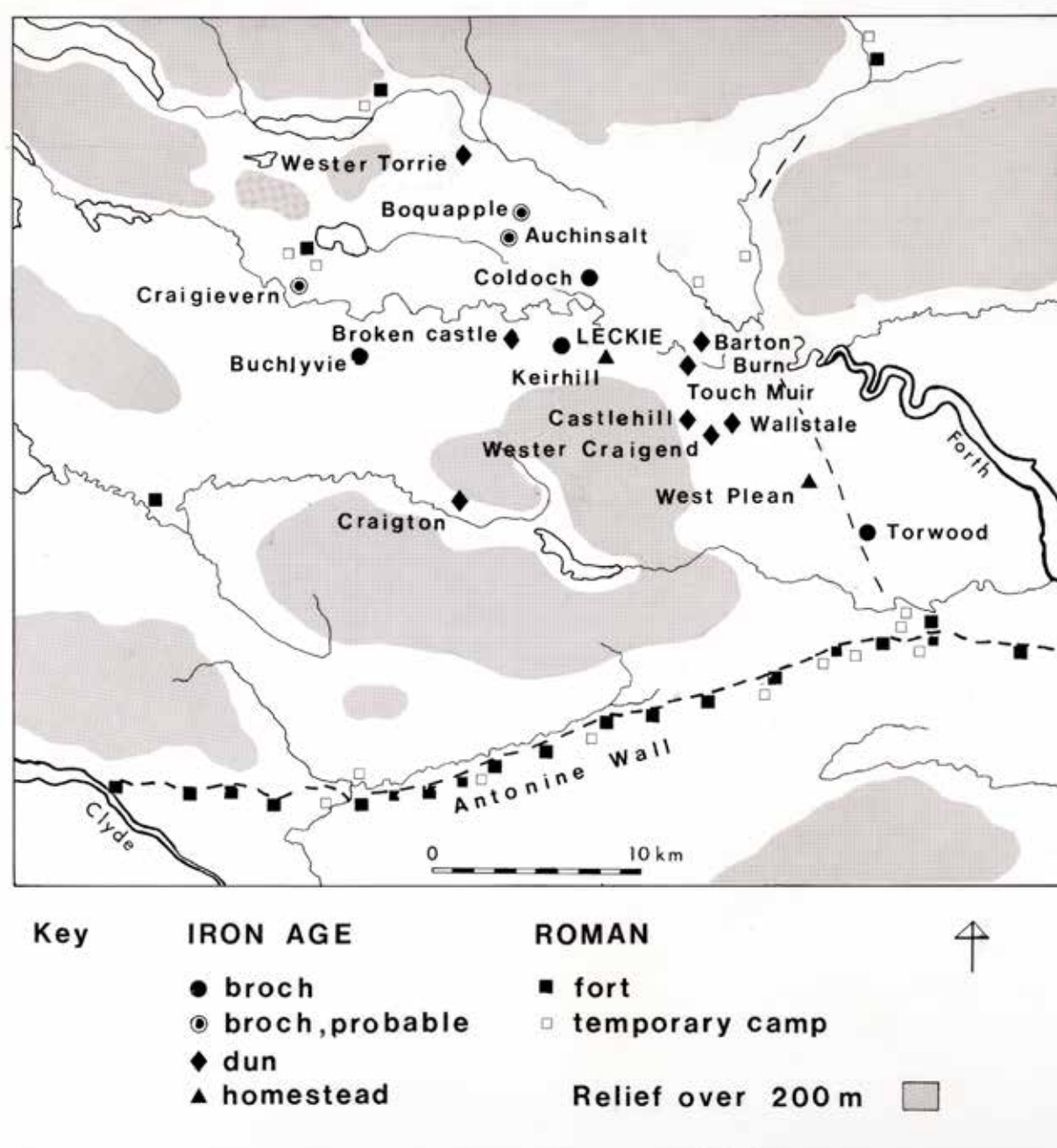


Fig. 5 - Location map of the broch at Leckie in relation to other Iron Age sites and to the Antonine Wall (drawn by Alan Braby and reproduced by kind permission of Dr. Euan MacKie).

arguing that the Antonine Wall was “a carbon copy” that was “blindly replicating” Hadrian’s Wall (*contra* Symonds 2018, 135–36; Graafstal *et al.* 2015, 59), but that “it resembled in certain respects the second plan for Hadrian’s Wall” and, fundamentally, that it “was changed during the period of construction”, as Hadrian’s Wall itself had been (1976, 51). Thus, there are clear examples of design continuity from Hadrian’s Wall in the provision of a regular system of fortlets, which mirror the amendments seen in the more flexible topographic positioning of milecastles on the Narrow

Wall (Symonds 2018, 120; 14–46), and in the placing of forts directly on the line of the Wall. Other lessons had been learnt from the operation of the Hadrianic frontier and various amendments to the Antonine Wall are readily apparent. These include the provision of a Military Way *de novo*, the absence of a Vallum and, possibly, of a system of towers, and dispensing with the provision of multiple fort gates opening out to the north.

The proposal that there was a change of plan during the construction of the Wall also provides a potential historical context and logical explanation for the unusually close spacing of garrison posts, 80% of which are only 1.5–2.4 miles (2.4–3.9 km) apart. It is highly probable that the building of the Antonine Wall would have stimulated a hostile local response in recognition of the impact on the indigenous population of the insertion of a hard border that may have been highly disruptive to social cohesion and split existing social groups. Indeed, a similar response to the building of Hadrian’s Wall has also been suggested (Graafstal 2012, 161; Symonds 2018, 116). It is difficult to determine the precise boundaries between such indigenous groups, but the locations of places in the geography of Ptolemy attributed to one, the Dumnonii, suggest that their territory extended across the line of the Wall (Ptolemy II, 3, 7; Rivet, Smith 1979, 343–44), though some have doubted that it was so extensive (Mann, Breeze 1987, 89). However, there is no reason to assume that the Forth-Clyde isthmus was the dividing line between the substantive differences apparent in regional metalworking traditions in the late pre-Roman Iron Age (Hunter 2007). Indeed, the overlap in the distribution of what Hunter terms “massive metalwork” and “central British metalwork” hints at a contested zone between that isthmus and the estuary of the Tay that chimes well with the location of Roman outposts beyond the Antonine Wall.

There is also potential archaeological evidence for local unrest at this time. The drystone-built broch tower at Leckie in the Forth valley was destroyed in a major conflagration probably early in the Antonine period (Fig. 5). The presence in the destruction deposits of a probable ballista bolt supports the suggestion that the Roman army was responsible (MacKie 2016, 11–15; 58–59; 77–85; 157–166 Fig. 1.5).<sup>2</sup> Yet the recovery of quantities of samian pottery, glass and other Roman artefacts from the site, suggests that this high status settlement had been in friendly contact with Rome both throughout the Flavian occupation of Scotland and, at least briefly, into the Antonine period. A similar relationship is apparent from the material culture recorded from several other lowland brochs, leading to the interpretation of them as centres of regional elites controlling the importation of prestige goods (Macin-

nes 1984). Destruction of a local power base would be precisely the response one might expect from the Roman authorities to a rebellion in the area. Such an insurrection would have caused a delay in the building process, while troops dealt with the immediate problem, and is likely to have stimulated a desire to increase local security along the linear barrier, further increasing that delay. Both of these likely impacts are clearly visible in the archaeological record. We see the provision of more-closely-spaced forts along the Wall, many of them smaller than the norm so as to minimise the increase in manpower involved, while a delay to the overall building programme is reflected in the division of the final four miles (6.4 km) of Wall into much shorter legionary sectors to speed up its completion.

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J.</i> 3, 1974, 51–65</p> <p><b>Zusammenfassung</b></p> <p>Dieser Artikel setzt sich mit den verschiedenen Vorschlägen zur ursprünglichen Konzeption des Antoninuswalls auseinander. Auf der Basis des stratigraphischen Verhältnisses zwischen dem Antoninuswall und seinen Militärstützpunkten wird argumentiert, dass es während der Bauzeit eine grundlegende Planänderung gab. Dies hatte den Bau mehrere zusätzliche Kastelle zur Folge, die bereits bestehende Kleinkastelle ersetzen. Zudem führte es zu einer nennenswerten Verzögerung des Bauprogramms. Dieser Beitrag bietet eine Erklärung für diese kurzfristige Planänderung, durch die der Antoninuswall eine der am stärksten bemannten linearen Grenzen des Römischen Reiches wurde.</p>
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# **Low altitude mapping of the frontier fortlets from *Porolissum-Brebi*. Digital models and frontier interpretations**

## **ABSTRACT**

The Roman frontier layout is directly conditioned by the landscape types and features. Every type of frontier is created in that way to exploit at maximum the topographic layers to the advantages of the tactical ones.

The frontier of Dacia Porolissensis is a non-linear one, being a perfect example of how the Romans used the given landscape to place the military installation. Thereby, it was created a spatial pattern of these structures, being established a tripartite form of organization: the first line is represented by auxiliary forts, the median lines is represented by burgus-type structures or middle sized fortification and the third and the most advanced line is composed of watchtowers.

A part of my research and the present presentation is focusing on the second type of structures, the burgi. By using a large spectrum of methods from epigraphy, topographical survey, aerial survey, GIS analyses and using older excavations, I tried to underline the main functional characteristics of these installation and mainly what is their role in the mechanism of *limes Dacicus*, with special focus on the frontier of *Dacia Porolissensis*.

**KEY WORDS:** ROMAN FRONTIER, *DACIA POROLISSENSIS*, FRONTIER FORTLET, *UAV*, DSM



## Introduction

The frontier system of *Porolissum* area which represents the most elaborate scheme amongst the general layout patterns of the frontier of *Dacia Porolissensis*<sup>1</sup> it continues to have several areas slightly more neglected than others.<sup>2</sup> Amidst these areas, a specific zone together with its minor frontier installations constitutes the main topic of these pages.

The area in cause is located in the vicinity of modern day Brebi village (Creaca Commune, Sălaj County, Romania), and also in the limitrophe area of *Porolissum* archaeological complex (Figs. 1 and 2). Starting with the 19<sup>th</sup> century,<sup>3</sup> this particular area of Brebi village came into the spotlight of the Roman Dacia frontier researchers due to the fact that here, Torma Károly identified on the field two rectangular structures, considered since then *burgi*, *castella* or *praesidia*<sup>4</sup> (to be understood in this context as *frontier fortlets*<sup>5</sup>) with a certain role in the frontier mechanism.<sup>6</sup> Later in the 20<sup>th</sup> century, after two briefly archaeological campaigns<sup>7</sup> and several major field surveys,<sup>8</sup> it was enunciated a theory according to which the three elements identified, two fortlets and a linear fortification, were belonging to an early stage of the Dacian frontier, chronologically framed somewhere in the very first decades of the 2<sup>nd</sup> c. AD.<sup>9</sup>

In this study, we reopen therefore the archaeological dossier of the frontier installations from Brebi, discussing and analyzing them in a broader frontier context,

adding extra data to the topic and confirming once again, with several new arguments that we most probably deal with early phases of the frontier organization. In addition to this discussion and interpretation, we accomplished several low altitude *UAV* (*Unmanned Aerial Vehicle*) surveys in order to get a clear image of the surface archaeological structures, by obtaining high precisely point-filtered *DSM'S* (*Digital Surface Models*) which revealed us several interesting aspects about the site planning.

The limits of the analyses are clear, due to the fact that we used only a reevaluation of the older excavations in connection with the digital models. Even so, the results are promising and shows us a quite different perspective on the local frontier decision and planning.

## Older accounts of the frontier installations from Brebi. Surface surveys and excavations

Integrated within the first systematic survey of the frontier of *Dacia Porolissensis*, the Brebi frontier installations have an archaeological story of their own. In order to simplify the polemic, we will not use the local toponyms of the structures but we will name them *Brebi I*<sup>10</sup> and *Brebi II*,<sup>11</sup> following thus their textual descriptive order.

The first identified structure was therefore *Brebi I*. It was discovered on field by the Hungarian archaeologist and father of the northern Dacia *limesforschung*, Torma Károly, being firstly published in 1864<sup>12</sup> and

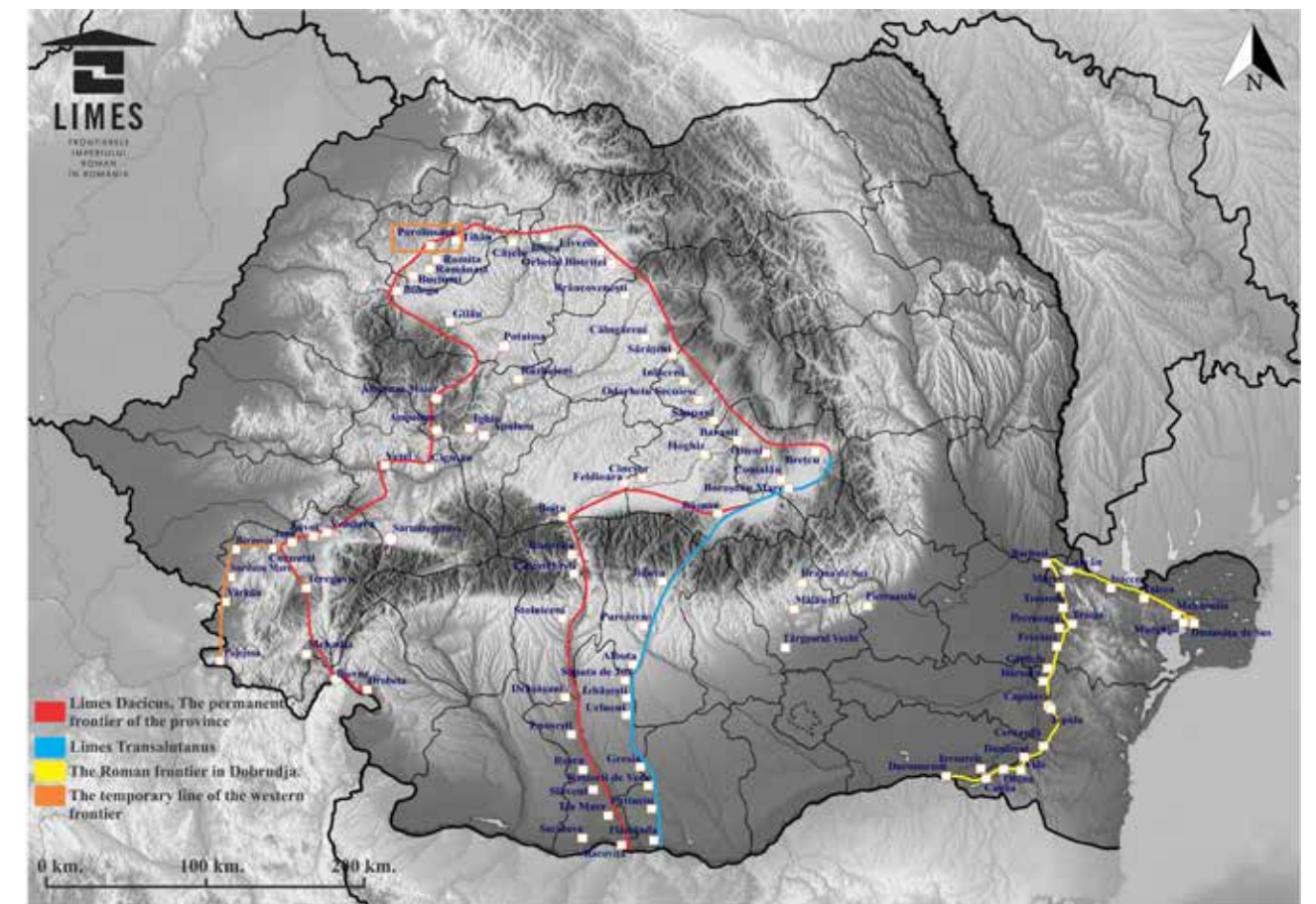


Fig. 1 - The frontier of Dacia (© Limes-The Frontiers of the Roman Empire in Romania National Project)

later in 1880,<sup>13</sup> recording without excavations (or ground plans) its approximate dimensions. A step forward was taken slightly later, in 1912, when another renowned Hungarian archaeologist surveyed the area. Buday Árpád, even he interpreted the Dacian frontier in a quite automatic way and with rather inadequate methods,<sup>14</sup> he managed to achieve the first topographical ground plan of the structure from *Brebi I*<sup>15</sup> including also the second structure from *Brebi III*<sup>16</sup> and the linear fortification.<sup>17</sup>

After the First World War, the Romanian archaeologist have approached the subject of the north-western

frontier of *Dacia Porolissensis*.<sup>18</sup> *Brebi I* was the target of a rather chaotic archaeological excavation made by C. Daicoviciu, in 1933. His *perpetuum mobile* was mainly to infirm the existence a continuous linear frontier system *per se* on the Meseș Mountains and especially in the *Porolissum* area and also to neglect the older theories of Buday A.<sup>19</sup> and E. Fabricius.<sup>20</sup> Anyway, the excavation (with no archaeological plan recorded) made C. Daicoviciu to postulate the theory of an early 2<sup>nd</sup> century *burgus* mainly because of the lack of stone walls combined with a few potsherds and scattered adobe marks.<sup>21</sup>

<sup>1</sup>See in this direction Ferenczi 1941, 189–214; Ferenczi 1967, 143–162; Gudea 1985, 143–218; Gudea 1989, 51–115; Matei 1996, 63–73; Matei 2007, 250–269; Opreanu, Lăzărescu 2016; Cociș 2016, 41–75.

<sup>2</sup>The present example to which we can add the case of the frontier fortlet from *La Strâmtură* (see Pop, Csók 2011, 250–251; Cociș 2018, 38–39, 68 Pl. IV, with the older bibliography) or the fortlet from *Dâmbul lui Ionaș* (Gudea 1989, 103–104), both located within the frontier system from *Porolissum*.

<sup>3</sup>Torma 1864, 35; Torma 1880, 81.

<sup>4</sup>Due to the fact the Romanian language do not possess a term similar to fortlet or *kleinkastell* (see in this direction Jones 2015, 931; Symonds 2018, 8), the Romanian researches are using the Latin counterparts to designate these medium-sized fortifications from the frontier area (Ferenczi 1959, 347; Ferenczi 1971, 609; Gudea 1997, 22).

<sup>5</sup>In the terms and the acceptance of M. Symonds (Symonds 2018, 17).

<sup>6</sup>Gudea 1989, 95–102.

<sup>7</sup>Daicoviciu 1935, 255; Macrea *et al.* 1962, 493, 496.

<sup>8</sup>Ferenczi 1941, 189–214; Gudea 1997.

<sup>9</sup>Daicoviciu 1935, 255.

<sup>10</sup>The local toponyms for the Brebi I structure: *Sub Citeră*, *Roata Dungii*, *Turnul mare de la Brebi*, *Bisericiuță*.

<sup>11</sup>The local toponym for the Brebi II structure: *La Școală*.

<sup>12</sup>Torma 1864, 35.

<sup>13</sup>Torma 1880, 80–84.

<sup>14</sup>Buday 1912, 107, 112–118; For analyses and critics see Ferenczi 1971, 613–614; Cociș 2016, 43–44.

<sup>15</sup>Gudea 1989, 376 Fig. 30.1.

<sup>16</sup>Gudea 1989, 380 Fig. 34.1.

<sup>17</sup>Gudea 1989, 383 Fig. 38; See the redrawings in Cociș 2016, 60 Pl. VI.a.

<sup>18</sup>Cociș 2016, 41–46.

<sup>19</sup>Buday 1912, 103–118; Buday 1914, 95–105.

<sup>20</sup>Fabricius 1926, 642.

<sup>21</sup>Daicoviciu 1935, 255.



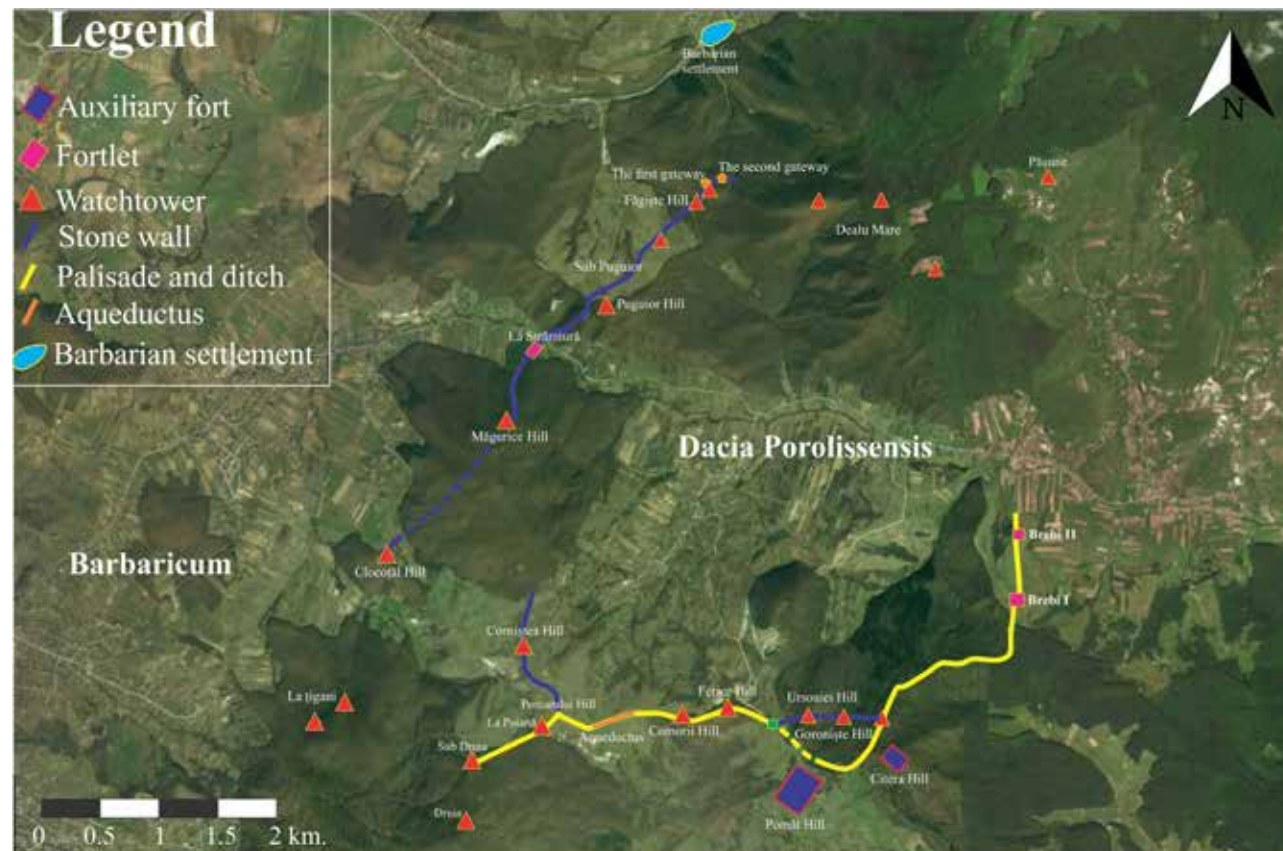


Fig. 2 - The fortlets from Brebi in their frontier landscape settings.

Another *descriptive* episode of *Brebi I* was pointed out within the field research carried out by Ferenczi István, in the early 40's. Among other details about the aspects of the ruins highlighted in his descriptions, two of them are of greater interest: a) the fact the linear fortification does not have fully integrated the fortlet, having thus no contextual connection with the defensive elements of the structure and b), his observations that on the southern and eastern side (wrong), the fortlet has two gaps in the fortified elements, interpreted by Ferenczi as access gates,<sup>22</sup> aspects to which we will come back later. It is worth mentioning that the first aerial photos of the area were achieved also in the abovementioned decade. In one of them, one can see the linear fortification and the two structures from Brebi.<sup>23</sup>

The first systematic archaeological excavations of *Brebi I* were conducted in the summer of 1959.<sup>24</sup> The few results achieved are still quite interesting and important. Three trenches and an open surface<sup>25</sup> were carried out in order to observe the inner stratigraphy of the site and its defensive elements. The precinct of the fortlet is composed of an earth rampart with a height between 1.2-1.6 m and a base width of 9-12 m. The defensive ditch was identified only on the western side of the fortlet (false), having a width of 2.15 m and depth of -1.6 m.<sup>26</sup> Inside the precinct rampart, the authors of the excavations reported the traces of a timber and adobe building, with a rooftop made of tiles, interpreted by them (in a correct way) as a military barrack. Judging by its dimensions of 4 x 3 m,<sup>27</sup> it is more plausible to be a barrack chamber than a whole barrack block. The majority of the archaeological material was composed

of common pottery, bronze and iron fragments, a coin and a bronze brooch,<sup>28</sup> today (most probably) lost.

The second, smaller, installation from Brebi, henceforth called *Brebi II*, has a similar historiographical excursus as the previous one, mainly due to the fact that is located precisely 216 m north from *Brebi I* fortlet. It was originally discovered by Torma,<sup>29</sup> drawn by Buday,<sup>30</sup> redrawn and discussed by Ferenczi<sup>31</sup> and later excavated by Daicoviciu<sup>32</sup> and Macrea,<sup>33</sup> within the same years and archaeological campaigns as *Brebi I*. Ferenczi observed the fact that the structure is naturally anchored within the framework of the linear fortification which continues 200-250 m north, a fact previously underlined by Daicoviciu,<sup>34</sup> validated also within our digital model.<sup>35</sup>

Due to the fact that we do not have any conclusive data or plans about the excavations undertaken in 1933 (we identified however the trench in the digital model of the surface), we can use only the data provided by the archaeological trench carried out in 1959. Based on their report, the precinct of the structure is composed of an earth rampart of 9.5-10 m and a preserved height of 1.2-1.8 m with a ditch on all four sides, measuring 2.5 m, with a depth of -0.6 m.<sup>36</sup> The same team observed that on the western side, the structure has a gap, within the structure of the ditch and the enclosure, of 3.5 m,<sup>37</sup> without anticipating exactly its purpose (or its eastern counterpart). Later, N. Gudea, observed again that the structure was built in the same time with the linear fortification.<sup>38</sup> In this case, there are no mentions of any wooden structure inside the enclosure, the archaeological material being extremely poor: several potsherd and a fragmented brooch<sup>39</sup> (most probably also lost).

Several accounts framed within a larger survey area<sup>40</sup> refer also to the linear fortification that connects the two structures from Brebi. Every author that described *Brebi I* and *II* observed the imposing linear fortification. Yet, the only useful accounts are given by Buday who made several altimetric profiles and by Macrea who excavated it by the means of a single archaeological trench. The structure of the linear fortification was basically a *fossa-vallum* system, the earthen rampart having a width of 8.5 m and height of 1.5 m; the defensive ditch has a width of 3.5 m and depth of -1.4 m. The linear fortification is thus a linear wooden palisade, with an elevated earthen rampart and a defensive ditch. (Fig. 3)

### Digital models of the structures and frontier interpretations.

In order to have a better picture of the site, an *UAV* based photo dataset was used. The raw data was achieved by the means of low altitude photogrammetric survey method in a gridded flight mission, being subsequently processed to obtain a high resolution filtered and georeferenced *Digital Surface Model* as a 3D topographical map for our study. Several steps were followed in order to achieve the final product. Firstly, we must underscore that the workflow was based on the *SfM*<sup>41</sup> (*Structure from Motion*) algorithm that allowed us the 3D reconstruction of the site surface.

The photos were introduced in a *SIFT* (*Scale Invariant Feature Transform*)-based software, in order to identify the *tie points* (the common points from the photographic data set); using the process called *bundle adju-*

<sup>22</sup>Ferenczi 1941, 193.

<sup>23</sup>Radnóti 1945, LXVIII.1, nr. 3-4.

<sup>24</sup>Macrea *et al.* 1962, 493.

<sup>25</sup>Macrea *et al.* 1962 Fig. 10, A; Gudea 1989, 97.

<sup>26</sup>Macrea *et al.* 1962, 493; Gudea 1989, 98.

<sup>27</sup>Macrea *et al.* 1962, 494; Gudea 1989, 98.

<sup>28</sup>Gudea 1989, 98-99.

<sup>29</sup>Torma 1880, 81.

<sup>30</sup>Buday 1914, 103.

<sup>31</sup>Ferenczi 1941, 197-199.

<sup>32</sup>Daicoviciu 1935, 255.

<sup>33</sup>Macrea *et al.* 1962, 494.

<sup>34</sup>Daicoviciu 1935, 255.

<sup>35</sup>Several geophysical surveys were carried out in order to identify the continuation of the linear fortification north of *Brebi II* (Opreanu, Lăzărescu 2016, 109 Fig. 68).

<sup>36</sup>Gudea 1989, 101.

<sup>37</sup>Gudea 1989, 101.

<sup>38</sup>Gudea 1989, 102.

<sup>39</sup>Macrea *et al.* 1962, 494.

<sup>40</sup>Macrea *et al.* 1962, 494.

<sup>41</sup>For the algorithm see Koenderink, van Doorn 1991, 377-385; Fonstad *et al.* 2012, 421-430; Westoby *et al.* 2012, 300-313;



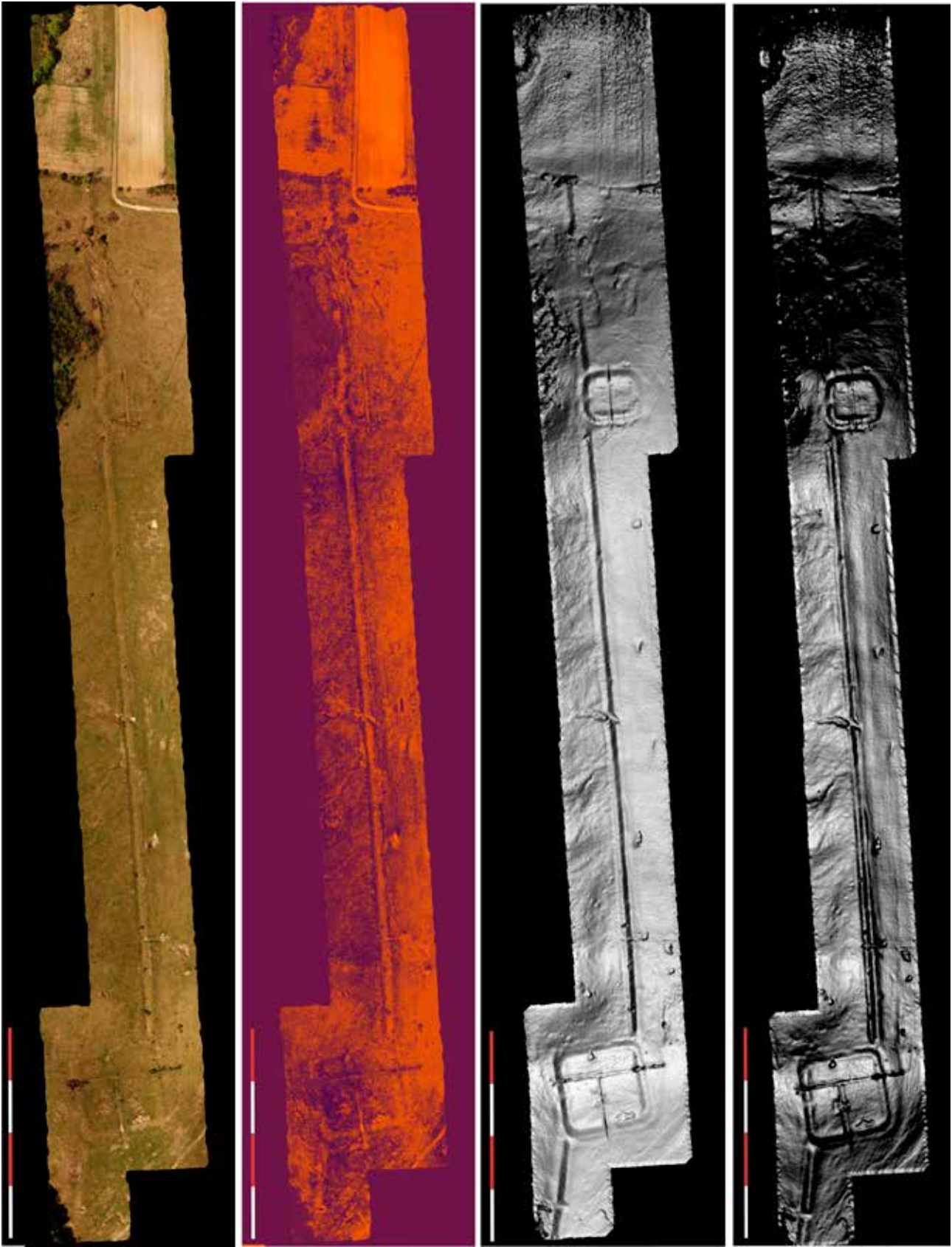
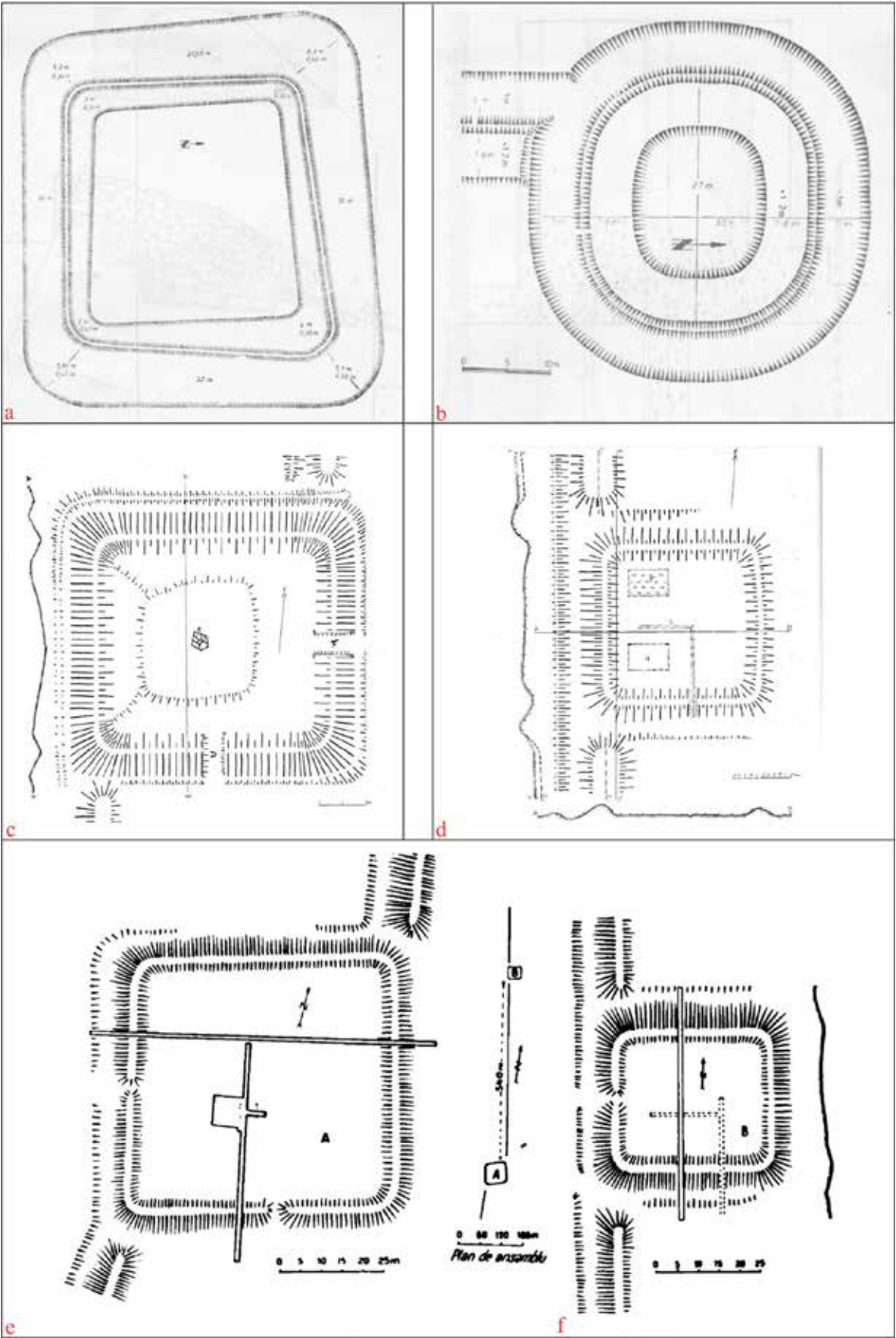


Fig. 3 - The evolution of the *Brebi I* and *II* ground plans: a, b-1912 (after Gudea 1989, 356 Fig. 10.1, 389 Fig. 34.1), c, d-1959 (after Macrea *et al.* 1962, 492 Fig. 10), e, f-1941 (after Ferenczi 1941, 194 Fig. 4, 198 Fig. 7).

Fig. 4 - The georeferenced photogrammetric and post-processed scanning of the frontier system from Brebi (© the author).



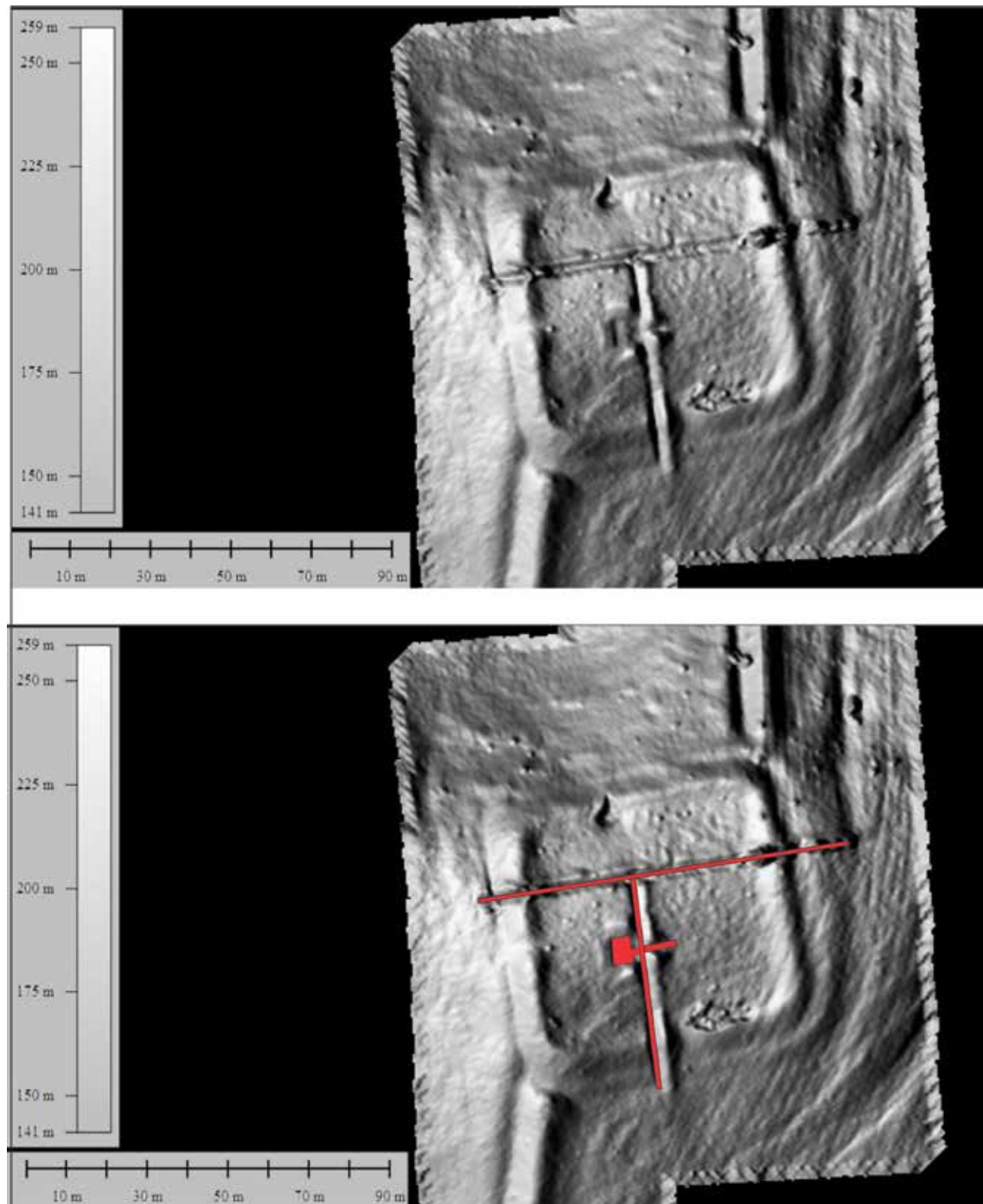


Fig. 5 - Digital Surface Model of Brebi I fortlet and the georeferenced excavations from 1959 (© the author)

statement,<sup>42</sup> the internal and the external geometry of the camera combined with the 3D reference of the whole scene, the *sparse point cloud* was extracted. Through the second process, we densify the *sparse point net-*

<sup>42</sup>For the *bundle adjustment* process see Triggs *et al.* 2000, 298–372; Liu, Zayer 2012, 1–12.

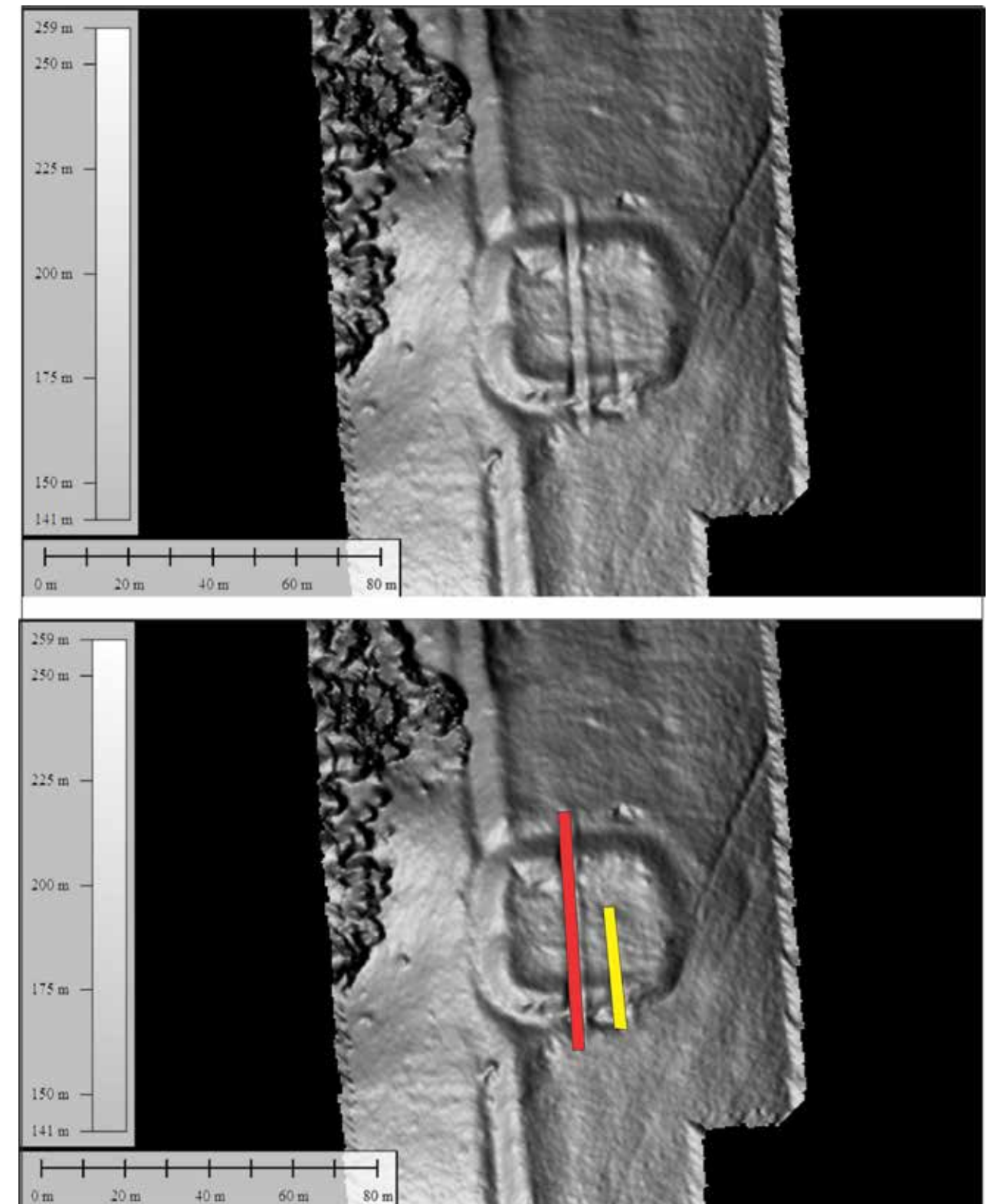
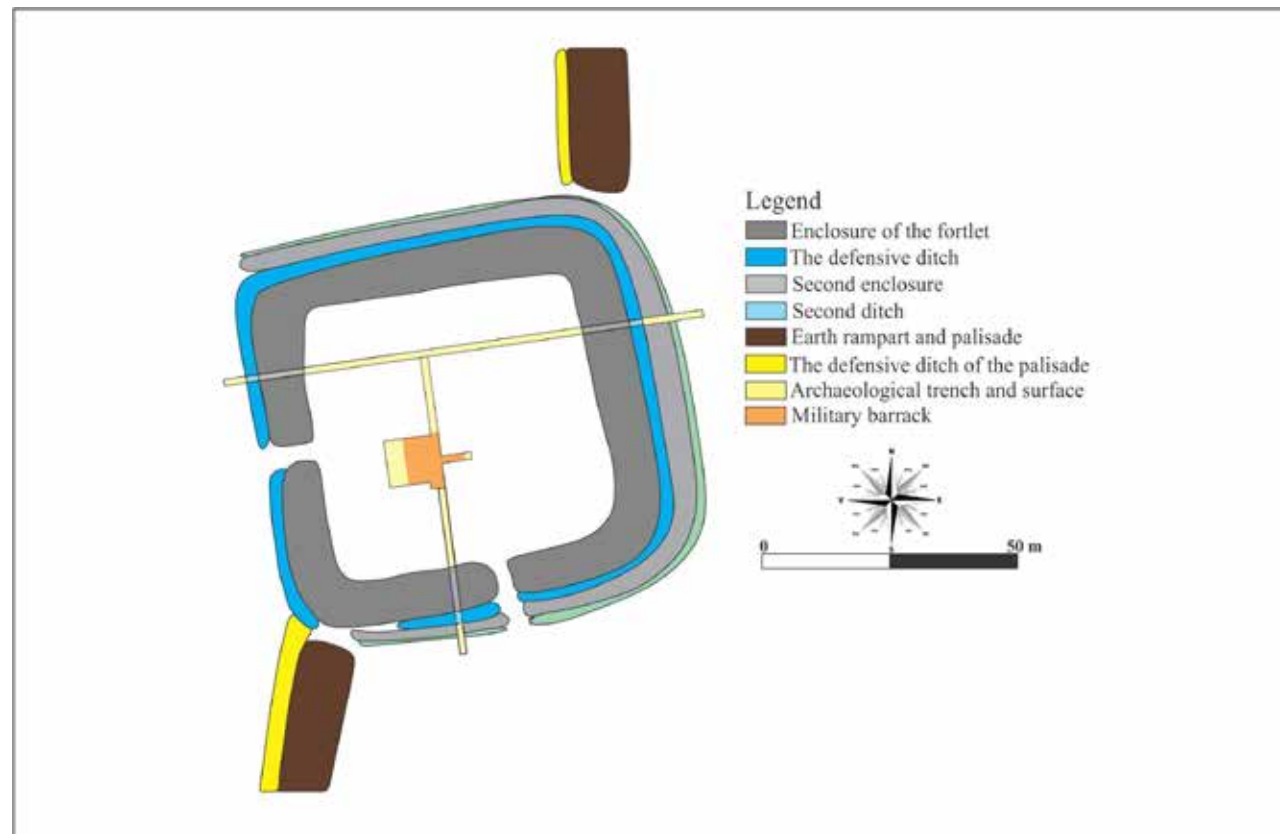


Fig. 6 - Digital Surface Model of Brebi II fortlet and the georeferenced excavations from 1933 (yellow) and 1959 (red) (© the author).

work within algorithm process called *MVS* (*Multi View Stereo*),<sup>43</sup> the *sparse point* network becoming a *dense*

<sup>43</sup>For a similar workflow applied on the sites of *limes Transalutanus* see Ștefan, Ștefan 2016a, 255–270. See also Ștefan, Ștefan 2016, 25–35.

Fig. 7 - Digital Surface Model-based interpretation of *Brebi I* (© the author).

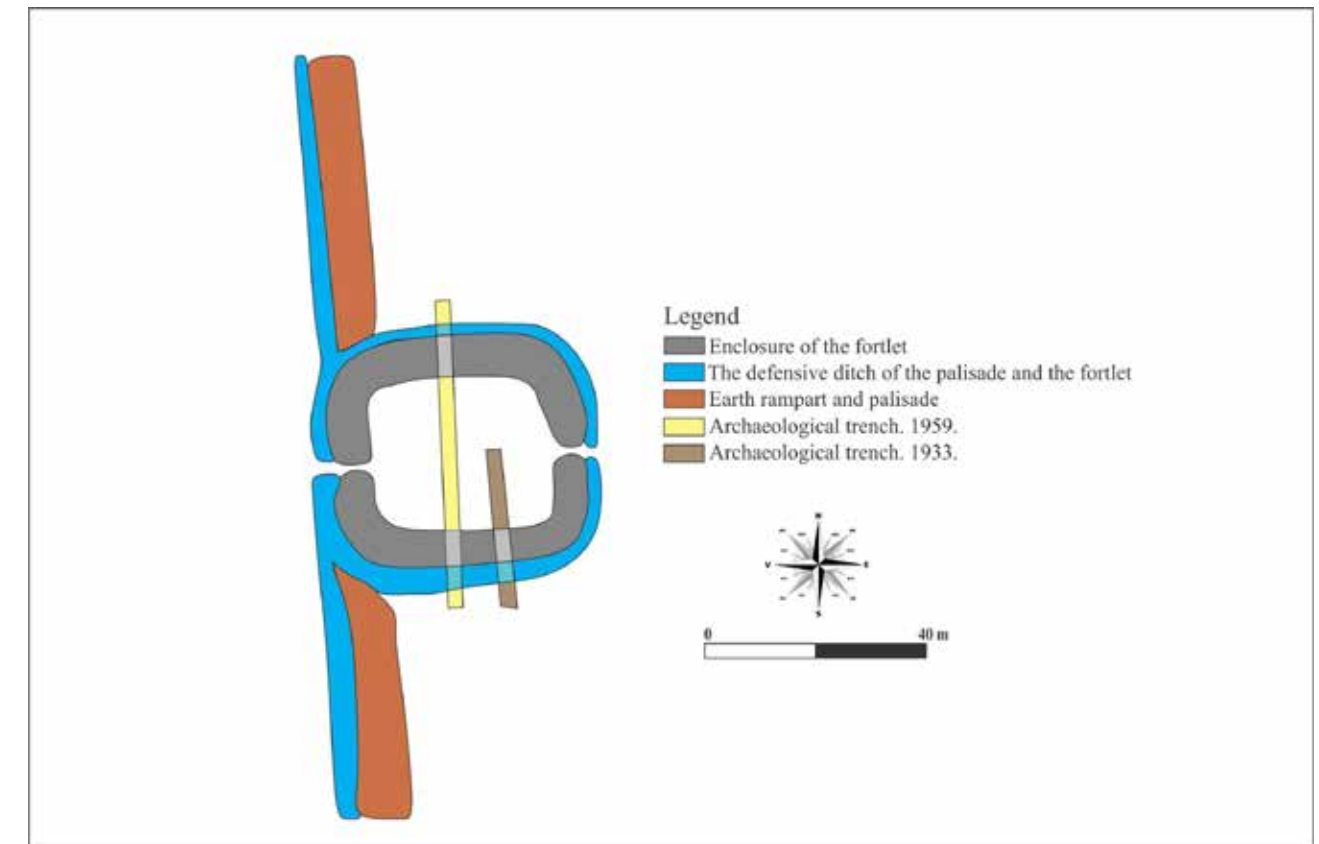
point cloud, containing in this particular case, 24 million common points (Figs. 1-3).

In this stage, the dense point cloud was exported in a .las file, being later interpolated in a GIS-based software obtaining a *Digital Surface Model* with a high resolution. By setting the dynamic *hillshade*, we were able to see in detail the surface remains (and phases) of the frontier structures from Brebi. Further, the dense point cloud was processed in a triangulated 3D mesh model, being also textured and exported as a high quality georeferenced (with *RTK-based Ground Control Points*) orthophotoplan. By constructing these final data, we obtain not only a high quality orthophotoplan of the structures but also a high quality digital model of the site, so needed for further research and analyses. By creating these models, we are able to calculate their true dimensions and surfaces and also to create an accurate site plan.

As we have underscored, even if the frontier structures from Brebi were the subject of several major field surveys, their role and position in the frontier system was quite ignored, or in the best case, approximated. Due to the historiographic clichés ubiquitous in the Romanian literature from the 20<sup>th</sup> century and even from the early 21<sup>st</sup> century, the frontier of Dacia Porolissensis (analyses within the general framework of *limes Romanus*) was especially seen as a military controlled barrier with an organic sealed, physical organization and an almost inexistent permeability.<sup>44</sup> By detaching of such interpretations, we have positioned our theoretical sphere amongst the interpretative directions that considers the frontier a controlled crossing system, manned by the military factor and with a highly economical role.<sup>45</sup> Combining this aspect with new data regarding the Brebi area and several new info about the linear frontier fortifications from Porolissum, we are able to create a theoretical and a chronological framework of the installations from the studied area.

<sup>44</sup>Ferenczi 1968, 95–96; Ferenczi 1971, 599–622.

<sup>45</sup>Based mostly on Whittaker 1994, Breeze 2012 and Symonds 2018.

Fig. 8 - Digital Surface Model-based interpretation of *Brebi II* (© the author).

The first important aspect is the relative chronology of *Brebi I* and *II* and their contextual relations with the linear fortification. Based on the *Digital Surface Model* of *Brebi I*, we believe that the military installation was built initially as a *freestanding fortlet* in the frontier area, before the building process of the continuous palisade. The fortlet is slightly irregular, measuring 54.24 x 55.64 x 61.25 x 57.23, having rounded corners and a defensive ditch on all four sides. This was, in our opinion, its first layout. Subsequently the building of the continuous palisade that goes (in a rather quasi-homogenous manner) from *La Poiană* to *Brebi* (Fig. 1), anchored at some point the fortlet. Thus, as we can observe on the digital model interpretation and in the photos taken in the field, the linear fortification does not fully integrate the fortlet but stops in its southern and norther corners. The gaps are measuring between 5–6 m. The strange fact is that a second, smaller enclosure appears, together with a smaller ditch, probably as an outcome of the palisade. The enclosure and the ditch are built only on three sides, except for the western one

(Fig. 7). Based on the digital scanning, it is clear now that the gates of the fortlet are located on the western and norther sides being use not for crossing but rather for military activities.

The situation of the *Brebi II* installation is slightly different. In this case, the smaller structure is measuring 33 x 31 x 31.5 x 33, having also rounded corners and defensive ditch on all four sides; the structure has a more regular appearance. The major difference is that *Brebi II* is organically integrated within the linear fortification with no gaps left, this particular aspect indicating a building process undertook simultaneously with building process of the palisade; thereby, we postulate the hypothesis that *Brebi II* is dating slightly later than *Brebi I*, functioning most probably together for a short period of time (Fig. 8).

Based on a recent published study,<sup>46</sup> we observed how the Porolissum frontier system was organized in an earlier (most probably in the reign of Trajan) phase

<sup>46</sup>Cociș 2019, 45–59.





Fig. 9 - Post-processed aerial photography of *Brebi I* (© the author).



Fig. 10 - Post-processed aerial photography of *Brebi II* (© the author).

with watchtowers but not linear fortifications (a later, Hadrianic concept<sup>47</sup>), these minor structures being subsequently integrated within the later palisade. We believe in this point that the fortlet from *Brebi I* was such a case. A *freestanding fortlet* built in an early landscape frontier, to supervise and control the possible movement across the frontier. Later, when the palisade system was built (we are inclined to believe that the first linear earth and timber fortifications were erected



Fig. 11 - Post-processed aerial photograph of the palisade and the ditch (© the author).

during the reign of Hadrian), *Brebi I* was integrated for a relative time span in this frontier system, altogether with *Brebi II*. In the case of this later installation, the earlier accounts did not mention the traces of barrack blocks inside the enclosure. The gates of *Brebi II* indicates however that this structure, actually a smaller fortlet, could be used as fortified gateway,<sup>48</sup> organically anchored in the palisade system, in connection with the frontier human dynamics. The plan and the dimensions are extremely similar with the milecastle passages from Hadrian's Wall,<sup>49</sup> except for this local example is made of earth and timber. In this manner, we theoretically assume the presence of one or two barracks inside the enclosure for the accommodation of the soldier that manned the smaller fortlet.

We do not know how long this system did actually was used in the administration of the frontier. The existence of a second linear fortification (an *opus incertum* stone wall of almost 3 km<sup>50</sup>) and a stone fortlet located 4 km west of Brebi (in the point called *La Strâmtură*<sup>51</sup>) could indicate a short use for the fortlets of Brebi and a decommissioning of a part of the palisade due to the

fact that (most probably) the physical frontier suffered a local permutation at a certain point.

It is assumed that the timber fortlets did not stay in use for a long time both due to the degradation of the wooden structures and the continuous development of the frontiers,<sup>52</sup> the fortlets responding to a particular security situation at a given time.<sup>53</sup> The structures from Brebi could represent an early episode of the north-western organization of the frontier of Dacia Porolissensis, as much as a response to a particular frontier situation in its early stages.

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<sup>47</sup>Whittaker 1994, 60–98; Breeze 2012, 55–91.

<sup>48</sup>Symonds 2013, 53–70; Symonds 2018a, 153–158.

<sup>49</sup>Breeze, Dobson 2000, 33–40; Symonds 2018, 114–116; Symonds 2018a, 153–158.

<sup>50</sup>Matei 1996, 63–73; Matei 2007, 250–269.

<sup>51</sup>Cociș 2018, 38–39, 68 Pl. IV.

<sup>52</sup>Breeze 2011, 5.

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**Zusammenfassung**

Die Organisierung und die Verwaltung der Grenze von Dacia Porolissensis hatte ein funktionelles Modell der räumlichen Verteilung von kleinen Befestigungen, das meistens von den topografischen Gegebenheiten bestimmt war. Die Letzteren definierten den strategischen, militärischen und wirtschaftlichen Faktor der Grenzregion um Porolissum (Kr. Sălaj, Rumänien). Vorliegende Abhandlung setzt sich als Vorhaben, eine neue Bewertung derartiger kleinen Befestigungen zu erstellen, nämlich derjenigen, die in der Fachliteratur als burgi (Kleinkastelle) bekannt sind. In unserem Fall handelt es sich um die zwei Kleinkastelle von Brebi (Gem. Creaca, Kr. Sălaj). Diese kleinen Befestigungen befinden sich in der Nähe des großen militärischen Komplexes von Porolissum und sind schon seit der zweiten Hälfte des 19. Jh. bekannt. Sie wurden sowohl an der Oberfläche als auch durch Ausgrabungen untersucht. Auf Grund dieser Untersuchungen schlagen wir eine neue Evaluierung der oben genannten Strukturen vor, wobei wir u. a. Fotogrammetrie von geringer Höhe benutzen, um den genauen Grundriss der Kleinkastelle erstellen zu können. Auf Grund von Analogien und der Situation auf dem Gelände ist es sehr wahrscheinlich, dass wir es hier mit einer frühen Etappe der Grenze von Dacia Porolissensis zu tun haben, eine Etappe in der man lineare Befestigungen benutzte. Später entstand dann vermutlich auch ein frühes Kleinkastell (wahrscheinlich traianisch-hadrianisch) und ein befestigter Zugangsweg in die Provinz.



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# **New LiDAR Data on the North-Western *Limes* of Dacia**

## **ABSTRACT**

In the Northwest, the limit of Dacia was the highland chain of the Mountains Meses, which separate the Transylvanian basin from the Pannonian plain. Its summit connects the Apuseni Mts and the Eastern Carpathians, as a natural barrier, a geographical limit between two basins, long of about 60 km.

It is the most spectacular sector of the Roman frontiers here, with visually connected towers built in a network on the crest of the hills, with forts behind, fortlets and earthen ramparts blocking every valley penetrating the chain of the mountains.

Some of the towers have been archaeologically investigated, until recently never topographically mapped. We don't know when the limes was built. On Trajan's column there is no trace of such an event and neither in other sources. In most of the auxiliary forts aligning behind the limes, evidence dating from the time of Trajan was found. The combined structures of the northern limes, meaning rows of towers in different shapes, parallel lines of defense, sometimes a wall, or just an earth rampart are proof of not only the complexity of the Dacian limes, but also of a very dynamic chronology. In the few archaeological researches inside the towers, the earliest traces were coins from the mid-2<sup>nd</sup> century AD.

The new LiDAR evidence on an interval of more than 60 km in the mentioned area reveals other interesting features which prove more phases in building this frontier of Dacia.

**KEY WORDS:** ROMAN ARMY, FORT, LEGION, *LIMES*



## History of research

The systematic research of the north-western border of Dacia began in the seventh decade of the 19<sup>th</sup> century. The researchers who committed themselves to studying this complex system, along with their essential works on the *limes*, were enumerated in some of the fundamental studies for understanding the frontiers of Dacia.<sup>1</sup> The first to tackle this area was K. Torma, who employed the term *limes dacicus*.<sup>2</sup> He described in the area of Crișului Valley, to the north, in the locality of Poieni, the start of the *limes*. This was presented as a more complex system, comprising a smaller-sized fortification (50 x 47m) whence started a stone wall on a length of circa 80m towards the north, continued to the north-east by an earthwork; the *limes* advanced for 65km,<sup>3</sup> until Porolissum. Investigations followed only at some of the watchtowers. Due to the large gaps between them, K. Torma admitted that there must have been more.<sup>4</sup>

T. Ortway and Fl. Rómer doubted the Roman character of the features, in spite of the finds.<sup>5</sup> A. Domaszewski did not believe that there was a continuous line, suggesting, correctly, a 'Thalsperren' system.<sup>6</sup> Finally, G. Finály was among the few to undertake field research, even excavating one of the towers in the area of the

fort at Bologa. In his tower, he claimed that the traces discovered by K. Torma were not Roman, at most the Romans using a pre-existing structure, thus suggesting a pre-Roman dating.<sup>7</sup>

K. Torma's idea of an uninterrupted line would not lack supporters, two of them being Á. Buday and Téglás Gábor.<sup>8</sup> Only the former carried out actual field research, identifying the towers described by K. Torma, correcting the information and discovering new towers.<sup>9</sup> E. Fabricius followed the same lines, emphasising the idea of a continuous turf wall stretching from the north of the province to the Danube.<sup>10</sup>

Already in 1921 I. Marțian claimed that, on the basis of the erroneous interpretation of an inscription discovered at Coplean (CIL III, 827), the *limes dacicus* had been considered as the 'Roman limit' from the Criș to the Someș rivers, on the ridge of Meseș Mountains.<sup>11</sup> The reading of this inscription had been corrected to *reg(io) Ans...* by A. von Domaszewski in 1902 (CIL III, 7633).<sup>12</sup> I. Marțian continued with the description of some earthworks and 'Cyclopean walls' in the area of Porolissum, correctly identifying some of the watchtowers and small-sized fortifications.<sup>13</sup> The border system became more complicated near Porolissum, the author mentioning the existence of a stone

<sup>1</sup>One of the most important studies was that of I. Ferenczi, who deplored the fact that after 100 years of research there was still no clear image of this 'unique' defensive system, Ferenczi 1971, 599. This synthetic study continued other essential contributions to the knowledge of the north-western border of Dacia, see Ferenczi 1968.

<sup>2</sup>He undertook the first field research, especially in the area of Porolissum, at the beginning of the 1860s, Torma 1863, 34–7.

<sup>3</sup>Only the drawing reveals that the fortification was crossed by the modern road. Also of interest is the description of two constructions (N/A towers or, probably buttresses) adjacent to the wall, the first at 182 steps (circa 60m) and the second near the end of the wall, having 0.85m wide walls, Torma 1880, 53–4, Fig. 1.

<sup>4</sup>Torma 1880, 61.

<sup>5</sup>Ortway, 1875, 225–233; 257–270; 292–306; Rómer, 1875.

<sup>6</sup>Probably referring to the blocking of valleys with the help of auxiliary forts, Domaszewski 1893, 242. It probably did happen this way initially, until the building of watchtowers, the earliest during Hadrian's reign.

<sup>7</sup>Finály 1904.

<sup>8</sup>Buday 1912, 107–18. The second was an amateur archaeologist who was also influenced by the comparison between the Dacian *limes* and the one in Germany (Téglás 1906; 1907), having not only scientific arguments, see Gall 2014, 268–70.

<sup>9</sup>Buday 1912, 105–107.

<sup>10</sup>Fabricius 1926.

<sup>11</sup>He considered the sites belonging to the *limes* as 'preceding the Roman rule in Dacia' and believed the earthwork had a ditch on both sides: 'on lopsided slopes, in rocky places and at pass entrances, the vallum is replaced by Cyclopean walls... the line of the vallum is interrupted by a series of inserted small fortresses... some being circular wall constructions, while others simple earth circumvallations', Marțian 1921, 9–10.

<sup>12</sup>A *reg(io) Ans(amsium)* was proposed only in 1926, see Pârvan 1926, 275.

<sup>13</sup>He asserted the existence of a complicated system that sealed off a territory of 7 sq. km, Marțian 1921, 10.

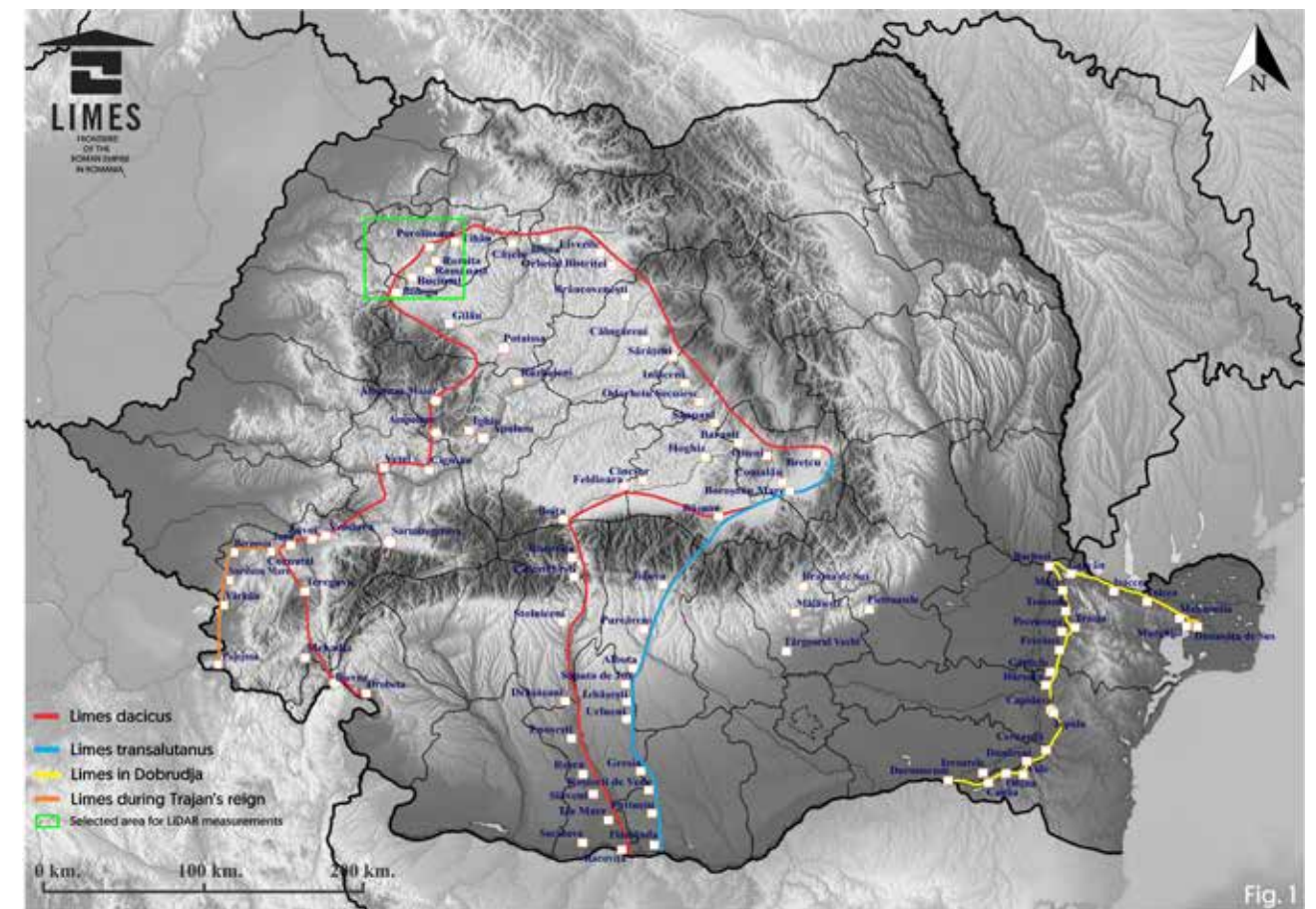


Fig. 1 - The map of Dacia, ©Felix Marcu

wall continued by a vallum; therefore, he distinguished between the two.<sup>14</sup>

In about the same period C. Daicoviciu surveyed the discussed area, concluding that, except for some segments, there was no continuous *limes* line.<sup>15</sup> By 1940, A. Radnóti employed here for the first time aerial photography in order to identify the frontier in the area of the Meseș Mountains, once more arguing, unsuccessfully, in favour of a continuous *limes*.<sup>16</sup> He was probably among the last to claim this. It is obvious that the *limes* in this area consisted of a complex system, which

combined networks of watchtowers with small fortifications and, at some places, with earthwork barrages with or without ditch and stone or only sill walls, usually built in the area of passes and even in higher grounds near Porolissum. This is true only for the north-western *limes*, until the area of the fort at Tihău; from here on, only towers arranged in networks and, rarely, small fortification in valleys or on low terraces are known. Until in the 2000s, numerous researchers reopened the issue of the north-western *limes*, among the most important being I. Ferenczi, N. Gudea and Al. V. Matei. Most of the times field investigations overlapped, pri-

<sup>14</sup>Entering the Strâmtură (A/N the 'Meseș Gate' pass) one can see the traces of a wall descending on the slope into the valley and then climbing the opposite slope until the nearest ridge, where it ends in a double, concentric circumvallation. From this point on, an earthwork that continues the wall turns to the east, following the ridge of the last ramification of the Meseș Mountains and leads to Agrișului Valley' (A/N where it ends, in the area of Prodănești), Marțian 1921, 10, Fig. 4. On the map, perpendicular to this wall and joining it, uninterrupted earthworks are illustrated, continuing the one known at Brebi and in the proximity of Ciglean village. Al. V. Matei claimed that the blocking of this valley was discovered only in the 1990s, a novel piece of information published for the first time in 1996 (Matei 2007, 251). This is only partially true, even if I. Marțian had claimed that the wall was continued by a vallum (Buday 1912, 118). For that matter, A. Buday recalled that K. Torma had claimed that the earthwork was sometimes replaced by walls (Buday 1912, 118), without mentioning the exact spots.

<sup>15</sup>Daicoviciu 1935, 255–256, 303–304.

<sup>16</sup>Radnóti 1945, 143–60.



marily because accurate topographic mappings were never made.<sup>17</sup>

### Topography

Meseşului Ridge divides the Transylvanian Basin, part of Dacia, from the Tisza Plain. It comprises dwarf mountains that form a natural obstacle on the north-east – south-west direction, on a length of 65km, with maximum heights of 1000m, crossed by very few valleys. The forts were placed at distances of around 10km or even less between them, starting with the one at Bologa to the south-west and ending with the one at Tihău to the north-east (Fig. 1). Because of the configuration of the terrain, it was nearly impossible to build a continuous artificial barrage, which would have been useless anyway. The watchtowers on the ridges of the Meseş Mountains are very difficult to identify in the field, since the toponyms had been changed several times during the 19<sup>th</sup> century, or were wrongly transcribed.<sup>18</sup> It is true that the Romans could have avoided Meseşului Ridge. Beyond, to the north-west, there was a relatively flat plain, but they preferred to take advantage of the terrain. Although the northern *limes* is different, east from Someşului Valley the cuesta-shaped hills being oriented to the north-south, the frontier system is similar, though lacking, as far as we know, artificial linear barriers. The situation in front of the two *limes* sectors on the other hand is different. To the north, there were extremely few traces of settlements contemporary with the existence of the province. Most were located to the north-west, and even here they were

not close to the Roman border.<sup>19</sup> The relations with the Romans must have been generally peaceful, especially after the Marcomannic Wars.

### LiDAR measurements

For the first time, the towers around the fort at Bologa started to be re-identified and at the same time charted with modern means<sup>20</sup>. These investigations allowed GIS analyses and especially visibility and inter-visibility studies.<sup>21</sup> Then, with the beginning of the 'National Limes Programme' in 2015, filed research intensified, remaining focused on delineating sites with the help of non-invasive methods (topographic instruments, aerial photography, LiDAR, geophysics, or simple surveys).<sup>22</sup> Considering the geomorphology of the terrain and the fact that most areas were forested, it became clear that LiDAR measurements had to be employed right from the start. These were initiated only in 2017 and covered an area of 660 sq. km, from the area of the fort at Bologa to the fort at Tihău.<sup>23</sup>

As we will see, the emplacement of towers was in close connection to the distribution of settlements in front of the border. These settlements clustered in front of the fortifications at Buciumi, Românaşi and Porolissum, in direct relation to the roads entering and exiting the province.<sup>24</sup> This is why the area was the most militarised, inclusively in terms of traffic control exercised by towers and smaller fortifications. Since most of the secure settlements or isolated finds outside the frontier were dated around the time of the Marcomannic Wars,

it is possible for the towers on Meseşului Ridge to date from that period as well.<sup>25</sup> The forts were undoubtedly early, located unusually close to each other, though this situation is not without analogies in the Roman Empire.

### Preliminary results

At this point, I will enumerate, from the south-west (Poieni area) to the north-east (Tihău area), a few elements that are clearly visible on the LiDAR data. Some of them confirm previous discoveries, others bring some nuances and there are also new elements.<sup>26</sup> Almost 30 new structures resembling the configuration of towers have been identified, but data processing is still ongoing.<sup>27</sup>

- the earthwork at Poieni, near the fort at Bologa, which probably started from a smaller-sized fortification seen only by K. Torma in the 19<sup>th</sup> century,<sup>28</sup> is clearly visible at circa 50m from where K. Torma appears to have observed it, near Vărădeştilor valley. In the measurements it is obvious that it does not go beyond the first tower (Poieni 1) identified in the area and investigated by N. Gudea.<sup>29</sup> The *vallum* keeps its course for circa 160m, and then takes a left turn, reaching the first known tower (Fig. 2).

- ever since K. Torma, researchers attempted to identify a road parallel to the towers on Meseşului ridge, especially given that the first believed in the existence of a continuous artificial barrier.<sup>30</sup> In the LiDAR measurements, such a road, which could indicate a connection

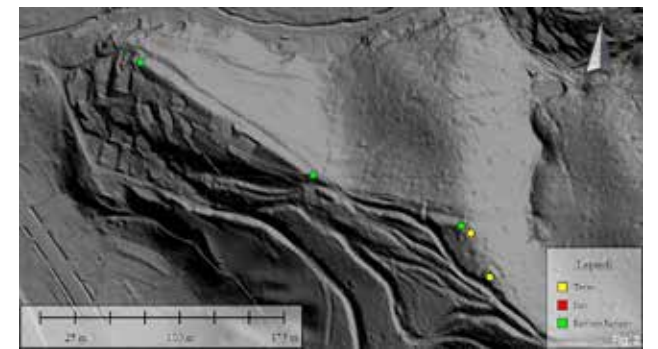


Fig. 2 - LiDAR details in Poieni area

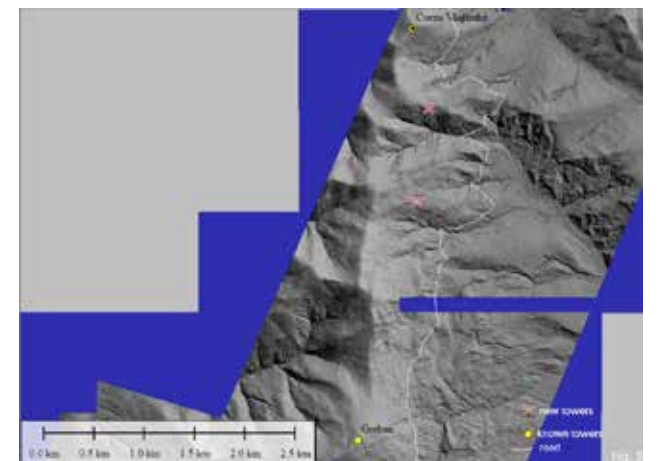


Fig. 3 - A segment with two new towers and the supposed Roman road

between the towers, is clearly visible in the area of the towers at Grebăn and Vlaşin, and follows the most adequate course (Fig. 3).

- other possible earthworks, sometimes mentioned, though never accurately charted, are visible in the

<sup>17</sup>The most relevant studies for this sector are the following: Ferenczi 1941; Ferenczi 1959; Ferenczi 1967; Ferenczi 1968; Gudea 1985; Gudea 1989, 105–15; Gudea 1997; Matei 1996.

<sup>18</sup>For the presentation of the geomorphology of the territory, see Ferenczi 1967, 145–6. The problem of changing or double toponyms had been already raised by A. Buday at the start of the 20<sup>th</sup> century. N. Gudea explained that this was the main difficulty in identifying towers, although he used the same method, Gudea 1985, 148–9.

<sup>19</sup>For the habitation areas to the north and west of the future province of Dacia, see <https://foldepites.wordpress.com/terkepek/>; Mihăilescu-Bărliba 1996, and extensively, with a rich bibliography, see Stanciu 2015.

<sup>20</sup>Also with the contribution of G. Cupcea and I. Petiş.

<sup>21</sup>The main conclusion was that the towers had been usually placed on the southern, more sheltered slope, arranged in a network (Gudea 1985, 151), and always at the visibility limit of one or several neighbouring towers, all with visibility especially towards the interior of the province, Marcu, Cupcea 2013; 582–6; Marcu, Cupcea 2015, 73.

<sup>22</sup>The first LiDAR investigations in the area of Porolissum were carried out in 2013, Opreanu *et al.* 2014. The institution responsible for the western and northern areas of Dacia is the National Museum of Transylvanian History, which benefits from collaborations with local institutions, especially regional museums; for recent results, see Marcu *et al.* 2018.

<sup>23</sup>A 'full waveform' was performed, with a scanning angle of 60°, a deviation of <0.25 mrad, with a precision of 20 mm. A RIEGL Q 780 sensor was used, with laser pulse frequency IGI IId of 256 HZ, CCNS4 type aerocontrol, OEM4/OEMV type GPS and a DTM/DSM of 0.50 m (pixels).

<sup>24</sup>Matei, Stanciu 2000, Annexe 19.

<sup>25</sup>St. Ferenczi connected them to Trajan (Ferenczi 1968, 87), but without putting forward decisive arguments. Taking into account the administrative and especially military re-organisation that took place during Hadrian's reign, the beginning of tower construction in this period cannot be excluded. This theory was considered for the first time by L. Homo, who still supported the idea of a continuous *limes*, see Homo 1925, 210. Even if the coins discovered in towers were dated starting with the middle of the 2<sup>nd</sup> and until the middle of the 3<sup>rd</sup> centuries AD, the towers were seen as contemporary with the forts, which had been built in the beginning of the province, cf. Gudea 1985, 157–8.

<sup>26</sup>I. Ferenczi established the total number of towers from this sector at 61, while N. Gudea counted 66, see Ferenczi 1968, 80; Gudea 1985, 151.

<sup>27</sup>It is possible for some of the new towers to be among those that had been discovered by I. Ferenczi and N. Gudea, a few having unclear toponyms.

<sup>28</sup>Called 'Dâmbul Vărădeştilor', Torma 1880, 56.

<sup>29</sup>Gudea 1985, 161. The *vallum* was recognised by everyone who dealt with the area. A. Buday identified the first towers (Buday 1912, 106), but he agreed with K. Torma, who had prolonged the earthwork until the first tower known to him, the one at Carpen, the third in A. Buday's count, see in brief Ferenczi 1959, 343–4.

<sup>30</sup>It was described as a 'cobbled road' that I. Ferenczi accepted with reservations only in the area of the *vallum* at Poieni, Ferenczi 1959, 343. A. Buday recalled a cobbled road in the beginning, and then a narrow path parallel to the *limes* (Buday 1912, 107–115), very difficult to discern. The natural conclusion is that there is no certainty these access ways were Roman; for the history of the issue, see Ferenczi 1968, 85–6.



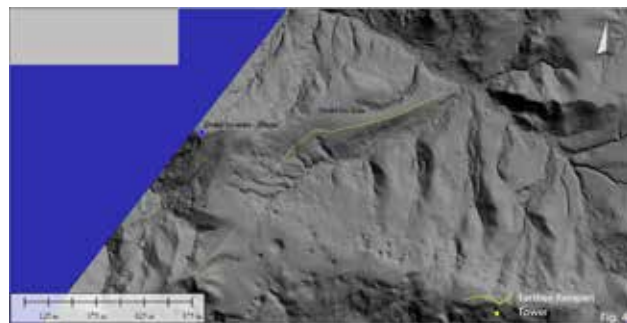


Fig. 4 - The area of 'Dealul Secuiului' with the presumed *burgus*

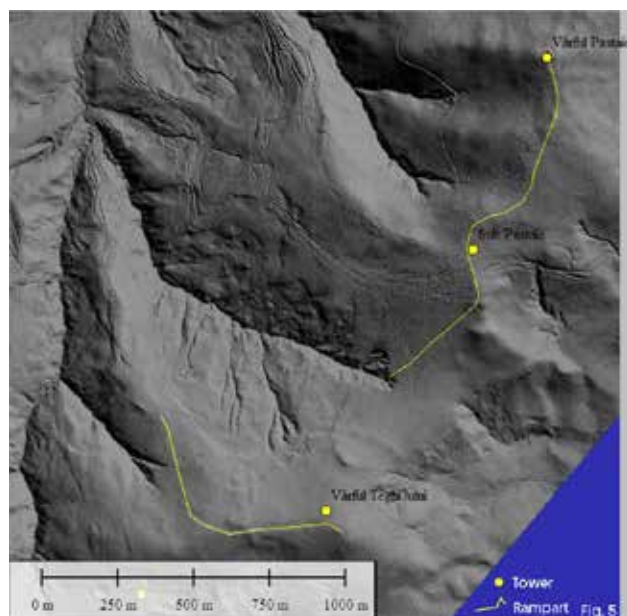


Fig. 5 - The area of 'Vârful Păstaie'

LiDAR data as well, in the area of Ragului valley, near Secuilor hill, where there should be a *burgus*,<sup>31</sup> unidentified; the only fortification here is one with irregular

sides, placed in front of the vallum, probably preceding the Roman period (Fig. 4)

Next comes the earthwork visible on a longer length in the area of Teghișului Peak,<sup>32</sup> towards Păstaie Peak. It is interesting how the tower on the peak is joined with the vallum (at this point the rampart actually ends), whereas the tower to the south is slightly behind it (Fig. 5).

The next visible sections of the earthwork are those near Porolissum, in 'La Strâmtură' area. The earthwork to the south-east of the *burgus* at Fântâna Sușigului, situated south from the present-day road, runs on a distance of circa 350m, as far as is visible on the LiDAR, towards Măguriță Peak.<sup>33</sup> Furthermore, LiDAR measurements indicate that the wall-earthwork cuts through the south-western corner of the fortification;<sup>34</sup> therefore, the earliest element is the ditch around the fortification, which probably belonged to an early phase of the fort.<sup>35</sup> One can notice several earthwork segments that double or complete the ones already known.<sup>36</sup> This includes the sector called 'La Strâmtură', where the earthwork appears to be doubled on the north-eastern slope (Fig. 6).<sup>37</sup> Further along, the trace of the wall investigated by Al. V. Matei at Poiana, in Mirșid,<sup>38</sup> is clearly visible. However, this is not rectilinear. It is visible only on a distance of circa 800m, until the new tower uncovered and researched by Al. V. Matei. Then, after a 300m gap, it can be distinguished on a portion of 550m, in the area of the towers on Vișinal hill. In addition, a ditch seems to be visible along the first portion of the wall, but this feature has not been identified by

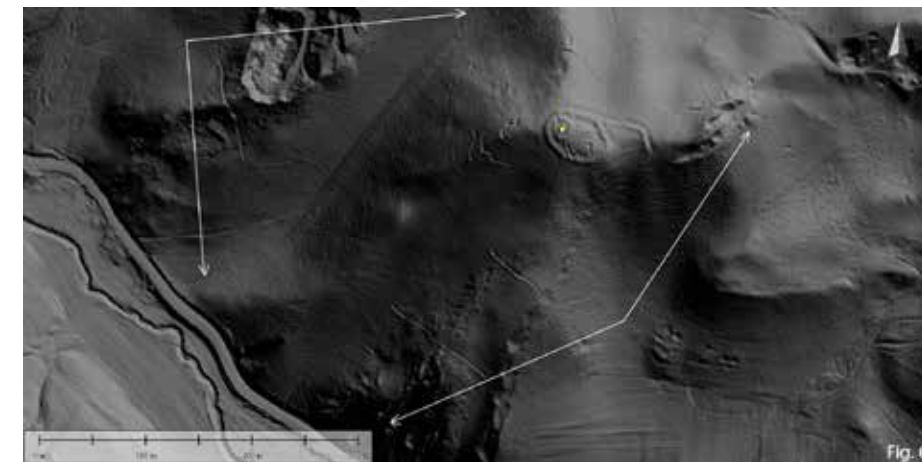


Fig. 6 - The area 'La Strâmtură' with two parallel earthen ramparts

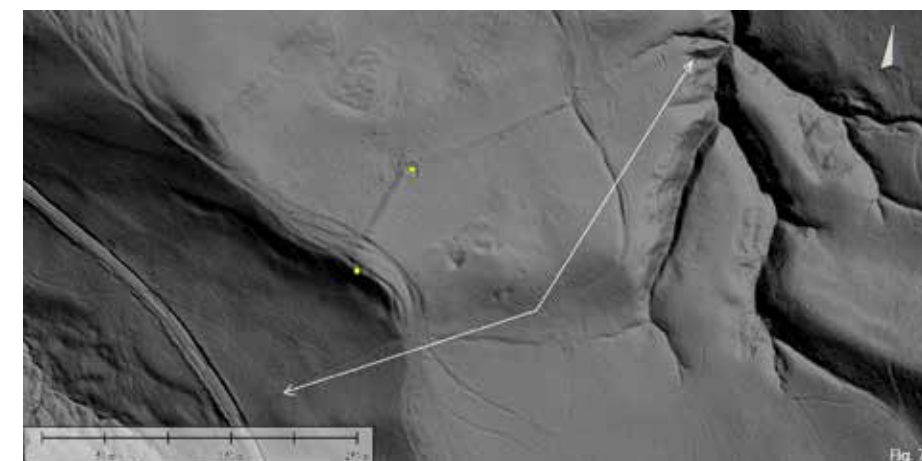


Fig. 7 - The area with the Roman wall and the gate, 'Dealul Vișinal'

archaeological research<sup>39</sup> (Fig. 7).

The next valley that appears to be blocked by earthworks is in Prodănești area. A short portion west from the present-day road and north from the stone quarry can be seen very clearly.<sup>40</sup> After a little over 1000m, other linear anomalies are visible in the continuation of this structure, on a length of circa 1100m, with a small gap of around 100m, towards a newly identified tower and towards the tower at 'Fundătura', the only common relay between forts at Porolissum and Tihău. Similarly, on the opposite side, east from Agriului valley, on the ridge oriented to the north-south, a linear structure appears, but this time following the edge of the hill. A series of other anomalies similar to tower structures

also surface here. The larger number of structures that seemingly comprised the limes system in this region could be explained by the confluence of three important river basins, the Agrij and Almaș flowing here into the Someș, which then turns to the north. Of course, if these elements are indeed Roman, not all of them will have been contemporary. This fact results from the visibility studies, which show that they overlapped, being very close to each other.

## Conclusions

As far as revealed by LiDAR measurements, the earthwork appears to be generally joined with the towers, as in the case of the ones at Poieni and Păstaie

<sup>31</sup>Ferenczi 1967, 157. The *burgus* was partially investigated by N. Gudea, but no archaeological material was discovered. Only the plan, the orientation and the construction system made the author believe that this was a Roman fortlet, Gudea 1985, 151, 167–8.

<sup>32</sup>Presumed by N. Gudea (Gudea 1985, 151). Maybe this is what I. Ferenczi referred to when he spoke of two vallum sections at 'La Șanț', Ferenczi 1967, 157.

<sup>33</sup>This vallum is also mentioned by Marțian 1921, 10, characterised as a wall, then by Matei, Lako 1979, 129 (visible on a distance of 250–300m) and by Gudea 1989, 106 (on a distance of 500–750m, characterised as a wall).

<sup>34</sup>Identified by Al. V. Matei as measuring 65x50m (Matei, Lako 1979, 129).

<sup>35</sup>For that matter, N. Gudea claimed that there were two construction phases, but from the drawing he provided it does not ensue that the wall coming from Măguriță joined the wall of the fort, Gudea 1985, 177, Fig. 29.

<sup>36</sup>Matei 2007, pl. II.

<sup>37</sup>Maybe this is the portion I. Marțian referred to when saying that '...it ends in a double concentric circumvallation', Marțian 1921, 10. On the other hand, it is possible for these to be related to a previous Dacian fortification, see Gudea 1985, Fig. 28; Matei 2005, pl. 3; Matei 2007a, 153.

<sup>38</sup>Al. V. Matei claimed that this wall, built in the *opus signinum* technique, 1–1.3m wide and dubbed 'the province wall', continued rectilinearly for another 2km on the plateau and was not emplaced on top of the hill, but halfway on the slope (Matei 2007, 252–3), as also revealed by the LiDAR measurements.

<sup>39</sup>Two ditches were identified, but only to the north, in the area of the new towers on Vișinal hill. Here, a 4.60m wide *agger* with a sort of timber formwork on the exterior had also been observed. This was a complex system with three phases of use (the first was a timber phase) alongside the nearby gates, cf. Matei 2007, 253, pl. 7/2.

<sup>40</sup>The first to call to our attention the existence of this vallum was Al. V. Matei, but to our knowledge, he never published any data on it.

Peak or of the *burgus* at Ortelec, 'Fântâna Sușigului'. However, the towers were sometimes placed at a small distance behind it, as happened in the 'Sub Păstaie' area or in the environs of the tower at Făgiște.

We believe that the so-called interior line of defence of Porolissum, from the La Poiană – Porcarului hill - Corniștea hill - Comorii hill and Ferice hill area, is related to the water supply system.<sup>41</sup> This explains the traces seen in the vallum on the slope climbing up to Porcarului hill, clearly visible in the LiDAR and briefly described also by N. Gudea, without being able to understand them<sup>42</sup> (Fig. 8). In the section, it is obvious that the so-called vallum found here differs from the rest, being much narrower. The superficial ditch was in fact left by the earth excavated in order to create the slope on or in which the pipes of the aqueduct were set. On the opposite side, from Corniștea to Măgurița, a rectilinear vallum or even a stone wall can again be distinguished; the place being excavated, a ditch resulted, which follows the ridge until near the base, and then further up it continues on the slope towards Măgurița and stops in a 'great quadrilateral ruin'.<sup>43</sup> In the LiDAR measurements, only the area in which irregularities similar to the ones in the aqueduct area can be discerned. Therefore, it is possible for an aqueduct to have also started from here, from a spring drawn

into that 'ruin', which joined the one to the south.<sup>44</sup> However, these presumptions require a separate study.

Another result of the LiDAR measurements is the accurate location of all known towers, so visibility and inter-visibility studies can be relevant. Consequently, it becomes evident that the division in sectors commenced by K. Torma<sup>45</sup> and redefined by I. Ferenczi<sup>46</sup> and N. Gudea<sup>47</sup> must be nuanced.<sup>48</sup> We can see that a part of the observations made a few years ago with respect to the sector near the fort at Bologa remains partially valid towards the north-east. The computation of intervisibilities following the previously established criteria brings forth a few supplementary pieces of information.<sup>49</sup> In essence, the *limes* system determined by C. Daicoviciu holds true,<sup>50</sup> with the later nuances brought by I. Ferenczi, N. Gudea and Al. V. Matei. Specifically, this was a complex system comprising a network of towers and smaller fortifications, as well as wall and earthwork barrages, which partially or completely blocked valleys, at times emplaced even on higher terraces and plateaus, where there was easy access. The smaller-sized fortifications were situated at passes, except for the ones near Porolissum, at Brebi. They all appear to be attached to a wall or earthwork and only those in the area of Porolissum were intervisible with the fort, the rest communicating through towers. In the case of the

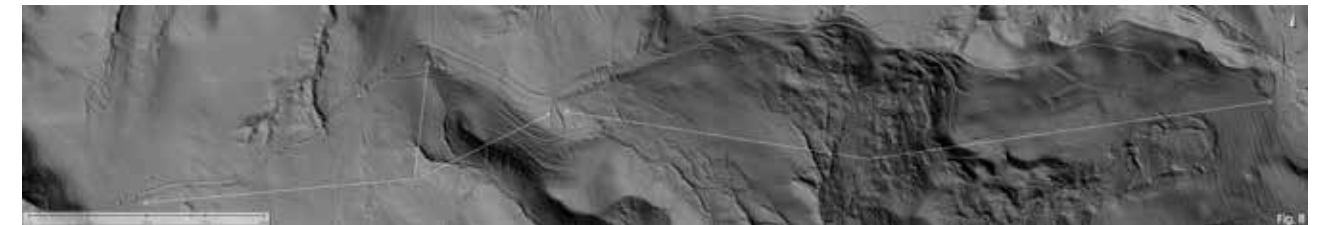


Fig. 8 - Aqeduct

forts at Brebi the constructional homogeneity between the vallum and the *burgi* is definite and clearly visible, being raised at the same time. On the other hand, in the case of the *burgus* at Ortelec, it is obvious that the ditch of the *burgus* predated the wall coming from the tower on Măgurița.

Furthermore, the LiDAR measurements revealed new elements, the most important being the novel c. 20 towers. Taking into account the overlapping visibilities and the fact that in many cases the towers are very close to each other, chronological differences are probable. In any case, the general principle of building towers only at the margin of the visibilities of other towers or forts is certain throughout this sector. It had been proved that near the fort at Bologa most of the towers had visibility towards the interior of the province. They did not communicate directly with the fort, the majority being in direct contact only with the towers placed on the highest spots, Grebăn and Măgura Bologii, whence areas towards the exterior could also be seen. The surveillance of the exterior of the province begins to be a characteristic of the towers that start to have inter-visibility with the fort at Buciumi, especially starting with tower 2 on Prislop hill, although the distance as the crow flies is of circa 8-9km. From here on, they all had visibility both to the exterior and to the interior, in direct connection to the presence of some settlements outside the province.<sup>51</sup> Of course, the existence of relays for transmitting messages between the line of towers, generally situated at a distance of circa 5km from the forts, and the forts cannot be excluded, since the distance was fairly large.<sup>52</sup> The maximum distance between towers is of 4.50km, measured between the tower on Măgura Bologii and the first tower at Poieni.

Some are in turns very close to each other and, except for those in the area of Porolissum, the distance between the forts and the nearest tower is of 3km, also encountered in the case of the fort at Bologa.<sup>53</sup>

The watchtowers were arranged in a network, not in a straight line, the latter disposition being rendered impossible by the configuration of the terrain. This is why the distance between them is variable and irrelevant. Wherever there were artificial barrages, the towers were adjoined to them (Poieni or Păstaie Peak) or placed at a small distance away (Teghișului Peak, Sub Păstaie, Comorii and Ferice hills, or Poaina Mirșid-Făgiște), being impossible to establish a succession at this point. Given the large number of towers, it is obvious that communication took place foremost between them, the nearest then sending signals to *burgi* or forts.

Previous visibility analyses were made following field walks, i.e. simple observations made with the naked eye, from the height of a person.<sup>54</sup> Therefore, it is only natural that some of the towers had not been correctly assessed. In fact, many of them had a larger surface of visibility. From many of the towers one could see at the same time several forts. Overlapping occurred especially in the area of the forts that were close to each other, Porolissum Pomăt-Citera, Buciumi, Românași and Romita. Consequently, it is hard to tell which towers were associated to which forts only based on intervisibility and possibly on tile stamps. It is a well-known fact that the Roman army was flexible and emphasis was put on the most efficient response, soldiers being detached even on greater distances, depending on circumstances. The system appears to have been

<sup>41</sup>The area was photographed by A. Radnóti (Radnóti 1945, LXVII), also described by I. Ferenczi (Ferenczi 1941, 197–8, 208) and archaeologically researched, Macrea, Rusu, Mitrofan 1962. Al. V. Matei established that what had been previously known as a 'double vallum' represented, in fact, an aqueduct. However, he was referring only to the 225m long section where this aqueduct is doubled, Matei 2005, pl. 2. The first research on the *limes* had been conducted here and in the area of Brebi, Moga 1950, 134; Macrea, Rusu, Mitrofan 1962, 492–95.

<sup>42</sup>'...it is always interrupted on the slope climbing to Porcarului hill', Gudea 1989, 107. Furthermore, on the entire course of this presumed vallum, from Poiană to Ferice, fragments of ceramic tubes had been discovered, see Matei 2005, n. 13.

<sup>43</sup>Cf. Gudea 1985, 177; Gudea 1989, 106. This segment is described also in Radnóti 1945, 161–2.

<sup>44</sup>It is hard to say how they were insulated during winter. Maybe this explains the existence of at least two large water cisterns in the fort on Pomet hill (Gudea 1983, 120 sqq.; Marcu 2007, 89 - one of the possibilities for building C3; Fiedler *et al.* 2018), presuming the aqueduct was not continuously used during the cold season. The building of an aqueduct has analogies in some other parts of the empire, the best known is the inscription found at the *principia* at Öhringen, where a new 2 km long aqueduct is mentioned to be built for water supplying of the *praetorium* and a *balneum*, Wolff 1911, 57, Abb. 24.

<sup>45</sup>Torma 1880, 53–64.

<sup>46</sup>Ferenczi 1967, 157–8.

<sup>47</sup>Gudea 1985, 149–50.

<sup>48</sup>See also Marcu *et al.* 2018.

<sup>49</sup>A height of 8m proved to be sufficient here as well, see Marcu, Cupcea 2015, 73; Marcu *et al.* 2018. However, we must admit that a difference between towers is possible, not all being necessarily of the same height. Unfortunately, the lack of detailed archaeological research prevents us from further specifications. The established radius is of 10 km, being more or less casual, but yet in direct connection with the most remote towers having visibility with the fort at Buciumi, with a distance of 8-9 km apart as the crow flies. If a 2-3 km radius would have been established, as it is proposed recently, almost no tower would have had intervisibility with the forts, except those closed by in Porolissum area, Lăzărescu, Bilașco, Vescan 2016, 277. In theory the intervisibility and acoustic analysis may reflect similar patterns, but in practice they are difficult to verify, especially when the patterns are set taking into account inaccurate position of a tower, as it is for instance the so-called tower 19th, Lăzărescu, Bilașco, Vescan 2016, Figs. 164, 166, 169, 173.

<sup>50</sup>Daicoviciu 1935, p. 255–256, 303–304.

<sup>51</sup>Matei, Stanciu 2000, Annexe 19. The chronological relation between those and the building of the *limes* remains to be explained.

<sup>52</sup>For the efficiency of messages depending on distance, see Woolliscroft 2001, 47–63; Bello Foglia 2014, 31–8.

<sup>53</sup>D.J. Woolliscroft proved through experiments that a more 'complex' message, like a Morse type, could not be visible under 2km, Woolliscroft 2001, 47.

<sup>54</sup>For instance, Gudea 1985, Fig. 4.



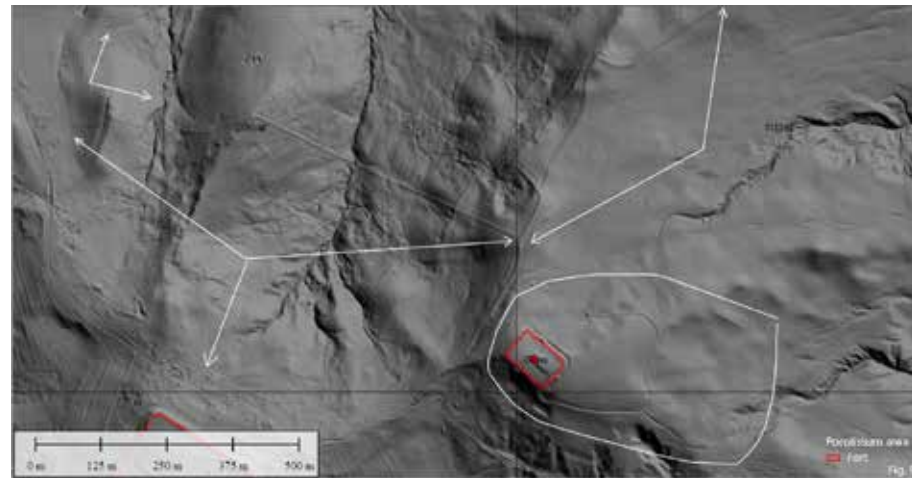


Fig. 9 - Wall and earthen ramparts in Porolissum Pomăt and Citera area

unitary, although between the fort at Bologa and the rest there seems to be no relays, whereas between the forts at Buciumi, Românași, Romita and Porolissum there were several, and between the forts at Tihău and Porolissum just one. Although apparently homogeneous, serving the same purpose of facilitating communication, the complex system in Dacia was different from the well-known frontier sectors in Britannia and Germania Superior – Raetia<sup>55</sup> because of the landscape. Nevertheless, it must have been just as effective.

The new measurements bring to light fresh data that seems to confirm older suppositions. The map published by I. Marțian in 1931 appeared unreal. However, later investigations and the new measurements confirmed the existence of earthworks and walls in the area of ‘La Strâmtură’, earthworks in Brebi area,<sup>56</sup> of the wall in front of the complex at Porolissum (the area of Ursoaiei and Goroniștei hills),<sup>57</sup> of the earthwork starting from the eastern corner of the annexe of the fort

on Citera hill,<sup>58</sup> visible on a length of almost 200m (Fig. 9), but also of some earthworks near Agrijului valley, in Prodănești village, and of some similar anomalies west from this sector.

One of the most important results consists in eliminating the gaps present until now (Fig. 10). The issue of the existence of some intermediate towers, if indeed the distance between the line of towers and the forts was too large (except maybe for the area of Porolissum) remains to be solved. However, it is certain that the system in north-western Dacia, and probably the whole of Dacia, differs from those in Britannia and Germania. There, towers were situated much closer to the forts, at average distances of 500m, making it possible for the existence of a system that would produce ‘high resolution’ short range cover.<sup>59</sup> Conversely, the average distance between the fortifications on The Stangate, in the most well-known sector, was of 5km, towers being added only where there was no intervisibility between

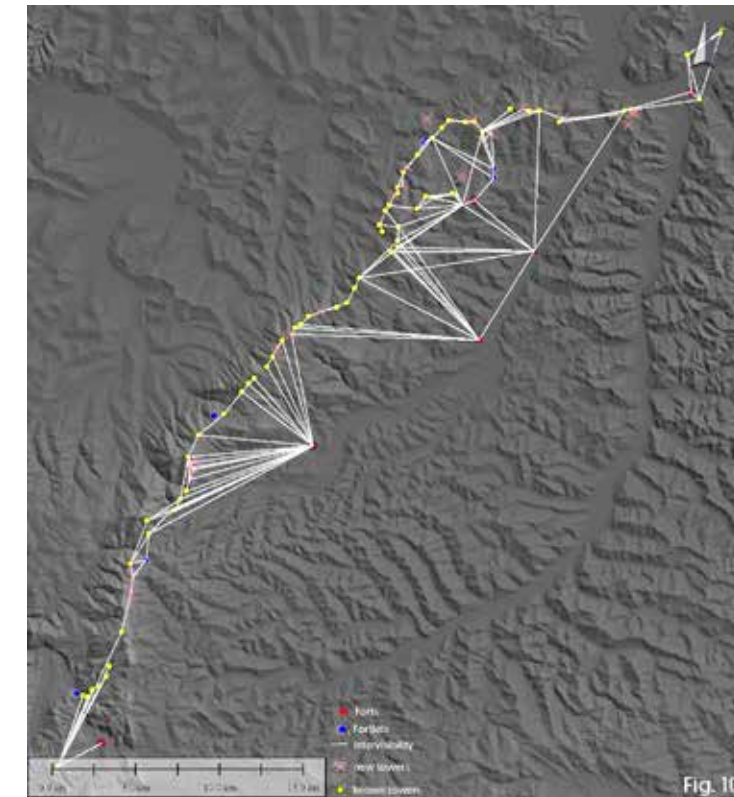


Fig. 10 - Intervisibility between forts and towers

them.<sup>60</sup> In the case of the sector studied by us, with the exception of Porolissum, the minimum distance between towers and forts is of 5km as the crow flies, with variations of up to 9km to the last towers various forts had visibility with. Only at the ends, at Bologa and Tihău, the nearest towers, and for that matter the only relays, are at circa 3km away. Therefore, the system in Dacia generally seems to be adapted to long-range surveillance, with short-range surveillance in passes and wherever there were easy access ways. As we have said before, we believe that messengers were extremely important in delivering messages<sup>61</sup> (*Amm. Marcellinus* XXVIII, 3, 8), being also the choice of D.J. Wooliscroft, signalling being employed only in emergencies and over long distances<sup>62</sup>.

Nevertheless, a lot of work remains to be done to fully understand the system. Non-invasive methods are extremely useful, but without field research and archaeo-

logical investigations it is impossible to obtain a real picture.

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<sup>55</sup>In brief, in Wooliscroft 2001, *passim*.

<sup>56</sup>Gudea 1989, 109–11, with bibliography. In his turn, I. Ferenczi claimed that the wall from here also continued on the opposite side of the valley, Ferenczi 1941, 197–8.

<sup>57</sup>This appears to be the wall vaguely described also by I. Marțian (Marțian 1921, 10–1), then by Macrea, Protase, Rusu 1961, 376, Fig. 1, being called ‘segment f’ in Gudea 1989, 108, Fig. 7.

<sup>58</sup>This was mentioned and partially researched by Al. V. Matei, who claimed it was unpublished. It was observed on a length of circa 100–150m, from the corner of the fort towards Leanca valley (A/N *Luncilor* at Marțian 1921, Fig. 4), its Roman character being very strange if we accept that the precinct annexed to the fort on Citera hill was Dacian, insufficiently argued, see Matei 2007a, 159–65. It was also presumed to be a Roman practice fortification (Gudea 1997, 50) or a temporary camp from the time of the Dacian wars, Opreanu *et al.* 2014, 82.

<sup>59</sup>Bello Foglia 2014, 38.

<sup>60</sup>In the first phase of use, a distance of 5–6km was considered the maximum, if there was good visibility, Wooliscroft 2001, 48, 55. Likewise, A. Bello Foglia relied on the calculations of J.C. Russ (‘to multiply the size of the observed object by 3,000 to get the maximum distance...’), (Bello Foglia 2014, 31), even though later turned to the calculations of A.K. Goldsworthy (Goldsworthy 1996, 52), who, we must not forget, referred to armies on campaign.

<sup>61</sup>Marcu, Cupcea 2015, 72.

<sup>62</sup>Wooliscroft 2001, 13.

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## **Rezumat**

Se face o prezentare, pe scurt, a rezultatelor măsurătorilor LiDAR realizate pe sectorul de nord-vest al graniței romane a Daciei, fiind precizate cele mai importante elemente identificate. Datele sunt, încă, în curs de prelucrare, prin urmare mai multe detalii vor fi expuse într-un studiu viitor. Sunt vizibile porțiunile de val din întregul sector, dar și zidurile și fortificațiile din zona Porolissum-ului, unele confirmând descoperiri mai vechi.

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# **The internal structure of the legionary fortress of *Mogontiacum*/Mainz – First insights**

## **ABSTRACT**

Obwohl das Mainzer Legionslager auf eine fast 250-jährige Forschungstradition zurückblicken kann ist bisher nur sehr wenig über die Innenbebauung dieses spätestens um 13/12 v. Chr. errichteten Militärstützpunktes bekannt. Aus diesem Grunde sollen durch den Verfasser im Rahmen einer Dissertation an der Universität Freiburg im Breisgau mehrere zwischen 2003 und 2014 im Innenbereich des Legionslagers durchgeführte Grabungen ausgewertet und vorgelegt werden. Von diesen wird eine Fläche im nordwestlichen Bereich des Legionslagers vorgestellt, die erste wichtige Einblicke in die Struktur und Genese der Innenbebauung dieses bedeutenden Militärstützpunktes liefert. Die frühe augusteische Okkupationsphase am Rhein ist hier durch mehrere sich zeitlich ablösende Zenturionen-Kopfbauten des sog. *hibernacula*-Typs vertreten. In spätaugusteischer/ frühkaiserlicher Zeit ändert sich die Nutzung der Fläche grundlegend. Die ältere Bebauung wird einplaniert und stattdessen wird ein größerer Gebäudekomplex errichtet, der aufgrund von werkstatsspezifischen Funden und Befunden als *fabrica* angesprochen werden kann.

Ein weiterer markanter Nutzungswandel geht mit der Verlegung der *via principalis*, frühestens ab vespasianischer Zeit, einher. In der Folgezeit wird die Randbebauung dieser Straße mehrfach umgestaltet. In ihrer jüngsten Ausbauphase, die ins zweite Drittel des 3. Jahrhunderts n. Chr. datiert, wird die Straße von einer vermutlich repräsentativ ausgestalteten *porticus* begleitet.

**KEY WORDS:** ROMAN MILITARY, *MOGONTIACUM*, MAINZ, LEGIONARY FORTRESS, INTERNAL STRUCTURE, *FABRICA*, *VIA PRINCIPALIS*



## Introduction

Since the first systematic treatise on the Roman antiquities of Mainz by Father Josef Fuchs published in 1771<sup>1</sup> the legionary fortress of *Mogontiacum* has consistently been the subject of historical and archaeological interest for about 250 years. Nevertheless, very little is known about the internal buildings of this important military base on the Linsenberg, so far. This is conditioned primarily by the post-Roman building activities on the former areal of the camp. Whilst, until baroque times the area of the legionary fortress seems to be mostly undeveloped, the construction and consistent expansion of the different fortification systems of the early modern period were marked by major interferences within the topography of the legionary fortress, causing a great loss of ancient fabric of building on one hand, but also sealing vast parts of the legionary fortress by accumulation on the other. With the conveyance and demolition of these early modern fortifications since the end of the first half of the 19<sup>th</sup> century major areas within the legionary fortress were excavated.<sup>2</sup> In 1842 the architect and later head of the municipal planning and building control office of the city of Mainz, J. Laské, documented the remains of a granary (Fig. 1.8) in the northeastern part of the fortress,<sup>3</sup> while in 1901 the great legionary bath (Fig. 1.4) was excavated.<sup>4</sup> Apart from these two buildings as well as numerous smaller excavations<sup>5</sup> which mostly provided unconsolidated structures, the internal structure of the legionary fortress is largely unknown. Due to this lack of information five areas (Figs. 1.1-2; .6; .10-11) excavated between 2003 and 2014 shall be evaluated in the course of a Dissertation by the author at the Institute for Roman Provincial Archaeology at the University of Freiburg im Breisgau (DE).

One of these areas located in the northwestern part of the legionary fortress – excavated in 2014 at the so called "Römerwall" – shall be presented below (Fig.

1.6), providing first insights into the dynamic history of the legionary fortress and its internal structure.

## First Phase

The earliest structures of this area are two 0.4 m wide post-trenches, which run parallel to each other with a distance of two metres (measured from one inner edge to the other) between them (Fig. 2). At the southern trench two post pits, each with an edge length of 0.16-0.2 m, could still be observed. They probably belong to the rear of a timber-earth wall. All these characteristics fit astonishingly well to the earliest timber-earth wall of the fortress, as documented at other parts of the camp.<sup>6</sup> This is the first time that the course of this early fortification at the northwestern side of the fortress can be verified with certainty. The corresponding V-shaped ditch has to be expected in the adjoining area to the north. This section of the fortification seems to correlate with a section of a V-shaped ditch located more in the southwest of the camp<sup>7</sup> (Fig. 1.5), which now can be attributed to the early fortification with certainty.

Apparently, the earliest fortification had never had an earth rampart, since no signs of one could be found during the excavation. This is consistent with the latest results on the early fortification by Daniel Burger.<sup>8</sup> The *intervallum* extends to the adjoining area southeastern of the post-trenches. It is marked by a zone of pits, in which also a field baking oven could be documented (Fig. 2).

The earliest finds from the pits located within the *intervallum* can be dated between 20 and 10 B.C. and are thus associated with the founding of the camp during the campaigns of Drusus around 13/12 B.C.

## Second Phase

The features of the following construction phase (Fig. 2) are characterized by modest remains of wall tren-

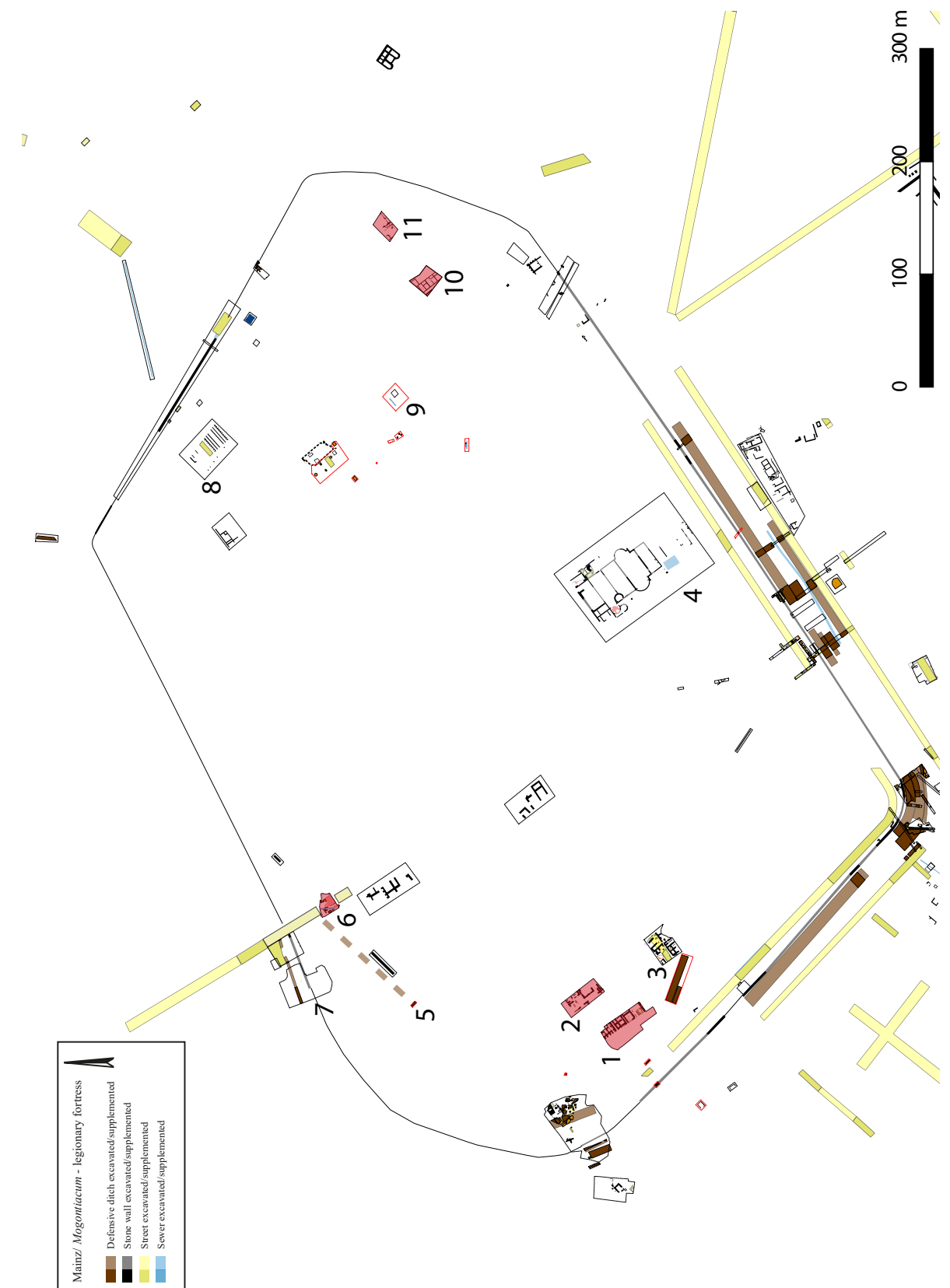


Fig. 1 - Plan of the legionary fortress of *Mogontiacum*/Mainz (the numbers refer to the text) (Basis: D. Burger, modified by author)

<sup>1</sup>Fuchs 1771

<sup>2</sup>Burger 2016, 9–10

<sup>3</sup>Laské 1855, 18–21

<sup>4</sup>Behrens 1917/1918, 46–57

<sup>5</sup>Laské 1855, 22–24; Neeb 1912, 54; Neeb 1913/1914, 131; Behrens 1917/1918, 57–59; Kutsch 1920, 25–30; Baatz 1962, 15–16; 21–22

<sup>6</sup>Burger-Völlmecke 2020, 184; Baatz 1962, 17–18

<sup>7</sup>Burger-Völlmecke 2020, 139; Stümpel 1974, 243

<sup>8</sup>Burger-Völlmecke 2020, 191



Fig. 2 - Structures of phase 1 and 2 of the legionary fortress in the excavation area of 2014  
(by author; basis: excavation plans by M. Kramer/K. Soukup, GDKF Mainz)

ches and numerous post-pits of a timber frame building. The posts – set in regular distances – show two different measuring systems. While the post-pits of the walls aligned southwest-northeast were set in distances between 1.5 and 2.5 p.M. to each other, the post-pits of the walls aligned northwest-southeast show distances of 2.5 p.M. Knowing these surveying systems it was possible to fill in the missing post-pits, which allow to reconstruct an eight by at least seven metres sized building, located within the *intervallum*. Its proximity (of only 2.26 m) to the timber-earth wall, still existent in this phase, also underlines the fact that the early fortification of the camp have never had an earth rampart.<sup>9</sup> The building reconstructed in this way consists of a central entrance corridor flanked by three rooms of different dimensions on each side. Comparable buildings in better preserved state could also be documented in the *retentura* of the fortress.<sup>10</sup> Similar ground plans can be found in almost every military camp of the Augustan occupation phase at Rhine and Lippe.<sup>11</sup>

These parallels allow an interpretation as centurions' quarters of the so-called *hibernacula*-type.<sup>12</sup> The sparse findings allow to date the erection of this building to the last decade B.C.

### Third Phase

Unfortunately, the preservation of the third timber construction phase is relatively fragmentary, which complicates the interpretation of the buildings attested here (Fig. 3).

Due to orientation, dimensions (9.45 m x 3.75 m) and construction technique it seems most likely to interpret

these structures as centurions' quarters as well. Lacking significant findings it is currently not possible to date these structures more precisely than into the Augustan period.

### Fourth Phase

Within the late Augustan/ early Tiberian period a major change in the utilisation of space in this part of the fortress becomes apparent. The timber-earth wall was torn down and probably relocated further to the northwest as demonstrated for the southwestern fortification by Burger.<sup>13</sup> This expansion of the fortress is likely to be seen in context of the reorganisation of the Rhine borderline under Tiberius and the permanent deployment of two legions in Mainz. Related to this expansion were fundamental structural changes, which also affected the internal buildings of the camp. The buildings within the former *intervallum* were torn down, the whole area was levelled, and a presumably larger building complex was erected instead (Fig. 4). This building, of which only a section could be excavated, is characterized by at least four room units of similar dimensions (approximately 4 m x 2.5 m). The rooms 1-3 are further subdivided by partition walls into two or up to three smaller units. Evidence of different oven structures within the individual rooms of this building allow an interpretation as *fabrica*. Aside from an ordinary fire place in the northwest of the building complex an elongated oval oven of almost 2 m length and 20 cm width seems to be noteworthy. The bottom of the oven was still filled with charcoal. Perhaps it was used as forge or as furnace as parallels suggest.<sup>14</sup> Bronze casting is documented by evidence of a melting hearth, located in room 4. Similar ovens were found for example at

<sup>9</sup>The barracks of the military camp of Dangstetten, where the distance between the centurions' quarters and the inner V-shaped ditch at its closest point amounts to only a few metres (approx. 2.5), show a comparable situation (cf. Fingerlin 1972, 210 Beilage 28). Consider that in this article the features of the V-shaped ditches of the military camp were erroneously interpreted as foundation trenches of the timber-earth-wall (cf. Fingerlin 1977, 278–279).

<sup>10</sup>FM 03-020

<sup>11</sup>For example in the Augustan military bases at Nijmegen-Hunerberg (NL) (Niemeijer 2016, 11–25; 29–35 Fig. 3, 47, 10, 14), Dangstetten (DE) (Fingerlin 1972, 209–210, Beilage 28), Oberaden (DE) (Kühlborn 1992, 59–61 Fig. 31A-b), Anreppen (DE) (Kühlborn 2009, 11 Fig. 9), Marktbreit (DE) (Herrmann 1992, 557 Fig. 7) as well as the earliest phase of the Augustan settlement of Waldgirmes (DE) (Becker 2015, 62–63 Fig. 60). The earliest examples for these kinds of buildings so far known are from the late republican site of Trier-Petrisberg (DE), where they belong to the earliest occupation phase (Löhr 2018, 137 Fig. 7; friendly reference by Johann Schrempf).

<sup>12</sup>Batz 1985

<sup>13</sup>Burger-Völlmecke 2020, 202–205

<sup>14</sup>Heising 2014, 28–29 with footnote 29–30



Fig. 3 - Structures of phase 1 and 3 of the legionary fortress in the excavation area of 2014  
(by author; basis: excavation plans by M. Kramer/K. Soukup, GDKE Mainz)

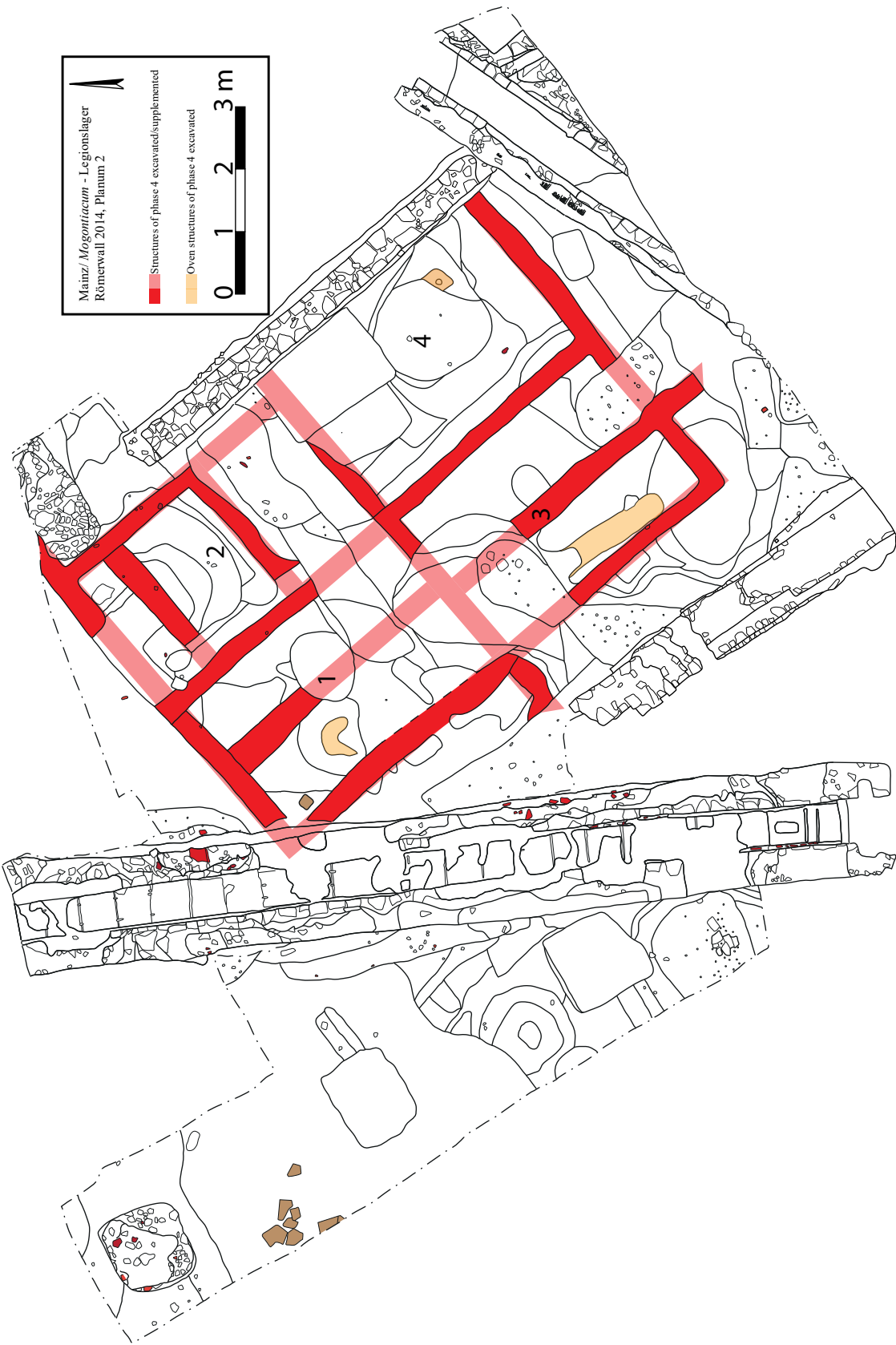
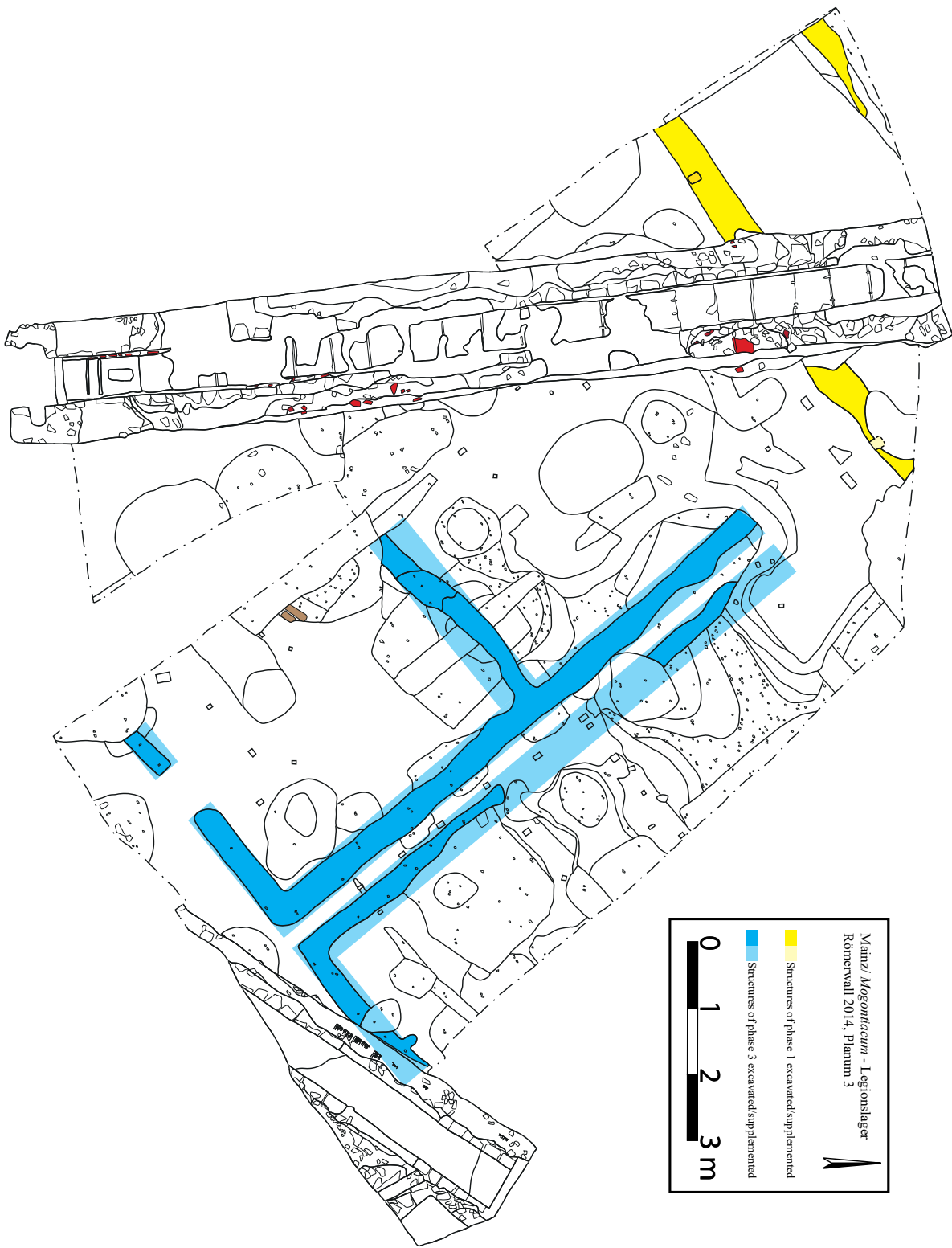


Fig. 3 - Structures of phase 4 of the legionary fortress in the excavation area of 2014  
(by author; basis: excavation plans by M. Kramer/K. Soukup, GDKE Mainz)

Augst (CH)<sup>15</sup> and at the Auerberg (DE).<sup>16</sup> In addition to that, there is a large number of findings, unfortunately mostly unstratified, referring to the processing of bone and metal. Bone turning and bone carving are documented by production waste as well as half-finished objects (Fig. 5.1-2). Bronze casting is represented by a waster (Fig. 5.3), several drops of solidified bronze (Fig. 5.4), a fragment of a crucible (Fig. 5.5) and slags. A half-finished seal box (Fig. 5.6) found in the occupation layers of room 3, which is lacking the obligatory perforation at the bottom,<sup>17</sup> refers to the production of rectangular seal boxes on this site. This is besides Kaiseraugst/ *Augusta Raurica* (CH) and Sisak/ *Siscia* (HR) the third evidence for the production of seal boxes in the northwestern provinces and the Danube region and the only one which can be connected to a specific workshop site.<sup>18</sup>

The conspicuously small amount of production waste at this workshop site is probably a result of the efficiency of waste disposal of the legionary fortress. Thus, a waste deposit containing a large number of refuse material of a metal processing workshop, which could presumably be related to the presented *fabrica*, could be documented approximately 50 metres in the northwest of the *fabrica* at the slope of the Linsenberg (Fig. 1.7). Ten coins – all of them in mint condition – from these refuse layers, dating to the early Tiberian period, would fit the dating of the *fabrica*.<sup>19</sup>

Due to the fact that only a small section of the *fabrica* could be excavated it is currently not possible to determine its ground plan, even though the subdivision into small room units could be seen as an indicator for a *fabrica* of the so called "Basar-Typ", which often shows this feature.<sup>20</sup>

Therefore, the *fabrica* at the so called Römerwall is the second *fabrica* attested for the legionary fortress of Mainz. The first one is located in the southwestern *retentura* of the camp (Fig. 1.3). Here A. Heising could uncover parts of a presumably larger building complex, built in timber-earth technique, in which installations of a metal processing workshop could be documented. Heising dates the occupation period of the first phase of the *fabrica* between approximately 10/15 A.D. to 40/45 A.D.<sup>21</sup> It cannot be entirely ruled out that already by Augustan times two *fabricae* could have existed. However, it seems to be no coincidence that both *fabricae* were built in early Tiberian times, especially because under the reign of Tiberius for the first time two legions are attested as garrison for the legionary fortress with certainty.<sup>22</sup> Therefore, it is likely, that each of the two *fabricae* were run by either one of the two legions.<sup>23</sup> Perhaps the existence of two *fabricae*, working at the same time, could also be seen in the context of the reorganisation of the Rhine frontier under Tiberius. After the *clades Variana* Tiberius had to recoup the losses from the battle to ensure the operational readiness of the troops deployed in *Germania*. The new recruits and for sure a significant part of the redrafted veterans, too, had to be provided with military equipment.<sup>24</sup> This increased demand for military equipment could have been satisfied to a certain extent by the military bases at the Rhine zone themselves. Furthermore, the expeditions of Germanicus from 14 to 16 A.D. had to be prepared, which must have also required an increased production of military equipment. But this hypothesis cannot be proven as long as the exact production range of the two *fabricae* in the legionary fortress of Mainz remains unknown.



Fig. 5 - Selected finds referring to the processing of bone and bronze (photos: GDKE Mainz, compiled by author)

### Fifth Phase

With the beginning of phase five the *fabrica* was torn down and the area was covered with a dense layer of gravel, which forms the surface for an at least 12 m wide road (Fig. 6). Due to the subsequent construction phases of this road it can be identified as the *via principalis* of the legionary fortress. According to a Sesterce of Vespasian, found in the levelling layers – directly beneath the gravel – the rerouting of the *via principalis* can be dated after 71 A.D.

There is no doubt that the rerouting of the *via principalis* was accompanied by major structural changes concerning great parts of the interior of the legionary fortress. But at the present state of research only a few mostly sporadic observations can be related to these restructuring measures in early Vespasian times. The *fabrica* in the *retentura* mentioned above was thoroughly renovated shortly after 70 A.D.,<sup>25</sup> whilst in the *praetentura* a stone cellar could be connected to these measures (Fig. 1.9). The backfilling of this cellar contained a mostly complete inventory of dishes dating to late Neronian times, while younger finds from Flavian times are entirely missing. Therefore, it seems most

<sup>15</sup>Furger 1998, 129 Fig. 11

<sup>16</sup>Drescher 1994, 168 Fig. 23

<sup>17</sup>Furger, Riha 2009, 18–21

<sup>18</sup>Furger 2009, 35; Wartmann, Furger 2009, 101–103

<sup>19</sup>Burger-Völlmecke 2020, 142–144 204–205,

<sup>20</sup>Petrikovits 1975, 94 Fig. 26

<sup>21</sup>Heising 2014, 27–29

<sup>22</sup>Burger-Völlmecke 2020, 201–202

<sup>23</sup>Friendly reference by Lisa Berger

<sup>24</sup>It seems to be no coincidence that under the reign of Tiberius a new style in the design of Roman military equipment is introduced, which could be related to these measures (cf. Deschler-Erb 2016, 595; Deschler-Erb 2000, 389).

<sup>25</sup>Heising 2014, 29





Fig. 6 - Structures of phase 5 of the legionary fortress in the excavation area of 2014  
(by author; basis: excavation plans by M. Kramer/K. Soukup, GdKE Mainz)

probable that the abandonment of the cellar is related to these restructuring measures, associated with replacement of the legions *Quarta Marcedonia* and *Vicesima Altera Primigenia* by the legions *Prima Adiutrix* and *Quarta Decima Gemina Martia Victrix* in context of

the reorganisation of the German provinces concerning their defence under emperor Vespasian after the Batavian revolt around 70 A.D.<sup>26</sup>

<sup>26</sup>As neither the vessels nor the remaining backfill showed indications pointing to a fire, a destruction of the cellar in context of the turmoil during the Batavian revolts (69-70 A.D.) can be excluded. This would also correspond to Tacitus' *Historia*, mentioning that the legionary fortress of *Mogontiacum* was besieged by armed forces consisting of *Chatti*, *Usipetes* and *Mattiaci* but survived without considerable damages, unlike many other camps along the Rhine: "*Dein mutati in paenitentiam primani quartanique et duoetvicensimani Voculam sequuntur; apud quem resumpto Vespasiani sacramento ad liberandum Mogontiacy obsidium ducebantur. Discesserant obsessores, mixtus ex Chattis Vsipis Mattiacis exercitus, satietate praedae nec incruenti*" (Tac., *Hist.* IV, 37) "[...] *Cohortium alarum legionum hiberna subversa cremataque, iis tantum relictis que Mogontiacy ac Vindonissae sita sunt.*" (Tac. *Hist.* IV 61) (Schmitz, 2008, 128-129). On the contrary, consider the preliminary report of F. Kutsch on the excavations in the area southeastern of the so-called Augustusplatz on the dextral side of the *retentura* in 1919, which mentions fire debris from barracks dating into Claudian-Neronian times. He assumes that the barracks were destroyed during the besiegement of the fortress but does not exclude the possibility that the barracks were burnt down on purpose to make space for the construction of new barracks in the course of the change of the legions under Vespasian (cf. Kutsch 1920, 27).



Fig. 7 - Structures of phase 6 and 7 of the legionary fortress in the excavation area of 2014  
(by author; basis: excavation plans by M. Kramer/K. Soukup, GdKE Mainz)

### Sixth Phase

The rerouting of the *via principalis* is followed by a longer period in which no major structural changes are discernible, until a stone building was placed at the northeastern edge of the area, reducing the width of the *via principalis* by 4 metres (Fig. 7). The exact function of the building, which was not erected before the second half of the second century, remains unknown. Perhaps it has to be seen as a section of a *taberna*-like building complex flanking the street.<sup>27</sup>

### Seventh Phase

Presumably with the construction of a massive wall (Fig. 7) running parallel to the *via principalis* in the western part of the excavated area at least the upper parts of the building must have already been disassembled. Due to the solidity and location of this newly erected wall at the edge of the road it seems likely that it served as a foundation for a *porticus* flanking the *via principalis*.

<sup>27</sup>For examples of *tabernae* flanking the *via principalis* cf. Petrikovits 1975, table 1, 4-6, 8



Fig. 8 - Structures of phase 8 of the legionary fortress in the excavation area of 2014 (by author; basis: excavation plans by M. Kramer/K. Soukup, GDKE Mainz)

### Eighth Phase

The latest Roman activities in this area are marked by another restructuring phase of the *via principalis* (Fig. 8). Two sewers were passed through the area, of which the longer section could be interpreted as one of the main sewer lines of the legionary fortress, running towards the direction of the *porta principalis sinistra*, while the shorter one seems to be connected to a building in the northeast, which is, besides the sewers themselves, the only structure in the whole area built by using *opus signinum*. Considering the degree of contamination of the water running through the sewers

this close to the *porta principalis sinistra* it seems most likely that the water was used for latrines. Perhaps this sewer section was connected to a private latrine of one of the tribunes' houses, which in other legionary fortresses are often located in this sector.<sup>28</sup> Furthermore, the surface of the *via principalis* was enlarged by 4 metres to the west, where it was confined by three foundation plinths of a *porticus*, which were arranged in a line parallel to the road. Due to the findings all these construction measures cannot be dated before the second third of the third century.

Layers as well as findings from the fourth century are missing entirely. At the current state of research it is not possible to decide, if this lack of late antique finds and features has to be seen as a result of decreasing occupation in this part of the legionary fortress or if later building activities, especially the construction of the fortification systems of early modern period could have caused a major loss of ancient substance.<sup>29</sup>

The features presented above provide a first insight into the dynamic history of the legionary fortress. Although the small section of the excavated area sets limits to the interpretation and dating of the individual building structures, it provides important information about crucial aspects of the military base, such as the course of the earliest fortification of the camp.

It can be observed that utilisation of space in this part of the fortress changed at least three times, ranging from soldiers' accommodations to the location of a metal and bone processing workshop up to the route for one of the main roads of the camp, the *via principalis*.

Furthermore, it is now possible to reconstruct the course of the *via principalis*, which is given by the alignment of the foundation plinths of the *porticus*, flanking this road.

However, many questions concerning the internal structure of the legionary fortress are still unanswered, in particular about its character during Late Antiquity. Hopefully, the other excavations, which are going to be evaluated in the course of further research, will answer some of these questions and complement the picture of the internal structure of the legionary fortress of *Mogontiacum*/Mainz.

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<sup>28</sup>Petrikovits 1975, 64 table 1, 6, 11-12

<sup>29</sup>On the contrary the total absence of material from the late antique period – even out of the unstratified findings from the top cultural layers – are arguments for the first scenario.



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**Zusammenfassung**

Die vorgestellten Befunde liefern erste wichtige Einblicke in die bewegte Geschichte des Mainzer Legionslagers. Insgesamt ließen sich acht Bauphasen differenzieren, die von augusteischer Zeit bis in das zweite Drittel des 3. Jahrhunderts n. Chr. datieren.

Zum Zeitpunkt der Gründung des Lagers gehörte der vorgestellte Bereich zur nordwestlichen Peripherie des Militärstützpunktes wie der Nachweis der ältesten Holz-Erde-Mauer belegt. Das sich diesseits der Umwehrung erstreckende *intervallum* war zu dieser Zeit weitgehend unbebaut. Dies ändert sich jedoch in der Folgezeit und es lassen sich mehrere, sich zeitliche ablösende Holzfachwerkgebäude nachweisen, die zumindest teilweise als frühe Offizierskopfbauten anzusprechen sein dürften (Phase 2-3). In spätaugusteischer/frühtiberischer Zeit lässt sich dann ein deutlicher Nutzungswandel konstatieren. Die vorausgehende Bebauung wird einplaniert und auf dem Areal wird eine *fabrica* errichtet (Phase 4). Anhand von Produktions-

abfällen und Halbfabrikaten lassen sich Bein- und Bronzeverarbeitung nachweisen.

Eine grundlegende Umstrukturierung der Lagerinnenbebauung markiert die Verlegung der *via principalis* durch diesen Bereich des Lagers (Phase 5). Diese Maßnahme dürfte frühestens ab vespasianischer Zeit erfolgt sein. Auch in der Folgezeit bleibt der Verlauf der Straße durch diese Fläche weiterhin bestehen, wobei ihre Randbebauung mehrfach umgestaltet wird (Phase 6-7). Der jüngste nachweisbare Ausbau der *via principalis* erfolgte ab dem zweiten Drittel des 3. Jahrhunderts n. Chr. mit der Errichtung einer die Straße begleitenden *porticus* (Phase 8). Anhand der Flucht der Punktfundamente dieser *porticus* lässt sich nun erstmals auch der Verlauf der *via principalis* rekonstruieren, wodurch sich wichtige Hinweise auf die Inneneinteilung des Lagers ergeben.

Dennoch bleiben vorerst noch viele Fragen bezüglich Struktur und Genese der Innenbebauung des Legionslagers offen. Insbesondere bleibt zu klären, ob das vollständige Fehlen spätantiker Funde und Strukturen auf einen Rückgang der Nutzung dieses Lagerbereichs zurückzuführen ist oder, ob hier spätere Eingriffe in die antike Bausubstanz zu einem vollständigen Verlust der spätantiken Schichten geführt haben könnten.

Es bleibt abzuwarten, ob sich diese Fragen im Zuge der Auswertung der übrigen Grabungen beantworten lassen und sich somit das gewonnene Bild von der Innenbebauung des Mainzer Legionslagers vervollständigen lässt.





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# Großflächiger Magnetometer-Survey am Legionsstandort *Vetera castra* und in seinem Umfeld auf dem Fürstenberg bei Xanten

## ABSTRACT

In einem gemeinsamen Projekt des Deutschen Archäologischen Instituts Berlin und des LVR-Amts für Bodendenkmalpflege im Rheinland zur Denkmalqualifizierung römischer Bodendenkmäler des UNESCO-Welterbes „Niedergermanischer Limes“ wurde die Mikrotopographie des Fürstenbergs großflächig durch hochauflösende Magnetometermessungen erfasst. Dazu gehören die Innenflächen und Umwehrungen der mehrperiodigen Zweilegionenlager (*gemina castra*) sowie ihr Umfeld, in welchem sich militärische Großbauten und Siedlungsareale befinden. Zahlreiche neue Erkenntnisse zur Binnengliederung und zum Straßensystem, zur Vermessung und zu einzelnen Gebäudegrundrissen innerhalb der Legionslager sind durch die Auswertung, in welche auch Altgrabungen und Luftbilder miteinbezogen werden, zu verzeichnen. Besonders groß ist der Wissenszuwachs bei dem sogenannten augusteisch-tiberischen Lager A-C, von welchem bislang nur Teile der Umwehrung bekannt waren. Durch die Messungen wird deutlich, dass innerhalb des etwa 57 ha großen polygonalen Lagers systematisch angeordnete Großbauten und Kohortenblöcke die Fläche füllen. Im Umfeld wurden mindestens zwei große Platzanlagenentdeckt, die jeweils als *campus* identifiziert werden können.

**KEY WORDS:** VETERA I, XANTEN, ZWEILEGIONENLAGER, LEGIONSLAGER, UMWEHRUNG, INNENBEBAUUNG, CAMPUS, CANABAE LEGIONIS

## Einführung

Im Rahmen des Antragsverfahrens zur Aufnahme des Niedergermanischen Limes auf die Welterbeliste der UNESCO läuft seit 2015 ein Kooperationsprojekt zwischen dem LVR-Amt für Bodendenkmalpflege im

Rheinland und dem Arbeitsbereich Kulturgüterschutz und Site Management des Deutschen Archäologischen Instituts Berlin. Im Rahmen dieses Projekts werden verschiedene Standorte des Niedergermanischen Limes großflächig und weiträumig mit hochauflösenden, fahrzeuggestützten Magnetometerprospektionen

untersucht<sup>1</sup>. Zum Einsatz kommen von der Firma Sensys GmbH (Bad Saarow) hergestellte 16-Kanal-Magnetometer Systeme (SENSYS MX V2 und V3 mit zugehörigem Programm SENSYS MAGNETO®-MX ARCH) mit integriertem Echtzeit-GPS, die mit einem Geländewagen oder einem Quad mit einer Geschwindigkeit von bis zu 15 km/h gezogen werden.

Der Fürstenberg bei Xanten ist bis heute kaum überbaut und weitgehend landwirtschaftlich genutzt. Auf einer Fläche von insgesamt ca. 200 ha konnte fast die gesamte Mikrotopographie über eine Ausdehnung von etwa 3 x 1,5 km mit dem Magnetometer erfasst werden. Die hochauflösenden zentimetergenau verorteten Magnetogramme bieten nun die Möglichkeit, Genese und Struktur der Legionslager und ihres Umfeldes ohne erneute Bodeneingriffe genau zu analysieren. Etwa die Hälfte der Messfläche fällt auf die Bereiche der Legionslager, wo die Messungen 2018 abgeschlossen werden konnten. Neben der Erfassung der Baustrukturen selbst bietet die Methode auch die Möglichkeit, die Qualität der Erhaltung des Denkmals nach Ausgrabung und intensiver landwirtschaftlicher Nutzung des Bodens zu beurteilen.

### Bisherige archäologische Untersuchungen

Untersuchungen zur genaueren Verortung und Ausdehnung des bei Tacitus überlieferten und seit dem 16. Jh. nach Xanten verorteten Legionslager Vetera castra brachten bis Anfang des 20. Jh. zunächst keine erfolgreichen Ergebnisse<sup>2</sup>. Erst mit den Grabungen durch das damalige Bonner Provinzialmuseum zwischen 1905-1914 und 1925-1934 konnten das claudisch-neronische Zweilegionenlager sowie die Umwehrung einer älteren Periode lokalisiert werden<sup>3</sup>. Die Forschungen konzentrierten sich auf den zentralen Bereich des jüngsten, in neronischer Zeit bestehenden Lagers, dessen Belagerung während des Bataveraufstandes 69 und 70 n. Chr. durch Tacitus lebhaft überliefert ist<sup>4</sup>.

Mit ca. 11 ha wurde damals etwa nur ein Zehntel der Fläche beider Zweilegionenlager untersucht, wobei diese Untersuchungsfläche nicht flächig freigelegt, sondern auch in dem intensiv untersuchten zentralen Lagerbereich nur mit Schnitten von meist 1 m Breite durchzogen ist. Seit diesen maßgeblichen Untersuchungen fanden nur wenige kleine, meist baubegleitende Maßnahmen am Fürstenberg statt. Die umfangreiche Fundvorlage durch Norbert Hanel bildet bis heute das gültige Chronologiegerüst des Platzes<sup>5</sup>.

Seit 1960 wird das Areal regelmäßig für luftbildarchäologische Kenntnisse befliegen<sup>6</sup>, eine systematische Auswertung dieser Ergebnisse liegt bislang jedoch nicht vor. Verschiedene Einzelaspekte zeigen bereits den Erfolg der Methode, vor allem zu konstruktiven Details, wie Luftbilder zum Aufbau der Holz-Erde-Mauer des neronischen Lagers<sup>7</sup>.

Auch bereits in den 1970er Jahren durchgeführte Magnetometermessungen zeigten, dass die Methode an diesem Platz erfolgversprechend ist. Weitere Untersuchungen mit dem Magnetometer und der Elektrik 2007/2008 bekräftigen dies. Untersucht wurden drei Flächen mit insgesamt 3,8 ha mittels Magnetometermessung und zwei der Flächen durch eine Widerstandsmessung<sup>8</sup> in Bereichen, die bereits durch die Grabungen in der 1. Hälfte des 20. Jh. ausgegraben wurden. Die Befunde konnten bestätigt werden. Gleichzeitig wurden aber auch die Schwierigkeiten der praktischen Durchführung bei großflächigen Bodendenkmälern deutlich, welche erst durch die fahrzeuggestützte Methode mit Differential-GPS gelöst wurden. (Abb. 1., Abb. 2.)

### Neues zum claudisch-neronischen Lager

Auf dem Fürstenberg bei Xanten lag mit einer Fläche von ca. 57 ha eines der größten bekannten Standlager des Römischen Reiches.

Die Grabungen gaben Aufschluss über die typische spielkartenförmige Form und zentrale Bauten im Inneren des Lagers. Im Zuge der Magnetometermessungen kann neben den Erkenntnissen zu dem älteren Legionslager auch das Wissen über die claudisch-neronische Periode über die Altgrabungen und Luftbildbefunde hinaus maßgeblich erweitert werden. Die Umwehrungsgräben sind nun erstmals vollständig in ihrem Verlauf nachgewiesen, dazu ist in vielen Bereichen auch die Holz-Erde-Mauer im Magnetogramm erkennbar. Zudem erweitert sich das Verständnis zu den Bauten im Inneren. Die nur in kleinen Bereichen ergrabenen Bauten<sup>9</sup> im östlichen *scamnum tribunorum* können nun vervollständigt werden. Der Grundriss des im westlichen Bereich ausgegrabenen Tribünenbaus Q kann vervollständigt werden, ebenso wie ein weiterer östlich anschließender Tribünenbau. Ein dritter ist nahezu vollständig im Magnetogramm zu erkennen, womit der symmetrische Aufbau von je drei Tribünenhäusern zur rechten und linken Seite des Praetoriums gesichert ist. Für die Analyse von Struktur und Anordnung der Bauten der Staboffiziere ergeben sich damit nun verlässlichere Grundlagen.

Daneben kann an verschiedenen Stellen der neue Nachweis für die bislang kaum erforschten Mannschaftsbaracken erbracht werden. Der Grundriss der Baracken in den sechs *insulae* im südlichsten *scamnum* wird nahezu vollständig rekonstruiert werden können.

Im Bereich der nördlichen *retentura* waren bislang keine Gebäude bekannt. Auch wenn im Magnetogramm dort die Befunde der älteren Phase als stärkere Anomalien deutlich überwiegen und das Bild der späteren Periode verunklaren, sind an verschiedenen Stellen Mauern von Gebäuden auszumachen. Damit ist nachgewiesen, dass nicht alle Befunde von Erosion betroffen sind, sondern die Substanz des Bodendenkmals in einem besseren Zustand ist, als aufgrund der hier unklaren Luftbildbefunde angenommen wurde<sup>10</sup>. Ein Teil dieser Bebauung ist auf Abb. 3, E zu sehen. Die negativen Anomalien stellen die Fundamente der

*contubernia* dar. Die Baracken sind Ost-West orientiert und die Kopfbauten liegen von der Umwehrung abgewandt.

### Ein claudisch-neronischer *campus*

Für Legionsstandorte ist jüngst die Identifizierung von großen, monumental ausgestalteten Rechteckbauten mit von offenen Hallen begleiteten Innenhöfen als *campus* durch Christian Gugl und Jürgen Trumm gelungen<sup>11</sup>.

Ein solcher architektonisch gefasster Ausbildungsplatz konnte durch die Magnetometermessungen bereits nördlich des augusteisch-tiberischen Lagers A-C erkannt werden. Aufgrund der gleichen Ausrichtung gehört dieser *campus* zu dieser frühen Lagerperiode<sup>12</sup>. Eine weitere solche Platzanlage lässt sich ebenfalls östlich des claudisch-neronischen Lagers im Magnetogramm erkennen. Im Rahmen einer Analyse von Luftbildstrukturen, die einen rechteckigen Großbau mit Innenhof und Raumreihen an den Schmalseiten andeuteten, hatte bereits Hans-Peter Klossek den Bau als mögliches Forum oder *campus* angesprochen<sup>13</sup>.

Im Magnetogramm zeigt sich nun der gesamte Bau (Abb. 3, A). Der Innenhof von ca. 116 x 110m lichter Weite (ca. 370 x 390 Fuß<sup>14</sup>) mit einer Fläche von 12.760 qm (ca. 144.300 röm. Quadrat-Fuß) entspricht dabei fast genau der Fläche von 10 *actus* (144.000 röm. Quadrat-Fuß). Unklar bleibt noch, ob innerhalb dieser Maße noch eine nach innen offene Portikus bestand.

An der südlichen Längsseite ist eine offene Halle zu erkennen, während die westliche Schmalseite durch Raumreihen gegliedert wird, jeweils mit einer Breite von ca. 6 m. Die nördliche Längsseite ist schwieriger im Magnetogramm zu erkennen. Sie wird vermutlich ebenfalls als offene Halle konzipiert gewesen sein. Die östliche, dem Rheintal zugewandte Schmalseite wird durch dreischiffige offene Hallen von insgesamt ca. 16

<sup>1</sup>Bödecker u. a. 2018

<sup>2</sup>zur Forschungsgeschichte zuletzt Obladen-Kauder 2014; Hanel 2014

<sup>3</sup>Zusammenfassend Lehner 1930

<sup>4</sup>Tac. Hist. 4,60

<sup>5</sup>Hanel 1995

<sup>6</sup>Durch das LVR-Amt für Bodendenkmalpflege Scollar 1965

<sup>7</sup>Durch B. Song, Ruhr-Universität Bochum seit 2003 Hanel, Song 2007; Song, Hanel 2011; Song, Hanel 2014; Hanel, Song 2017 – Die vollständigste Zusammenstellung und Auswertung der bislang bekannten Luftbildbefunde findet sich bei Klossek 2014

<sup>8</sup>Becker, Wipperf 2011

<sup>9</sup>Lehner 1930, 64

<sup>10</sup>Hanel, Song 2015, 862

<sup>11</sup>Trumm 2013; Gugl, Trumm 2015; Doneus u. a. 2013, 154–164

<sup>12</sup>Bödecker u. a. 2018, 278–279

<sup>13</sup>Klossek 2014, 22–23. - Bei Hans-Peter Klossek bedanken wir uns herzlich für die Einblicke in seine Ergebnisse und viele Anregungen zur Analyse der Luftbilder.

<sup>14</sup>Die Umrechnung erfolgte mit dem *pes Monetalis* zu 0,296 m.



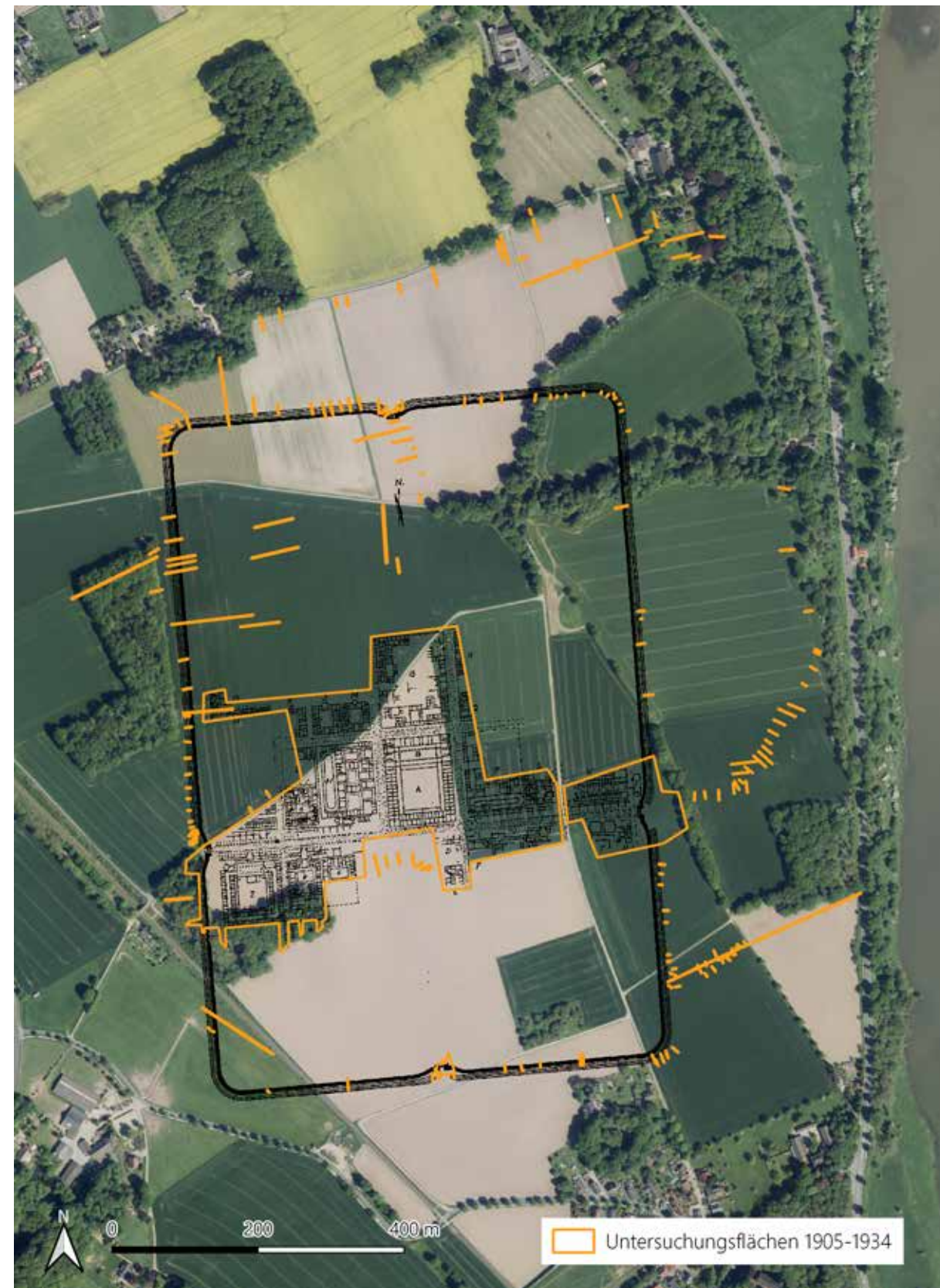


Abb. 1 - Die 1905-1934 untersuchten Flächen mit dem Grabungsergebnissen St. Bödecker, L. Berger, LVR-Amt für Bodendenkmalpflege im Rheinland; Kartengrundlage ©Geobasis NRW 2019 und Hanel 1995 Taf. 169)



Abb. 2 - Vetera I und Umfeld. Gesamtbild der Magnetometermessungen (Stand Juli 2018) (St. Bödecker, L. Berger, E. Rung, LVR-Amt für Bodendenkmalpflege im Rheinland; F. Lüth, Deutsches Archäologisches Institut Berlin; Kartengrundlage ©Geobasis NRW 2019)



m Breite, geprägt. Der Grundriss entspricht damit ganz der für einen *campus* kanonischen Struktur.

In seiner lichten Weite misst der Bau ca. 122 x 138 m (ca. 1,68 ha; 410 x 470 Fuß) und ist damit fast nur ein Drittel so groß wie der *campus* nördlich von Lager A-C (ca. 182,5 x 249 m; ca. 4,5 ha). Die Ausrichtung des *campus* folgt dabei exakt dem claudisch-neronischen Legionslager (Abb. 3, B) und ist vermutlich mit diesem gleichzeitig. Während der große *campus* vor dem Lager A-C womöglich für beide Legionen (und Hilfstruppen?) konzipiert war, dürfte dieser wesentlich kleinere *campus* östlich des claudisch-neronischen Lagers nur für eine Legion gedient haben. Ob man ihn sogar der in der östlichen Lagerhälfte stationierten 15. Legion zuweisen kann<sup>15</sup>, bleibt noch offen.

Die großflächigen Magnetometermessungen zeigen damit eine intensive Nutzung des unmittelbaren Umfeldes der Lager auf dem Fürstenberg direkt durch das römische Militär. Hinweise auf zivil genutzte Flächen sind dagegen bislang spärlich.

#### Neue Erkenntnisse zum sog. Lager A-C augusteisch-tiberischer Zeit

Von den jüngeren Perioden der Legionslager auf dem Fürstenberg waren bislang nur fragmentarische Abschnitte der Umwehrungen sowie vereinzelte Strukturen im Inneren bekannt. Mit der neronischen Periode zusammen decken sie etwa 100 ha ab. Deutlich lassen sich zwei Perioden im Magnetogramm unterscheiden: Nahezu genau Nord-Süd orientiert ist die spielkartenförmige Umwehrung und der zentrale Bereich des neronischen. Mit einer Überschneidung von etwa 60 % liegt darunter die sich durch Anomalien äußerst stark abzeichnende Innenbebauung des früheren, augusteisch-tiberischen Lagers A-C. Der Grundriss weicht um ca. 15 Grad von der späteren Periode ab und ist somit gut zu unterscheiden. Erstmals erschließt sich ein völlig neues Bild zur Binnengliederung und Innenbebauung. Damit gelang auch der sichere Nachweis, dass die Gräben A (im Norden) und C (im Südosten) tatsächlich zu einem Lager gehören, wie es Lehner aufgrund der jeweils gleichartigen Konstruk-

tion der Holz-Erde-Mauer sowie der an beiden Stellen beobachteten Brandschuttverfüllung im Lagergraben geschlossen hatte<sup>16</sup>. Der Verlauf der Umwehrung im Westen ist noch zu klären, ebenso nach Osten, wo in Frage zu stellen ist, ob die Umwehrung aufgrund der topographischen Lage am Rand der steil abfallenden Moräne möglicherweise wegfiel oder der Erosion zum Opfer gefallen ist.

Wie für die frühen Lagerstandorte üblich, passt sich die Umwehrung stark der Topographie an, wohingegen die Innenbebauung regelmäßig und rechtwinklig gegliedert ist.

Die Gebäude zeichnen sich durch eine dichte Fläche an überwiegend positiven Anomalien ab, deren befundgenaue Auswertung noch aussteht. Sowohl Strukturen, die zu Baracken zu ergänzen sind, als auch große Gebäude im Zentrum sind auszumachen. Teile der Umwehrung konnte ebenfalls detektiert werden. Die bereits durch Grabungsschnitte nachgewiesenen Abschnitte A im Norden und C im Südosten<sup>17</sup> können verifiziert und in ihren weiteren Verläufen verfolgt werden sowie durch Kombination mit den Ergebnissen der Ausgrabungen und Luftbilddauswertungen genauer angesprochen werden. In Abb. 3 sind unter den negativen Anomalien des neronischen *campus* (Abb. 3, A) die Befunde des anders orientierten älteren Lagers als mehrheitlich positive Anomalien zu erkennen. Eine genaue Analyse der Altgrabungen soll klären, warum sich die frühen Lagerbefunde so gut abzeichnen. Vor allem die Verfüllung mit Brandschichten, wie sie bereits für die Lagergräben von Lehner hervorgehoben wurden, könnten hier ausschlaggebend sein. Rechtwinklig verlaufende Straßen formen *insulae* (Abb. 3, C). Die hier abgebildete misst etwa 180 m Breite, was etwa 600 römischen Fuß entspricht. Innerhalb der *insula* sind vor allem im südöstlichen Bereich Gruben zu erkennen (Abb. 3, D), die Nord-Süd orientierte Baracken formen. Zwar in etwas schwächerer Ausprägung, aber in erkennbar gleicher Orientierung, setzen sich die Befunde über die Straße hinweg fort.



Abb. 3 - Ausschnitt aus den Magnetometermessungen mit dem neronischen *campus*, der neronischen Umwehrung und darunter der augusteisch-tiberischen Bebauung (St. Bödecker, L. Berger, E. Rung LVR-Amt für Bodendenkmalpflege im Rheinland; F. Lüth, Deutsches Archäologisches Institut Berlin; Kartengrundlage ©Geobasis NRW 2019)

#### Ausblick

Die kombinatorische Auswertung von Grabungsbefunden, Luftbilddaufnahmen und geophysikalischen Messungen<sup>18</sup> wird zukünftig ein erheblich differenziertes Bild der römischen Lagerstrukturen auf dem Fürstenberg sowie des direkten Umfeldes erlauben.

Für die Entwicklung des sich erst unter Augustus etablierten Systems der ständigen Stationierung von römischen Legionen an den Grenzen des Imperiums kommt den Untersuchungen von *Vetera castra* auf dem Fürstenberg dabei eine Schlüsselstellung zu. Hier lässt sich nun die Entwicklung der Innenbebauung vom System der polygonalen Lager zum spielkartenförmigen Prinzip an einem einzigen Ort nachvollziehen. Gleichzeitig bieten die systematisch in die Landschaft ausgreifenden Untersuchungen Einblicke in die Nut-

zung des direkten Umfeldes eines Legionsstandortes der augusteischen bis neronischen Zeit durch das Militär und die Zivilbevölkerung. Hier zeichnet sich bislang eine Dominanz der vom und für das Militär errichteten Bauten ab.

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<sup>15</sup>Hanel 1995, 271.

<sup>16</sup>v. Petrikovits 1958, 1815

<sup>17</sup>Lehner 1906, 321–324

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**Summary**

In a joint project of the German Archaeological Institute Berlin and the LVR-State Service for Archaeological Heritage, the area of the double-legionary base *Vetera castra* at the Fürstenberg near Xanten was recorded by large-scale high-resolution magnetometer surveys in the preparation for the application of the "Lower German Limes" as UNESCO World Heritage Site. The survey encompasses the inner area and defences of the multi-periodic legionary fortresses as well as their surroundings, in which large military buildings and settlement areas are located. Numerous new discoveries on the internal structure and the road system, on measurement and on individual ground plans of buildings within the legionary fortresses can now be recorded. A big step in understanding the development of fortresses from the area of Augustus to Nero at this site was achieved by recording the inner structures of the so-called fortress A-C (Augustan-Tiberian period), of

which only parts of the enclosure were known before. At least two parade grounds, each several hectares in size and surrounded by monumental architecture have been discovered in the surrounding area. The results of the large-scale measurements provide new insights into the development of one of Rome's largest fortresses and its surrounding landscape.





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## Two Late Antique Fortifications in Northwestern Noricum

### ABSTRACT

With the geophysical prospections in Mösendorf (2015) and the excavations in Oberranna (since 2017), far-reaching new insights into late antique fortification architecture in *Noricum (ripense)* could be gained. The find spots are located in the northwest of the province, in the present-day federal state of Upper Austria. They have been known since the 19<sup>th</sup> century, but have only received the attention that they clearly deserve in recent years. Both fortifications are to be considered in the context of transport infrastructure, resp., control. In Oberranna, a *quadriburgus* that monitored activity on the Danube is examined. The excellently preserved structure can be visited since 2018 in an approximately 1000 m<sup>2</sup>-large protective structure. The *burgus* of Mösendorf lay exposed on a hill above the Vöckla River Valley and the *via publica* between *Iuvavum*/Salzburg and *Ovilavis*/Wels, which directly passed by and to whose monitoring it served. Excavations would be also desirable here.

**KEY WORDS:** *BURGUS*, *DANUBE LIMES*, *VIA PUBLICA*, *NORICUM*, *UPPER AUSTRIA*, *MÖSENDORF*, *OBERRANNA*

Very little is still known about late antiquity in northwestern Noricum. Although Eugippius' *The Life of Saint Severin* is an outstanding written source from the late 5th century, and the *Notitia Dignitatum* also provides a wealth of information, knowledge of and publications on the archaeological remains bet-

ween the late 3<sup>rd</sup> and 5<sup>th</sup> centuries are, however, to be described as extremely modest. With the geophysical prospections in Mösendorf (2015) and the excavations in Oberranna (since 2017), far-reaching new insights into late antique fortification architecture could be gained. Both types of construction are unique in

the province of Noricum. The excavations in Oberranna are being continued in 2019, and further research would be desirable for Mösendorf as well.

### Quadriburgus Oberranna

In 1840, the first excavations took place in Oberranna near Engelhartzell. The Schlögen Excavation Society, in cooperation with the Upper Austrian Museum Association, uncovered sections of the southeast flank of a solid building with two round towers.<sup>1</sup> In March 1960, the Upper Austrian State Museum was informed by the Engelhartzell police station that, in the course of digging work for an access road to a new gas station in Oberranna, extensive wall sections had been found. During this excavation in the southwest flank area, the west tower—the third round tower of the building—was discovered. However, half of the west tower and the entire south tower were truncated by about 1 m for the filling station entrance.<sup>2</sup> The gas station no longer exists today. In 1985, the burgus was listed as a historical monument to protect it from further destruction. In 2007, the ruinous building (a former tavern) above the northern tower was finally razed; the floor slab remained untouched to protect the archaeological building stock. Until 2016, the area presented itself as an overgrown debris hill and was used to store old appliances and vehicles. Trees and shrubs several meters high grew on the archaeological site, and slowly but steadily caused damage to the Roman building fabric (Fig. 1a).

The 2018 Upper Austrian State Exhibition “The Return of the Legion” and the nomination of the Danube Limes as a UNESCO World Heritage Site offered the opportunity to negotiate the acquisition of the affected property. Thankfully, the private owners agreed to a land swap. In the meantime, the municipality of Engelhartzell has become the contractual owner of the land; the funds came from the Upper Austrian State Exhibition budget. The clearing of the vegetation practically started once the contract had been signed (Fig. 1b). Since 2017, on behalf of the Upper Austrian State Museum, the excavation company Archeonova has been conducting digs in Oberranna, which have exceeded all expectations. The rising masonry sometimes reaches up to a height

of over 2 meters; the foundations lie up to 1.5 meters in the ground. In an internal space of the west tower, fortunately only partially destroyed in 1960, several square meters of the original waterproof Roman wall plaster have been preserved. Even fingerprints from Roman times can be seen. A very special highlight is the virtually complete Roman “plunge bath” (*piscina*), which shows that the cellar of this tower was used as a bath house (Fig. 2). The excavation of the cold bath room (*frigidarium*) was completed in 2018; the warm bath room (*caldarium*) will be examined in 2019.

In addition to the “bathing tower,” the archeological site with the so-called “Römerkeller” (“Roman Cellar”) features another attraction. Around 1500, the small elevation directly above the Danube was rediscovered as a settlement site. The already exposed and largely flood-proof location was even more emphasized by the debris cone of the small Roman fort. Tons of loose building blocks lay around. These were used as building material, but without knocking down the remaining walls. On the contrary, the still completely intact lower part of the north tower of the Roman structure was incorporated into the new building. Immediately adjacent to the Roman walls is a second cordon which supports the cellar vault. Anyone entering this part of the complex today will be standing simultaneously in a Roman and a late medieval edifice. For a long time the building was run as a tavern; the cellar served as a storage space (ideal for wines) and party room. Up into the 20th century, the tavern experienced various conversions and extensions; the underlying Roman tower was only affected once during the breakthrough of a second cellar access. The late medieval structure erected on top of it, which integrated the Roman building stock, was an absolute stroke of luck, since the archaeological substance remained well-protected. Thanks to this fact, the “Roman burgus Oberranna” is by far the best preserved example of Roman architecture in Upper Austria.

Situated directly above the bank of the Danube in Oberranna, the small, solid fortification is a so-called *quadriburgus*, the only Roman structure of this kind in Austria. The external dimensions were about 28 x 28 meters; the entrance into the bulwark was on the side facing the river. In the roughly square-shaped core build-



Fig. 1a - The archaeological site in Oberranna before löschen clearing in the summer of 2016 (photo: Archeonova).

ding (18 x 18 m) four pillars form a small, open atrium, which probably also served for the water supply. Four round towers with diameters of 8–10 m were attached to the corners of the core structure (Fig. 3).

The towers offered an excellent view over a long stretch of the Danube, enabling the river traffic to be extensively monitored. About 100 meters upstream, the Danube formed a small side arm, which provided ideal conditions for the mooring of ships. The Rannatal River Valley flowing into the Danube opposite could also have been a reason for erecting the structure at this spot. The *burgus* had already been destroyed in Roman times. The suspended ceilings and the roof truss burned down and collapsed into the building. Countless roof tiles crashed into the screed floors. What had caused the blaze could not be clarified yet. The archaeological finds pose another riddle, since most of the artifacts recovered up to now are clearly older than the *burgus*. Perhaps there was a predecessor building here, which, however, still has to be discovered.

Parallel to the excavations in Oberranna, construction on the Danube Cycle Path commenced in order to close the gap between Engelhartzell and Wesenufer in time

before the Upper Austrian State Exhibition. In the original plan, the bike path would have led over the areas of the *burgus* leveled in 1960. Owing to the perfect coordination between the municipality of Engelhartzell, the Department of Cultural Affairs and the Directorate of Road Construction and Traffic of the Upper Austria State Government, the bike trail could be re-routed. Such careful consideration of a road construction project for an archaeological monument is to be evaluated as an Austria-wide model example. Taking this step first guaranteed that the site in Oberranna could be completely secured with an impressive, over 1000 m<sup>2</sup>-large protective structure and thus presented to the public for the long term (Fig. 4). In the interior of this construction a partially elevated steel-timber walkway with wooden planking leads you over the Roman structure. Once you arrive at the balcony, you are not only provided with the best overview of the *burgus*, but a glass surface opens up a wonderful view to the Danube, making the strategic location and function of the Roman fortification comprehensible (Fig. 5).

For the 2018 Upper Austrian State Exhibition and the subsequent continuation as a branch location of the Upper Austrian State Museum (OÖ Landes-Kultur

<sup>1</sup>BMFC 1842, XXVI, XXXVI.

<sup>2</sup>Eckhart 1960, 37; Eckhart 1983, 25–28.





Fig. 1b - The archaeological site in Oberranna before löschen clearing in the summer of 2016 (photo: Archeonova).

GmbH), efforts towards a contemporary presentation of the eventful history of this remarkable archaeological site under the motto “From a small Roman fort to a wine cellar” are underway. After the basic “hardware” of explanatory panels on the building itself was installed during the State Exhibition year, a film highlighting the excavation and showing animated ideal reconstructions of the *quadriburgus* in Oberranna, was implemented 2021.

In keeping with modern monument protection and the UNESCO World Heritage Site of the Danube Limes, parts of the archaeological substance remain untouched below ground level. This has created an archaeological reserve to provide future generations the opportunity to answer unsolved or new questions using other methods. The dimension of the building fabric and the excellent state of preservation require, to a certain extent, extraordinary solutions. Immediately following the discovery of the west tower with the integrated bath, the entire *frigidarium* was provisionally covered and a

restoration team began with the necessary conservatory measures to be able to preserve the large-sized wall plasters and the *piscina* without a loss of substance. In the meantime, a concept has been developed especially for the winter. The cold bathing room and the hip bath tub are covered between November and March, and tempered with a remote-controlled heating system, if necessary.<sup>3</sup>

### Burgus Mösendorf

The *via publica* between Iuvavum/Salzburg and Ovilavis/Wels has been occupying classical scholars for more than two centuries. In the *Tabula Peutingeriana*, the places between the two autonomous cities of Iuvavum and Ovilavis are called Tarnantone, Laciaco and Tergolape. In the *Itinerarium Antonini* only Laciaco is listed. None of these places could be identified with complete certainty to this day.<sup>4</sup> Due to the mention of *Laciaco* or *Laciaco* in the *Itinerarium Antonini*, as well as in the *Tabula Peutingeriana*, and the good



Fig. 2 - View of the west tower with the integrated bath house and original wall plastering in 2017 (photo: Archeonova).

middle position between *Ovilavis* (distances in both works: m.p. XXXII) and *Iuvavum* (m.p. XXVIII or m.p. XXVII), it is to be assumed that this is the most important station between the two cities. It has most commonly been ascribed to Frankenmarkt, but there are no compelling arguments for this.<sup>5</sup>

Only about 3 km east of Frankenmarkt lies Mösendorf, which first came into the focus of classical studies between 1865 and 1867, and has also been repeatedly proposed as the Laciaco/Laciaco way station.<sup>6</sup> Especially the milestone<sup>7</sup> of Emperor Septimius Severus and his sons, which was found in 1865, delighted the scholars of the 19<sup>th</sup> century and initially drew attention to this special site. Today it stands in front of the Marienkirche in Vöcklamarkt. The last line of the inscription indicates the distance of the former site of *Iuvavum*: AB IVVAO M XXXI / from Iuva(v)o m(ilia

*passuum*) XXXI. 31 Roman miles, approximately 46 kilometers, correspond very well to the distance from the center of Salzburg to Mösendorf if one follows the course of today's B1 federal road, which runs parallel to the Roman route over long distances or does not deviate too far from it. The location of the milestone find is likely to be close to its original installation site. Unfortunately, the original plan sketch of these early excavations has disappeared; fortunately, two largely identical copies have been handed down (Fig. 6). On the basis of the findings and on the milestone, as well as other definitely Roman finds, Friedrich von Kenner arrived at the conclusion that it is likely to be a smaller Roman fortification.<sup>8</sup> This has not remained undisputed, however, since several clearly medieval objects have also been found.<sup>9</sup>

<sup>3</sup>Kastler, Traxler 2014, 134–136; Lang *et al.* 2016, 18.

<sup>4</sup>For more detailed information on the research history, see Grabherr *et al.* 2018, 149–155, 177–189.

<sup>5</sup>CIL 17/4, Fasc. 1, No. 89.

<sup>6</sup>Kenner 1869, 25.

<sup>7</sup>For a summary on this discussion, see Grabherr *et al.* 2018, 149–155, 161–162, 171–173.

<sup>3</sup>Klimesch *et al.* 2017; Klimesch, Reitberger-Klimesch 2018; Traxler, Klimesch 2018; Traxler, Klimesch 2019.

<sup>4</sup>Kastler, Traxler 2014, 129–137; Lang *et al.* 2016, 17–18.



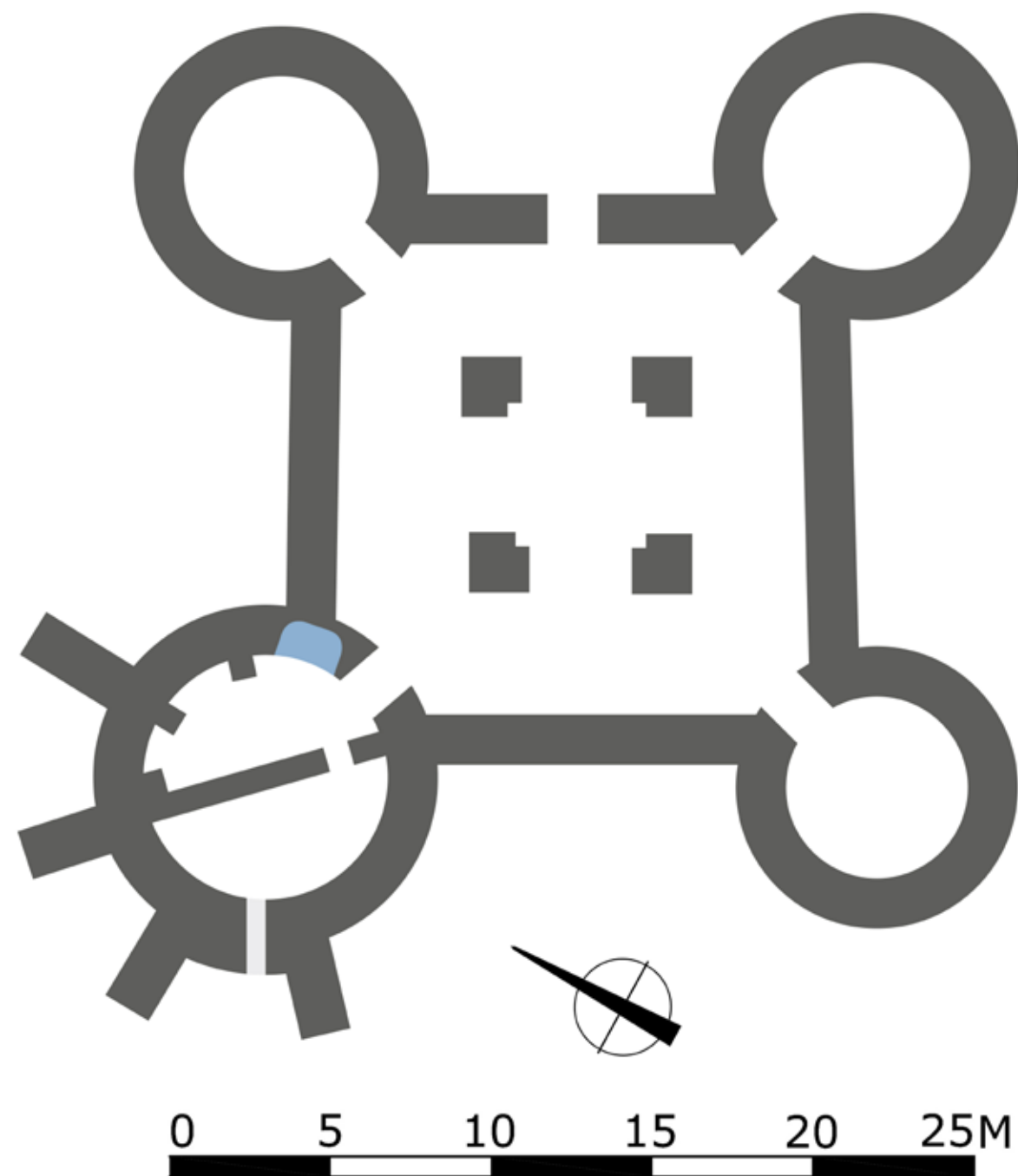


Fig. 3 - Schematic ground plan of the *burgus* of Oberranna (Upper Austrian State Museum, G. Lohninger/S. Traxler).

A local inspection in 2013 and an airborne laser scan still hinted at structures of the complex.<sup>10</sup> In 2015, as part of a cooperation project between the Upper Austrian State Museum and the University of Innsbruck, geophysical surveys were carried out to review the 19th century findings and the monument's condition, yielding excellent results (Fig. 7). An approximately

square-shaped foundation extends into the center of the area. The side lengths measure 17.97 m in the north, 17.52 m in the east, 18.3 m in the south, and 18.3 m in the west. The wall thickness is assumed to be at least 2 m. The entrance stands out on the south side facing the Roman *via publica*. An interruption of the masonry, which is slightly offset from the central axis towards



Fig. 4 - Protective structure in Oberranna in 2018 (photo: E. Weinlich).

the east, appears on the survey image here. Inside the building, approximately 2 m southwest of the center of the space, there is a solid reflection with a diameter of nearly 3 m that is discernible over a larger depth range. This finding could be a supporting pillar, like those also verified in Oberranna (see above), or possibly the walled cistern described in the documentation of the old excavations.<sup>11</sup> A verified interpretation of the finds must ultimately remain open due to the lack of information. In principle, pillars for a solid structure of approximately 20 m side length are quite conceivable, but then four pillars would be expected. Three of them, however, are not visible in the survey image and probably would have to have been completely destroyed. The position of the solid reflection within the walled enclosure would be appropriate for at least one of four supporting pillars. This would result in an atrium in the center, which served for the natural lighting of the

building, as well as for the water supply. Areas with probably larger concentrations of debris, the origin of which cannot be interpreted, are apparent in the center of the building, as well as outside in the north and the southwest.

Parallel to the solid, main edifice, a linear structure of compacted resistance, which is quadrant-shaped in the corners, appears at a distance of 8 m. Owing to the rounded corners, a formal reading as a ditch is initially close. The partially strong reflections, which also extend over a larger depth range, could speak as well for masonry as for a compact ditch filling with stone material. Since approximately half the distance between the central building and the outer ring there is a series of punctiform structures of higher resistance that run parallel to the outer ring, which likewise indicate a rounded corner progression, a structural af-

<sup>10</sup>See Kastler, Traxler 2014, 133 Fig. 4.

<sup>11</sup>Kenner 1869, 24.





Fig. 5 - Protective structure in Oberranna from the inside – view over the *frigidarium* towards the north tower and platform (photo: E. Weinlich).

filiation to it is evident. Thus, a reading of the same as a wall ring with a pillared battlement may appear appropriate, especially since the width of the find does not successively decrease with increasing depth, which would be expected in the case of the backfilling of a V-shaped military ditch. It also becomes apparent in the same depth as the foundations of the main structure, although a lower level of the floor would be presumed for a ditch. Both the length and the width of the curtain wall can be established as 38.41 m, respectively. The floor plan does not fit into an orthogonal system, but rather forms corresponding parallels in the angle system of  $86^{\circ}/94^{\circ}$ , which points in any case to a clear reference to each other and probably to a simultaneous construction as well.

The magnetogram initially shows numerous dipolar anomalies, most of which are caused by iron pieces. Massive dipolar disturbances are detectable in the south of the measuring area with the emanation of a chain link fence bordering plot No. 6198, and three

measuring or boundary points to the east and north of the measuring area. A structure consisting of four vertically aligned dipolar anomalies set closely together in a rectangle emerge in the northwest section of the survey image. In the interior of the walled enclosure, which was captured by georadar imaging, and partially in its immediate surroundings, extremely strong dipolar anomalies, which overlap all other magnetic structures and elude an archaeological interpretation, stand out. An approximately orthogonal system of ditches 105 m in length and 65 m in width, which encloses the central structure, is double-walled in the east and bends there after 35 m from the north towards the south. This ditch system shows slight deviations from the central building features and is therefore probably to be classified in a chronologically different manner and is perhaps to be seen in connection with the medieval re-use of the location (see above). In the southwest part of the measuring area, a narrow ditch which has no reference to other finds runs from northwest to southeast. Positive anomalies, likely to indicate pits, can be found

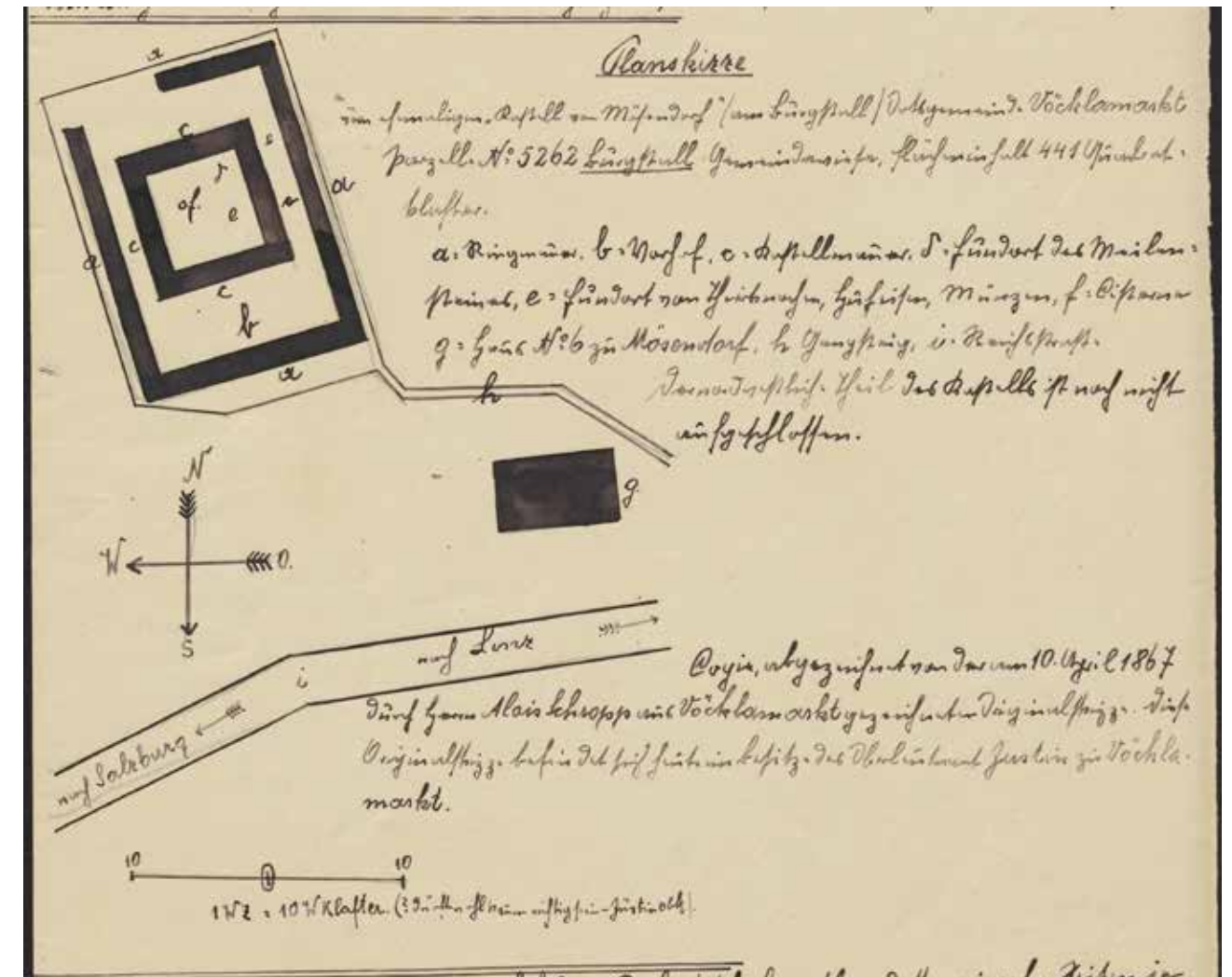


Fig. 6 - Plan sketch of the former "fort" of Mösendorf: "a = ring wall, b = forecourt, c = fort wall, d = site of the milestone, e = site of animal bones, horseshoes, coins, f = cistern, g = house No. 6 in Mösendorf, h = steep path. i = imperial road."  
 "Copy, copied from the original sketch drawn on April 10, 1867 by Mr. Alois Schropp from Vöcklamarkt"  
 (H. Justin 1909).

twice to the west, just outside the large ditch system, and, in a smaller dimension, to the north of it. There is a similarly oriented rectangular positive anomaly within the ditch system in the southwest, next to which a very strong magnetic signal can be recognized directly to the southeast.

If the results of the building features extrapolated through GPR measurements are compared with those of the investigations between 1865 and 1867, then the distinct congruencies as well as the striking differences become obvious. The reason for this cannot be clarified at present on the basis of the existing documentation of the research from 1865 to 1867.<sup>12</sup>

Based on typological considerations and on the premise that no structures refer to a medieval feature, it is obvious to interpret the structures in Mösendorf (deduced from the plans of the 1860s and from geophysical prospecting) as a late antique *burgus*, as we know as residual forts or reduced residual forts in the corners of the former auxiliary camps of Wallsee, Zeiselmauer and probably also Traismauer on the Noric Danube border. So much as this interpretation is conclusive, so striking are the two peculiarities of the Mösendorf features. The rounded corners of the curtain wall and the pillars in the courtyard are details that are usually missing in other *burgi* or *quadriburgi*. Pillars outside the tower, which were built for a battlement, are at least

<sup>12</sup>See Grabherr *et al.* 2018, 162–164.

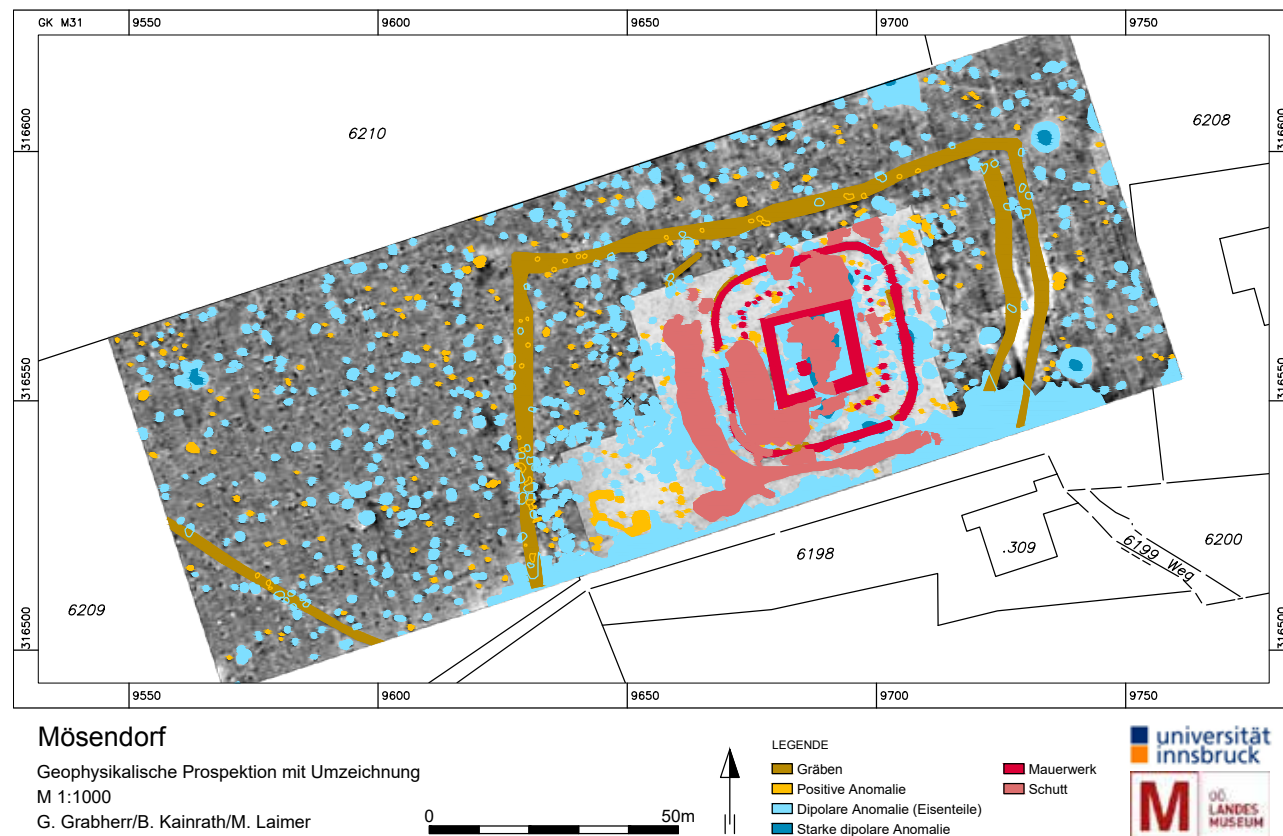


Fig. 7 - Results of the geophysical prospection. M 1:1000 (G. Grabherr/B. Kainrath/M. Laimer).

presumed for the *burgus* in Meckatz.<sup>13</sup> A plinth, which almost adjoins the wall of the tower, and a fortified corner are indicative of a battlement in this feature. Proof of further corresponding battlements is lacking and therefore the Mösendorf fortlet probably represents a special case. The round corners of the outer ring wall find good comparisons in the so-called signal stations, which protected the east coast of Britain at the end of the 4<sup>th</sup> century (*litus saxonicum*, Saxon Shore) and had to assume important functions as bases, supply and message stations.<sup>14</sup> Four of these forts, built at fairly regular distances of about 15 to 20 km, are confirmed by the find; a fifth is discussed by the evidence of an inscription.<sup>15</sup> These facilities have a central tower with a first floor, supported by wooden pillars on stone plinths, and a curtain wall with rounded corners and a circumferential moat, demonstrating many similarities with the find in Mösendorf. A major difference, however, is the corner towers that are documented in

most of the British forts and are missing in Mösendorf. *Burgi* that have pillar bases in the tower interior are known not only on the British East Coast, but also in Pannonia. As to the question of the function of these plinths, a differentiation must again be made, and the sizes of the towers must be considered: The towers of the signal stations vary between 14 and 15 m in width on the outside and are thus smaller than the tower in Upper Austria, which measures 18 x 19 m and approximately corresponds to the size of the towers in Leányfalu (18 x 18 m)<sup>16</sup> and Budakalász-Luppa csárda (18 x 17 m).<sup>17</sup> Due to the pillars in the British complexes (six at Goldsborough and seven at Scarborough), the existence of an upper floor, which was supported by these pillars, is assumed. On the other hand, the larger Pannonian fortlets each possess four pillar foundations, which Mösendorf presumably also had. The watchtowers of Rtkovo-Giamija, Donje Butorke and Mora Vagei in the area of the Iron Gate on the Danube likewise

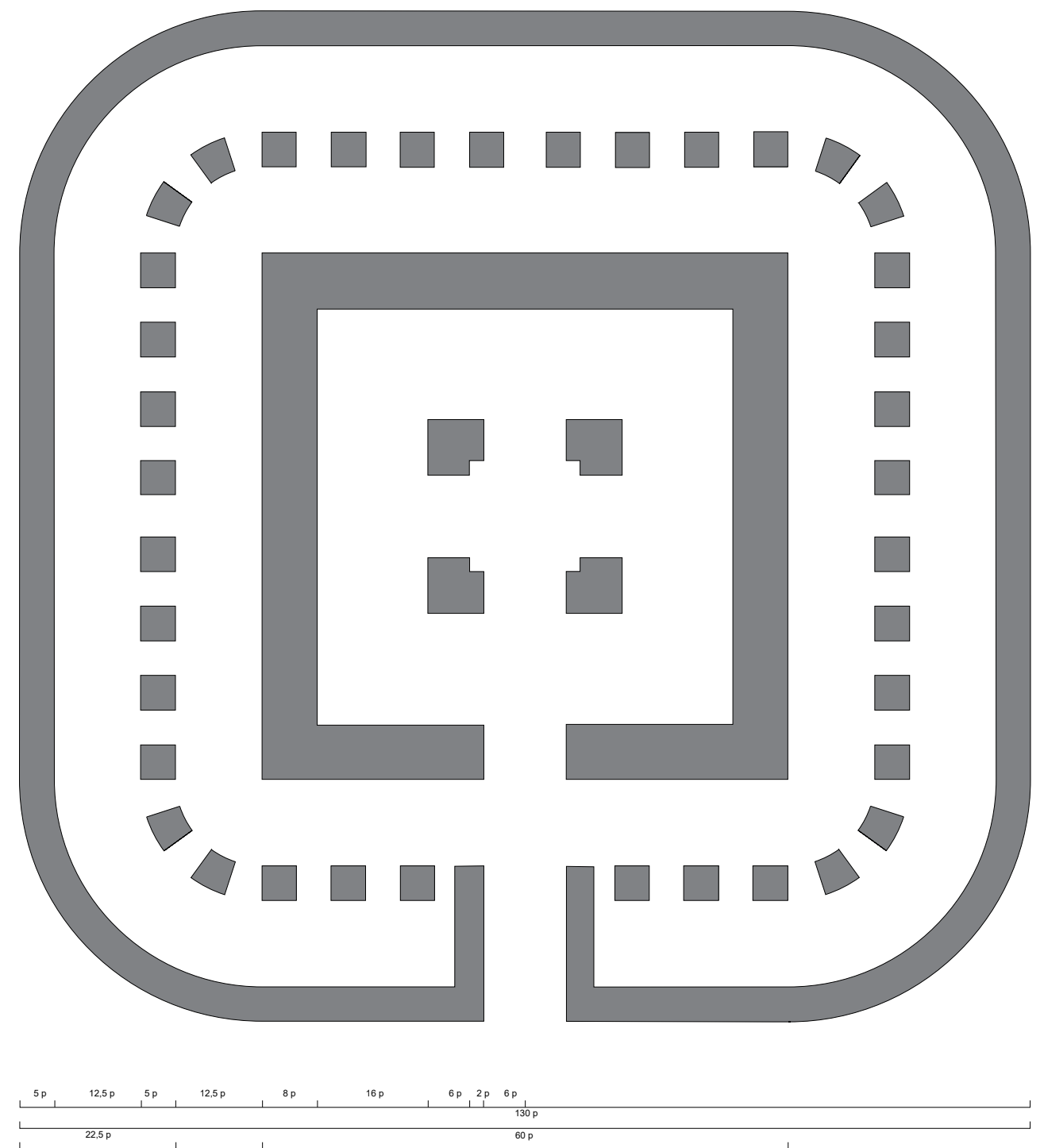


Fig. 8 - Schematic idealized ground plan of the *burgus* of Mösendorf according to foot measurements (G. Grabherr/B. Kainrath).

show four central pillars, which are formed into an L-shape using spolia, and have similar dimensions of about 18.5 m<sup>2</sup>.<sup>18</sup> On the basis of the width, which had to be traversed with a beam, an inner atrium is assumed. This in turn, is rather out of the question for the British

complexes because, at least in the Scarborough signal station, such a reconstruction is not feasible because of the central pillar.

<sup>13</sup>Garbsch 1967, 53.

<sup>14</sup>Wilson 1989, 142f.

<sup>15</sup>Ravenscar: Wilson 1989, 142.

<sup>16</sup>Soproni 1985, 38 Fig. 19.

<sup>17</sup>Soproni 1985, 43 Fig. 26.

<sup>18</sup>Jeremić 2007.



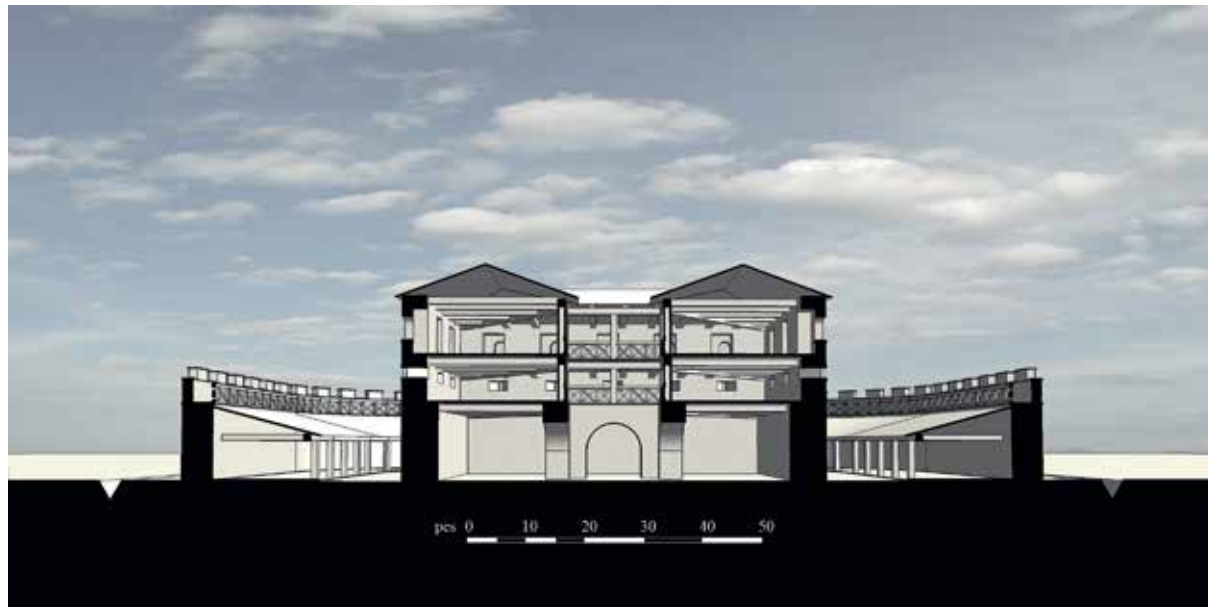


Fig. 9 - Reconstruction proposal of the *burgus* of Mösendorf: cross section (D. Grisseemann).

The data obtained from the geophysical prospection, including the information on the design of the largely preserved complex which is functionally, temporally and spatially comparable, yet still above ground, make a schematic reconstruction of the fortifications in Mösendorf possible. The 4° deviation from the right angle, probably caused by the respective surveying equipment, was not taken into account in the reconstruction, since this probably was not intended and should rather be regarded as a “measurement error” of the ancient construction engineers. Moreover, even if not all finds were preserved, the fortification was reconstructed as a symmetrical complex in an orthogonal system. The Roman foot of 0.296 m obviously served as the unit of measure, although no corresponding further use of the unit in construction is given and that the orthodoron measuring 11 *digiti* has been proposed as the basic measure of the 4<sup>th</sup> century.<sup>19</sup> However, the dimensions of the finds obtained from the prospection almost always produced whole and predominantly round number values. From the reconstructed ground plan (Fig. 8), a width of the central building of 60 pedes (p) and a total width of the built structure of 130 p can be ascertained (Fig. 9). In analogy to the so-called “Restkastell” (“residual fort”) of

Zeiselmauer,<sup>20</sup> with the story heights determined by the putlog holes, the main building is reconstructed as a defense tower with a central atrium and - as confirmed by the excavation findings of 1866 - a cistern for the water supply. The design of the window openings and embrasures draws upon the results of the 1985 building survey of the likewise remarkably preserved *burgus* of Bacharnsdorf,<sup>21</sup> as well as upon the analogous shape of the arched windows with an entrance niche to the left in the western half-round tower of the Mautern fort.<sup>22</sup> The similarities, but also differences in the story heights of these three late antique complexes of the Noric section of the Limes are striking. Thus, in a schematic comparison for the *burgus* of Bacharnsdorf (the average height of the beam holes of 1 p [Roman foot] is generally used for the floor slab), this results in a distribution of 8 p room height for the ground floor, 8 p for the first floor with a 2 p-high embrasure at the height of 3 p from the floor bottom, and probably 10 p for the second floor with a 2 p-high arched window opening at the height of 4 p above the floor bottom. This results in a total height up to the roof approach should no third floor be assumed - of 28 p. For the so-called residual fort in Zeiselmauer, the corresponding components measure 8 p - ground floor, 7.5 p - first floor with openings of 2.5 p

<sup>19</sup>Nagy 1999.

<sup>20</sup>Ubl 1977; Schröder 2006; Ployer 2015b.

<sup>21</sup>Ubl 1997, 203–207; Genser 1986, 264–266; Fischer 2002, 136; Ployer 2013, 234–237; Ployer 2015a.

<sup>22</sup>Technical redrawing in Gassner, Jilek 2000, Fig. 39.



Fig. 10 - Reconstruction proposal of the *burgus* of Mösendorf: perspective oblique view (D. Grisseemann).

height just below the beam holes for the floor of the second story, which in turn is extended by a height of 8 p. When added together, the height of the *burgus* up to the assumed eaves height amounts to 25.5 p.

The late antique semi-circularly protruding west tower of the Mautern fort also has three stories, but in total attain a tower elevation of 43 p. The heights of the stories are 15 p for the ground floor, 12 p for the first floor, and 14 p for the second floor, whose high arched windows with niches range from 3 to 9 p in height. The differences in the total height of these three complexes with the same number of floors are considerable. Thus, the *burgus* of Zeiselmauer with an atrium reaches merely 59.3% of the height of the west tower of Mautern, while the *burgus* of Bacharnsdorf reaches at least 65.1%.

The tower is covered by a surrounding gabled roof, which protects the top platform from weather effects and serves as a water supply to the cistern in the courtyard. The outer curtain wall was reconstructed with a circular battlement featuring crenellations. The point foundations that can be identified in the radargram parallel to the enclosure wall led to the assumption of an internally encircling development with a pent roof adjoining the battlement, which is supported by a ring of columns. The space of about 450 m<sup>2</sup> gained through this can be used both as an open portico and as closed

rooms (warehouses, stables, etc.). Due to the reduced reconstruction to the basic structural shape, the hypothetical indication of a staircase in the central tower, as well as staircases to the outer battlements, has been dispensed with. The same applies to the assumed spatial divisions, both within the tower and in the spaces adjoining the curtain wall. Altogether, the reconstruction proposal (Fig. 10) constitutes the “minimum dimension” of the complex according to the information available so far from the geophysical prospections and the results of the research of 1865–1867. A larger height expansion of the central tower analogous to the find in Mautern is conceivable, especially considering the military requirement for a good weapon effect from the top floor of the tower above the curtain wall.

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**Zusammenfassung**

Mit den geophysikalischen Prospektionen in Mösendorf (2015) und den Ausgrabungen in Oberranna (seit 2017) konnten weitreichende neue Erkenntnisse zur spätantiken Befestigungsarchitektur in Noricum (ripense) gewonnen werden. Die Fundorte liegen im Nordwesten der Provinz, im heutigen Bundesland

Oberösterreich. Sie sind seit dem 19. Jahrhundert bekannt, haben aber erst in den letzten Jahren die Beachtung erfahren, die sie sich eindeutig verdienen. Beide Befestigungen sind im Zusammenhang mit Verkehrsinfrastruktur bzw. tkontrolle zu betrachten. In Oberranna wird ein Quadriburgus erforscht, von dem aus die Donau kontrolliert worden ist. Das hervorragend erhaltene Bauwerk kann seit 2018 in einem circa 1000 m<sup>2</sup> großen Schutzbau besichtigt werden. Der *burgus* von Mösendorf lag exponiert auf einer Anhöhe über dem Tal der Vöckla und der unmittelbar vorbeiführenden *via publica* zwischen Iuvavum/Salzburg und Ovilavis/Wels, zu deren Überwachung er diente. Auch hier wären Ausgrabungen wünschenswert.





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## **Before the Legion Arrives - Roman Military Garrisons around Lauriacum**

### **ABSTRACT**

The location of the *legio II Italica* in Lauriacum/Enns after the Marcomannic Wars has long been known. Up to now, it has been assumed that the regiment had been stationed earlier in Albing, only 5 km east across the Enns River. Recent research has shown that the legion camp in Albing was a futile attempt – probably under the rule of Caracalla – to relocate the *legio II Italica* to a more prominent location, which is better visible from the opposite bank of the Danube.

New aerial photo evaluations and the subsequent geophysical prospecting (geomagnetics and ground penetrating radar) have led to the discovery of a previously unknown military camp in Stein-St. Pantaleon in the immediate vicinity of the legionary camp in Albing. Extensive finds from the second half of the 1<sup>st</sup> century to the third quarter of the 2<sup>nd</sup> century, including military equipment and not least seven fragments of at least six military diplomas, are known to have originated from there. This clearly indicates that the auxiliary camp Stein-St. Pantaleon is to be regarded as a forerunner of the *legio II Italica* garrison in Lauriacum/Enns.

The succession of the military camps in the area near the mouth of the Enns river (Stein-St. Pantaleon, Enns and Albing) underlines the strategic importance of the Danube crossing to the Aist River Valley in the border area between Upper and Lower Austria, and the presence of the Roman troops in this section of *ripa Norica* already in the early period of the Roman Empire.

**KEY WORDS:** MARCOMANNIC WARS, DANUBE LIMES, MILITARY CAMP STEIN, *LEGIO II ITALICA*, LAURIACUM



A comprehensive control of the Roman Danube border in Noricum begins according to the current state of research in the Flavian period.<sup>1</sup> Before that, auxiliary camps were erected only at the main neuralgic river crossings, and several small guard posts to monitor the Danube line were also probably set up. In the first and early second centuries, a very low population density in the Mühlviertel and Waldviertel regions on the opposite side of the Danube is assumed, which is why the danger potential of the border region is regarded to be low. Larger population groups are only assumed in the Bohemian core area, which lies about 100 km away on the other side of the Bohemian Forest. With the Marcomanni invasion of Raetia and Noricum, the situation changes fundamentally. Destruction layers can be observed in some fortifications, and due to the now greater threat to these border sections, the two legions newly created under Marcus Aurelius in 165/166 AD – the *legio III Italica* in Castra Regina/Regensburg in Raetia and the *legio II Italica* in Lauriacum/Enns in Noricum – are stationed here. For the first time since their constitution, these two provinces receive high-quality troops to secure the Danube border. In Regensburg, the legionary camp replaces the auxiliary fort of Kumpfmühl (see below), which was destroyed by an invasion in the early 170s, in order to secure the obviously crucial Danube crossing. A comparable motivation may also be assumed for the location of the sister legion at the confluence of the Aist and Enns rivers (Fig. 1).

### The *legio II Italica* in Enns and Albing

Up to now it has been assumed that the *legio II Italica* had initially set up camp in Albing on the orographically right side of the Enns River in the 170s.<sup>2</sup> Due to floods or at least a large flood risk, the fort is believed to have been relocated at the latest under Emperor Sep-

timius Severus in the 190s<sup>3</sup> to the low terrace in Enns situated 13 m higher. This assumption is apparently supported by the fact that today a section of approx. 10% of the camp area adjoining the northern corner has presumably been torn away by a flood.<sup>4</sup> Since only the foundations of the curtain wall with the towers and gates, as well as the camp military headquarters had been erected at the camp in Albing, the building site was abandoned in any case before the troops moved into the camp.<sup>5</sup> Traces of roads leading into the camp have not been discovered either in aerial photographs or during geophysical prospection. The legion camp in Enns remains a garrison location for the 2<sup>nd</sup> Italic Legion until late antiquity and is abandoned when the Roman military withdraws from *Noricum ripense* at the command of Odoacer in 488.

This view, which has been accepted for decades, is called into question by the current research of Stefan Groh and Helga Sedlmayer. When analyzing the finds from the northwestern *canabae* of Lauriacum, H. Sedlmayer comes to the conclusion that these were settled during the *Expediatio Germanica secunda*, and thus before the death of Marcus Aurelius.<sup>6</sup> This, of course, implies a previous construction of the legion camp at the Enns site, whereby the “window of opportunity” for the construction of the legion camp in Albing could be narrowed down to the time between the withdrawal from Ločica ob Savinji, where the legion had erected its camp between 168 and 171, and the arrival on the Danube in the mid-170s. Basically, the construction activities in Albing can only be estimated to have lasted a few months.

In recent years, St. Groh has been working intensively on the three camps of the *legio II Italica*,<sup>7</sup> and has conducted extensive geophysical prospecting at all locations. In doing so, he has expanded the knowledge

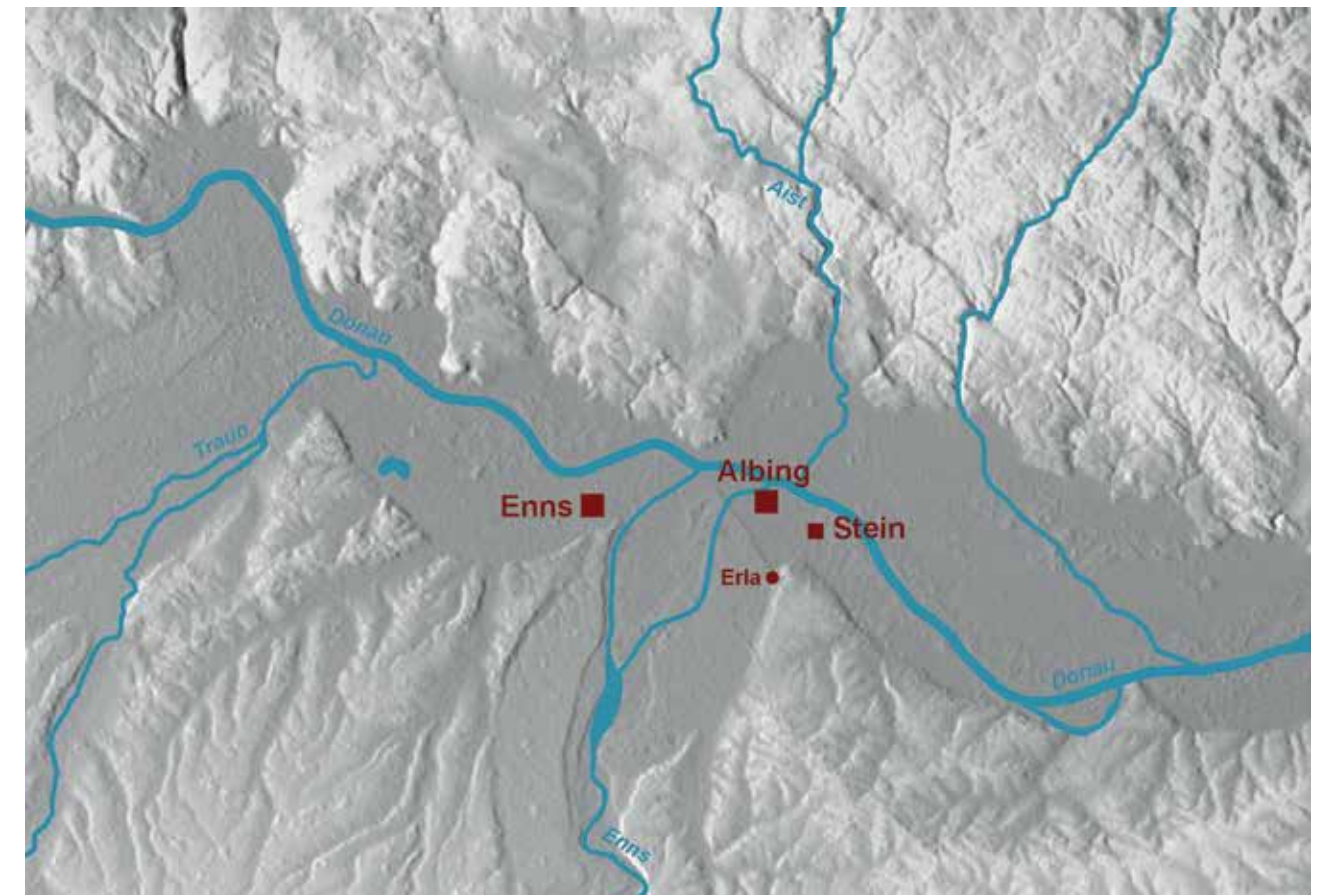


Fig. 1 - Map of the mouth of the Enns River with Roman military installations (ArchaeoPublica – G. Grabherr/B. Kainrath)

about the ground plans, as well as the military building structures. Especially in the case of the unfinished legion camp of Albing, he suggests a new date in the reign of Caracalla.<sup>8</sup> The most important indications are the formal designs of the camp towers and the monumental *porta praetoria*. The intermediate towers of the Albing camp, in contrast to those of Ločica and Enns, generally jut 0.6 m over the camp wall. The corner towers of Ločica and Enns feature a rectangular outline, while those of Albing are more trapezoidal.<sup>9</sup> In contrast to the slightly shifted Enns site, the Albing site is located exactly opposite the confluence of the Aist and the Danube rivers and prominently visible from across the river, and was supposed to receive an accordingly monumental gate complex. What is decisive, however, is the fact that bricks stamped by *legio*

*II Italica* have been incorporated into the grout mortar foundation of the Albing camp. At any rate, the stamp types from Albing display great similarities to those from Ločica, which is why a chronology of Ločica – Albing – Enns was postulated.<sup>10</sup> The bricks laid into the foundations are to be regarded “als Zuschlagstoff der Caementitium-Konstruktion [...] aufgrund der Kalkmörtel oder -sinterreste, die [...] auch die antiken Bruchflächen überziehen”,<sup>11</sup> and thus as secondarily used building rubble or rejects. The presence of a corresponding quantity of brick rejects produced and stamped locally by the legion at the time when the grout mortar foundations are being prepared appears highly questionable and an import of the broken brick from the Vransko brickyard<sup>12</sup> near Ločica can be ruled out. The chronological determination of the short-lived

<sup>1</sup>On the development of the Noric border section, see most recently: Hameter 2015; Ployer 2018, 13–15.

<sup>2</sup>174/175 AD: Petrovitsch 2006, 289. Summary of the older literature in Groh 2018, 25 and Artner *et al.* 2018, 39.

<sup>3</sup>On account of the dedication to the genius of the *legio II Italica* (CIL III 15208) from 191 AD, this is considered as a possible date. In any case, this is to be regarded as a *terminus ante quem* if one does not want to interpret the stone as being set up a second time in Enns. The monumental building inscription from the year 202 AD, which has been found in at least secondary use in the *principia* (Winkler 2006, 18–27) points to the completion of the same or another larger structure in the camp, whereby it must ultimately remain open as to whether it is the first or later construction phase.

<sup>4</sup>Rejecting this assertion, Artner *et al.* 2018, 40.

<sup>5</sup>Artner *et al.* 2018, 38.

<sup>6</sup>Sedlmayer 2017, 194. However, the presented archaeological material can only be used to a limited extent for a fine chronological differentiation of a few (maximum 15) years.

<sup>7</sup>Groh 2018.

<sup>8</sup>Groh 2018, 100 f.

<sup>9</sup>Groh 2018, 103.

<sup>10</sup>Ubl 2008, 248.

<sup>11</sup>Groh 2018, 116.

<sup>12</sup>Most recently Lazar 2015.

and apparently futile attempt to build a camp of the *legio II Italica* in Albing can ultimately succeed only via a dendrochronological investigation of the wooden piloti under the foundation of the defensive wall, as repeatedly proven by Groller under intermediate tower XII.<sup>13</sup> Unfortunately, it is not possible to say whether or where corresponding remnants have survived.

Fort and *Vicus* in Stein

Only a few Roman finds from the area of the legion camp in Albing have been uncovered in the excavations carried out so far. On the contrary, in Stein, just over 1 km away, large quantities of small Roman finds have long been gathered up on the fields. As a rule, these were ascribed to the *canabae legionis* of Albing or the Roman brickworks of St. Pantaleon-Erla<sup>14</sup> (about 2 km south of Stein). The oldest references date from the beginning of the 20<sup>th</sup> century by Maximilian von Groller-Mildensee, the first important excavator of Enns and Albing. He comments on the investigative drawings of the first excavation in Stein as follows: “Der [...] Darstellung ist angesichts der Dürftigkeit der Reste weiteres nicht beizufügen und möge nur bemerkt werden, daß auf den umliegenden Feldern römische Gefäßreste nicht zu den Seltenheiten gehören.”<sup>15</sup>

With the onset of the use of the deep plough in agriculture in the 1970s, the number of gathered surface and detector finds increased significantly, which corresponding find publications show. Thus, in 1996, Johann Matouschek and Heinz Nowak<sup>16</sup> presented their collection of *Terra Sigillata*; in 2007, Matthias Pfisterer<sup>17</sup> identified 138 Roman coins from Stein, which, however, he assigned to the Albing site. Through the exact year dating of these coins on a timeline (Diagram 1: Numismatic annual issue index), a continuous circulation of money for the period of about 60–180 AD becomes apparent. Taking into account the usual use of older coinage at the time of the beginning of settlement, this probably dates back to the period of

the Flavian dynasty. The steeply declining numismatic curve at the end of the 170s indicates an abrupt simultaneous end to the settlement. A large part of the rich collection of Roman finds at the local museum of the nearby town of St. Valentin comes from the Stein site. In addition, there are several private collections, such as that of Karl Kremslehner, which is now available for scientific processing.

The significance of the Stein find site becomes particularly clear when the stock of Roman military diplomas from the private collections is taken into account. So far, six fragments from five different diplomas have been published.<sup>18</sup> The oldest diploma dates from 95 AD (Stein 4), one from the period of 135–138 AD (Stein 1 + 3), and two from the year 138 (Stein 5 and Stein 6). A further diploma eludes temporal classification (Stein 2). In the meantime, another copy from the Kremslehner Collection can be added to this list. Remains of eleven lines of the inscription are still preserved on the recto and three lines on the verso. The diploma was issued under the emperors Marcus Aurelius and Lucius Verus in 164/165 AD. The six Stein military diplomas therefore cover a period of 70 years between 95 and 165 AD (Tab. 1).

In view of the topographical situation at the eastern mouth of the Enns, the defense and the *principia* of the Albing legion camp are clearly visible on many aerial photographs. By contrast, on most of the openly accessible aerial photographs for the area of nearby Stein, from where the majority of the Roman finds originate, a fairly constant crop mark, which initially eluded a verified interpretation, can be recognized again and again. Because of terrace edge on the east side of the road leading from St. Pantaleon to Stein, a suspected Roman camp<sup>19</sup> was repeatedly sought on this plateau.

On July 3, 2017, the promising opportunity, presented by the prolonged drought and high summer temperatures, arose to take aerial photographs using a

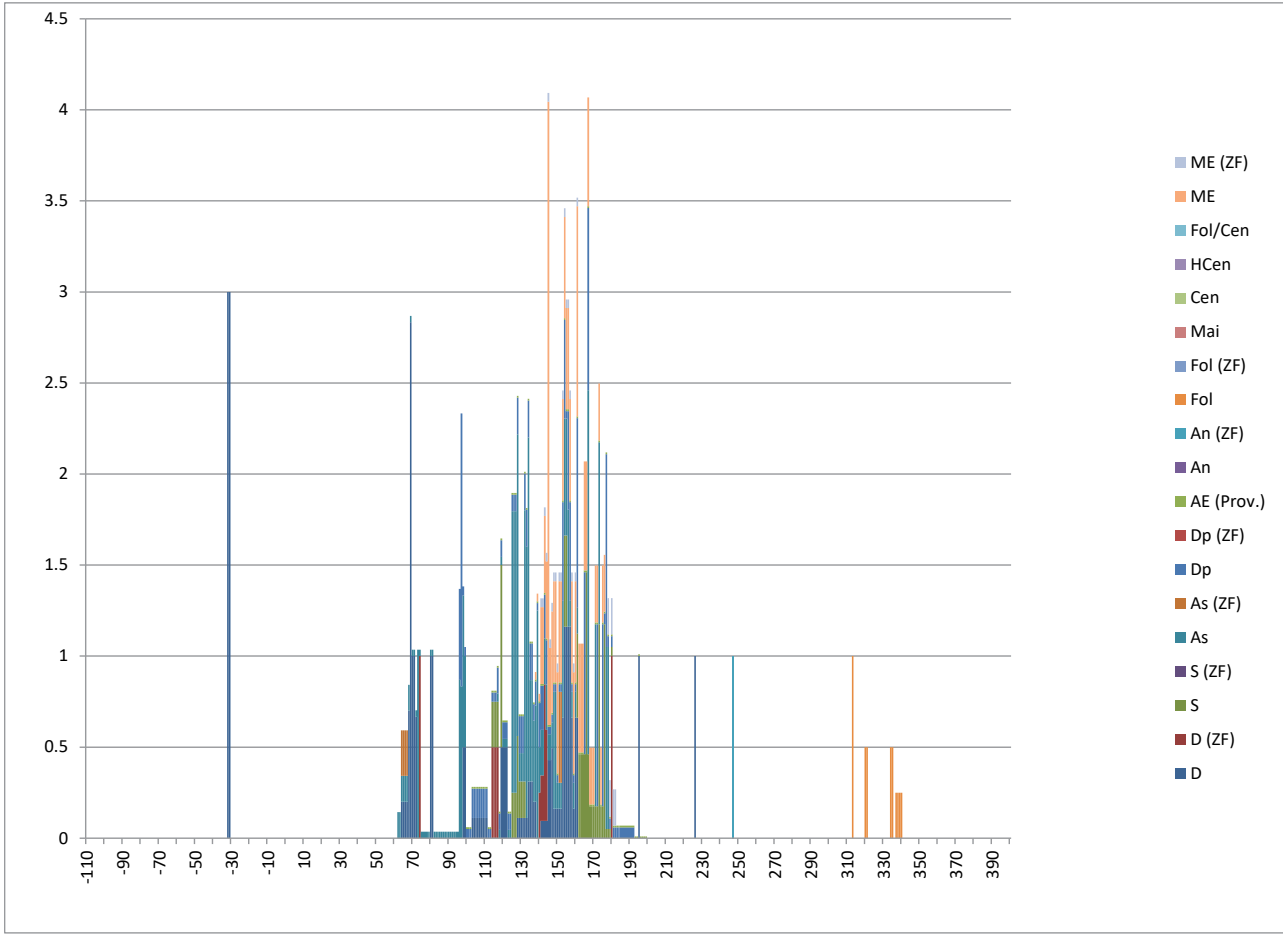


Diagram 1 - Coinage based on annual indices from Stein (n = 138) (ArchaeoPublica – G. Grabherr)

Number	Literature	ED Clauss/Slaby	ED Heidelberg	Dating
Stein 2	RMD 108	EDCS-12100884 (“Albing”)	HD009257	?
Stein 4	Ubl 2009, 107–112	EDCS-48900601 (“Stein”)	HD066862	95
Stein 1+3	RMD 93+125	EDCS-12100872 (“Albing”)	HD009254	135/138
Stein 5	Ubl 2009, 113–116	EDCS-48900602	HD066863	138
Stein 6	Ubl 2009, 116–119	EDCS-48900603	HD066864	138
Stein 7	-	-	-	164/165

Tab. 1 - Military diplomas from Stein (ArchaeoPublica – St. Traxler)

drone.<sup>20</sup> This activity brought quite encouraging results (Figs. 2 and 3). The already frequently observed crop mark turned out to be a crossroads within the Roman *canabae*, on which several ground plans of houses, probably typical so-called “Streifenhäuser”, laid out

according to an orthogonal grid, orient themselves. East of the road, however, where the terrain slowly slopes down to the Danube, the aerial view reveals the southwest corner of a Roman stone fort. Distinctly vis-

<sup>13</sup>Groller 1907, 166–169.

<sup>14</sup>Stiglitz 1969.

<sup>15</sup>Groller 1910, 39.

<sup>16</sup>Matouschek – Nowak 1996.

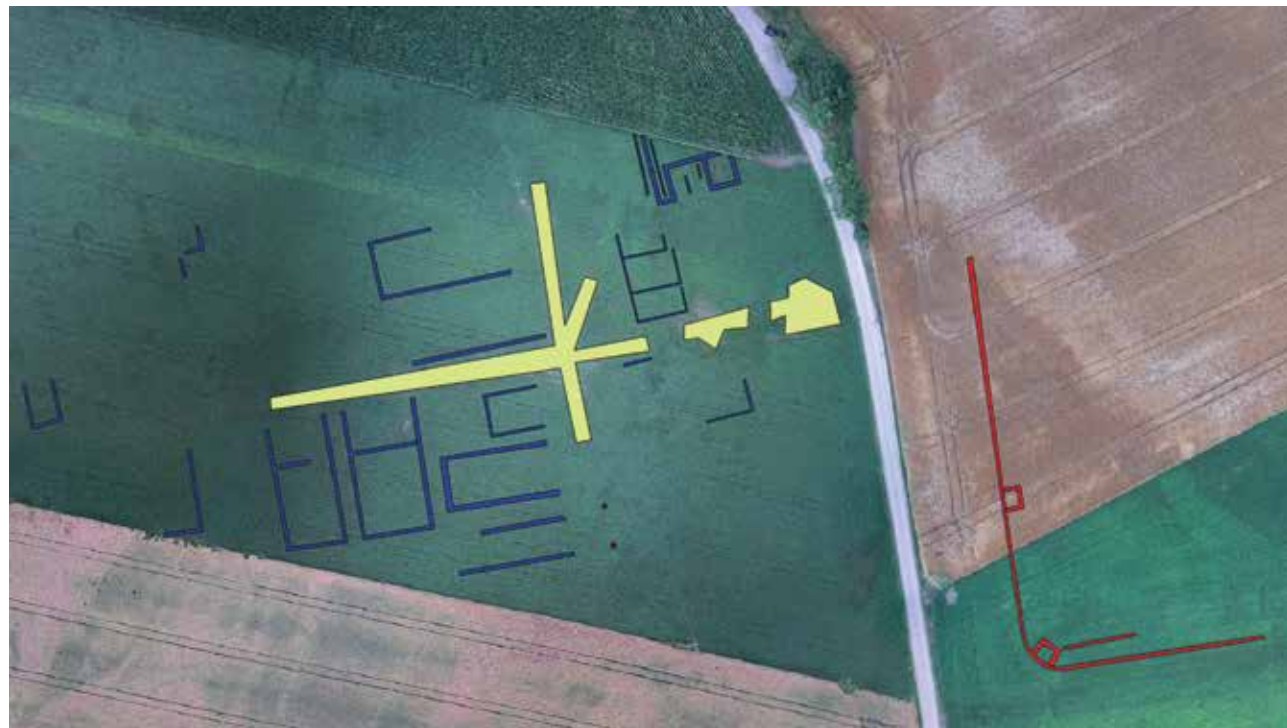
<sup>17</sup>Pfisterer 2007, 689–694.

<sup>18</sup>Ubl 2009.

<sup>19</sup>Zabehlicky 1986; Ubl 2009, 107: “Dies ließ am Fundort ein unerkannt gebliebenes römisches Militärlager oder eine andere militärische Anlage vermuten”; Lappé 2015, 181.

<sup>20</sup>The aerial survey was the start of a project organized by the association ArchaeoPublica in cooperation with the University of Innsbruck, the Upper Austrian State Museum, and the Lower Austrian State Government (see Grabherr *et al.*, 2018). Josef Reisinger (Erla) and Helmut Ardelt (St. Valentin) are gratefully thanked for their essential organizational work.



Fig. 2 - Aerial photo of the garrison and fort *vicus* in Stein (July 3, 2017) (ArchaeoPublica – G. Grabherr/B. Kainrath)Fig. 3 - Aerial photo of the garrison and fort *vicus* in Stein (July 3, 2017) (ArchaeoPublica – G. Grabherr/B. Kainrath)

ible are the rounded corner with the inner corner tower, as well as an intermediate tower north of it.

On the aerial photos from another survey flight in August 2017 (Fig. 4), the intersection and the camp's corner are still visible, but new additional findings do not appear. A detailed terrain model was generated from the data of these aerial photographs, clearly showing the descent towards the Danube (Fig. 5).

If one tries to summarize the results of the aerial photographs of the discovered stone fort, it becomes apparent that the southwest corner of the camp is detected to be approximately between the *porta principalis sinistra* and the *porta decumana*. This quarter of the fort measures approx. 80 x 80 m, whereby a camp width of 160 m can be deduced, a figure that corresponds to the forts of Pöchlarn and Zwentendorf. The Praetorian fronts in these two camps were also washed away by the Danube. Proof of the longitudinal extent is thus

Fig. 4 - Interpreted aerial photo of the garrison and fort *vicus* in Stein (August 24, 2018) (ArchaeoPublica – G. Grabherr/B. Kainrath)

not possible. The intermediate towers of the garrison walls of Stein, Pöchlarn and Zwentendorf all have a side length of about 5 m. The distance from the corner of the fort to the center of the nearest intermediate tower is 38–39 m.<sup>21</sup>

On October 20–21, 2017, a grid survey in the southern camp area and geophysical prospections were carried out by means of magnetic and ground penetrating radar.<sup>22</sup> The magnetogram (Fig. 6) shows very strong dipolar disturbances around the *porta decumana*. Two thermoremanent anomalies, which could point to kilns, emerge near the *porta principalis sinister*. Probably a double ditch system can be recognized to the south and west of the fort wall. The entire section of the camp northeast of the line between the two localized gates shows no traces of archaeological findings, making it clear that this area was washed away by a Danube

flood or a former branch of the Danube. Evidence of the corresponding course of the Danube is provided by the Josephinian (Fig. 7) and Franciscan Land Surveys from the 18<sup>th</sup> and 19<sup>th</sup> centuries. The fort wall with the corner tower, an intermediate tower, as well as remnants of the inner structure, show up to a depth of 1.1 m in the depth slices of the GPR measurement (Fig. 8).

It is evident that all three military installations of Enns, Albing and Stein with the Praetorian front are aligned exactly with the Aist river valley on the opposite side of the Danube (Fig. 6) and that their main focus therefore lies on control and surveillance. Together with the three field camps of Obersebern<sup>23</sup> located directly north of the Danube, which were newly discovered by St. Groh and already postulated by P. Karnitsch,<sup>24</sup> and the early earth-timber camp of Enns brought into discussion

<sup>21</sup>The dimensions were taken from the plans in Ployer 2018, 66, Fig. 32; 104, Fig. 65.

<sup>22</sup>The property owners and the volunteers of ArchaeoPublica are sincerely thanked for this.

<sup>23</sup>Groh 2018, 24 f.; Groh, Sedlmayer 2018, 47–56; 59–69.

<sup>24</sup>Karnitsch 1951, 107–117.



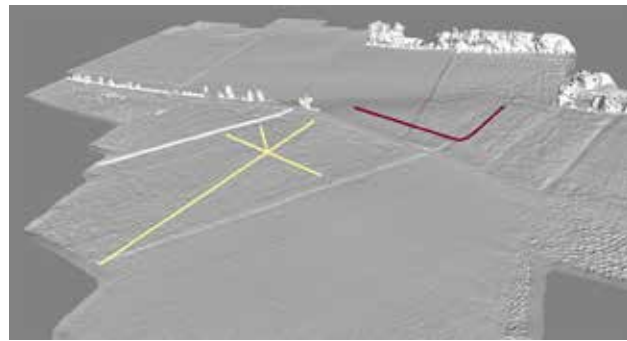


Fig. 5 - Terrain model of the investigated area in Stein with the entry of the Roman roads and the garrison corner (ArchaeoPublica – G. Grabherr/B. Kainrath)



Fig. 6 - Magnetogram (± 5 nT) of the fort in Stein (ArchaeoPublica – G. Grabherr/B. Kainrath)

again by St. Groh and H. Sedlmayer,<sup>25</sup> the strategic importance of the region is forcefully demonstrated.

### Summary and Outlook

In summary, a development comparable to the one in Raetia can be assumed for the military protection of the



Fig. 7 - Josephinian Land Survey with the entry of the military garrisons and alignment of the Praetorian front (ArchaeoPublica – G. Grabherr/B. Kainrath, using the Josephinian Land Survey (<https://mapire.eu/en/map/europe-18century-firstsurvey/?layout=osm%2C163%2C165&bbox=1606170.9450659864%2C6138206.92276456%2C1630630.7941172426%2C6147761.551300207>))



Fig. 8 - Radargram (summed depth slices from -0.50 to -0.70 m) of the fort area in Stein (ArchaeoPublica – G. Grabherr/B. Kainrath)

Danube border in Noricum. There, the sister legion *III Italica* replaces the auxiliary fort of Kumpfmühl<sup>26</sup> at an important Danube crossing in Regensburg, because this no longer corresponds to situation altered by the threat. Likewise, at the important crossing into the Aist River Valley, the auxiliary fort of Stein is replaced by the military garrison in Lauriacum/Enns.

The later attempt to move the legion to a more central, topographically prominent location remains an unfinished episode. Even if only fragments of it have survived, the newly discovered camp at Stein also offers great future research potential for the early genesis of *ripa Norica*, since it is the only Noric auxiliary fort on the Danube which has not been built over by recent settlements and had already abandoned by the Roman army in the 2<sup>nd</sup> century AD. The surviving southwest corner of the fort and especially the expansive *vicus*, from which the majority of the known finds originates, should definitely be explored further. The search for the associated burial sites and the embedding of this fort location into the region offer additionally exciting fields of research.

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**Zusammenfassung**

Der Standort der Legio II Italica in Lauriacum/Enns nach den Markomannenkriegen ist seit langem bekannt. Bisher wurde von einer früheren Stationierung des Regiments in Albing ausgegangen, das sich nur 5 km östlich über die Enns erstreckt. Jüngste Forschungen ergaben, dass das Legionslager Albing ein vergeblicher Versuch war - wahrscheinlich unter der Herrschaft von Caracalla -, die Legio II Italica an einen prominenteren Ort zu verlegen, der vom gegenüberliegenden Donauufer aus besser sichtbar ist.

Neue Luftbilddauswertungen und die anschließenden geophysikalischen Prospektionen (Geomagnetik und Bodenradar) haben zur Entdeckung eines bisher unbekannten Militärlagers in Stein-St. Pantaleon in der unmittelbaren Nähe der Legionslagers Albing geführt. Von diesem Platz ist umfangreiches Fundmaterial aus der 2. Hälfte des 1. Jahrhunderts bis zum 3. Viertel des 2. Jahrhunderts bekannt, das auch militärische Ausrüstung und nicht zuletzt sieben Fragmente von mindestens sechs Militärdiplomen umfasst. Damit wird deutlich, dass das Auxiliarlager Stein-St. Pantaleon als Vorläufer der Garnison der Legio II Italica in Lauriacum/Enns zu betrachten ist.

Die Abfolge der Militärlager im Bereich der Enns-mündung (Stein-St. Pantaleon, Enns und Albing) unterstreicht die strategische Bedeutung des Donauübergangs zum Aisttal im Grenzgebiet zwischen Ober- und Niederösterreich und die Präsenz der römischen Truppen an diesem Abschnitt der Ripa Norica schon in der frühenrömischen Kaiserzeit.

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# The Roman Fort in Hegra

## ABSTRACT

Ancient Hegra (Madā'in Sâlih) was a Nabataean settlement on the Incense Route in the Arabian Peninsula. Following the Roman annexation of the Nabataean Kingdom in 106 A.D., the town had continued as a provincial center. The excavations by the Saudi-French Mission revealed a fort located on the southern side of the settlement and constructed in the early 2<sup>nd</sup> century A.D. It featured perimeter walls, two gates, corner towers, a possible small bathhouse and the barracks. Due to its small size, the fort probably functioned as a headquarters of the local forces and a base for *vexillationes*, which included soldiers of *legio III Cyrenaica*, some of whom served as *stationarii*. Presumably, the fort was militarily abandoned by the end of the 3<sup>rd</sup> century but the civilian occupation continued in the 4<sup>th</sup>. The excavations produced a wealth of information and artifacts, the latter including numerous ceramics (also the imported types), uncommon bronze objects, large number of coins, and one Latin inscription. The fort in Hegra is a unique monument of this kind in Saudi Arabia and it confirms the significant Roman presence in the NW part of the Arabian Peninsula.

**KEY WORDS:** ARABIA, HEGRA, NABATAEAN KINGDOM, MADĀ'IN SĀLIH, ROMAN ARMY, FORT, LEGION, STATIONarii

Ancient Hegra (modern Madā'in Šālih in NW Saudi Arabia) was the southernmost town of the Nabataean Kingdom, which developed into a commercial entrepôt in the international incense trade between South Arabia and the Mediterranean. Following the annexation of Nabataea by Trajan in A.D. 106, Hegra and the northern Hijaz were incorporated in the Roman province of Arabia (Fig. 1). The presence of Roman army units or their personnel, including *legio III Cyrenaica*, *ala I Ulpia drome(dariorum) Palmyr(enorum) (milliaria)* and *ala Gaetulorum veterana* is attested by several inscriptions and graffiti found in the environs of

the town (Speidel 1977, 703–706; al-Talhi and al-Daire 2005; Gatier 2017, 283–289; Gatier 2018). Through the excavations of a Roman fort in Hegra, the Saudi-French Mission which, since 2008, investigates the town, provided further information on the nature of the Roman military presence there (Fiema, Villeneuve 2018).

## Description and Finds

The otherwise featureless landscape of the town is nevertheless marked by two high southern hills - A and



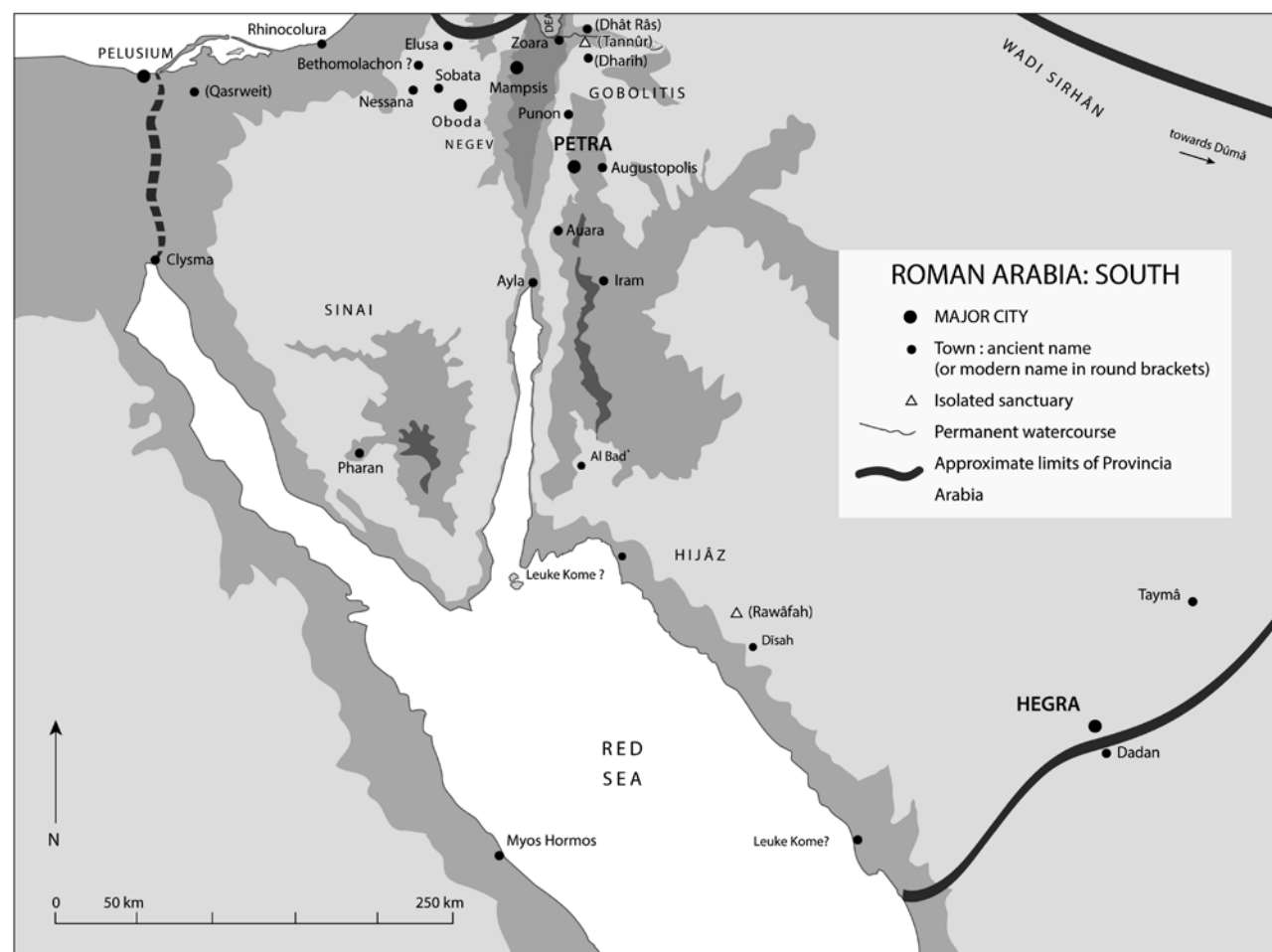


Fig. 1 - Hegra and the southern part of the Roman province of Arabia (by F. Villeneuve)

B - and the fort is located directly west of Hill B, in Area 34. On the top of that hill there was once a large citadel but its use as a quarry in the 20<sup>th</sup> century has obliterated any meaningful remains. Undoubtedly, however, the citadel must have been in a close functional relationship with the fort (Fig. 2). The fort is located on the stony plateau (ca. 110 m E-W x ca. 70 m N-S), which turns into a flat ridge continuing northwestward (Fig. 3). The fort is ca. 85 m (E-W) and over 65 m (N-S) and is limited by three perimeter walls and the slope of Hill B.

The complex appears as a quadrangle consisting of series of rooms surrounding an irregular central courtyard (Fig. 4). The best preserved element of the Roman fort is its southern perimeter wall, ca. 65 m long and running the WNW-ESE course, which joins on the eastern end with remains of a poorly preserved stone wall, ca. 18 m long. That wall runs the ENE-WSW direction

and it represents pre-Roman (Nabataean) remains in Area 34 (*infra*). Sometime in the later 2<sup>nd</sup> century A.D., the Nabataean wall was substantially reinforced by the addition of the casemate space, the mudbrick wall with the stone revetment, the cross-walls, and the “*glacis*.”

At the western end of the southern perimeter wall there is the SW corner tower (max. ca. 4.1 x 4.2 m = ca. 14 x 14 p.M.<sup>1</sup>), integrated in the corner formed by the southern and western walls. The tower projects outwards by 1.7 m (i.e., 6 p.M.). While the plateau ends in the area of SW tower, dipping into the surrounding sandy area, another wall continues beyond the tower, on the same line as the southern perimeter wall to the place where yet another square corner tower was excavated (see Figs. 3 and 4). It is not certain if that wall and the tower also belonged to the (enlarged) fort.

<sup>1</sup>I.e., *pes Monetalis* (0.296 m)



Fig. 2 - Area 34 - the fort and the citadel on top of Hill B (by D. Kennedy/APAAME)

Ca. 23 m east of the SW tower is small gate, ca. 2.1 m (little over 7 p.M.) wide, flanked by two solid, rectangular towers or large buttresses ca. 3.70 x 1.70 m and 4.20 x 1.70 (6 p.M.) m, respectively (Fig. 5). The foundation deposit of the gate-flanking towers yielded late 1<sup>st</sup>-early 2<sup>nd</sup> century-dated sherds. A room (No. XI) adjacent to the gate on the NW side was occupied in the 2<sup>nd</sup>-3<sup>rd</sup> centuries, but by the mid-3<sup>rd</sup>, most of the floor's flagstones were removed, the gate was blocked by inserting two stone basins and the stacks of flagstones, and a small buttress (1.5 x 1.5 m) was built outside, in front of the blocking. Finally, in addition to two rectangular towers flanking the gate, there are also nine smaller buttresses, just like the one built against the blocked gate. These are roughly square, varying from ca. 1.30 x to ca. 1.60 x m. The buttresses appear to be solid constructions and later in date than the perimeter wall.

Some internal walls, perpendicular to the perimeter walls, imply the presence of rooms but the interior of the fort is currently relatively empty. The bedrock rises everywhere to the central point in the fort where poorly preserved remains (including some column drums) have been found. The exception is the eastern part,

located at the foot of Hill B, where a wing of rooms has been found (Fig. 6). Apparently, the walls of these rooms followed the contours of the terrain there as well as the orientation of pre-existent structures incorporated into the Roman fort. The wing features units which are two-room deep (Rooms III-X), resembling *contubernia* in Roman forts, e.g., of Davison Type B – rectangular front *arma* and rectangular rear *papilio* of roughly the same dimensions (Davison 1989, 4–5, 267 fig. A). The rooms at Hegra are 3.6 m wide and 5 m deep, i.e., 12 x 17 p.M., thus close to legionary *papiliones* (12 x 15 p.M.). It is also possible that these rooms were “stable-barracks,” i.e., the structures where horses were accommodated in the front rooms equipped with soakaway pits, and troopers in the back rooms, all rooms being rectangular and roughly of the same size, as in Hegra but this remains a speculative hypothesis to be tested by future excavations (see discussion in Fiema, Villeneuve 2018: 710).

In the NE sector of the fort, there is a long and narrow area, flanked by N-S walls (Fig. 7). Remains of a broad gate on the way leading to the town of Hegra have been uncovered there. Large slabs still preserved there were a part of the pavement of the passageway, surrounded





Fig. 3 - The Roman fort in Madā'in Šālīh (by FalconViz)

by the remains of the gate's structure. The gate was flanked on the western side by a massive tower-like structure. Since the ground there rapidly slopes northward the construction of the tower flanking the gate required the presence of a massive levelling substructure made of mudbrick walls with spaces in-between filled in.

On the eastern side of the gate, Hill B slopes down forming a stony spur running northwards. This sector, which topographically may appear somewhat external to the fort, was definitely a part of it from the functional standpoint. A large, well constructed room (No. XVII) which abuts the cliff of Hill B, appears as a major inhabited space in this sector, perhaps related to the citadel above it (see Figs 4 and 7). Large quantities of ceramics (probably also originating from the citadel) were found there, including, among the others, two water pipes, two large rectangular *suspensura* tiles as well as square *pilae* used in hypocaust system. Quantities of ash found in this sector imply the existence of some kind of heating installation. Notably, to NW of Room XVII, remains of what appears to be a "post-bath"

phase of a small heated room (No. XV) were uncovered (Fig. 8). The *praefurnium* is well preserved, and the clear depressions in the bedrock indicate the bottom of heated air ducts but all other elements had been removed already in antiquity. What currently remains is a long ceramic pipe which provided water/air (?) to the center of the room, apparently no longer related to the original function of the room.

The excavations provided very large quantities of ceramics; sherds of the 2nd–3rd centuries A.D. date were predominant but 1st century B.C./A.D. and 4th century types were also present. Imported material included, Kapitän II amphoras, Eastern *terra sigillata* and African Red Slip ware. More than 150 coins were found. Many were Nabataean or probably local (the so-called "Athena/owl" type, possibly dated to the 2nd–1st centuries B.C.) but Roman coins of the 1st–3rd centuries A.D. are also well-represented. Among numerous bronze objects are mostly fragmentary hooks, binders, plates, metal straps/bands, buckle rings and fasteners, and strap-junctions and terminals, many presumably parts of specialized military horse harness (see, e.g.,

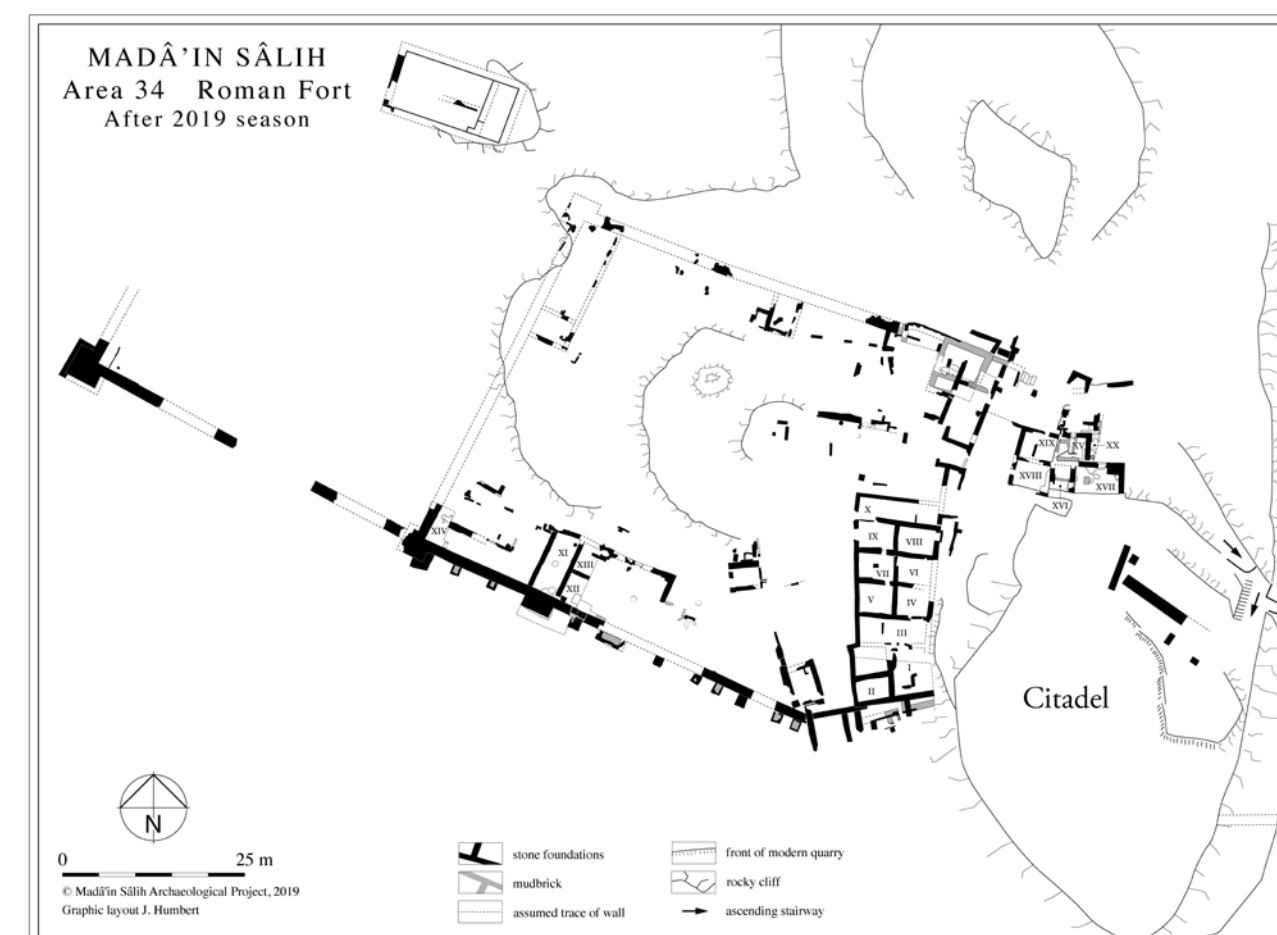


Fig. 4 - The plan of the fort in Madā'in Šālīh following the 2019 fieldwork season (by J. Humbert)

Dixon, Southern 1992, 61–70, for cavalry equipment; James 2004, 76–77, e.g., nos. 42–45, 86–87, for similar objects from Dura Europos; also Allason-Jones and Bishop 1988, 75–79, for similar 1<sup>st</sup>–2<sup>nd</sup> c. A.D. objects from Corbridge), Fig. 9. Notable is the openwork baldric fastener of sword belt which finds good 2<sup>nd</sup>–3<sup>rd</sup> century parallels from Dura Europos (James 2004, 52, 62, 74–75, nos. 18–20). Several bronze plates feature series of punched holes; perhaps scales of *lorica squamata* but since none have patterned holes for vertical and horizontal stitching, these might be local repairs, replacements, or segments of horse armor. Two of these resemble scale wired only horizontally and attached to flexible backing (Bishop and Coulston 1993, 117; see also *ibidem*, p. 88, fig 51.i, for an example with two pairs of top horizontal holes from Carnuntum). Other bronze objects include a female head as a part of a vessel's handle, a Roman fibula, an oversized finger of a statue, and a hind leg of a bull statuette (see Fig. 9). Representations of bull are often found in the Roman military context, either as popular symbols of units, or related to the Mithraic rites. Iron objects were rare

but included an axe or pickaxe of type often found in Roman contexts (e.g., Hänggi, Doswald, Roth-Rubi 1994, 300–302, Abb. 212b, nos E141, E142, from *castellum/vicus* at Tenedo-Zurzach). The inscriptions found in Area 9 included one written in Ancient South Arabian script and one written in Ancient North Arabian script. A Latin inscription, also found in the fort and dated to A.D. 213–217, mentions an imperial freedman (Fiema, Villeneuve and Bauzou, forthcoming).

Of interest was the deposit of bronze objects found under the overturned bottom of a basin in Room XI. The finds included a figurine of domestic male goat, a tree-trunk-shaped lamp-stand, a male figurine of Satyr emerging from a flower, and a figurine probably representing the Greek-Egyptian deity Harpocrates. Most intriguing was a bone astragal with the piece of substance (incense) which appears to have solidified in the depression of the astragal's surface. All aforementioned objects were found located around the astragal. The dating of this deposit – end of the 3<sup>rd</sup>/early 4<sup>th</sup> c. – may imply a ritual burial of artifacts, associated with





Fig. 5 - The southern gate and the large gate-flanking tower (by Z. T. Fiema)

some kind of ceremony (burning incense) either at the end of the military use of the fort or at the beginning of the subsequent civilian re-occupation of the space.

The area of the fort also provided large number of broken basalt millstones, including large Pompeian-type hourglass mills (both *catilli* and *metae*) as well as smaller querns and rotary hand-mills (for typology, see Moritz 1958, 74–97, 103–122). These were apparently in use in the fort or its vicinity, as is often evidenced in Roman military contexts. The archaeozoological evidence indicates that the nature of habitation in the fort is unique and clearly different from that attested in other excavated areas in Madā'in Šālīh. Consumed species included large mammals – cattle, camel, donkey, horse. Sheep and goat, while more common elsewhere in Hegra, were also present although represented by adults only and with no extremities preserved. Apparently, the preference was for maximum volume of meat, and butchering was done elsewhere. These aspects reflect a overall policy of wholesale purchase,

butchering and redistribution, just like in the context governed by a military commissariat.

#### Phases of Occupation

By the 1<sup>st</sup> century A.D., the Nabataean town of Hegra was surrounded by the mudbrick-built rampart (Vileneuve 2014). The circuit was continuous, including Area 34 where a wall on the steep western slope of Hill B was built of stone. The lowermost deposits in Room I, which is adjacent to the Nabataean stone wall, yielded ceramics dated to the 1<sup>st</sup> century A.D. Also, a double burial (male and female) was located there. That Nabataean stone wall could have continued westward in the form of a mudbrick-built rampart. If so, and if its line did not conform with the ground plan of the subsequent Roman fort, it would apparently have been completely demolished by the Romans. Generally, the nature of the Nabataean-period occupation in Area 34, while attested, is not clear but it is highly probable that the top of Hill B was already utilized then as a citadel.



Fig. 6 - The military barracks (by M. Lefrançois)

The epigraphic record indicates that during the early period, following the annexation of the Nabataean Kingdom by Trajan in A.D. 106, major cities, such as Bostra, Gerasa, Gadara and Philadelphia were garrisoned by the army units (Freeman 1996, 101, 105–107; Kennedy 1980, 297–9). Some urban garrisons might have utilized civilian billeting but in the Nabataean settlement of Hawara/Hauarra (Humayma in southern Jordan), a fort was constructed in the early 2<sup>nd</sup> century (Oleson 2009). Probably soon after the annexation the Roman army base was also established in Hegra. Area 34 is the best place in the otherwise largely featureless terrain of the settlement in Madā'in Šālīh as it occupies a superb tactical location with all-round visibility, while the citadel on top of Hill B provides an excellent vantage observation point, particularly suitable for monitoring the town. Such dominance of Area 34 must have been easily recognized by the Roman occupation forces tasked with closely overseeing of activities in the conquered town and defending it from a potential external foe. The use of the modular system based on Roman feet, well attested in Humayma (Oleson 2017),

is also evidenced in Hegra, clearly implying the planning by Roman engineers. Admittedly, and as opposed to the traditional layout of Roman forts, the eastern part of the fort at Hegra was irregular because the integration with Hill B, i.e., the citadel, offered definite tactical advantage, and thus the incorporation of the Nabataean stone wall (and its adjacent structures) was inevitable. The central and western parts of the plateau allowed the imposition of a more regular quadrangular plan, featuring all three perimeter walls and corner towers.

The fort in Area 34 should be dated to the early–mid-2<sup>nd</sup> century and thus it is probably one of the earliest military structures in Roman Arabia. Not surprisingly, the fort at Humayma provides the closest temporal and the meaningful structural parallels for the Hegra fort. Particularly interesting is the presence of 20 rectangular projecting towers along the curtain walls in Humayma, a feature which so far was usually associated with the Severan period (e.g., the fort in 'Ain Sinu, Mesopotamia, see Lander 1984, 132–134). The fort in Hegra features two projecting towers flanking the gate and the





Fig. 7 - The NW sector of the fort, including the northern gate and the rooms excavated on the northern slope of Hill B (by Z. T. Fiema)

projecting corner tower of dimensions similar to those at Humayma (see Figs. 3 and 4). Furthermore, both Humayma and Hegra forts feature angles which are not curved (as in “playing-card” forts) but squared-off, a feature which so far was generally evidenced only in the 3<sup>rd</sup> century (*vide* ‘Ain Sinu fort). Thus the excavations of the forts in Hegra and Humayma lend further support to the notion that such arrangements were already present in the Roman military architecture of the 2<sup>nd</sup> century.

In addition to the gates, flanking and corner towers, the earliest phase of the Hegra fort presumably also included inner structures, such as the presumed small bath-house, and the eastern barracks while other barracks or service rooms might have been built against the inner faces of the perimeter walls. Generally, barracks built against fort’s circuit wall is a well-known feature in the late 3<sup>rd</sup>–early 4<sup>th</sup> century in the East, but such feature also occurs in smaller fortifications in Africa and in the East already in the 2<sup>nd</sup>–3<sup>rd</sup> centuries (see Fiema, Ville-

neuve 2018, 710). The Roman *praesidia* in the Eastern desert of Egypt, dated to the later 1<sup>st</sup>–3<sup>rd</sup> century are also good representatives of smaller military structures with barracks built against perimeter walls (see Reddé 2006, 244–247, for presentation).

The reinforcement of the eastern part of the southern perimeter wall of the fort might already have happened by the mid-2<sup>nd</sup> century or somewhat later but apparently still in the 2<sup>nd</sup> century. Perhaps, that activity reflects the information from the Latin inscription of A.D. 175–177 found in Hegra (al-Talhi, al-Daire 2005) which implies the restoration of an “old wall” with the technical assistance of Roman officers. Whether or not in response to a potential threat, this reinforcement was probably a practical measure applied to a relatively weak and “ageing” Nabataean wall. Furthermore, it might have been an element in a major overall bolstering of Hegra’s fortifications in the later 2<sup>nd</sup> century, perhaps associated with the increased Roman interest in the defences of Hegra (*infra*). Notably, the towers



Fig. 8 - The heated room (by Z. T. Fiema)

along the town circuit are later in date than the Nabataean mudbrick rampart. Since the distance between the towers is ca. 35 m, undoubtedly 120 p.M. was intended, equalling one *actus*, a standard module in use by Roman engineers.

Although these defences may appear somewhat disproportionate comparing with a potential threat these certainly were meant as a formidable deterrent and to strengthen the Roman prestige in the region. Yet, sometime by the mid-3<sup>rd</sup> century, the southern gate of the fort was blocked and nine small buttresses were built against the curtain wall. A massive robbing out of convenient reinforcement material (mainly, large flagstones) from everywhere at the site indicates somewhat desperate measures in response to some kind of the potential threat. The later 3<sup>rd</sup> century occupation was probably still military. But the abandonment of the fort in Hegra must have happened by the end of that century. Subsequently, it appears that the fort, or parts of it, was reoccupied by civilian population of Hegra, which apparently enjoyed the relative security provi-

ded by its still standing walls. This occupation might have continued throughout the 4<sup>th</sup> century but the exact date of the cessation of occupation there cannot, so far, be established.

### Function and Significance

It is apparent that the fort in Hegra is too small (only a little over half a hectare in size) to accommodate any army unit larger than infantry *centuria* or cavalry *turma*. Evidently, the soldiers of the two cavalry *alae*, who left inscriptions in the environs of Hegra (Speidel 1977, 703–706; Gatier 2018), were either billeted in the town or their camps are still to be found in the vicinity of Hegra. However, with the dominant location of Area 34 in Hegra and the towering citadel which, according to the ceramics, must have been occupied throughout the Roman period, it is reasonable to assume that the complex consisting of the citadel and the adjacent fort functioned as the headquarters of all Roman military units in the area.





Fig. 9 - Some bronze objects found in the fort – upper left: oversized finger of a statue, upper right: the openwork baldric fastener of sword belt, bottom: possible bronze armor scale (by Madā' in Šālīḥ Archaeological Project)

Moreover, the further light on the function of the fort in Hegra is shed by the corpus of 14 Latin and Greek inscriptions found in Area 35 and mainly reused in the structure of a monumental SE gate of Hegra located there (Villeneuve 2014; Fiema, Villeneuve, Bauzou 2020). While from among seven Greek inscriptions only one names a camel-mounted soldier, possibly from one of the two aforementioned *alae*, five from among seven Latin inscriptions mention personnel from *legio III Cyrenaica* and two other specify soldiers who were probably legionaries. Additionally, one inscription indicates the presence of *vexillatio* of the same legion – the main military unit in the Roman province of Arabia. The inscriptions are dedications, often to Jupiter Hammon, the tutelary god of the *III Cyrenaica*, and the dedicants, usually in pairs, often describe themselves as *stationarii (ad portam)*. Generally, *stationarii* were soldiers detached for this duty from their parental units, who monitored travellers' traffic, maintained road security and occasionally served as law enforcers in cities. They were also charged with

verifying travel documents either at city gates or during the road patrols (see Petraccia 2001; and contributions in France and Nelis Clément 2014). Thanksgiving testimonies of *stationarii* at Hegra indicate satisfaction with a mission accomplished or return from a difficult patrol. One can infer from the presence of *stationarii* in Hegra that the town was considered *statio* i.e., a road stop related to the imperial postal and transport system. But *statio* may also refer to urban army barracks with soldiers specifically charged with the protection of the population from any criminal activity (Petraccia 2015). The *stationarii* at Hegra were most probably infantrymen. Alternatively, they might have belonged to legionary cavalry but the organization and commanding structure of *equites legionis* is still poorly understood (Dixon, Southern 1992, 27–30) thus the former suggestion is more plausible. At any rate, the fort in Hegra would make an excellent base for small detachments of *stationarii* posted at the nearby gate of the town.

The function of the fort in Hegra must also relate to the overall significance of Hegra and its history in the 2<sup>nd</sup>–4<sup>th</sup> centuries. That Nabataean frontier town would have become a Roman frontier outpost although it was also postulated that the Nabataean Kingdom, and hence the Roman province of Arabia, extended their direct influence as far south as the region of Yathrib (Robin 2015: 97). It may reasonable to assume that the actual limit of Roman Arabia, i.e., the furthest extent of direct Roman administration ends just south of Hegra. In the wider perspective, it has been convincingly argued that the political-military and economic hegemony of Rome over the Red Sea region, which lasted at least over longer periods of time during the 1<sup>st</sup> and the 2<sup>nd</sup> centuries, was effective through the network of dependent kings, the cultivation of friendship with allies on both sides of the Red Sea, the activities of the Roman fleet, and the presence of military outposts in strategic locations (for discussion, see Speidel 2007, 305; Speidel 2015, 258). Some Hijaz oases within Roman Arabia, such as al-Bad', Hegra and Dumat al-Jandal would have been such bases of direct Roman military control. For example, the area of Dumat al-Jandal has also yielded Latin military inscriptions and Semitic inscriptions of Nabataean cavalymen recruited into the Roman army (Nehmé 2017, 149–155).

Yet the splendour of the Nabataean times at Hegra had largely disappeared after the Roman takeover. Material culture implies stronger links with the Mediterranean than with South Arabia yet besides the fort, the architectural remains of the Roman period are relatively modest (for discussion, see Villeneuve 2011; Nehmé, forthcoming). A revival of the Roman interest in the region dates to the Antonine period, exemplified by the Roman remains and inscriptions from the Farasan Islands (Villeneuve, Phillips, Facey 2004; Villeneuve 2007). As far as the currently available evidence indicates, a revival was also briefly felt in Hegra between the reign of Marcus Aurelius and Caracalla, when the inscriptions imply various activities of Roman army personnel and the archaeological record indicates the strengthening of the fort's defences. Yet the evidence related to the 3<sup>rd</sup> century demonstrates some unknown emergency marked by hastily undertaken further reinforcement of the fort. The military occupation of the fort is not attested beyond the end of the 3<sup>rd</sup> century. This may well correspond with the lack of historical information confirming the presence of Roman garrisons in NW Hejaz after the 3<sup>rd</sup> century (Fiema, Nehmé

2015). In conclusion, the fort and the epigraphic material firmly establish the position of Hegra in the Roman military history and there are good indications that the Roman presence in Hegra was not ephemeral and that the town of Hegra retained importance in the post-Nabataean period.

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### Zusammenfassung

#### Das römische Militärlager in Hegra

Das antike Hegra (Madâ'in Sâlih) war eine nabatäisch-römische Siedlung entlang der Weihrauchstraße auf der Arabischen Halbinsel. Die saudi-französischen Ausgrabungen brachten in Hegra ein römisches Militärlager zu Tage, das in das anfängliche 2. Jahrhundert n. Chr. datiert werden kann. Das Lager umfasst die Befestigungsmauer, zwei Tore, Ecktürme, ein kleines Badehaus sowie die Kaserne. Wahrscheinlich fungierte das Lager als Sitz der lokal ansässigen Streitkräfte und als Stützpunkt für die *vexillationes* der *legio III*

*Cyrenaica*, von denen einige als *stationarii* gedient haben. Während die militärische Funktion des Lagers vermutlich im späten 3. Jahrhundert n. Chr. aufgegeben wurde, setzte sich eine zivile Nutzung der Anlage im 4. Jahrhundert fort. Zu den Funden gehörten zahlreiche Keramikgefäße (auch importierte Typen), ungewöhnliche Bronzeobjekte, eine große Anzahl von Münzen und eine lateinische Inschrift. Das Lager in Hegra ist ein einzigartiges Monument dieser Art in Saudi-Arabien und bestätigt die bedeutende römische Präsenz im nordwestlichen Teil der Arabischen Halbinsel.





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# Tradition and Innovation in the Trajanic Auxiliary Fort at Haurra (Humayma), Jordan

## ABSTRACT

Twenty-five years of excavation and research by the author at the Trajanic auxiliary fort of Haurra on the Arabian frontier have yielded significant results concerning the application of a revolutionary fortification design combined with traditional planning procedures. Built immediately after Trajan's conquest of the Nabataean kingdom in AD 106, the fort and its interior structures were carefully laid out in modules of the Roman foot, according to a system centuries old. The rectangular enceinte, however, was provided from the start with 24 square projecting towers, apparently the earliest known example of this type of plan, previously thought to be a development of the third century. The fort was manned by a detachment from the Legio III Cyrenaica, which had occupied the Nabataean territory. There appear to have been close connections between this fort and a fort with projecting towers built at the same time by another detachment of the same legion at Madâ'in Sâleh (Hegra), 400 km to the south. Excavations at Haurra have documented a *principia*, *praetorium*, *horreum*, barracks, water-supply system, and a craft area that may have been a brewery, possibly the only brewery so far documented within a Roman fort. The *praetorium* was furnished with frescoes and mosaic floors with geometric decoration. Abandoned during the Tetrarchy, the fort was reoccupied by a smaller unit of camel-mounted archers in the early fourth century, and finally abandoned in the late fourth century, probably as a result of the earthquake of 363. The paper presents the special features of this fort, one of the few well-preserved principate forts in the Near East.

**KEY WORDS:** ROMAN FRONTIER FORT, *PRINCIPIA*, *PRAETORIUM*, *HORREUM*, LATRINE, ROMAN BREWERY, *TITULUM*

Twenty-five years of excavation and research at the Trajanic fort of Haurra on the Arabian frontier in Jordan have brought to light the association of a revolutionary fortification design with traditional Roman planning procedures. The final report is in press (Oleson, In Press); for preliminary reports see Oleson 2008, 2009, 2010, 2017; Oleson and Schick

2014; Oleson *et al.* 2003, 2008, 2015. The fort was built immediately after Trajan's conquest of the Nabataean kingdom in AD 106, adjacent to the Nabataean village of Hawara, halfway between Petra and Aqaba. (Fig. 1) The garrison was intended to monitor the local water supply and the civilian settlement, along with traffic on the *Via Nova Traiana* and the caravan routes



that converged on the site. An inscribed altar from the *vicus* suggests that the fort was manned by a vexillation from the *Legio III Cyrenaica* (Oleson *et al.* 2002). Given the need to patrol a hyper-arid landscape, the legionary vexillation probably was supported from the start by an *ala* of *equites dromedarii*, although this is only documented for the late third or fourth century. At 3.1 hectares, the area of the fort is appropriate to a garrison of about 500 men. (Fig. 2)

The fort and its interior structures were carefully laid out in modules of the Roman foot, according to a system centuries old (Oleson 2017). The rectangular fortification, however, was provided from the start with 24 square projecting towers, apparently the earliest known Roman example of this type of military plan, previously thought to be a development of the later third century (Oleson 2009; Oleson *et al.* In Press; Gregory 1995: 160–67; 1996). There appear to have been close connections between this fort and a fort with projecting towers built at the same time by another detachment from the same legion at Madā'in Sāleh (Hegra), 400 km to the south (see the paper by Fiema in this volume). It is possible that the Roman engineers, in preparation for Trajan's intended invasion of Parthia, were trying out a design already in use in Parthian fortresses and Hellenistic town fortifications (Pietsch 2000). (Fig. 3)

My excavations at the Haurra fort between 1992 and 2005 documented a *principia*, *praetorium*, *horreum*, barracks, water-supply system, latrine, and a craft area that may have been a brewery. Some of these structures went out of use during the reign of Diocletian, after which the earlier garrison was replaced by a smaller unit of local camel-mounted archers, the *equites sagittarii indigenae* mentioned in the *Notitia Dignitatum* (Or. 34.25; Oleson 2010: 53–55). The garrison was withdrawn in the late fourth century, most likely as a result of the earthquake of 363. After a brief occupation by civilian squatters, the fort was abandoned. Many of the tumbled blocks were salvaged to build the houses and churches of the thriving Byzantine community of Haurra, and blown sand and soil gradually covered the structural remains, which remained undisturbed until my excavations. This paper presents the special features of the fort, one of the few well-preserved principate forts in the Near East.

Although little has survived of the superstructure of the fortification and the interior structures, the wall

lines generally are well preserved, so it was possible to take accurate measurements and determine the planning system used by the military engineers. The structures were laid out on a rigid north-south grid with the important dimensions executed in logical numbers of the *pes monetalis*, the standard Roman foot of 29.6 centimetres. References to feet in this paper refer to the *pes monetalis*.

The three main buildings all faced the east-west *via principalis* (Fig. 2). The *horreum* was planned as a block 90 Roman feet square. The north block contained three rooms 30 feet wide and 60 feet long, including the walls. In front were two courtyards 30 feet long for delivery of foodstuffs. The *principia* was laid out in a block 100 feet wide and 175 feet long. The southern 145 feet consisted of a walled court; the *principia* itself consisted of five south-facing rooms 20 feet wide and 30 long. Like the *horreum*, the *praetorium* was also planned as a block 90 Roman feet square. There was a central court 50 x 60 feet framed on east and west by small rooms, and on the north by a central reception hall 25 feet wide and 30 long. This was framed on either side by two rooms 12.5 and 20 feet wide. The northeast corner of the structure was subdivided to serve as the commander's suite, richly decorated with floor mosaics and wall paintings. (Fig. 4)

The rampart defining the fort, 10 feet wide, was built of roughly shaped blocks facing a core of cobbles and earth. The outside surfaces were originally finished with white plaster, making a striking visual impression that reinforced the image of Roman control over the village below. The 24 towers projecting from the wall all bond with the rampart and belong to the original construction phase of the early second century. A slightly projecting foundation course continues from the rampart to the towers. The towers are all 20 feet wide or square and project 6 feet beyond the rampart (Figs. 3 and 5). There was a curving earth barrier -- a *titulum* -- 20 m north of the north gate, originally about 100 feet m wide and 30 feet thick. This barrier, rarely documented in the Near East, is barely visible to the eye, but is clear in our GPR survey (Oleson *et al.* 2003: 52–54, and In Press. This survey also revealed a trench 8 m outside the west rampart that presumably continued around the entire fort.

Water-supply was a critical issue in the hyper-arid climate of Haurra. Because of its location, run-off water

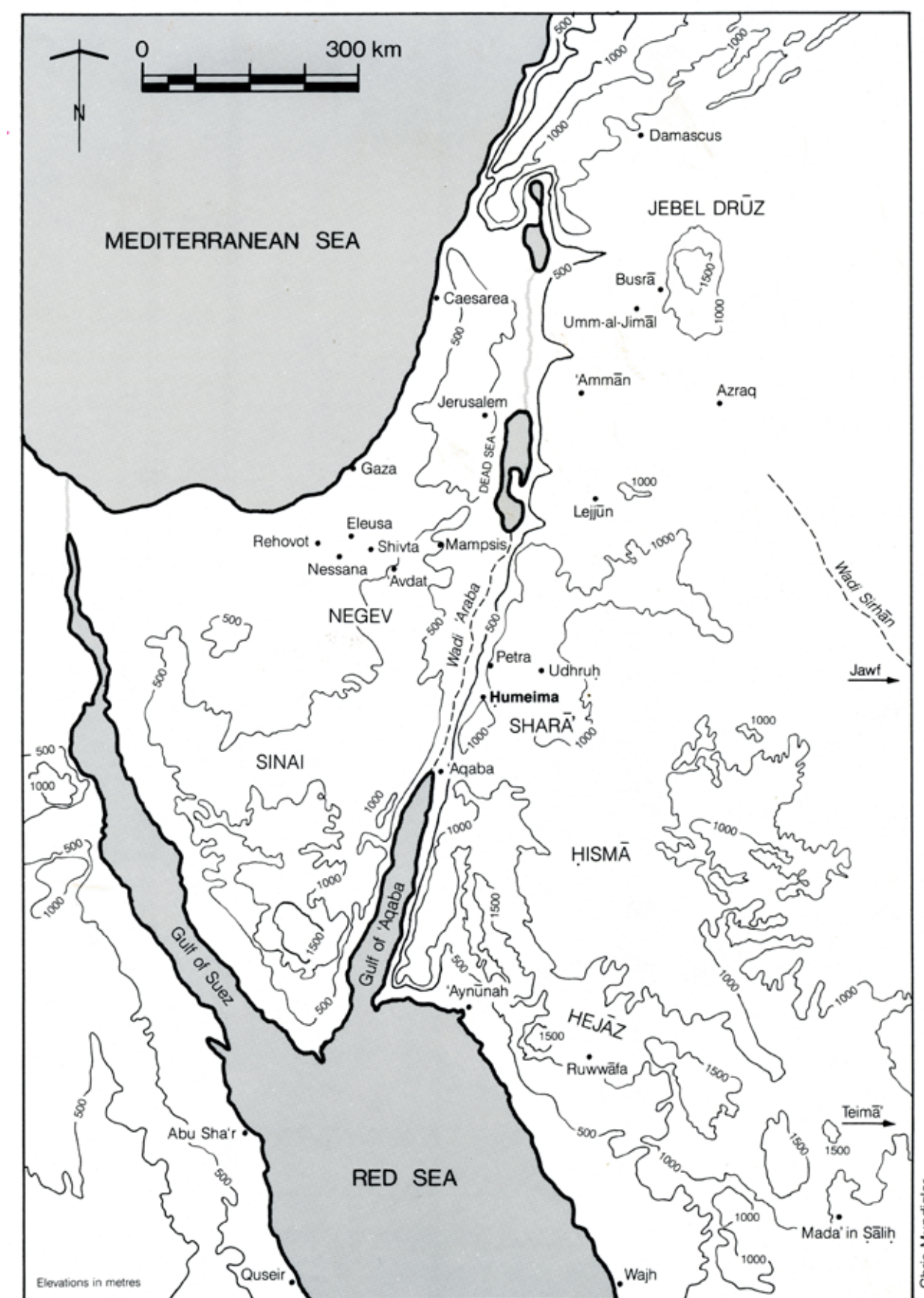


Fig. 1 - Map of region (J.P. Oleson).



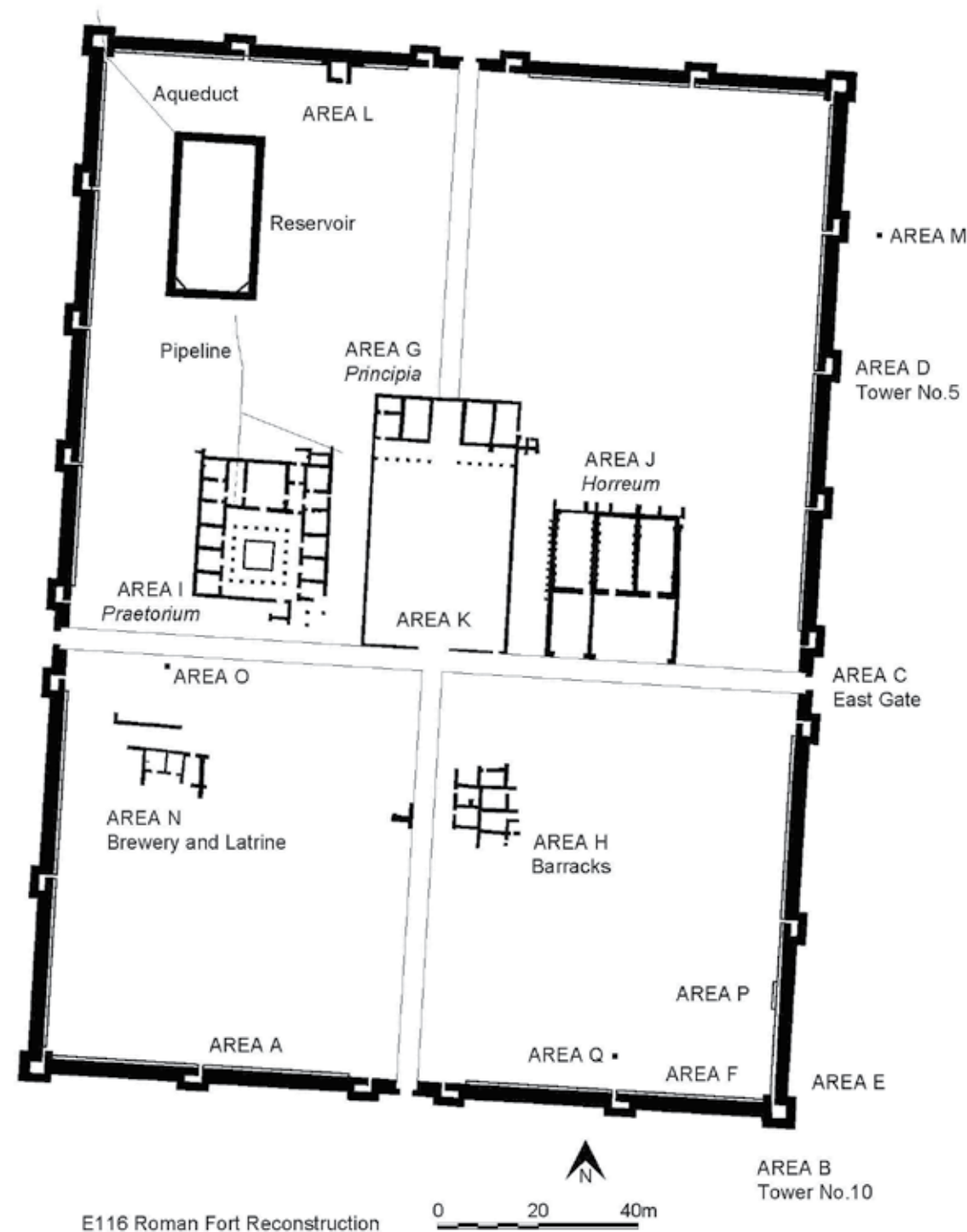


Fig. 2 - Reconstructed plan of fort (J.P. Oleson).

from the meagre annual rainfall was not available to the fort, but the Nabataean spring-fed aqueduct supplying water to the town reservoirs passed close by the

northwest corner. The Roman engineers built a take-off channel to divert part of the flow to a reservoir in the northwest corner of the fort, at the highest point within



Fig. 3 - Aerial of fort and town of Hauarra (J. Taylor).

Fig. 4 - View of Commander's Suite in *praetorium* (J.P. Oleson).

the walls. (Fig. 6) When filled to capacity, the 1400 cubic metres of water would have been sufficient to supply the garrison and mounts for about six months, although in normal circumstances the contents were undoubtedly refreshed frequently from the aqueduct. Platforms at the southeast and southwest corners of the reservoir suggest that *shadufs* were used to lift water to a gravity flow system using stone conduit blocks and terracotta pipes to carry it throughout the fort. Surprisingly, this is the largest known reservoir located inside a Roman fort. The contents were excess to the needs of the local garrison and probably were used to provide water to troops moving through the fort on their way to Aila and to Roman strongpoints in the southern part of the *Provincia Arabia* (see Oleson *et al.* In Press). Drains under the *via principalis* and *via praetoria* carried grey water and rainwater run-off out the east, west and south gates.

As the examination of modular planning showed, the principle structures in the fort had plans that were fairly standard for smaller Roman forts. (Fig. 2) The *principia* consisted of four office rooms framing the central *aedes*, which had a wide door opening in the courtyard façade. The rooms were all carefully paved with stone, and the walls of the *aedes* had colourful geometric frescoes. Four bases were placed against the façade, probably for statues. One carried a Latin inscription, unfortunately illegible (Oleson *et al.* 2002). There was a speaker's platform (*tribunale*) at the northwest corner of the courtyard. Reused blocks and mouldings taken from the monumental buildings of Nabataean Hawara appear in all these installations.

The *praetorium* had the standard villa-like plan consisting of a central court with porticoes, surrounded by service rooms, a reception room, and the commander's residential suite. (Fig. 7) Entry was from the *via principalis dextra* through a small reception area into the southeast corner of the courtyard. Remarkably for such a hyper-arid desert location, there was a small pool with fountain in the centre of the courtyard, fed by a terracotta pipeline from the reservoir. The commander's suite in the northeast corner of the building reinforced this sense of opulence in the desert. There were originally five rooms, four of which had colourful mosaic pavements and frescoed walls (Fig. 4). An additional room was added later on the north, with hypocaust heating (Fig. 8). The mosaics show clear parallels with mosaics in late first century AD Nabataean villas near Petra, indicating that local mosaicists were brought in. The frescoes showed geometric panels, imitations of stone revetments, and plant motifs.

The provision of food and drink was an important consideration at this isolated desert site, so it is not surprising that a substantial *horreum* was provided. This also followed a standard Roman military plan, with three long parallel rooms and sturdy walls with exterior buttresses. (Fig. 2) The westernmost room (Room A) had brick paving and a drain in the southwest corner, suggesting the storage of liquids such as olive oil and wine. The other two rooms were paved with stone and probably were used for grain and other dry provisions. The paving stones and bricks carried no traces of bins, so the grain was most likely stored in sacks or baskets. Carts or pack animals could enter the fort through the east gate, proceed down the *via principalis sinistra*,





Fig. 5 - Tower no. 5 (J.P. Oleson).

then unload in courtyards in front of the wide doors leading into the storage areas.

Only a small portion of two barracks blocks was excavated (Area H), but it shows the typical arrangement of identical small rooms 15 x 12 feet in size (Figure 2, Area H). Squatters renovated most of the rooms for occupation at the end of the fourth century, so it is not clear whether the *contubernia* originally consisted of the typical pair of an outer *arma* for cooking and storage and an inner *papilio* for sleeping. In the early fourth century, when a smaller unit occupied the fort, some of the barracks rooms became redundant and were put to other purposes. One of the rooms was turned into a forge where iron and copper alloy artefacts were made or recycled.

A substantial structure in the southwest quadrant of the fort contained a latrine and craft area (Fig. 2, Area N). The small latrine, accessed through a paved foyer, consisted of a central paved area surrounded on three sides by a trench. (Fig. 9) No seating survived, but several slabs bridging the channel may have supported wooden seats or facilitated squatting. The small room, ca. 2 x 2.5 m, probably could have accommodated only

six or eight clients at once. Water was supplied to the trench through a terracotta pipe. There must have been other latrines around the fort, most likely located in the *intervallum* along the rampart.

The structure west of the latrine contained five basins built of mortared rubble and plaster, each about 30 cm deep, with a total capacity of 1000 lt. (Figs. 9 and 10) The basins were built at the time the fort was constructed and appear to have gone out of use in the late third century. None of the usual functions of such basins suit their context, construction, or desert location: for example, water storage, tanning leather, fulling or dyeing textiles, or production of fish sauce. A tantalizing possibility is that the basins were used in the production of a rustic type of beer, similar to that brewed in Egypt from the Bronze Age to the present, and in modern rural Arabic called *bouza* (Oleson, In Press; Lucas, Harris 1962: 10–16; Morcos *et al.* 1973; Nelson 2005: 23–24). Malted barley is dried, or lightly baked in loaves, then mixed with water in a basin or large jar. Like the process for modern lambic beer (Van den Steen 2011), the basins are left open to natural wind-born yeasts, or mash from a previous batch can be used as a starter. After two or three days of fermentation, the

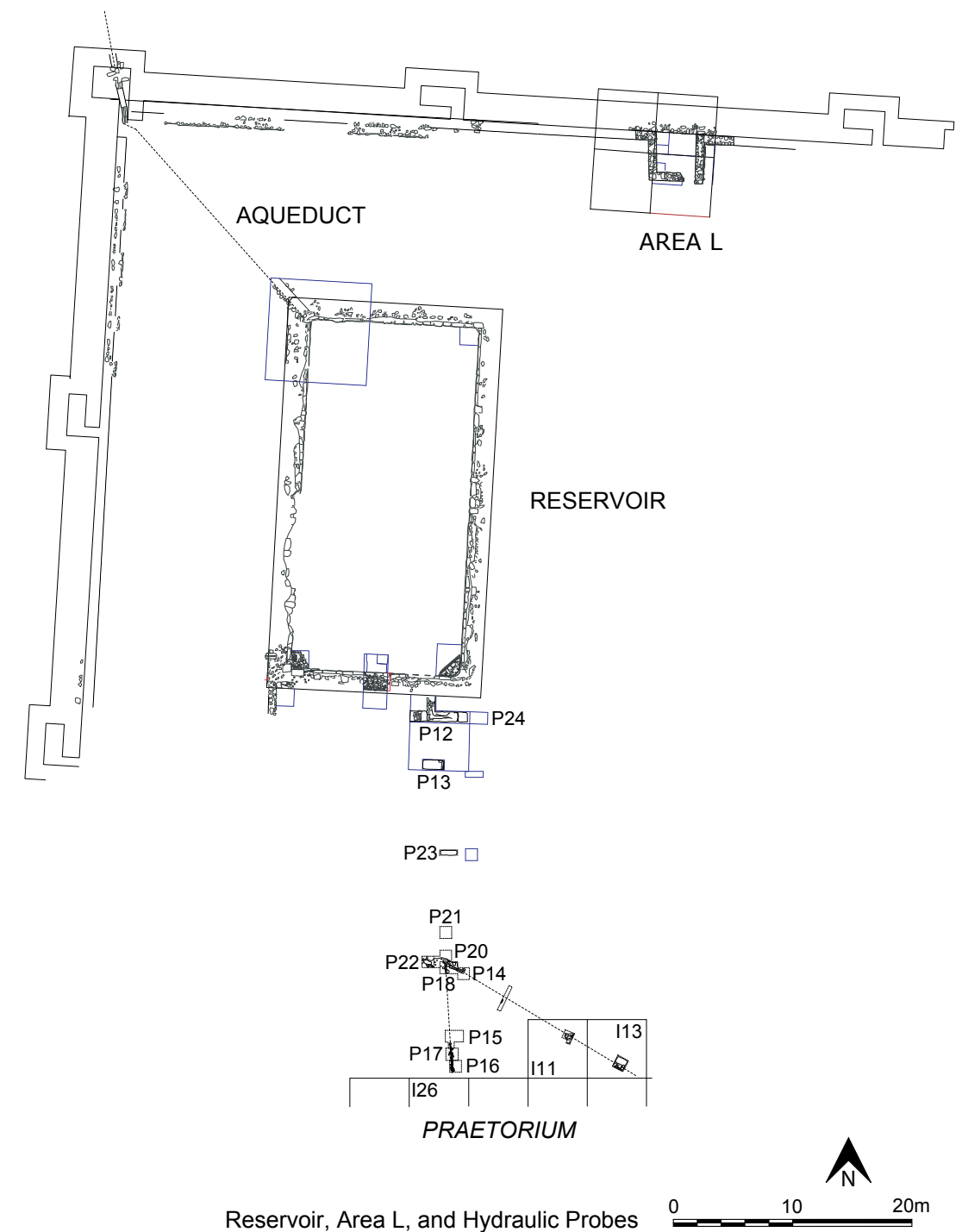


Fig. 6 - Plan of reservoir and associated pipelines (J.P. Oleson).

soupy liquid is dipped out and strained into containers for immediate consumption or short-term storage. If each of the production stages took two days and all the basins were continually in use, this brewery might have produced approximately 3,000 litres of a soupy kind of sour beer every week. For a military unit consisting of about 500 men, this would have provided each soldier

with approximately one litre of beer a day, a reasonable ration.

As long as there was sufficient water from the aqueduct and sufficient stores of locally grown barley or wheat, the production of beer would have been a simple method for optimizing the food and water supply and raising morale at an isolated post. The leftover mash

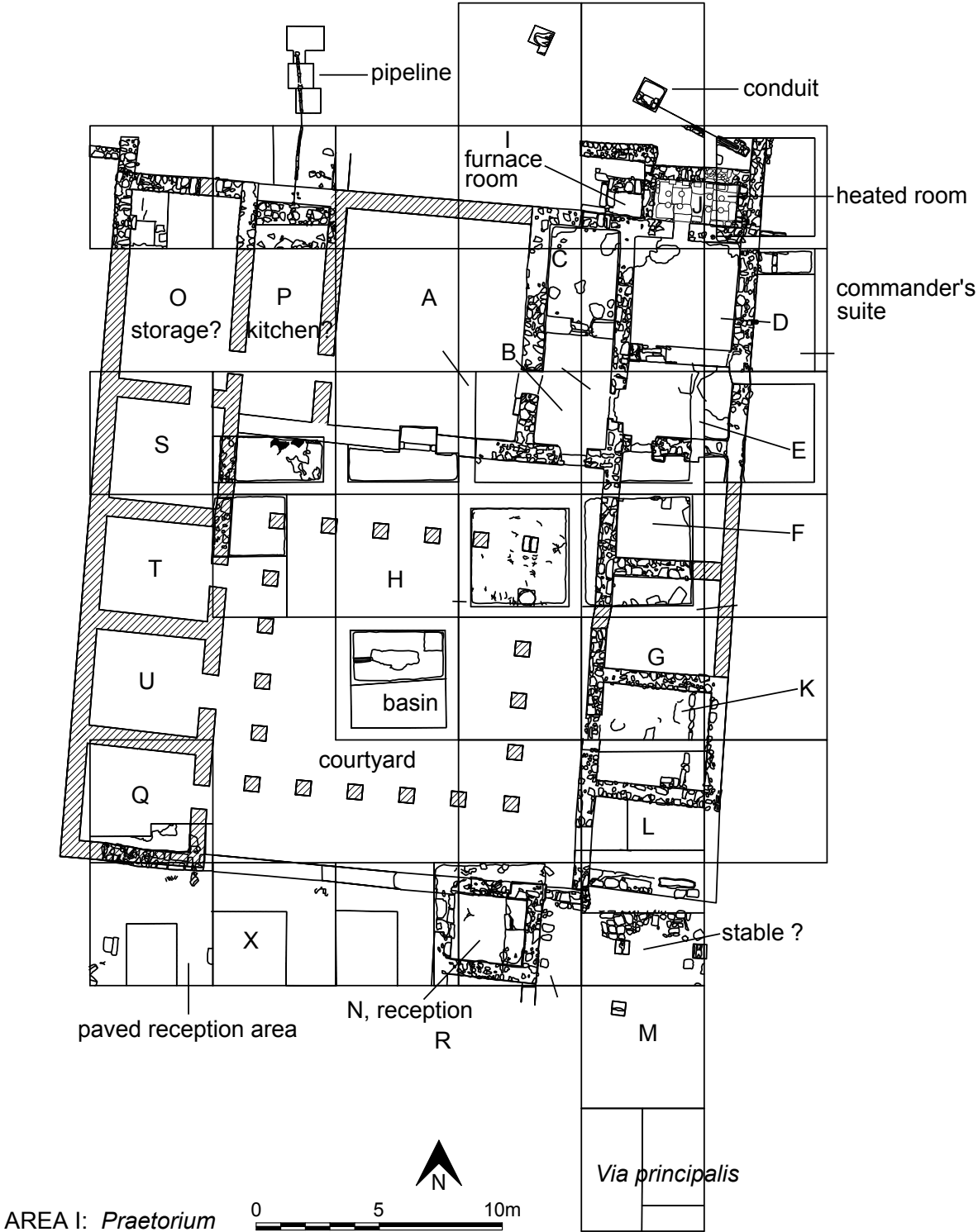


Fig. 7 - Excavation plan of *praetorium* (J.P. Oleson).



Fig. 8 - Hypocaust heated room in Commander's Suite, *praetorium* (M.B. Reeves).



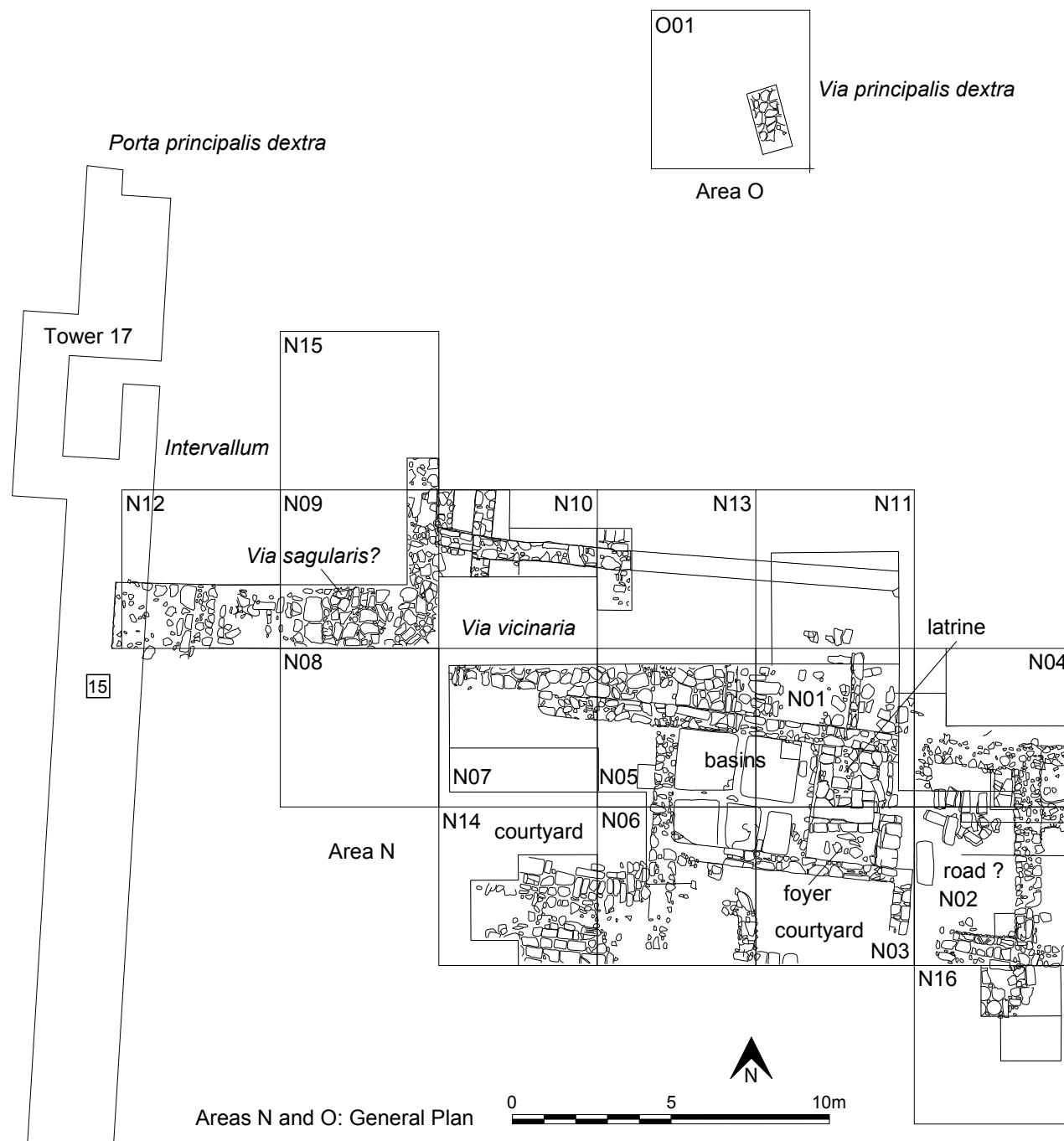


Fig. 9 - Plan of Area N: latrine and possible brewery (J.P. Oleson).

would have made a welcome supplement to the diet of the camel mounts in the fort and of the pigs we know were raised nearby for meat. Roman soldiers in both the Near East and Europe were accustomed to beer as a drink, sometimes issued as rations, as recorded for Vindolanda (Birley 1977; Bowman, Thomas 1994: nos. 182, 186, 190, 482; 2003: nos. 581, 628; Nelson 2005: 65–77), and for units of the Leg III Cyrenaica at Oxyrhynchus (POxy. 12.1513).

Given the documentary evidence for beer as a military ration, it is striking that no breweries have as yet been identified inside Roman forts other than Haurra. A brewery containing two ovens for roasting the sprouted grain but without brewing tanks was found in the vicus at Vindolanda, adjacent to the fort (Birley 1977: 45–46). Another brewery in the vicus associated with the second-century *castellum* at Regensburg-Großprüfening in Germany contained a spring, well, oven, and a 2.4 x 2.8 m waterproof tank (Boos 2010). A fermenting tank with “residues of black beer,” is said to have



Fig. 10 - View of possible brewing basins (J.P. Oleson).

been found in 1911 during the excavation of a Roman camp near Alzey, in the state of Rhineland-Palatine, but it is not clear whether or not it was found inside the fortifications (Dornbush 2006). It may well be that in northern Europe forts could rely on production of beer in the associated civilian settlements. At Haurra, where there is no evidence the local Nabataean population was accustomed to beer, there may have been no alternative to production within the fort itself.

In conclusion, the Haurra fort is a striking example of the Roman capacity to project their military power to a far-off frontier in a hostile environment, to adapt their long-standing design traditions to a new situation, and to sustain the occupation for several centuries.

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**Summary**

John Peter Oleson, an archaeologist and Classics scholar, is Distinguished Professor Emeritus in the Department of Greek and Roman Studies at the University of Victoria, Canada, where he taught from 1976 to 2015. He is a Fellow of the Royal Society of Canada, has been a Killam Research Fellow, and in 2010 he was awarded the Pierre Chauveau Medal by the Royal Society of Canada for his "distinguished contribution to knowledge in the humanities." Professor Oleson's research focuses on ancient technology, particularly ships, harbours, and water-supply systems, and on the Near East in the Nabataean and Roman periods. He has directed archaeological excavations underwater and on land at a number of sites around the Mediterranean, particularly at Humayma in Jordan. He has published 12 books and more than 95 articles concerning ancient technology, marine archaeology, the Nabataeans, and the Roman Near East. For more information, see his web page at <https://web.uvic.ca/~jpoleson/>.



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# ‘Power Over’ or ‘Power With’? Monumentality in the Desert: the Roman legionary fortress of Udhruh (Jordan)

## ABSTRACT

Monumentality in Roman military architecture is manifested both in a physical as in an emotional way. The manifestation of its physicality becomes clear to the beholder of such representative buildings and structures. Monumentality also has an emotional side which can relate to ideology, troop cohesion and domination. The intentions of different forms of monumentality - which will be treated in this paper - are dependant on the builders-planners and on the intended target groups. This paper focuses on physical and intentional aspects of monumentality for the legionary base of Udhruh (Southern Jordan). The location and layout of the curtain wall and its *principia* make clear that this military installation was a remarkable political and territorial marker in a changing landscape.

**KEY WORDS: MONUMENTALITY, BUILDING INTENTIONS, LEGIONARY FORTRESS, DESERT PORTAL, UDHRUH, PETRA, JORDAN**

*“I have finished a monument more lasting than  
bronze, more lofty than the regal structure of the  
pyramids, one which neither corroding rain nor  
the ungovernable North Wind  
can ever destroy, nor the countless series of the  
years, nor the flight of time.  
I shall not wholly die, and a large part of me will  
elude the Goddess of Death.  
I shall continue to grow, fresh with the praise of  
posterity, as long as the priest climbs the Capitol  
with the silent virgin”.*

Horace, Odes 3.30

## Introduction

Monumentality seems to be omnipresent in Roman society. This becomes clear to any modern visitor beholding the architectural remnants of a town in the centre or on the fringes of the *Imperium Romanum*. We – as modern spectators – are however tied to the present and the danger of anachronism is an obvious one, when perceiving criteria on ancient notions of monumentality. Several antique written sources from the Roman era can however elucidate that several modern concepts of monuments and monumentality were also part of the perceptual codes of those days. The word monument, from which the relatively modern word monumentality

has been derived, has a Roman origin. Varro (6, 49) links the word *monimenta* to *memoria*, distinguishing a monument as a prominent and durable physical structure intended to keep the memory of a certain person or event alive. In the above quote Horace sarcastically reconsiders his own ‘monumental’ writing, labelling it with both physical and emotional aspects, which we can comprehend and use as monumental criteria. The physical characteristics Horace mentions relates to durability, impressiveness and indestructibility. He also mentions recognition and the reward of eternal fame, resulting in a sense of immortality for its creator. With these Horace touches upon more emotional characteristics and possible intentions behind monuments and monumentality. Vitruvius nowhere uses in his *De Architectura* the word *monumentum* or a derivative form, he however uses *dignitas* to characterize buildings. A building without a portico and lacking well balanced proportions is, according to his books 3-5, purely functional of nature. He characterizes buildings with colonnades and correct proportions as edifices with *dignitas*. Vitruvius psychologizes and sociologizes such buildings by means of this. Vitruvius’ descriptions (1, 1) of the architect’s qualifications and training trajectory also further underline the importance of emotional intentions behind built structures. Besides functionality many other classic authors also describe the emotional impact and intentions of built structures on different audiences, without however explicitly using the word monument or monumentality.

Monumentality and Power

Archaeological studies on monumentality have focussed mainly on Roman cities.<sup>1</sup> According to Hanson (2016, 75–80) the debate in these studies have been dominated by two discussions, namely whether Roman cities were laid out according to a morphological uniformity and standardisation, and the level of ‘euergetism’, or who was responsible for financing and constructing the edifices and built structures. These aspects – standardisation and euergetism – are not the most useful or obvious ones for comprehending characteristics of monumentality on Roman military

architecture. As a result we will leave this debate on the Roman city for what it is s and will return to previous lines of research (see i.a. Driessen 2005a, 2005b, 2007). Monumentality in Roman military architecture has both a physical as an emotional side. The physical aspect is connected with the furnishing of a selected location with representative buildings and structures, and contributes to the physical monumental manifestation of these buildings and monuments both separately and together as a whole. Physical monumentality can be characterized by several criteria. The manifestation of this can be identified if structures are built or laid out 1) on a large scale or with a clear intention to impress, 2) in an expert manner combining experience, knowledge and craftsmanship, 3) with a refined and delicate detailing, 4) in a durable and solid way, 5) with the application of specific materials, and/or 6) using contrasts in colours and resources.<sup>2</sup>

Monumentality also has a psychological, an emotional side in that it appeals to our imagination. Such an appeal is concealed in buildings which combine the specific ideas, knowledge and experience of its creator together with the application of specific materials and well balanced proportions, as can already be observed when reading Vitruvius. Alfred Roth (in Costa. 1948, 128), the 20<sup>th</sup> century Swiss Architect of International Modernism, gives the following definition of monumentality: “*Monumentality is the transcendental, most inspired expression of the essence, the will, the greatness of an epoch. Monumentality, if true, is transfigured truth and spiritual greatness; if false, it is a concealed lie and an idol of material dimensions*”. Monumental architecture can enchant and offer spiritual protection, it can intimidate and mislead, but it is of eminent importance that the symbolism is actually understood by the intended audience. The monumentality objectives are thus dependent on the intentions of the builders and/or the planning authorities, the intended target group(s) they aim at and the perceptions of the latter. A classification of different intentions of monumentality (see Fig. 1) has been made based on classical written and archaeological sources (Driessen 2005a; 2007, 16–18).

<sup>1</sup>See for this for instance Edmund 2007; Hanson 2016.  
<sup>2</sup>This list of criteria is based on classical written sources and archaeological research, see Driessen 2007, 16–18; 42–64; 108–126. One or a combination of some of these criteria can already result in a manifestation of this physical monumentality, so not all these conditions need not to be met altogether.

INTENTION OF MONUMENTALITY	Aim	Intended Target Group	Architectural Characteristics	Specific Characteristics
Commemorative Monumentality	Maintain Remembrance - Religious, Personal or Social Message	Future Generation(s)	Real Monument Non-Utilitarian Profane as well Religious	Linking Past with Present and Future
Monumentality of Eternal Glory	Glorification / Remembrance of Builder / Planner of a Project	Visitors / Beholders	Diverse in Shape and Function	Often in combination with other Forms of Monumentality
Community Monumentality	Expressing and Reinforcing Common Values	Own Community	Often Utilitarian Buildings with Symbolism for Own Community - Profane or Religious	Towards Presence & Future For & By Own Community
Political Monumentality	Strengthening the Position of Leaders	Present and Future Followers, plus other Actors as Defeated Opponents / Outsiders etc.	Impressive and Representative Buildings and Places	Method of Subjection or Protection of Status Quo
Monumentality of “Tamed Nature”	Demonstration of Technological Superiority	Users and Beholders	Impressive Infrastructural Works mostly for Public Use (Roads, Communication, Waterworks etc.)	“Nature Tamed” to Perfection, and World Order Intention, next to Primarily Functional Utilization

Fig. 1 - The intentions of monumentality, as applied for Roman buildings, monuments and structures



When considering monumentality most of us think about power, whereby the most widely perceived sort of power is the one with clear negative associations: ‘Power Over’. This is power in an unequal relationship where, by means of inter alia coercion and repression, one party takes from, dominates over and/or further controls the other. This can be considered as a win-lose relationship, and the reaction of the subject parties can differ from compliance and resistance to manipulation. ‘Power Over’, and political motivated intentions are very essential for Political Monumentality (Fig. 1). Monumentality is for many people a loaded concept because of its political (ab)use by 20<sup>th</sup> century regimes, which can be illustrated by the following remark by Mock (1944, 25): “*A totalitarian nation demands buildings which will express the omnipotence of the state and the complete subordination of the individual*”.<sup>3</sup> Such propagandist<sup>4</sup> building policy is not only a modern phenomenon. Hannestad (1988, 9–10) even believes that the majority of what we regard as Roman art can be considered, to a greater or lesser extent, as manifestations of propaganda.

Two other sorts of power – ‘Power To’ and ‘Power Within’ – refer to individualistic expressions, respectively to the potential of everyone to shape his/her own life and world, and to a person’s self-worth and self-knowledge (VeneKlasen, Miller 2002, 45). These deal predominantly with late 20<sup>th</sup> and 21<sup>st</sup> century situations, but can however relate to the antique forms of Commemorative Monumentality and Monumentality of Eternal Glory (Fig. 1). These more individual forms of monumentality are of no further interest for this specific paper.

A communal expression of power is related to finding and/or creating common ground between different interest groups in order to enhance forms of collective strengths between these parties (*ibidem*, 45). Based on collaboration, solidarity and mutuality it can help to build bridges between different stakeholders to prevent or adjust social conflicts and to create and promote bonds and companionship. This expression of power – ‘Power With’ – has more positive associations and

can result in a win-win relationship whereby the result of the whole is greater than the sum of the individual parts. ‘Power With’ can be associated with Community Monumentality (Fig. 1) with the aim of expressing and reinforcing common values and cohesion between different actors (Driessen 2005b).

The Monumentality of ‘Tamed Nature’ aims to demonstrate the technological superiority of the regime and the people who contributed to this. In a summary of the built wonders of the world, Pliny (*Nat. Hist.* 36, 105–108) pays special attention to Rome’s natural disasters withstanding and eternity defying *cloaca maxima*. Drerup (1966) states that impressive infrastructural works like for instance aqueducts, bridges, sewer systems – serving primarily public interests – symbolize the struggle between man and nature, a struggle from which Rome emerges as the victor, to become the center of the conquered world. Rome’s engineers shape and bend the landscape to their will: mountains are pierced and valleys are spanned to conduit water, lakes and canals are dug to provide man with water, marshes are filled in and mountains are leveled so people can live where desired, and the most remote outposts of the empire are made accessible by a road network which in some cases may seem more symbolic rather than being effective.<sup>5</sup> This nature-conquering monumentality makes clear that Rome not only conquered the world with its armies, but also with technology. This monumentality is on the one hand quite suppressive and appeals to ‘Power Over’. On the other hand this knowledge and technology was also shared with communities and people living on the fringes of the empire allowing them to benefit from this as well. Likewise, ‘Power With’ may also be associated with this Monumentality of Tamed Nature.

#### The background of the Roman legionary fortress at Udhruh

In the late 3<sup>rd</sup> - early 4<sup>th</sup> centuries AD a revitalization of military structures took place under Roman control in Jordan. Many of these sites were already in use throughout the preceding centuries, but most of the ex-

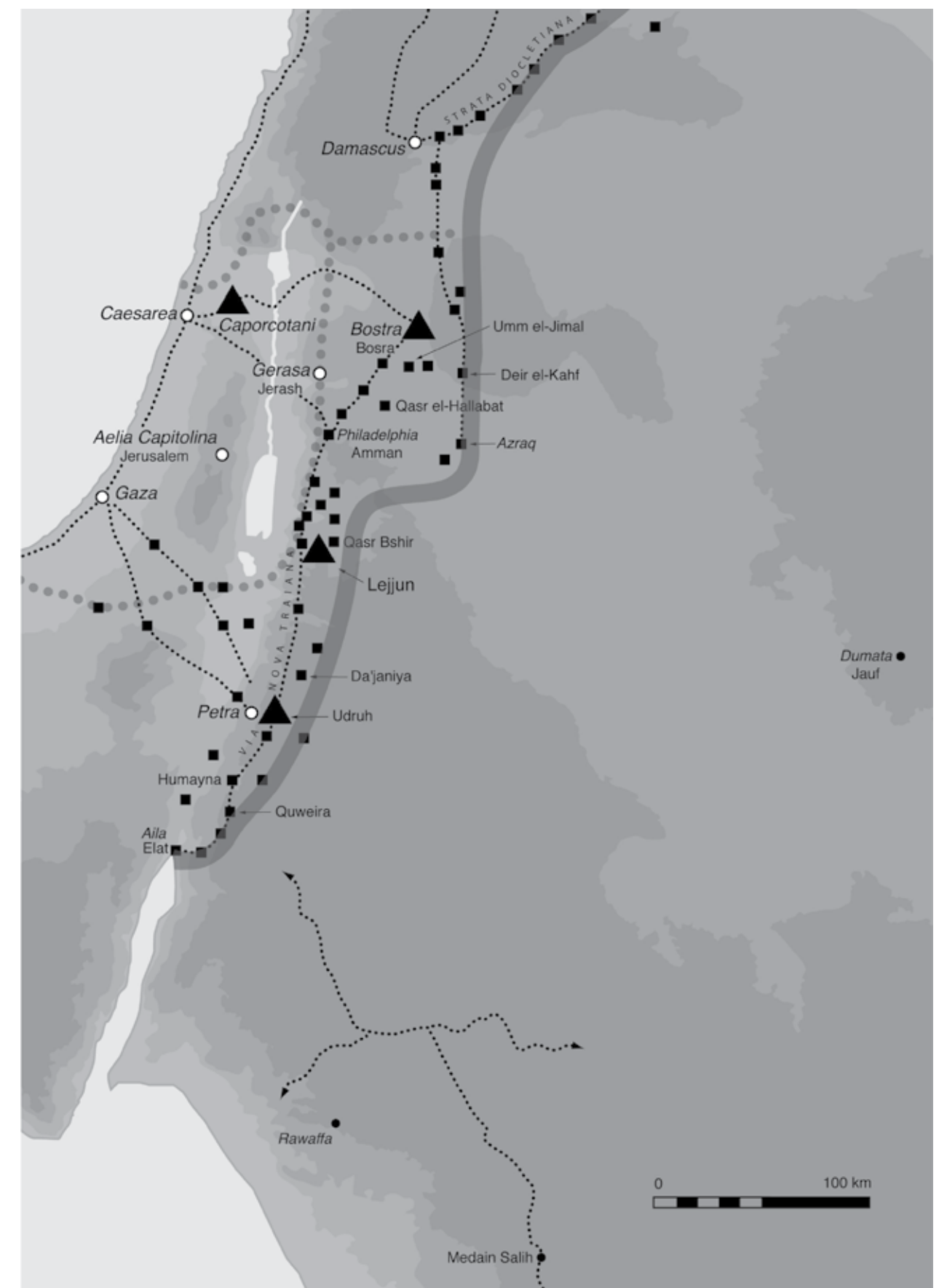


Fig. 2 - Map of the southern sector of the eastern frontier in Syria and Arabia, Source: Danube Limes–UNESCO World Heritage/Pen&Sword/CHCUniversity of Salzburg, authors: David Breeze and Kurt Schaller.

<sup>3</sup>Elisabeth Bauer Mock was in those days the director of the Department of Architecture and Design at the New York Museum of Modern Art (MoMa).

<sup>4</sup>The word propaganda derived from the Latin *propagare* (= spread, expand, extend) does not appear in the contemporary sense or in ancient sources and writings, but the contemporary meaning of the word propaganda did exist in Roman times.

<sup>5</sup>See also Frontinus *Aqueducts of Rome* I, 17–18.

cavated military installations (Fig. 2) were newly constructed in the Diocletianic era (Clark 1987; Godwin 2006; Parker 2006a). The legionary fortress of Udhruh measuring 4.7 hectares with its large external U-shaped towers is clearly late Roman in its shape. It was probably, according to the west gate building inscription (Fig. 3), rebuilt by the Legio VI Ferrata in AD 303-304 (Kennedy, Falahat 2008, 159–160). The rebuilding of the fortress can refer to an earlier Roman legionary camp, another Roman military fort of another character, or to earlier defensive installations of non-Roman origin. This is not clear yet. Udhruh must have housed a Nabataean settlement of some importance before it was redesigned as a Roman military base. Glueck (1935, 76–77) and Killick (1990, 249) already mention large quantities of Nabataean pottery finds from Udhruh. As from 2001 many fragments of Nabataean pottery were retrieved at the southwest part of the still standing curtain walls of the Roman *castra*. Nabataean iconographic evidence was also discovered here: a cut and worked limestone block with a *nefesh* and a rectangular sandstone block with a *betyl*.<sup>6</sup> These *spolia* were found at respectively the southwest corner tower of the fortress and the adjacent Byzantine church at Udhruh. Udhruh most probably developed as a second Nabataean nucleus in the hinterland of Petra (Tholbecq 2013, 299). The perennial spring as well as the intervisibility from the elevated location on the southwest side of the later fortress, were important locational criteria for both the Nabataeans as well as for the Roman troops. No long lasting Roman occupation of the site before the second half of the 3rd century of our era is to be expected. The coin find assemblages show, next to *inter alia* significant percentages of early first century Nabataean and 4<sup>th</sup> century coins (predominantly *folles* of Constantine, Constantinus II and Crispus) a noteworthy proportion of IIIB coins with some well-preserved *sestertii* and *dupondii* of the reigns of Valerian I and Gallienus. Besides a few south Gaulish *terra sigillata* sherds and a handful of severely worn Trajanic coins, that could have been in later circulation, evidence for an earlier Roman occupation is absent. The Roman curtain wall was – as observed in the eastern *intervallum* – constructed on dissimilar foundations. These upright parts of nicely finished coquina limestone blocks were built on top of roughly cut and ditto finished brecciated chert

and flintstone foundations. Similar walls and building practices were found outside the southern curtain wall (Fig. 4) and resemble the construction techniques seen at the Nabataean L-shaped fortlet at nearby hilltop Jabal al-Tahkim and other Nabataean structures in the region (Driessen, Abudanah 2019). This leads us to think that the Roman curtain wall was constructed on top of initial Nabataean walls or foundations. The Roman curtain wall that still stands nowadays is most probably part of the 303/304 rebuilding, but can be as well from an earlier Roman – for example 2<sup>nd</sup> half 3<sup>rd</sup> century – building campaign. Reading the bottom four lines of the building inscription (translation from Kennedy, Falahat 2008, 159) we tend to support the first hypothesis: “*The camp of the legion VI Ferrata Fidelis Constans rebuilt from its foundations through the efforts of the most accomplished dux Aurelius Heraclides and the most illustrious governor of the province, Aelius Flavianus, under the charge of Aurelius Mucianus, prefect of the same legion.*”

“*Soldiers should also learn how to build camps, for nothing is found so safe or so indispensable in war, since if a camp has been properly constructed... they seem to carry a walled city about with them everywhere*”.

“*When the legion acts with one mind and equal commitment to fortify a camp, draw up a line, do battle, complete in every part and needing no external additions, it usually defeats any number of the enemy*”.

Vegetius, *Epitoma Rei Militaris* 1.21 & 2.2.

#### Community Monumentality and the Roman legionary fortress at Udhruh

The Udhruh Roman fortress – still visible and partially standing today – is made of nicely cut and finished large coquina limestone blocks. These are used to erect the interior structures, but also the 3+ m wide ashlar defensive walls, its large external U-shaped interval and round corner towers, and its monumental gates. During the 2011-2015 field campaigns we not only surveyed and GIS-mapped the 48 km<sup>2</sup> research area, but also started to reconstruct the defensive structures



Fig. 3 - 3D reconstruction of the Udhruh castra building inscription, made with Leica P30 scanstation. Made by Maarten Sepers.

of the fort. All visible parts of the curtain wall and the external towers – from both inside as outside – have been measured, drawn and critically revised, and was started with a photogrammetry test. For the external interval towers we came to the conclusion that these were made according to a standardised lay-out (Fig. 5). The extra-mural church was the focus of the 2016-2018 fieldwork campaigns. Photogrammetry with Agi-Soft Photoscan was practised next to scanning with a Leica P30 Scan-station in order to compare these techniques, and to create different 3D-reconstructions. The southwest corner tower and the southern ashlar defensive wall area were also scanned with this scan-station (Figs. 6 and 7).<sup>7</sup> The corner towers – the southwest corner one still standing approx. 6 meters high – must have reached a height of around 15 meters above the exterior surface level.<sup>8</sup> With a proposed external height of 6.5 metres for the curtain wall and 11 metres for the interval towers alone,<sup>9</sup> it becomes clear that vast amounts of coquina limestone building blocks were quarried, processed, transported and applied to (re) build the Udhruh fortress.

The roughly cut and finished brecciated chert and flintstone blocks applied for walls outside the curtain wall and for some foundations observed under part of the eastern ashlar defensive wall were possibly of Nabataean origin, with an origin from rocky outcrops on the southern and western slopes and wadi of the fort. The nicely processed coquina limestone blocks originate from a large area of quarries situated on a plateau northwest of Udhruh. At several of these quarries with sizes extending 1000m<sup>2</sup>, different techniques of quarrying could be distinguished where some finished and unfinished blocks were left behind. The provenance and the dimensions of these blocks correspond with those used in the fortress. These quarries are situated – as the crow flies – more than 1.5km away from the fort.

The process of jointly quarrying, processing and transporting the blocks, and constructing the new defences, shelters and public buildings is an undertaking of monumental proportions. This will keep the soldiers physically busy and satisfied with a 'constructive' job from which they themselves reap the benefits. Better facilities are morale-promoting, collaborative working in a group context promotes cohesion, and the pride of

<sup>6</sup>Both are forms of Nabataean aniconic sculpture, *nepheshes* served as memorial markers for the deceased, and *betyls* as representations of Nabataean deities (Wenning 2001).

<sup>7</sup>These scans have not yet been fully processed, so these figures are still tests.

<sup>8</sup>This is based on the calculations made for the similar legionary fortress of el-Lejjūn and the still standing remains at Qaṣr Bshīr (de Vries *et al*, 2006, 194).

<sup>9</sup>Also based on the calculations and assumptions of de Vries (*et al*, 2006) for el-Lejjūn.



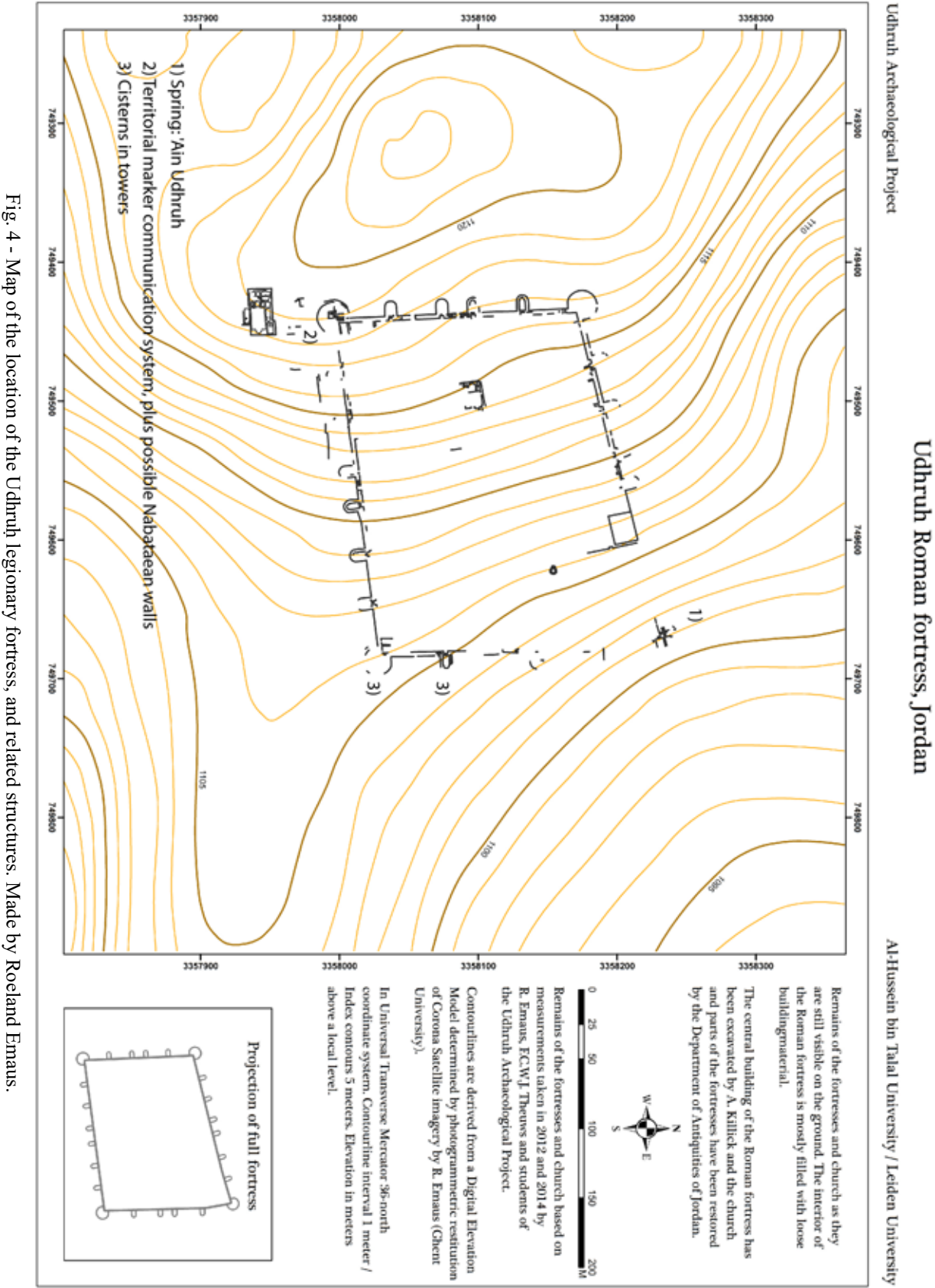


Fig. 4 - Map of the location of the Udhruh legionary fortress, and related structures. Made by Roeland Emaus.

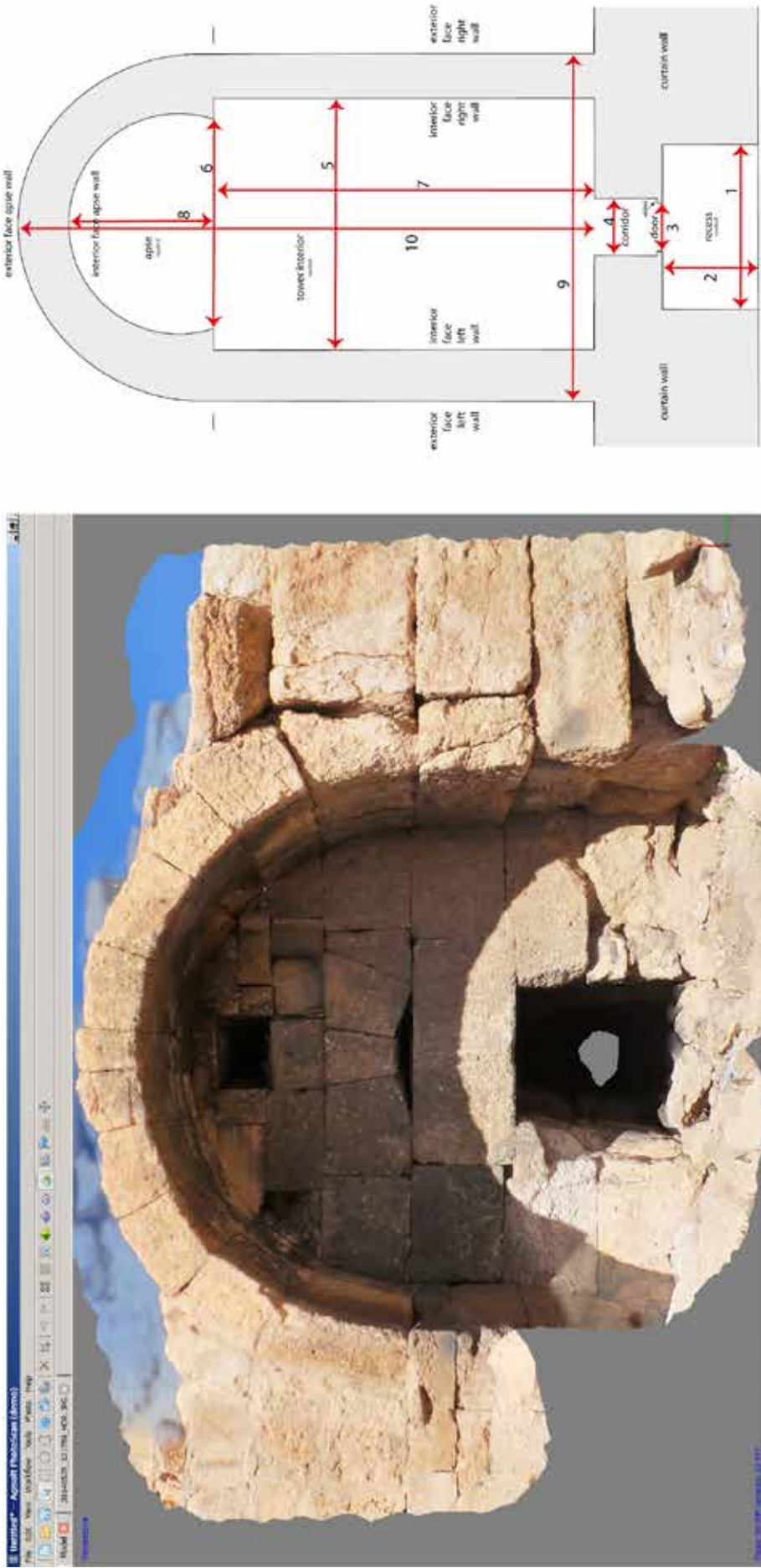


Fig. 5 - 3D frontal reconstruction (left) and lay-out plan (right) of external interval tower of Udhruh *castra*. First made with photogrammetry and AgiSoft Photoscan by Maarten Sepers and Roeland Emaus, second made by Frans Theuvs.



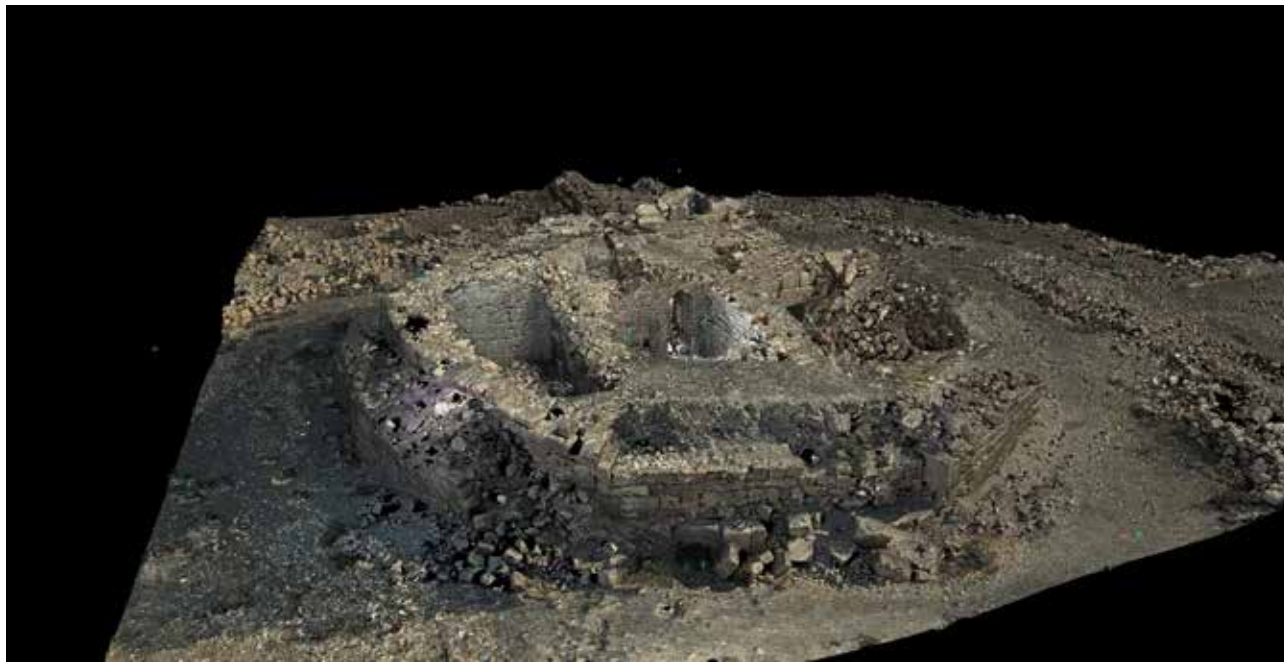


Fig. 6 - 3D reconstruction of the southwest corner tower of the Udhrūh *castra*, made with Leica P30 scanstation. Made by Maarten Sepers.



Fig. 7 - 3D reconstruction of the southern curtain wall of the Udhrūh *castra* and environs, made with Leica P30 scanstation. Made by Maarten Sepers.

the achieved results, the new *castra* of the Legio VI Ferrata, will certainly contribute to the *esprit de corps* of the 6<sup>th</sup> legion. The size and contents of the build-

ing inscription of the western gate will also contribute to the created culture of the legion used by the army command to commit individual soldiers to this legion,

its aims and values, as *esprit de corps* has been defined (Boer 2001, 303–4). These different individual (morale) and group factors (cohesion and *esprit de corps*) will have had a serious impact on the sense of community of the here based troops.<sup>10</sup> The security, safety and comfort in a monumental setting for and built by the here based troops – relating to Vegetius' quote at the start of this paragraph – together with the achieved morale, cohesion and *esprit de corps*, are in this setting the crucial criteria of Community Monumentality, and reflect a form of 'Power With'.

*"With such an array of indispensable structures carrying so many waters, compare, if you will, the idle Pyramids or the useless, though famous, works of the Greeks!"*

Frontinus, *de aquis urbis Romae*, 1.16.

#### Udhrūh's Monumentality of Tamed Nature

Access to fresh water is one of the most essential criteria to select a location for a settlement. This is a universal issue, but of eminent importance for establishing military bases – for hundreds of soldiers, their families and luggage trains men – in a semi-arid setting. Through the control over local perennial springs or other vast quantities of water you not only provide your troops with this indispensable resource, but gain power over local and travelling caravan communities as well. The legionary fortress of el-Lejjūn is situated near the perennial spring 'Ain Lejjūn (Parker 2006b, 114) and in the vicinity of the forts of Qaṣr Bshīr and Da'jāniya large reservoirs (respectively 64x47.5m and 48x46m), fed by local wadis, were built (Clark 1987; Godwin 2006). Udhrūh hosted – as Lejjūn – one of the most reliable perennial springs in the entire region: 'Ain Udhrūh. Udhrūh housed – as seen above – an important Nabataean settlement and most likely developed as a second Nabataean nucleus in the hinterland of Petra. The spring of Udhrūh was most probably an important factor for the choice of location for as well the Nabataean settlement as the Roman camp. Udhrūh and its spring were of strategic importance for the Nabataeans as they constructed also an elaborate communication system for the whole region, of which all

separate watch towers and fortlets had a direct visual connection with the higher parts of this settlement. This Nabataean multi-utility signalling system was not only constructed for military means, it played as well a role in controlling and safeguarding the caravan trade and the newly established agro-hydrological intensifications in the Udhrūh region (Driessen, Abudanah 2019). The Nabataeans did transform the steppe region around Udhrūh into an agricultural landscape consisting of new settlements, run-off water harvesting systems and arable fields (Driessen, Abudanah 2018a, 137–140). In Roman times access to 'Ain Udhrūh was at the northeast side of the fortress. This connection to the spring and the control of this important water source is most probably the reason why this side of the *castra* has an atypical trapezoidal shape (Fig. 4). Another unusual feature that strikes immediately is the slope – with a decline of around 20 meters – on which the fort was built. These somewhat odd characteristics were necessary to incorporate both the source of water, and include the territorial marker connecting to all the parts of the signalling and communication system in the surrounding region, (respectively 1) and 2) in figure 4). The surveyed Nabataean watchtowers and fortlets – connecting with Petra as well having a north-south link – were still in use or reused in the Roman period. The same was observed for the agro-hydrological measures and use of Udhrūh and environs. These were further extended in the Roman period with an elaborate *qanat* and connected field system to the southeast of the Roman fortress. It has its origins in the first or second century CE and develops into a program of agricultural intensification in the following centuries, making use of water otherwise lost due to deep percolation (Driessen, Abudanah 2018a, 141–151). The *qanat* system results in water becoming available for agricultural (among possible other) needs also in the drier periods of the year. This must have resulted in the development of other farming strategies – like for instance crop rotation – together with growing of perennial plants, adjustments in the technologies of processing the harvested goods and transformations in the seasonal life cycles of the communities involved. The construction, transformations and use of this impressive network of well-preserved ancient subsurface and surface-water conservation measures and connected irrigated fields

<sup>10</sup>See for further explanation of these factors and the justification for the use for the Roman armies and the situation for Roman Nijmegen in particular, Driessen 2005b and 2007, 60–64, 126–128.



could only have been established under the supervision of a central authority. An authority with adequate vision and technical background that was able to control and organise the required means and labour. The system was most probably very successful as it was renovated and adjusted in the Byzantine and Ummayyad periods, eventually covering a time span of at least six centuries (Driessen, Abudanah 2018a, 141–151).

Control over and transformation of both the old caravan route with a pivotal water source and the Nabataean communication and security network, plus the further intensification of the long-term innovative water management and agricultural systems for the Udhruh region make clear that the Roman authorities did apply the required technology to conquer and transform the world to their needs, for which most probably also other stakeholders than the armies were involved and could benefit: a combination of both ‘Power Over’ as ‘Power With’.

...”[After Varus disaster] a statue of Victory that was in the province of Germania and faced the enemy's territory turned about to face Italy.”

Cassius Dio 56.24.4

### Political Monumentality of Udhruh's castra

The Roman armies built a variety of impressive military structures at the edge of the steppe and semi-arid regions still suitable for dry-farming techniques in the last decades of the 3<sup>rd</sup> or early 4<sup>th</sup> century. Monumental ‘implants’ constructed at tactical and/or strategical landmarks that were ‘built for eternity’, as large parts of these military installations are still standing after 1700 years (Fig. 8).

They were built on a large scale or with a clear intention to impress. The last is not only accomplished by the construction itself, but can be also a result of the chosen location. The forts were laid out in an expert manner combining experience, knowledge and craftsmanship. For us this became clear when we were measuring, drawing and revising the curtain wall and towers of

the Udhruh castra during the 2012-2015 campaigns. The ashlar defensive walls were dry-stacked without wall-cramps and/or wall-anchors in such a way that the applied large and chinking coquina blocks were forced together in a strong setting with a mortared rubble core, withstanding several historically documented earthquakes in the region in the Byzantine and early Islamic periods. The fortress was transformed into a historically well-known and attested town during these periods<sup>11</sup> and large parts stand till today, testifying for a durable and solid construction as well. The application of specific materials and using contrasts in colours and resources are other physical aspects of monumentality which can be testified when observing the Roman military installations in Central Jordan. For the trapezoidal 57 x 54m fort of Qaşr Bshīr the use of blocks decorated with ‘rustification’ patterns can be observed for especially the towers, but also for the curtain walls.<sup>12</sup> The ashlar defensive walls of the parallelogram-shaped (102 x 99 x 100 x 101m) castellum of Daʿjāniya is completely made of roughly cut brown and black basalt blocks which are coursed with chinking stones and mortar. The interior structures are also constructed from these locally quarried brown and black basalt blocks giving this fort altogether a very overwhelming, even a bit sinister appearance. A coarse white plaster, still attached to many parts of the outer walls (Godwin 2006, 276), however made the excavators suggest that the entire exterior of the fort was originally plastered as has been observed with many other Roman military installations. The almost rectangular (238 x 192 x 240 x 190m) legionary base at el-Lejjūn and the trapezoidal (246 x 207 x 248 x 177m) legionary camp at Udhruh are constructed in a similar way. The curtain walls of Udhruh are with a width of more than 3 meter, more than half a meter wider than its counterpart at el-Lejjūn. The building teams at Udhruh had chosen to give the exterior of the fort a more monumental appearance than its interior, as the outer ashlar walls are made of very large coquina blocks measuring up to 3.0 x 1.2 meter, while the largest blocks of the inner ashlar walls measure up till 1.1 x 0.8 meter. It is not only the layout and realization of the defensive works, but another physical characteristic – refined and delicate detailing – that made us realize that the legionary base of Udhruh



Fig. 8 - Pictures of parts of the defensive structures of Roman forts from central Jordan, clockwise: Qaşr Bshīr, el-Lejjūn, Udhruh and Daʿjāniya. Pictures by Mark Driessen.

was of a more monumental stature than its counterparts along the limes Arabicus. Dozens of beautifully articulated architectural elements produced of stone from the local quarries – e.g. 30 columns of different sizes, five large Corinthian capitals (column top Ø 0.65m), six Ionian capitals (column top Ø 0.43m), 12 column basements, nine beautifully decorated architraves of four different types and four corbels – were retrieved on the surface near the location of its *principia*. With still between 2.5 and 4 meters of archaeological layers till reaching the initial Roman walking level we anticipate on many more of such architectural elements. It should not surprise that the *principia* is laid out in a very monumental way, as this is after all the heart of the legionary camp, not only in a physical, but also in a symbolic sense. To the legionary soldiers the headquarters would probably have been the symbol of the invincibility and omnipresence of Rome and her em-

perors (‘house of emperor’), not just once a year when they swore the oath of allegiance (‘temple of the legion cult’), but preferably in a daily confrontation (Driessen 2007, 118–121). This is a political monument for the here based troops. The complete legionary fortress – must have been an eye-catcher of unprecedented proportions – and were constructed in such a way to radiate power. Political monumentality, which can be used by those in power as a means of suppression or as protector of the status quo in the social hierarchy (‘Power Over’), fits in with the political and military reforms of the emperors Diocletian and Maximian. Both these *augusti* are mentioned in the first lines of the Udhruh inscription as the restorers of the world, the founders of peace everywhere, the vanquishers of all barbarian peoples and being fortunate unconquerable, as well as their co-emperors - Flavius Valerius Constantius and Galerius Valerius Maximianus - who are honoured as

<sup>11</sup>For references of these see for instance Driessen, Abudanah 2018a, 132–133; 2018b, 184–185.

<sup>12</sup>For the specific use of ‘rustification’ at Roman forts, we would like to refer to Erik Graafstal’s presentation given at the 2018 RAC/TRAC in Edinburgh, and his paper on this which was still in preparation when writing this paper.



the most courageous and most noble Caesars.<sup>13</sup> The name of the emperor Maximianus was later removed from the inscription, and most probably a result of the *damnatio memoriae* instituted on him by Constantine in AD 311, which lasted till AD 318. The regional and local Roman authorities under whose authorities this rebuilding of the fortress was accomplished are the senior military commander (*dux*) Aurelius Heraclides, the provincial governor Aelius Flavianus and the legionary prefect Aurelius Mucianus.

According to Trigger (1990, 125–128) clearly visible and wasteful use of energy is one of the most characteristic ways of showing power. The Roman authorities mastered the materials, labour and special skills needed to do so, as can be observed by the excessive splendor applied to the rebuilding of the Udhrūḥ *castra* and its *principia*.<sup>14</sup>

What however did surprise us that the Udhrūḥ *principia* and other phenomena of its fort were laid out in more monumental way than its regional counterparts. This most probably has to do with its location near Petra. We can hereby think of a monumental gateway via the refurbishment of an old possible caravanserai post to the capital of Petra, or should we say a monumental desert portal into the Roman world.

Summarizing we can state that monumentality in Roman military architecture has both a physical and an emotional aspect. The physical aspect is connected with the furnishing of a selected location with representative buildings and structures, and contributes to the physical monumental manifestation of these buildings and monuments both separately and together as a whole. Monumentality also has an emotional aspect which relates, inter alia, to ideology, troop cohesion, and domination. The intentions of such forms of monumentality are dependent on the builders-planners and on the intended target groups. This paper focuses on such physical and intentional aspects of monumental-

ity for the legionary fortress of Udhrūḥ (Jordan). The location and layout of the curtain wall assemblages and the *principia* make clear that this military site was a remarkable political and territorial marker in a changing landscape.

### Acknowledgements

The Udhrūḥ Archaeological Project and the results in this paper were not possible without the hard work and assistance of our team. Next to that we hereby would especially thank Maarten Sepers, Roeland Emaus, Frans Theuws, Guus Gazenbeek, Willem Willems†, Carol van Driel-Murray and Aktham Oweidi.

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<sup>13</sup>The complete tekst of the first lines of the Udhrūḥ inscription is: “*To the restorers of the world, the founders of peace everywhere, the vanquishers of all barbarian peoples, the emperors Caesars Gaius Aurelius Valerius Diocletianus [[and Marcus Aurelius Valerius Maximianus], pious fortunate unconquerable Augusti, and Flavius Valerius Constantius and Galerius Valerius Maximianus, the most courageous and most noble Caesars*” (Kennedy, Falahat 2008, 159).

<sup>14</sup>At this stage not much can be said about other internal structures and buildings of the fortress, as it has been re-used and modified as a town for the Byzantine and Islamic periods. On figure 7 can already be observed that the southern *intervallum* was fully built over. Several trial trenches excavated at the eastern *intervallum* make this clear as well. A flagstone floor next to the curtain wall at the bottom of the *intervallum* is stratigraphically attested to the Byzantine period leaving here no room for Roman layers.

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## INTRODUCTION THE PURPOSE OF ROMAN FRONTIERS

David J. Breeze and Christof Flügel

'Before I built a wall I'd ask to know  
What I was walling in or walling out,  
And to whom I was like to give offence.'

Robert Frost, *Mending Wall* (1914)

In discussions about the issues surrounding the provision of information to the general public about the function and operation of Roman frontiers, Christof Flügel and David Breeze hit upon the idea of inviting colleagues to present their own views of the purpose of Roman frontiers. We assembled some 20 or so arguments which had been presented at one time or another (Breeze 2018, 3–4) and reduced these to eight primary statements. We then invited eight colleagues to argue a single case in a special session at Viminacium. This was unfair to each speaker as in reality their own views were usually more nuanced, while the reasons for the creation of Roman frontiers depended on a mixture of several elements, mainly depending upon their date and geographical circumstances. Nevertheless, each speaker kept to the conditions of contributing to the session.

At the beginning of the session a ballot was undertaken to decide the order of speaking and the presentation of the papers in this volume follows that order. At the end of the session the audience voted. Both balloting and voting were supervised by Tatiana Ivleva and Anna Walas. Voters had to be present throughout the whole of the debate and were only allowed to vote for one argument. The voting was as follows:

- To prevent raiding: Erik Graafstal 26
- To control movement into and out of the province: Andreas Thiel 18
- To create an edge to the empire for the Romans: Sebastian Sommer 12
- To defend the empire: Eberhard Sauer 11
- To keep the troops busy: Simon James 8
- To control transhumance: Marcus Gschwind 7

- To serve as a symbol and object of intimidation: Christof Flügel 4
- To protect travellers in the frontier zone: Alan Rushworth 1

A prize of a mug depicting the Bridgeness distance slab on the Antonine Wall and a copy of the slab in chocolate prepared by Rebecca Jones was awarded to the winner.

This “Limes archaeology science slam” was the first of its kind during 24 Limes Congresses and it was broadly acknowledged both by speakers and the audience that this format would stimulate further discussions in trying to find an explanation for “The Purpose of Roman Frontiers”.

Finally, it remains to record that the participants responded to their challenge with great good humour as well as solid academic argument. Yet the reader should be aware that this was a debate and, in a debate, a little license is allowed!

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## **The defensive purpose of Roman frontiers**

### **ABSTRACT**

Iron Age linear earthworks protected tribal boundaries on various occasions effectively against incursions, as the sources clearly attest. Such barriers, as well as long walls in Greece and the Near East, will have inspired their later Roman counterparts. These cannot have been less effective than their prehistoric prototypes, and some of them served demonstrably defensive purposes. Basic earthworks could decide the outcome of wars even in modern times. Pre- and post-Roman parallels shed significant new light on the origins, purpose and potential effectiveness of Roman linear barriers. Evidence for border walls securing the prosperity of frontier territories throughout the ages cast doubt on modern hypotheses, questioning that such barriers ever served a tangible military purpose.

**KEY WORDS:** ANTONINE WALL, GORGAN WALL, HADRIAN'S WALL, IRON AGE LINEAR BARRIERS, LIMES, SASANIAN WALLS

### **Introduction**

**W**as the principal purpose of frontier walls to defend the Roman Empire? Nothing would be gained by listing well-known arguments for and against this proposition, nor is there space to systematically evaluate the views of past and present scholars on the purpose of Roman frontier defences in general and linear barriers in particular. Whilst a small selection of relevant work is discussed, evidence how better documented non-Roman barriers were used, how ef-

fective they were and what may have inspired Roman wall-construction in the first place has a much greater potential to shed new light on an old question. It is such comparative evidence that can make a novel contribution to the debate.

### **Barriers to protect tribal boundaries: an inspiration for Rome?**

One of the reasons for Rome's remarkable military strength and longevity was its willingness to learn from



its neighbours and opponents, and it was not the first entity to recognise that linear barriers could effectively protect the economic assets of a state or tribal community. Whilst there are some Roman linear barriers dating back to the first centuries BC and AD, notably Caesar's 19 mile long and 16 foot high fort-lined wall (*mur*) and ditch (*fossa*) against the Helvetii,<sup>1</sup> it was not until the second century that the decision was taken to halt expansion and only then were barriers first built on a grand scale.

This may have been inspired by earlier monuments the army encountered, notably in Greece, temperate Europe and the Near East, ranging from stone and brick walls to more basic earthworks.<sup>2</sup> In Northern Europe, the army still saw some of them in active use. Caesar, one of Rome's most successful generals and, as we have seen, one of its first long-wall-builders (if his wall was intended to be manned temporarily only) also bears witness as to the effectiveness even of basic barriers. We learn from Caesar that the cavalry of the Nervii, a tribe in northern Gaul, was weak, leaving them exposed to raids by their neighbours. To secure their borders, they planted impenetrable thorny hedges, making quick raids much more difficult.<sup>3</sup> This was just one of many defensive installations in pre-conquest Gaul, but remarkably even the inhabitants of free Germany, who built far fewer military fortifications, repeatedly felt the need to construct linear earthworks. The Germanic Angrivarii erected a substantial linear barrier (an *agger*, probably a basic earth or stone rampart) to protect their tribal lands, where there were no natural barriers. They used this to take a stance against the Roman army who succeeded in storming it only with difficulties.<sup>4</sup> Simple tribal barriers could form a real obstacle to a mega-empire's armed forces – powerful proof for their effectiveness. A linear barrier had also played a part in Rome's crushing defeat at Kalkriese,<sup>5</sup> undoubtedly the site of the Varus battle and not of a

skirmish during the Germanicus campaigns.<sup>6</sup> The Treveri built a palisade/breastwork-reinforced earthwork along their borders during the troubles of AD 69, being at war with the Germans.<sup>7</sup> Barriers in Jutland, including the 12km long Olgerdiget consisting of palisades, rampart and ditch, show that such installations were also constructed outside the sphere of Roman military operations.<sup>8</sup> It is likely that also in Britain some tribal boundaries were marked with similar linear earthworks and perhaps also with hedgerows. A concentration of such barriers at the western boundary of Catuvellauni/Trinovantes (Figs. 1 and 2), near the Claudian fortress of Alchester,<sup>9</sup> for example, cannot have failed to attract the attention of the invasion force.

Whilst the cited examples of defensive earthwork use are generations, or more than a lifetime, earlier than the apogee of Roman barrier construction, so are the much commemorated World Wars today, Tacitus wrote about the long walls of Angrivarii and Treveri not long before Rome started to erect its most elaborate barriers and there will have been many more cases than are attested in the surviving written records. Rome had witnessed that its adversaries in North-west Europe used earthworks and hedges to great effect, even if only temporarily manned. This no doubt will have influenced the decision to create similar installations on a much grander scale in Germany and Britain, and there can be no serious doubt that Roman walls erected against German or British opponents would have been at least as effective as the, often less elaborate, late prehistoric barriers the Roman army had encountered when operating in Gaul, Germany and Britain.

#### **Imperial barriers: less effective than their prehistoric counterparts?**

Roman writers, as we have seen, described linear barriers the army encountered during its wars in North-west

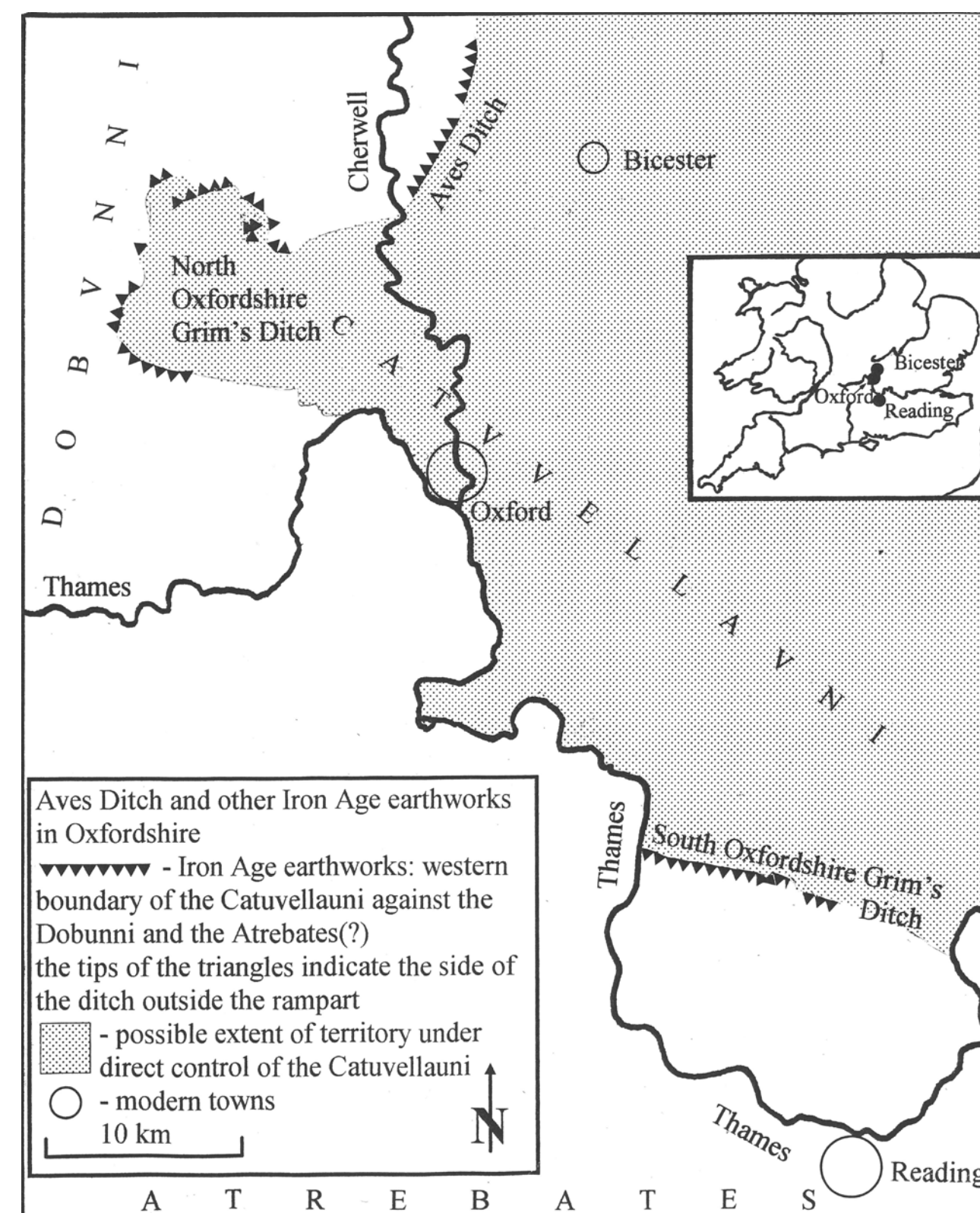


Fig. 1 - Iron Age linear barriers, some of them arguably defensive and protecting tribal boundaries, are likely to have been amongst the monuments that inspired their Roman counterparts: hypothetical map of the western limits of the territory of the Catuvellauni/Trinovantes (Sauer 2005b: 33 Fig. 28).

<sup>1</sup>Caes. *Gall.* 1.8; Cass. Dio 38.31.4; Furger-Gunti 1991: 104–107; Napoli 1997: esp. 502–505.

<sup>2</sup>Sauer *et al.* 2013: 605–613.

<sup>3</sup>Caes. *Gall.* 2.17.

<sup>4</sup>Tac. *ann.* 2.19–20.

<sup>5</sup>Rost, Wilbers-Rost 2018.

<sup>6</sup>Sauer 2005a: 148–152.

<sup>7</sup>Tac. *hist.* 4.37, cf. 4.28.

<sup>8</sup>Recent tree-ring dating indicates that the Olgerdiget dates back to c. AD 25, not AD 219 as postulated earlier: Jensen 2022; see also Christensen 2003; Jensen 2006: 587–90.

<sup>9</sup>Bell 2012: 53, 108–110, 114–117, 136–138; Hart *et al.* 2010: 137; Lambrick 2009: 361–375; 2013: 45, 47; Levick 2015: 10; Sauer 2005b.





Fig. 2 - The formidable South Oxfordshire Grim's Ditch may have secured an Iron Age tribal boundary.

Europe and their effective use against neighbouring tribes and even the Roman army. The people living beyond Hadrian's Wall and the German 'Limes', by contrast, have left no written records if and how these barriers were defended. The same is true for Sasanian Persia's northern neighbours, and there is also little written evidence for the long walls on the Sasanian Empire's northern frontiers, built in the fifth and sixth centuries.<sup>10</sup> Whilst it seems obvious that the prime function of massive investment in border defence was tangible and real military advantage in deterring, decimating, delaying and trapping the enemy, fashion has led modern scholarship to dismiss linear barriers as largely symbolic and not very effective. As there is no concrete written evidence to the contrary, any interpretation seems permissible. Roman and Sasanian frontier walls, despite being of much grander scale than their prehistoric antecedents, are often believed to have served no tangible and rational purpose. Mohammad

Chaichian, examining Hadrian's Wall and other long walls from antiquity to modernity, concludes that they 'always signal the fading power of an empire', believing Hadrian's Wall to be expensive to maintain, Britain to be economically relatively unproductive and the wall a sign of the inability of the 'colonizer' to manage conflicts with the 'colonized'. Radiocarbon dating of the Sasanian Gorgan Wall is dismissed and a later construction date proposed, conveniently enabling Chaichian to postulate construction much closer to the date of the empire's fall.<sup>11</sup> Hadrian's Wall and the Gorgan Wall were garrisoned for almost three and two centuries respectively before the empires in question did lose control over their hinterland. Roman Britain and the Sasanian Gorgan Plain arguably reached a peak in prosperity whilst the barriers were operational,<sup>12</sup> casting doubt on Chaichian's belief that the walls signal imperial death throes lasting for centuries. Yet, President Trump's wall-building ambitions have only reinforced

<sup>10</sup>Sauer *et al.* 2013.

<sup>11</sup>Chaichian 2014: back cover, cf. 49–52, 58, 89.

<sup>12</sup>There is no space here to discuss Romano-British economic development; on the establishment of a vast urban town of 3km<sup>2</sup> south the Gorgan Wall, signalling wealth and surplus production, see Sauer *et al.* 2013: 382–406.



Fig. 3 - The central section of Hadrian's Wall was built at the very edge of steep slopes: here west of Housesteads.

the view amongst the liberal elite that past and present defensive walls are mere follies, believing what seems morally objectionable must also be irrational.<sup>13</sup>

More moderate sceptics of the hypothesis that Roman frontier walls served as real defensive barriers acknowledge some benefits for frontier security, but doubt that any Roman walls ever served as fighting platforms, the army preferring to fight in the open with either no wall-walk in existence<sup>14</sup> or it mainly serving observation and patrolling purposes.<sup>15</sup> Why, however, were control lines or outright follies so well adapted to the terrain? In hilly landscapes, Hadrian's Wall and the Antonine Wall tended to occupy high ground and follow in places the edge of steep slopes (Figs. 3 and 4). If the sole purpose was surveillance and there was no wall-walk, placing the towers on vantage points with

wide views to the north and to other towers in the chain would have been sufficient. Integrating the towers into the wall only made sense, if they were considered a potential enemy target and, even then, straight connecting walls, wherever the terrain permitted, would have saved building material. There was little point for a wall to follow the contours if it was a control line without a wall-walk. John Poulter in his important survey of Hadrian's Wall, whilst acknowledging that it 'follows the edge of the crags for some 16km', indeed that the Roman surveyors from both coastal extremities aimed for the crags,<sup>16</sup> observes that in some other sections the wall was not in the optimal defensive position.<sup>17</sup> Hesitantly suggest-ing that it 'is possible that the principal purpose of Hadrian's Wall was rhetorical – to impress both the Roman world and the native population', he concludes much more convincingly that

<sup>13</sup>Catling 2017: 58.

<sup>14</sup>Breeze 2006: 109–110; 2011: 204–205.

<sup>15</sup>Poulter 2009: 80–81.

<sup>16</sup>Poulter 2009: 48, 73.

<sup>17</sup>Poulter 2009: 78–83; Breeze 2013: 3–4.





Fig. 4 - The Antonine Wall near Croy Hill with its ditch (foreground left to middle ground centre) follows the contours of the terrain.

there was a 'compro-mise between attempts to satisfy multiple functions.'<sup>18</sup> These included notably signalling and observation. As enemies could have attacked in the lowlands, there was little point in constructing the entire highland section at the edge of the steepest north-facing slopes if, as Poulter astutely observes, other routes were more advantageous for signal transmission.<sup>19</sup> The route of the Antonine Wall suggests to Poulter that it was in places deliberately built facing a marsh, 'the strongest defensive position for a barrier'.<sup>20</sup>

The Peel Gap Tower (Fig. 5) on Hadrian's Wall is of particular interest in this context. Its location at the bottom of a valley, overlooked by higher ground on both sides, makes little sense if intended as an obser-

vation post or signalling platform. If its purpose, however, was to defend a weak point, then its location is perfectly explicable. Missiles found when it was excavated powerfully support such an interpretation, as convincingly argued by Jim Crow: 'two piles of small, rounded pebbles were perhaps the remains of sacks of crude slingshots. One unexpected artifact was a ballista bolt-head... [The bolt] lends support to the military interpretation of the Wall and associated structures which is experiencing a welcome revival – perhaps we will even return to Haverfield's views of a century ago: 'The object of the Wall is plain, ... it is a fortification to bar ingress and resist armed attack'.<sup>21</sup> It has since been pointed out that the tower might have served as a 'security camera' to cover a blind spot of c. 100x200m,

<sup>18</sup>Poulter 2009: 77, 85.

<sup>19</sup>Poulter 2009: 77–86.

<sup>20</sup>Poulter 2010: 154.

<sup>21</sup>Crow 1991: 53.



Fig. 5 - The Peel Gap tower at the valley bottom was in an imperfect position for an observation post, but ideally placed to oversee a weak spot.

but since the approaches to the blind spot were clearly visible from other towers<sup>22</sup> (and more from a wall-walk) Crow's explanation is more convincing.

This is not to deny that some Roman barriers served, like the hedges of the Nervii, as effective control lines. This applies to the German 'Limes', which was dead straight over a c. 80km section in hilly terrain. It clearly was not intended to serve as a fighting platform, as the palisade was located in front of the ditch in the last phase of the Upper German 'Limes' and the Raetian Wall was too narrow to carry a wall-walk<sup>23</sup> (Fig. 6).

Most of the German 'Limes' furthermore ran through thinly populated land and will not have faced the same level of threat as its much shorter British counterparts,<sup>24</sup> subdividing the island, even if for most of the time

when Hadrian's Wall was occupied there were out-post forts forming a security cordon further north. Yet, as Nick Hodgson has shown, settlement immediately north of the wall was abandoned not long after its construction, whether as a result of Roman security policies or the repercussions of the wall, apparently not designed to facilitate and control regular traffic, separating communities.<sup>25</sup> Further evidence has emerged in recent years for the defensive design of the British walls. On the approaches to both, Hadrian's Wall and the Antonine Wall, pits have been found, probably holding thorny and/or entangled forked branches or sharpened stakes. Similar obstacles in part above ground and in part hidden below ground, designed to obstruct, injure or deter the enemy, are found at other sites under genuine threat, such as the circumvallation of Alésia or isolated forts and fortresses in hostile territory. They

<sup>22</sup>Bello Foglia 2014: 38–40.

<sup>23</sup>Sommer 2018: 30–32.

<sup>24</sup>Bidwell 2005: 72–74; Schnurbein 1992: 71–76.

<sup>25</sup>Hodgson 2015.





Fig. 6 - Reconstruction of the Upper German 'Limes' (left) and the Raetian wall (right) at Schwäbisch-Gmünd.

are uncommon on the German 'Limes'<sup>26</sup> – adding strength to the interpretation of the latter as a line of control, as opposed to the British walls also serving as defensible barriers.

Due to stone robbing and written sources failing to describe the architecture of Hadrian's Wall in any detail, we cannot prove or disprove that it carried a wall-walk. Tacitus, as discussed, reports that the Germanic Angrivarii used a mere tribal boundary earthwork as a fighting platform in AD 16. Procopius attests that the Justinianic Chersonese Wall carried an elaborate wall walk.<sup>27</sup> Like these two counterparts, one century before and four centuries after, Hadrian's Wall will have been designed to be defensible. That there were

initially 'very few men on the Wall line'<sup>28</sup> provides no proof to the contrary as, presumably, Germanic tribesmen would not have had numerous, if any, permanent guards patrolling tribal boundary earthworks; yet, they were evidently capable of manning them at times of imminent danger, and the same must be true for the Roman army in northern Britain. The course of Hadrian's Wall, overlooking the edge of steep slopes and the obstacles on its approaches (in places at least on flat ground) offer further support for this hypothesis.<sup>29</sup> Of course, it might be argued that Rome did not need to depend on entrenched positions, but preferred to fight with those breaching its defences in open terrain.<sup>30</sup> Yet, no sensible general will put his troops into unnecessary danger. Where terrain and walls could be used

<sup>26</sup>E.g. Bidwell 2005; Caes. *Gall.* 7.73; Hodgson 2017: 17–18, 162–164; Sauer 2006: 36–38, 136 pl. V; Schnurbein 2008.

<sup>27</sup>Prok. *aed.* 4.10.13–14.

<sup>28</sup>Breeze 2006: 110.

<sup>29</sup>E.g. Hodgson 2017: 157–171.

<sup>30</sup>Breeze 2011: 205.



Fig. 7 - Foothill section of the Sasanian Ghilghilchay Wall, following the edge of the escarpment. The mound in the foreground is part of the eroded towered mud-brick wall, overlooking a fort (middle ground, right).

to minimise or avoid casualties, it made no sense to raise one's head above the parapet. And any adversary attempting to cross Hadrian's Wall faced double jeopardy: when crossing into Roman territory and when trying to escape with booty both the wall and an ancient minefield equivalent had to be crossed, making a rapid invasion or escape impossible. The risk of being trapped will have served as a powerful deterrent to all but the most determined and numerically strong would-be invaders. If we are right in thinking that Hadrian's Wall could have been used as a fighting platform, only rarely will this have been put to the test.

There is no space here to scrutinise walls elsewhere. Suffice it to say that also in Late Antiquity within the Roman World<sup>31</sup> and further east advanced walls used terrain to defensive advantage – all no doubt more difficult to overcome than the basic tribal barriers cited. Sasanian walls in mountainous terrain tend to be positioned so that enemies faced literally an uphill struggle

(Figs. 7 and 8), with no point (in the lowlands or highlands) being more than five kilometres at most (but normally no more than two or three) from a fort to ensure a swift response to any attack.<sup>32</sup> Parallels in the positioning of walls across land corridors, with close attention to the terrain, between the Near East, Prehistoric Europe and Rome demonstrate to some extent mutual influences in the evolution of the system and perhaps even more so similar defensive logic underpinning such construction projects in west and east over millennia.

#### **Defensive walls, tried and tested over millennia: the Roman chapter in a long success story**

Such observations leave no doubt that some Roman long walls served a real defensive purpose, and the prehistoric parallels cited eradicate any serious doubt that even basic barriers could be militarily effective. Yet not only in Prehistory, Antiquity and the Middle

<sup>31</sup>E.g. Crow 2017.

<sup>32</sup>Aliev *et al.* 2006; Sauer *et al.* 2013.





Fig. 8 - The Gorgan Wall, following the edge of a steep slope in the mountainous eastern part.

Ages, even in the age of fire-arms could linear barriers decide the outcome of wars, as the following example will demonstrate. In 1784, ‘Ali Morad Khan ruled over all of Persia, except Mazandaran and the Gorgan Plain. Mazandaran was conquered first and then an army was dispatched from Tehran to Astarabad (modern Gorgan) to complete his conquest of Persia. The post-medieval Jar-e Kulbad earthwork proved decisive (Figs. 9 and 10). Reportedly once 24km long, it cut across the narrow Caspian coastal corridor (of c. 8km width today), running from the seashore to the mountains. Originally, it had been built against Turkmen incursions and was lined by nine forts in the 1770s with a garrison of 3,550 men combined. No more than a substantial earth dam, reportedly covered with an impenetrable thicket of trees, it was crossed by the army on the one road that led across. A siege of Astarabad, the last town in all of Persia to hold out against ‘Ali Morad Khan, followed. In this seemingly hopeless situation, the defenders of Astarabad succeeded in occupying the earthwork with musketeers, cutting off all supplies

to the besieging army. Suffering famine, it was defeated, forced to flee and decimated at the Jar-e Kulbad earthwork, with an estimated death toll of over 10,000, not counting those taken prisoner at the barrier. Aga Mohammad Khan, who had led his Astarabad-based forces to victory, subsequently became Shah of Persia and the founder of the Qajar dynasty.<sup>33</sup> If a tree-lined earthwork proved decisive in a war of the late eighteenth century, how can it be doubted that Hadrian’s Wall, the Antonine Wall and other Roman and Sasanian long walls could have been successfully defended against adversaries with inferior weaponry?

Roman walls can only be understood in comparison with those built before and since, some of them having arguably influenced Roman wall-construction, some of them much better known. In a recent wide-ranging study, Peter Spring perceptively summarises the reasons for frequent modern misinterpretation of linear barriers and makes a persuasive case for their defensive purpose: ‘... linear barriers... did not work well, ac-

<sup>33</sup>Gmelin 1774: 465–467; Hasan-e Fasa’i = trans. Busse 1972: 16–19; Sauer *et al.* 2013: 295–296; cf. Hambly 1991.

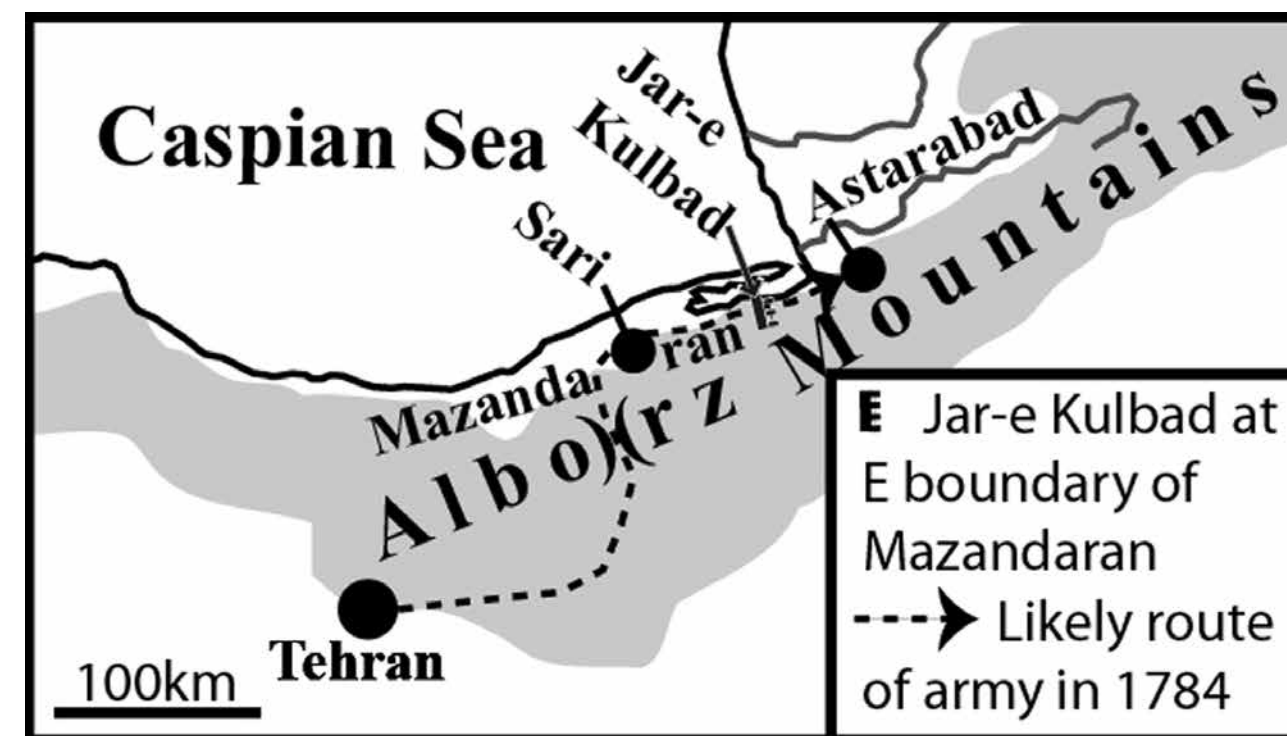


Fig. 9 - The war of 1784 in Northern Persia, in which an earthen linear barrier proved decisive.

ording to many armchair pundits... They are difficult to feel comfortable about morally. Yet, possibly these judgements say more about the intellectual character of the twentieth century... Now... linear barriers might be seen as an important element in the strategic mix that kept nomad raiders and hordes at bay for more than two millennia...<sup>34</sup> Indeed, if long-walls were a string of costly failures, incapable of securing frontier territory, as some would have us believe, why have they been built over more than four millennia,<sup>35</sup> with nobody ever learning the lesson? It is time to tell the unfashionable truth again. Roman barriers were not intrinsically inferior to their prehistoric or post-Roman counterparts, for some of which we have clear evidence for their use as effective defensive installations. They differed in architecture, all designed to deter, detect, obstruct, trap and ultimately defeat trespassers, some also to fend them off from a wall-walk. Roman walls were no vanity projects, but were built to reduce raiding and make invasion much more difficult and costly, thus protecting the prosperity of the hinterland. And, as long as adequately manned, they largely succeeded in doing so.

<sup>34</sup>Spring 2015: 327.

<sup>35</sup>E.g. Nunn 2009.

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Fig. 10 - The Jar-e Kulbad linear earthwork in northern Iran (behind/to the right of the human scales) decided the outcome of a war in the late eighteenth century.

Trust for sponsoring the Aves Ditch project that has shed light on Iron Age parallels in Europe.

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#### **Zusammenfassung**

Es ist mehrfach bezeugt, dass eisenzeitliche Erdwälle Stammesgrenzen wirksam gegen feindliche Einfälle schützten. Diese Wälle, wie auch Langmauern in Griechenland und im Nahen Osten, dienten wohl als Vorbilder für römische Grenzbefestigungen. Es gibt keine stichhaltigen Gründe, anzunehmen, dass römische Grenzsperren weniger effizient waren als ihre prähistorischen Vorgänger, und manche dienten eindeutig der Verteidigung. Selbst in der Neuzeit konnten einfache Erdwälle eine kriegsentscheidende Rolle spielen. Vor- und nachrömische Vergleichsbeispiele helfen uns, die Ursprünge, Funktionsweise und Wirksamkeit römischer Sperranlagen besser zu verstehen. Moderne Hypothesen, die Grenzwahlen aller Zeiten als militärisch nutzlos einstufen, sind unvereinbar mit Zeugnissen für ihre erfolgreiche Verteidigung zum Schutz des Hinterlands.

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# Roman frontiers and raiding<sup>1</sup>

## ABSTRACT

The key issue about Roman frontiers always has been the question of purpose. An important school of thought has pointed to the lightness, porosity even, of the linear works, purportedly implying a regulatory function, whether focused on people, trade or arms control. A second tradition emphasises the rhetorical aspect of Roman frontiers, their visual or psychological projection of power, whether external or internal. The wider public often simply sees them as lines of defence. None of these approaches, however, will fully explain the anatomy and spatial design of *limites*. With their base functions of observation, alert, response and back-up all carefully tailored to the local geography, Roman frontiers had an inbuilt capacity to instantly answer to local security threats, and to scale up and give chase if necessary. This identifies raiding, the endemic form of belligerence in the Barbaricum, always unpredictable and scalable, as the main concern that led to the creation, and development, of Roman frontiers as we know them.

**KEYWORDS:** ROMAN FRONTIERS, *LIMES*, RAIDING, CAVALRY, HADRIAN'S WALL, OBERGERMANISCH-RAE-TISCHER LIMES

This<sup>1</sup> short foray into imperial borderland is aimed at one of the crown jewels of Roman provincial archaeology: the artificial *limites* of the North.<sup>2</sup> Why these systems are best suited for a discussion of the purpose of Roman frontiers is easily explained. Everything about these systems suggests that they were carefully planned and purpose-made. The anatomy of the British Walls and the German *limes* in particular

has been intensely studied since the 1890s. This means that their stagewise development is known, and dated, with relative precision. Some systems, like the Dacian *limes* and the Antonine Wall in Scotland, were green-field creations reflecting the state of the art.<sup>3</sup>

Although the alternation of artificial and river sectors on the Upper German *limes* indicates that both types

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<sup>1</sup>This contribution stays close to the text (and slightly assertive debating style) of the paper read at the Limes Congress in Viminacium.

<sup>2</sup>For an overview: Breeze 2011, 55–91.

<sup>3</sup>For the latter: Graafstal in prep.



of frontier could serve the same purpose (Fig. 1)<sup>4</sup>, we will largely by-pass river-based systems, as they are hybrids which also served as fortified transport corridors.<sup>5</sup> We will also ignore the peculiarities of Hadrian's Wall whose bombastic gestures and metronomic regularity have almost obscured its true vocation.<sup>6</sup> Written evidence on the purpose of Roman frontiers may be sparse, but their spatial design survives unchanged. Careful analysis of common planning principles has the promise of bringing us closer to the instructions given to the surveyors who once set out these systems in the field – and knew what these were about.

### An endemic threat

This paper argues that the classic *limites* of imperial Rome took shape in response to security issues which resulted from a specific type of belligerence that was endemic in, and always threatened to spill over from, the Barbaricum. The hidden drivers were the ethnic mosaic, the social fragmentation and the unstable, personal basis of power structures, with elite groups and individuals continually competing for prestige. In most tribal societies Rome faced on her northern frontiers, various forms of clientage and *comitatus* would have supported chiefly or 'kingly' authority.<sup>7</sup> Such power structures tend to foster value systems and cosmologies centered on martial ideals and heroic warrior life-cycles. A late source like the *Beowulf* echoes a world in which leaders and retainers reached, and reproduced, their status in cyclical demonstrations of loyalty and military valour.<sup>8</sup> The ritualised forms of rewarding and reciprocity that are an essential part of these cycles also encouraged raiding, which happened at various levels, reflecting and often redefining the complex leadership structure of society.<sup>9</sup> The encounter with Roman expansion, first in Gaul, then in Germany and Britain,

had only upscaled these mechanisms and raised Roman awareness of them, as evidenced by both Caesar (*BG* e.g. IV.1.4; 12.1; VI.15; 23.3, 6–8; 35.4–7) and Tacitus (*Germ.* 13–15).<sup>10</sup>

The close and enduring relations between *reges* (whether petty or powerful), retainership and raiding are borne out by a host of evidence, spanning the late Iron Age to the Viking period, and ranging from early Irish heroic literature to the famous Danish war booty deposits.<sup>11</sup> This millennial cultural complex did not suddenly eclipse in the late 1<sup>st</sup> century AD to emerge again two or three generations later; the formative period of Roman linear frontiers is unlikely to have fortuitously coincided with an 'ebb of the German fighting spirit', as Mócsy once suggested.<sup>12</sup> In fact, and for very obvious reasons, the effect of the Empire would only have been to strengthen the aforementioned mechanisms – and added to the incentives for raiding. Roman 'foreign policy' tended to rely on divide-and-rule tactics, employing targeted 'denarius diplomacy' and selective support (or subversion), all of which would fuel internal competition for power between elite groups and individuals.<sup>13</sup> Moreover, with the frontiers fixed and the wars of conquest ended, inter-tribal raiding would have grown in importance as a source of slaves for the Roman economy.<sup>14</sup> Finally, as the provinces grew richer, and better protected, a successful raid into Roman territory would surely have risen to become the ultimate prize in the arena of martial valour and regal prestige.

We must not be misled by the *effect* of Roman frontiers: like most successful military systems in history, the *limes* largely removed the reason for it being there. But let us not be mistaken: whenever the northern frontiers showed signs of weakening or abandonment, the au-

<sup>4</sup>Cf. Hanson 2014, 5.

<sup>5</sup>Graafstal 2017.

<sup>6</sup>For the Emperor's personal involvement in the Wall's design and construction: Breeze 2009 and Graafstal 2018, respectively.

<sup>7</sup>For 1<sup>st</sup> century BC Gaul: Roymans 1990, ch. 3. For Germany: various papers in Burmeister, Derks (eds) 2009.

<sup>8</sup>Bazelmans 1999.

<sup>9</sup>Hiddink 1999, 65–82, 190–3.

<sup>10</sup>For Gaul: Roymans 1990, 38ff. Germany: Tausend 2009. A long-term perspective: Burns 2003.

<sup>11</sup>For the latter see e.g. Blankenfeldt, Rau 2009, Ilkjær, Iversen 2009, Rau 2013.

<sup>12</sup>Mócsy 1978.

<sup>13</sup>'Denarius diplomacy': Hunter 2007. For (higher status) imports in the Barbaricum as a proxy of Roman diplomacy: Erdrich 2001.

<sup>14</sup>For raiding and slaving in the periphery of the Roman Empire cf. Fentress 2011 (for North Africa) and 2019 (Late Republican Gaul).

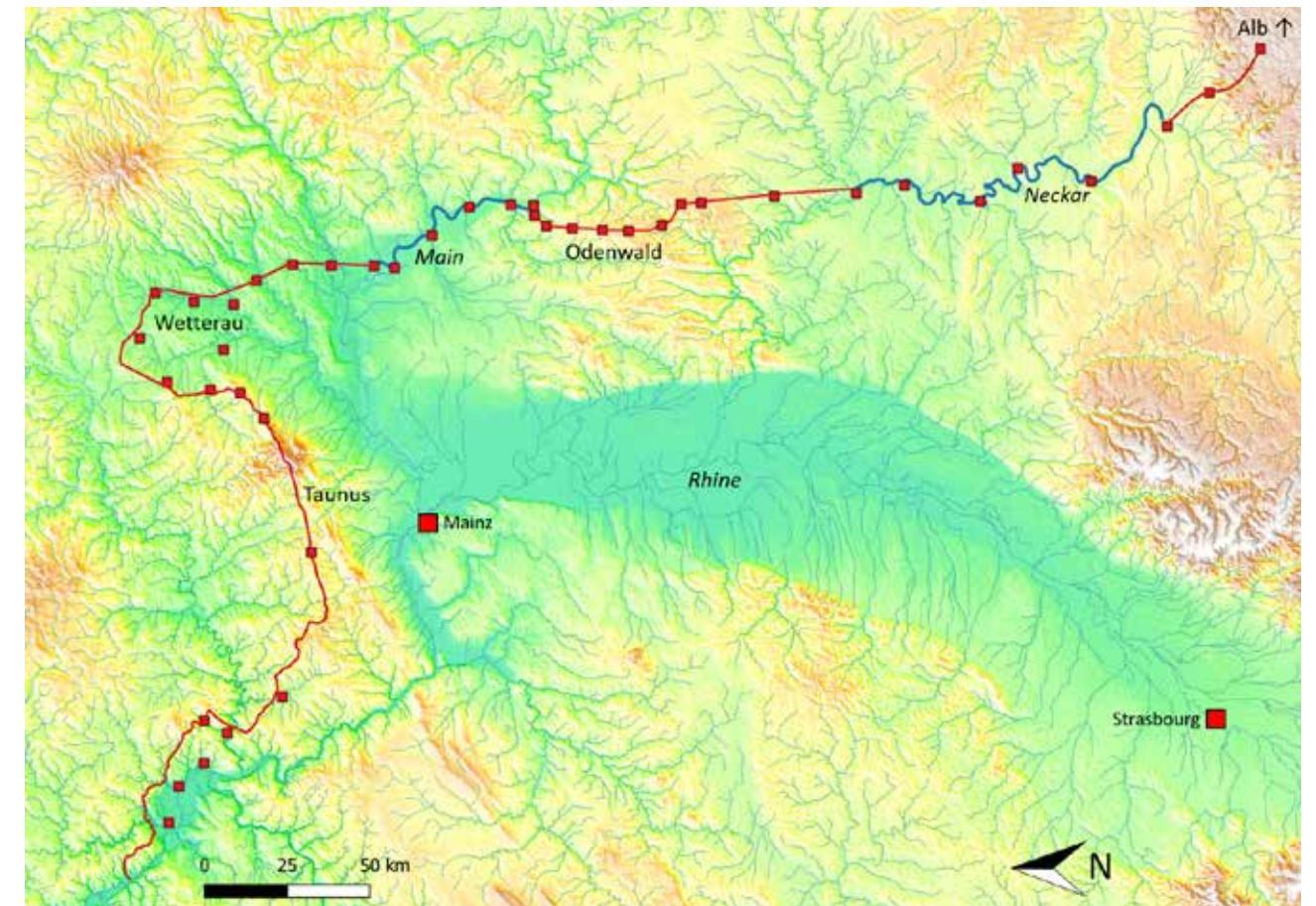


Fig. 1 - Disposition of the Upper German *limes* in the late Trajanic period, with alternating artificial (red) and river-based (blue) sectors. The elevation maps and watercourses of figs. 1, 4, 5 and 7 are based on EU-DEM (SRTM/Aster) and EU-hydro data; the colour ramp varies with the range of altitude values in each window.

tomatic response tended to be renewed raiding, as an overview for the Rhine provinces illustrates (Fig. 2).<sup>15</sup> If frontiers failed to respond, raiding would soon scale up: rumours of spoils and success would spread like wildfire and war bands would return in larger numbers the next if not the same season. For Rome, the issue was not so much the incidental and peripheral damage inflicted by the base level of raiding, but the inherent risk of escalation if raids were left unanswered.<sup>16</sup> The Later Roman Empire experienced dozens of such toxic sequences.<sup>17</sup> What these examples illustrate is that, on the 'barbarian' frontiers, raiding and warfare were just two ends of a sliding scale, with the Roman army often resorting to counter-raids as a punitive measure.

### A ring of response

We don't know much about the imperial agenda, if ever there was one, but it would certainly have been in Rome's interest to see the feeding capacity and fiscal potential of the frontier provinces increase. Barbarian raiding, at whatever level, posed a direct threat to the security and prosperity of the imperial borderlands and therefore needed to be kept at bay. The best answer was a policy of strict containment. But how to confront an endemic pestilence that would typically start with unpredictable pinpricks? Ideally, what was needed to answer security threats of this nature was something like the following wish-list:

- a more or less continuous ring of 'response centres';

<sup>15</sup>Hiddink 1999, 192–3. Cf. Breeze 2011, 206.

<sup>16</sup>Rightly emphasised by Goldsworthy 2003, 161.

<sup>17</sup>Goldsworthy 2009.



## Raids and security crises in the Rhine provinces

Date	Incident	Source
58 BC	Germani continuously at war with Belgae	BG 1,1
55 BC	Usipetes and Tencteri invade North Gaul	BG 4,1-15; 6,35
53 BC	Sugambri carry out raid on Eburones	BG 6,35
44 BC	Aulus Hirtius makes peace with Germani	Cicero, Att. 14,9
37 BC	Agrippa crosses the river Rhine	Dio 48,49,3
29 BC	Suebi expelled from Gaul by C. Carrinas	Dio 51,21,4
29 BC	Germani involved in rebellion of Treveri	Dio 51,20,5
25 BC	Germani kill Roman traders	Dio 53,26,4
19 BC	Germani cause nuisance in Gaul	Dio 54,11,1
16 BC	Sugambri, Usipetes and Tencteri cross Rhine, conquer eagle	Dio 54,20,4-6; Vell.2,97,1; Obsequens 71
12 BC	Sugambri and confederates under Maelo carry out raid	Dio 54,32,1; Strabo 7,1,4
41 AD	Publius Gabinius campaigns against Chauci	Dio 60,8,7
41	Sulpicius Galba campaigns against Chatti	Dio 60,8,7
47	Raid by Chauci along coast of Gaul	Dio 61,30,4-5; Ann. 11,18
50	Raid by Chatti in Germania superior	Ann. 12,27-28
57/58	Frisii and Ampsivarii try to occupy military prata on right bank	Ann. 13,54-56
69/70	Transrhene tribes join Batavian revolt one by one	Hist. 4,15-6; 21; 37; 61; 64-5; 77; 79; 5,18-9
162	Chatti invade Germania Superior and Raetia	SHA, Marc.Ant. 8,7-8
170/4	Campaigning against Chatti from Mainz	SHA, Did.lul. 1,7-8
170/4	Chauci invade Belgica	SHA, Did.lul. 1,7-8
213?	Attacks from Ocean shore and Elbe area	Dio 77,14,3-4
c. 220	Legionary legates present at Vechten	CIL 13,8810-11
231	Triumphal dedication by legio I Minervia at Bonn	CIL 13,8017
256/60	Gallienus combats German groups	Zos. 1,30,3; Vict. 33,1; Eutr. 9,8
260	Major incursion of Frangi, looting in Gaul and Spain	SHA, Aur. 7,1-2
260/74	Campaigns against transrhene tribes by Gallic emperors	Drinkwater 1987 passim
pre 275	Frangi and Alamanni invade Gaul	SHA, Prob. 11,5-12,3; Zos. 1,71,2; PL 8(5),18,3
286	Treaty of Maximianus with king Gennobaudes of Frangi	PL 10(2),10,3; 11(3),5,3
286	Frangi and Saxones ravage coast of Belgica and Armorica	Eutr. 9,21. PL 8(5),17,1-2; 18,1-4
297	Frangi, Chamavi and Frisii expelled from Batavia/Scheldt area	PL 6(7),5,6-6,4; 7(6),4,2; 8(5),8-9; 21,1
307/10	Campaign against Bructeri	PL 4(10),16; 6(7),10-13
313	Warfare on the border of Germania Secunda	PL 12(9),21-22
321	Campaign against Frangi	PL 4(10),18
c. 340	Warfare and peace with Frangi	Chron. 2357; Hyd. 341-2; Libanios 59,127-35
355	Barbari (=Frangi) take Cologne	Amm. 15,8,19
357/35	Frangi carry out raids between Keulen and Reims	Amm. 17,2,1-4
358	Salii have settled in Toxandria near Tongeren	Amm. 17,8,3-5
358	Chamavi attack Batavia	Zos. 3,6; 3,8,1
359/60	Campaign against (Ch)attuarii	Amm. 20,10,1-2
c. 368	Frangi and Saxones carry out raids in Gaul	Amm. 27,8,5
c. 370	Saxones beaten <i>Deusone in regio Francorum</i>	Amm. 28,5,1-7; 30,7,8; Chron. 2389
387/88	Plundering by Frangi under the leadership of <i>subreguli</i>	Greg.Tur. 2,9
389	Campaign against Bructeri and Chamavi, peace with Frangi	Greg.Tur. 2,9

Fig. 2 - Attested raids and security crises in the Rhine provinces, 58 BC-AD 389 (after Hiddink 1999, 192-3, slightly abridged). PL: Panegyrici Latini; the other abbreviations will be readily identifiable.

- consisting of garrisons sufficiently large to guarantee readiness levels that would normally outdo the average raiding band;
- with intervals in the order of 8-12 km (depending on the level of exposure, local geography, penetrability of the hinterland, etc.);
- activated by some sort of alarm system ideally placed in advance of it;
- (if the landscape was suitable for cavalry) with sufficient coverage of mounted forces, so that military response would be swift and able to give chase;

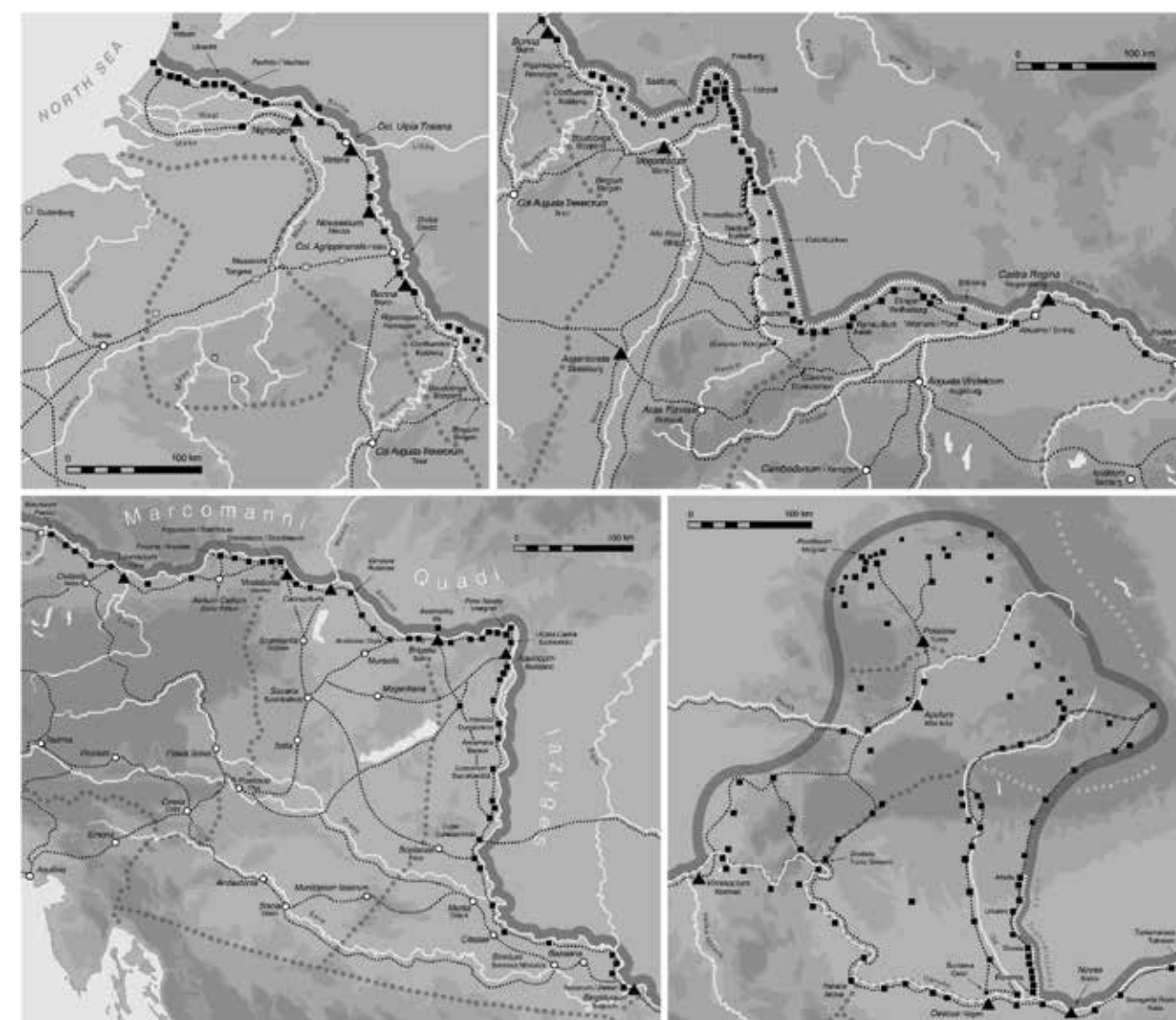


Fig. 3 - A ring of response: the Roman frontier in (from left to right, and top down) Lower Germany, Upper Germany and Raetia, Noricum and Pannonia, and Dacia. The rectangles indicate auxiliary forts, the triangles legionary bases (maps by David Breeze and Kurt Schaller).

- and, finally, with good horizontal roads enabling multiple units to coalesce quickly.

This wish-list actually is a very apt description of the developed *limes* system of the early 2<sup>nd</sup> century – a system that would come to traverse the varied geography of Europe, often continuing unchanged in areas where there were few communities to separate or impress, and little trade to channel or tax (Fig. 3).

There are many misunderstandings about Roman frontiers. One is to think of them as lines of defence. This is not how the Romans would have seen things: the defence of the Empire was the army – not the static linear works of the *limes*. The Roman military machine was armed, trained and had its mind set to fight in the open and take the offensive. Roman forts *could* be defended, if need be, but this always remained the exception.<sup>18</sup> The palisades, walls or ramparts of artificial frontiers, likewise, were not built for active mural defence – they were essentially obstacles. Even Hadrian's Wall lacks the typical paraphernalia of rampart warfare, its man-

<sup>18</sup>The double legionary fortress at Xanten successfully withstood several waves of attack by the Batavians in September 69: Tacitus, *Hist.* IV.22–3. Cf. Trajan's column, scene 32.



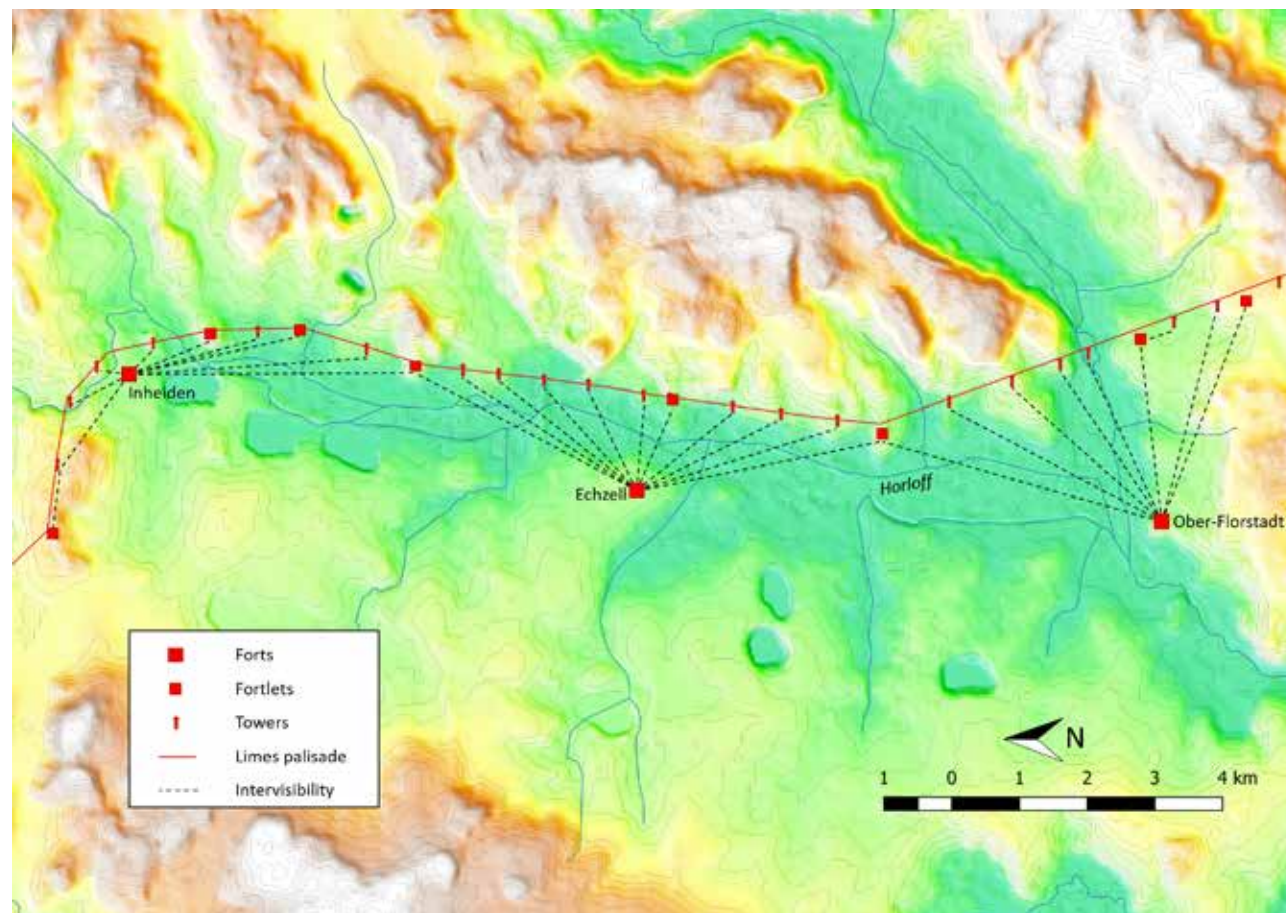


Fig. 4 - Spatial organisation of the eastern Wetterau limes. In this sector, the frontier infrastructure appears to have been carefully tailored on the terrain trap of the Horloff valley. Note that the status of most towers remains 'suspected', usually based on distance, elevation and neighbour intervisibility. Significantly, however, the resulting tower sites, with few exceptions, appear to be also intervisible with the forts in their sector.

traps only emphasising its role as a passive, albeit massive, barrier system.<sup>19</sup> The main defence of the Empire, Tacitus well knew (*Ann.* IV.5.1), were the legions – a deadly deterrent, both inward and outward, as well as a major economic and administrative force. Interestingly, and accordingly, they were normally kept in reserve in the hinterland, as the disposition in Britain, Upper Germany and Dacia illustrates. Only where the frontier coincided with a major river, were the legionary bases placed on the outer perimeter, mainly because of the legions' needs in terms of supply logistics.<sup>20</sup>

A common mistake with Roman frontiers is to narrow our scope to the linear works and read purpose into the relative robustness of the border obstacle. It has often

been stated that the Upper German palisade, let alone the preceding *Zaun* ('fence'), with detached watchtowers at c. 1km intervals in several sectors, can have aspired to little more than some sort of customs control or similar regulatory work.<sup>21</sup> But we must always remember that the palisade, or the Raetian Teufelsmauer for that matter, was just an outer skin. Its main function was to increase the time and effort it took for an uninvited party to cross the border, i.e. to raise the chance of the intruders being spotted.<sup>22</sup> In the same analogy, watchtowers are simply the sensory system that was needed to activate the frontier's muscles, i.e. the garrisons in the forts. It was the complete 'musculature' of a frontier sector, including the fast striking and far chasing cavalry, that determined its reactive capacity.

Only the total, layered package conveys the true message of the frontier's function.

On the Wetterau limes, accordingly, each fort had its own forward screen of watchtowers, neatly defining a series of response sectors (Fig. 4). David Woolliscroft has noted that the outer installations of these sectors, which may have duplicated, or even facilitated, signal links between neighbour forts, tended to be upscaled to fortlets.<sup>23</sup> In the Wetterau, the forts were placed well behind the frontier obstacle (Butzbach 1.3, Echzell 2.2, Arnsburg 2.4, Ober-Florstadt 4.3km). Interestingly, for all the fertility and *villa* density of the Wetterau, the implied interception zone appears to have been kept free of civil settlement down to the end of Roman occupation.<sup>24</sup> In the northeast, this c. 2km wide strip was carefully planned to coincide with the Horloff valley, perhaps not so much for shipping purposes<sup>25</sup>, but more likely as a terrain trap. As a backup for the entire system, the 1000-strong, part-mounted *Cohors I Flavia Damascenorum milliaria equitata sagittariorum* was stationed at Friedberg in the heart of the Wetterau region.

The other *limites* of the 2<sup>nd</sup> century are mostly variations on this theme. For all its deceptive monumentality, Hadrian's Wall was based on the very same spatial design principles, with the linear works placed well in advance of the existing Stanegate forts, initially.<sup>26</sup> The way the new Hadrianic frontier enveloped the Irthing valley strikingly mirrors the situation in the eastern Wetterau (Fig. 5). To confirm their shared origin and function, a raft of evidence now suggests that the German palisade and the British Wall were both commissioned by Hadrian in 118 or 119 as part of the same package of measures.<sup>27</sup>

### Rhetoric, regulation, Romanness, or raiding?

Of course, a principal purpose does not rule out additional effects. Some frontiers obviously projected an unmistakable message of mastery. The monumental rhetoric of Roman fort-gate facades is undeniable and could be the pride of the local garrison.<sup>28</sup> Other potential benefits presented themselves in the sphere of regulation. A running frontier obstacle monitored by a tower cordon could be supplied with crossing-points to channel and control trade across the borders. But the wish to prevent smuggling can hardly be the original reason for the creation of the complex layered systems just discussed.

The volume of 'free trade' with the Barbaricum is easily overestimated. It is now generally agreed that most Roman valuables in the Barbaricum reflect diplomatic transactions, mercenary service or looting. If trade items were bulky, like, potentially, cattle from north Britain<sup>29</sup>, they would follow established routes so that, in this example, customs control could have focused on Dere Street. Apart from a few trinkets perhaps, trade flows would have avoided difficult terrain like the Taunus mountain chain. Significantly, however, the linear works did not relax in such backwaters. The flow of items that really mattered would have been diplomatically embedded, largely directed and easily monitored anyway. A recent review of the Raetian limes concludes that the system offered few, if any, crossing-points for civilian traffic.<sup>30</sup> Hadrian's Wall may have provided just two.<sup>31</sup> Finally, there's little evidence that the frontier forces were themselves engaged in toll operations.<sup>32</sup>

Richard Hingley has suggested that physical borders like Hadrian's Wall helped to define a 'hybrid and

<sup>19</sup>A classic paper: Collingwood 1921. See also: Dobson 1986, 5ff. Man-traps: Bidwell 2009.

<sup>20</sup>Graafstal 2017, 188.

<sup>21</sup>See e.g. Schallmayer 2000, 72–3.

<sup>22</sup>Rightly underlined by Thiel 2008, 89.

<sup>23</sup>Woolliscroft 2001, 115–7 with Fig. 52.

<sup>24</sup>Lindenthal 2004.

<sup>25</sup>Cf. Becker 2018, 6–9.

<sup>26</sup>Woolliscroft 2001, 63–73.

<sup>27</sup>Graafstal 2018.

<sup>28</sup>Flügel, this volume. For an expression of pride: *AE* 1998, nr. 1641 (Bu Njem).

<sup>29</sup>Stallibrass 2009, Madgwick, Lewis, Grimes, Guest 2019.

<sup>30</sup>Sommer 2015.

<sup>31</sup>At the Portgate and Stanwix. It is questionable whether the milecastles of Hadrian's Wall were ever meant for civilian traffic: Symonds 2018.

<sup>32</sup>De Laet 1949. The customs station at Porolissum in Dacia appears to have been run by non-military personnel: Gudea 1996, 75–78.



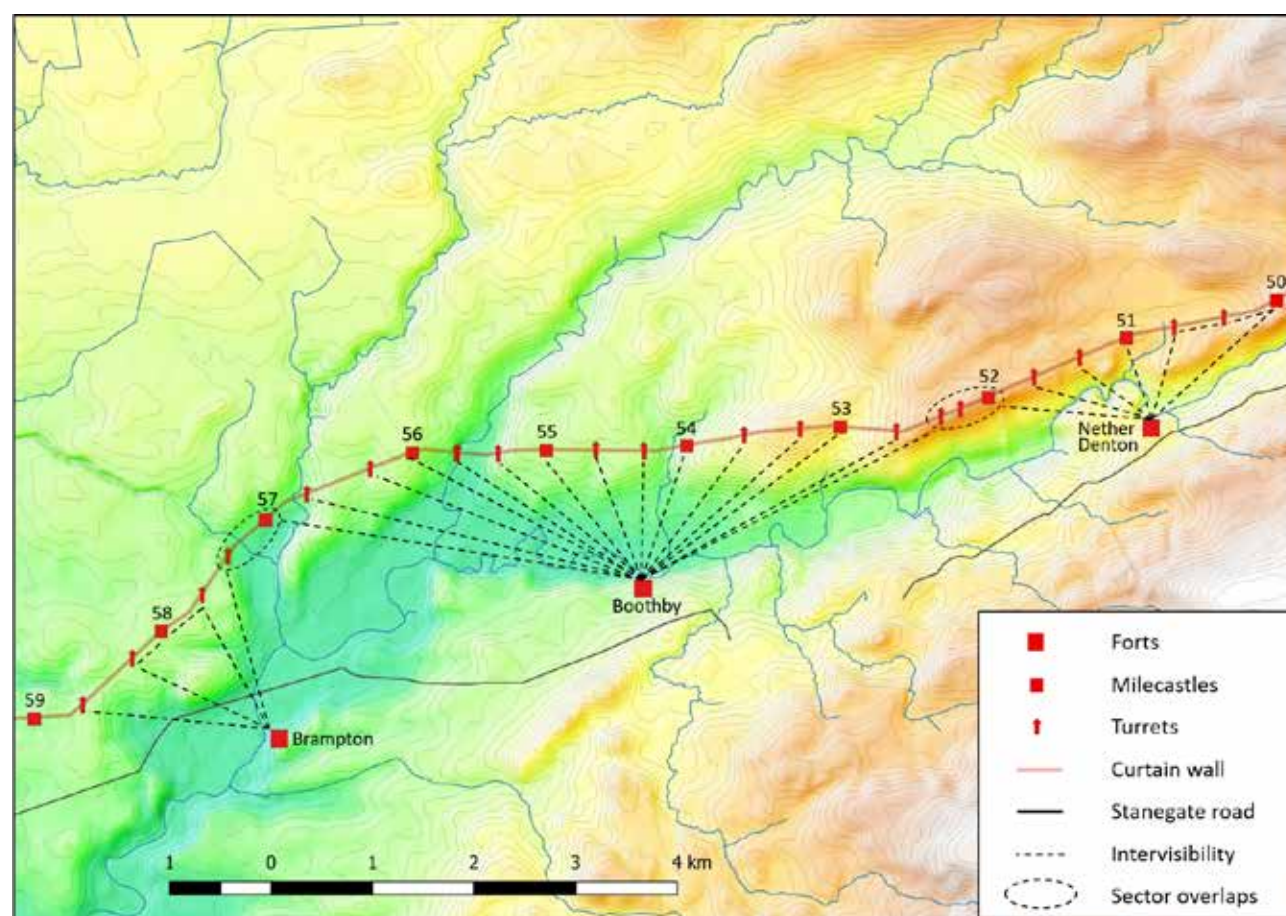


Fig. 5 - Spatial organisation of Hadrian's Wall between milecastles 50 and 59, including the pre-Wall tower on Pike Hill, west of MC 52. Shown is the first stage, with the pre-existing forts on the Stanegate acting as 'response centers'. All line installations save T 50a and MC 58 would have been intervisible with their sector's response center at 7.5m eye-ball height, some of which narrowly. The observation curtain appears to have been largely placed on the edge of the field of view from the forts. The dotted ovals pick out installations visible from both of the nearest forts. The overlap was crucial in the case of Boothby and Brampton which were not intervisible between themselves and may have relied on MC 57 for visual communication.

transformational Roman identity'.<sup>33</sup> This is certainly possible, and the notion may even have been actively promoted in imperial rhetoric and visual language.<sup>34</sup> But we should remember that the first stages of artificial frontiers mostly did without physical boundaries. The Trajanic stages of the British and Upper German frontiers were largely 'open'. The Raetian *limes* apparently functioned without running barrier until the early 160s.<sup>35</sup> The discontinuous *clausura* walls of Dacia Porolissensis and North Africa were no more than valley-blockers. In fact, several thousand kilometers of Roman frontier did without physical boundary.

The absence, or belated addition, of continuous frontier fences hardly supports the rhetorical, regulatory or Romanitas-defining functions being the driver.

But the clincher is the rearward positioning of the forts – a typical feature of the German and Dacian *limites* as well as the original plan for Hadrian's Wall. Had the primary concern been to control cross-frontier traffic, to separate 'us' from 'them' or to project military power, the prescribed position for the forts would have been on the frontier line itself. However, the forts were normally kept to the rear, detracting from their

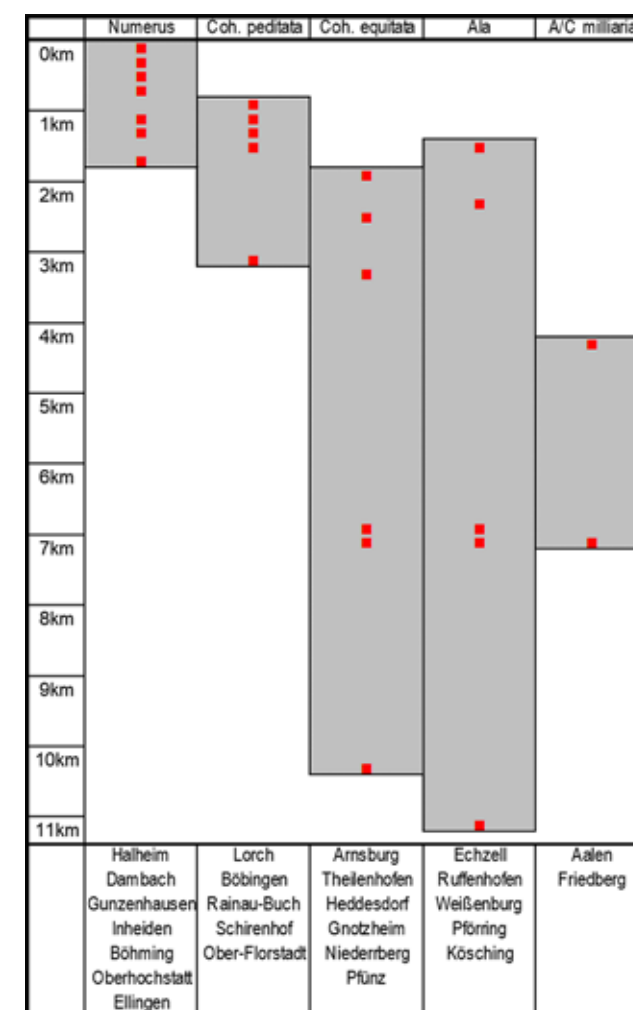


Fig. 6 - The distance of forts to the frontier line in Upper Germany and Raetia, sorted according to the nature and sizes of their garrisons. Excluded are the river sectors and the dead straight, 'terrain-crossing' *Vordere Limes*, as their installations tend to stick to the frontier line for reasons explained in the text.

potential rhetorical and regulatory functions, but enhancing their role as interception hubs. On the Upper German-Raetian *limes*, most forts were sitting several kilometers behind the 'front line' (Fig. 6). But there is a meaningful pattern here: the *numerus* forts were all close to the frontier obstacle, infantry cohorts tended to be placed a little further to the rear, while the part-mounted units and *alae* covered the whole range between c. 2 and 11km, with the two 800-strong units kept

in reserve at c. 4 and 7km. This stark pattern highlights the *limes*' primary function as an interception system.

Wherever the landscape was suitable for the creation of a layered system, with the frontier line roughly following a crest, ridge or series of hilltops, the tower cordon crowning this, and the forts keeping watch and ward from the rear, that would be the preferred option. If, however, the dominant relief pattern stood across the general direction of the frontier, and no continuous landscape feature lent itself to the creation of a forward, elevated observation screen, the planners would revert to a more compact, 'terrain-crossing' variant where all the installations, including the forts, were kept close to the frontier line, to reap the obvious benefits thereof.<sup>36</sup> This is the disposition on the southern part of the Odenwald *limes* and its successor, the Advanced or *Vordere limes* – but it is the exception that confirms the rule. Likewise exceptional, albeit with long-lasting effects, was the decision, probably taken in the special context of Hadrian's visit of AD 122, to pull about his newly commissioned frontier works in Britain and move the forts to, and integrate them with, the Wall.<sup>37</sup> Be that as it may, the default pattern would remain the rearward positioning of the forts, as the greenfield creation of the western Raetian *limes*, c. AD 160, illustrates (Fig. 7).

### The role of cavalry

The usual rearward positioning of cavalry serves to correct another misunderstanding: the Roman army did not wear out its mounted units in relentless patrolling of the wider frontier foreland – if this had been routine, the spatial organization of *limites* would surely have avoided the redundant daily movements to and from the frontier line. This is not to mention the dangerous and exhausting amphibic river crossings (or shippings) that would have been required on the Rhine and Danube frontiers. Roman frontiers apparently refrained from deep and daily patrolling of the forefield.<sup>38</sup> In essence, they replaced this unpreclusive and riskful practice with a layered system of passive interception.<sup>39</sup> One way to look at Roman *limites* is to think of them

<sup>33</sup>Hingley 2008, 26.

<sup>34</sup>Aelius Aristides, *Roman oration* 80. Cf. the opening scene of the column of Marcus Aurelius and the Severan relief from Rome discussed by Sommer, this volume, and Flügel, Meyr, Eingartner 2017, respectively.

<sup>35</sup>Sommer 2011, 162 with fig. 12.

<sup>36</sup>Cf. Woolliscroft 2001, 118ff. and 128–9, who suggests that forrest cover was the decisive factor in the switch to this variant.

<sup>37</sup>Graafstal 2018.

<sup>38</sup>Austin, Rankov 1995, 179–80.

<sup>39</sup>An idea hinted at by Thorne 2007, 231.



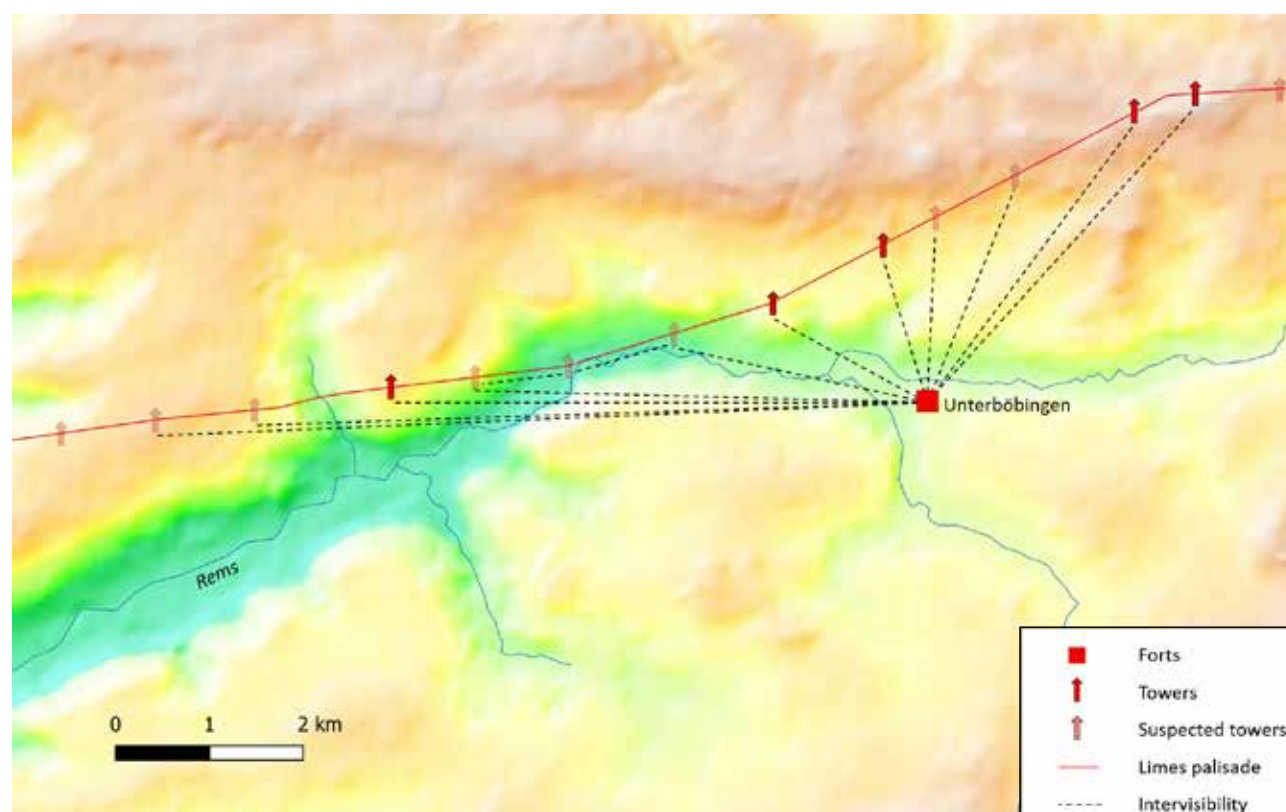


Fig. 7 - Spatial organisation of the *limes* in western Raetia, a greenfield creation of the early AD 160s. West of Unterböbingen, the system was planned with the Rems valley placed between the observation screen and the response centers (cf. figs. 4-5). More than half of the towers remain unconfirmed, but the line of the frontier obstacle would guarantee intervisibility with Unterböbingen for most of its length.

as efficiency-raising security infrastructures which, in the end, saved both lives and labour of the people who manned them.

The cavalry were the response forces par excellence, usually able to be on the trouble spot at short notice – and give chase. Perhaps not surprisingly, the classic age of *limites* saw the spread of the curious stable-bar-rack.<sup>40</sup> This was hardly a practical improvement over separate stables and horse-care facilities, but a striking parallel to our modern fire stations, where the fire fighters sleep close to their vehicles. A second benefit of cavalry is their wide range of action, up to 80 km a day in exceptional cases. Scheuerbrandt and Kemkes have pointed out that the German *limes* was almost scientifically covered by the maximum day-ranges of the *ala* forts.<sup>41</sup> The combined day-ranges of the mounted

forces also impressively cover the denser villa landscapes of southern Germany (Fig. 8).<sup>42</sup>

In Britain, interestingly, most cavalry units came to be deployed along the main north-south axes, several of them far behind Hadrian's Wall. That the mural barrier was just one thin layer in a complex frontier system is underlined by the successive reinstatements and upgrades of the Wall in c. AD 160, the mid-180s and 205-7 which included clusters of hinterland and 'outpost' forts, the latter up to 35km to the north. This disposition in depth naturally focused on the more easily penetrable eastern and western flanks of the Pennines and concentrated on the main 'vertical' roads. The later addition of a large fort at Piercebridge (4,58ha), 50km south of the Wall, which could send legionary reinforcements in both directions, also highlights the basic interception function of the British *limes*.<sup>43</sup>

<sup>40</sup> Hodgson 2002.

<sup>41</sup> Kemkes, Scheuerbrandt 1997, 16-17 with Figs 3-4.

<sup>42</sup> For the maps of Fig. 8: Flügel, Valenta 2017.

<sup>43</sup> Breeze 2019, 102-3 with Fig. 78; Hodgson 2017, 101ff., 109, 111.

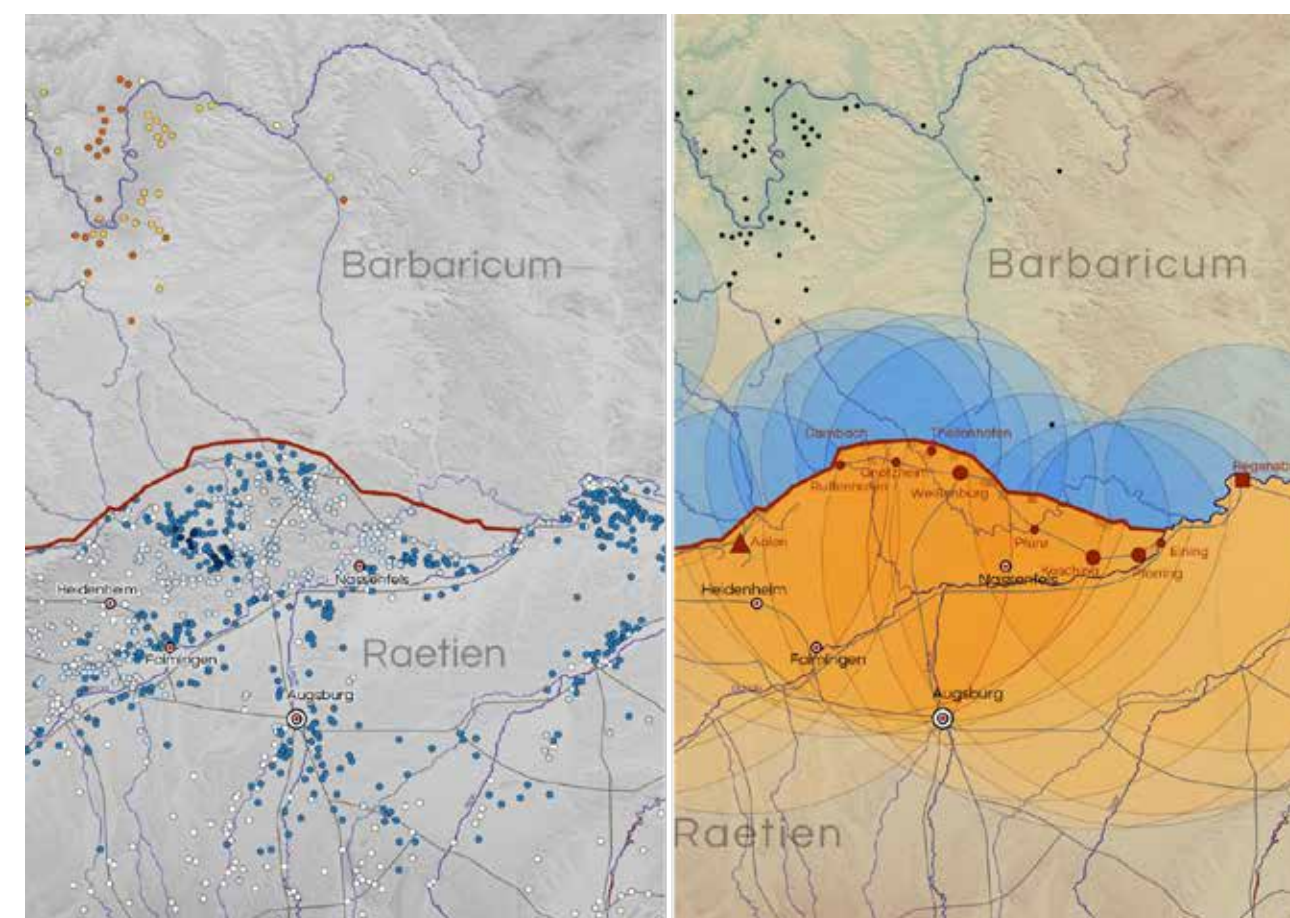


Fig. 8 - Settlements (left) and forts (right) in central Raetia after c. AD 160. On the left map, the intensity of blue (for villa sites) and yellow/red dots (for settlements in the Barbaricum) increases with soil fertility. On the right map, the red symbols indicate garrisons with cavalry components (triangle: *ala milliaria*; large dot: *ala*; small dot: *cohors equitata*; rectangle: legion). For the Barbaricum and provincial territory (blue and orange circles, respectively) maximum day ranges of 40 and 80 kms are assumed. Courtesy of Christof Flügel / Johannes Valenta.

The other frontiers offer variations, largely explicable in terms of terrain and topography. The mountain chains of Dacia asked for a layered system, with the tower cordon placed on the mountain ridge or hill tops, the smaller units (often *pedidatæ*) in the first line, and the larger or cavalry units in the second, all carefully placed according to the penetrability of the landscape.<sup>44</sup> River-based systems are entirely different as the frontier obstacle (the Rhine and Danube!) took much more effort to cross, and because these mighty supply channels tended to draw all the installations to the river bank so that they could provide logistic support and surveillance of river traffic – and profit from easy supply themselves.<sup>45</sup> In desert systems, the monitoring and security measures tended to be organized along

vertical, incoming routes, focusing on water points and transhumance patterns. But the principal concerns would have been little different.

The epigraphy of Roman frontiers is notoriously reticent on purpose, but where it speaks, its message is clear. In Tripolitana, a building inscription from the *centenarium* of Gasr Duib (IRT 880) states that the frontier infrastructure was built to check the incursions of barbarian raiders. The famous Commodian inscriptions from Lower Pannonia declare that the forts and towers were there to withstand the secret crossings of 'petty robbers' (*latrunculi*, Fig. 9). This diminutive is formal, derogatory terminology for any hostile party (other than a *hostis* in a declared war) that infiltrated

<sup>44</sup> Gudea 1997, 14 with fig. 8, although many of his asserted tower sites have failed to reproduce in later field surveys. See, however, the similar organisation of the NE sector Dacia: Pánczél, Szabó, Visy 2011, 177–180 with Fig. 155.

<sup>45</sup> Graafstal 2017.



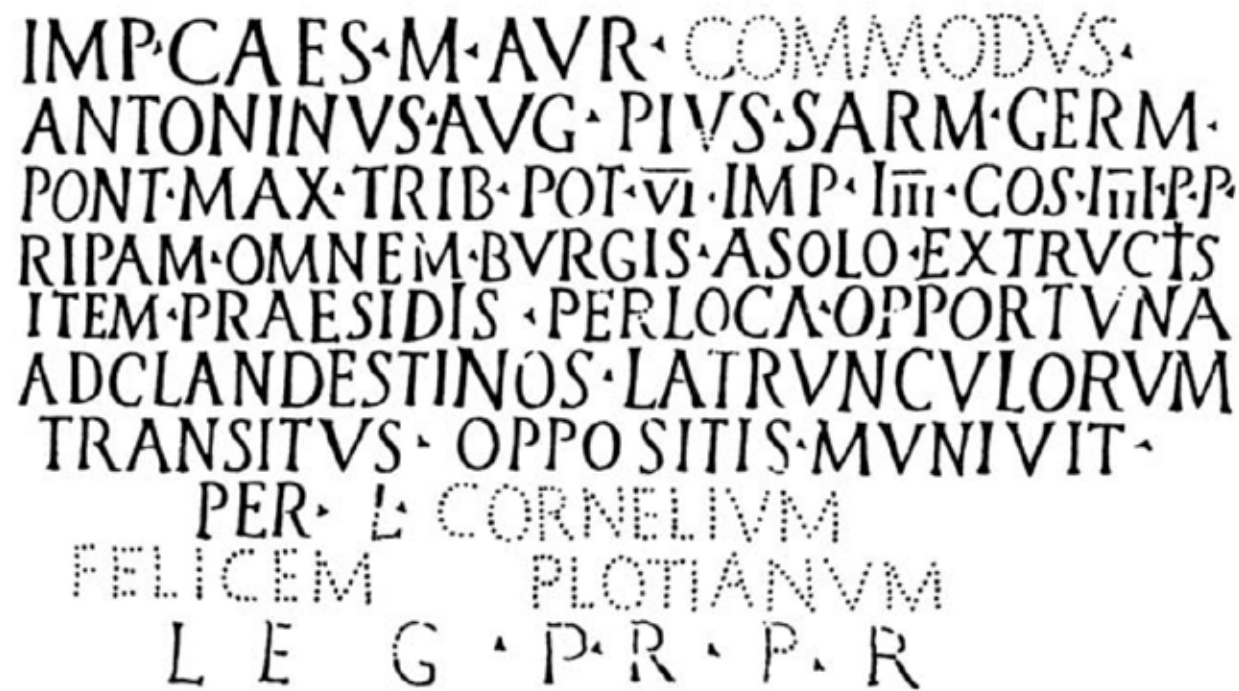


Fig. 9 - Inscription from Intercisa in Pannonia Inferior dated to AD 184 referring to the construction of 'forts opposite places suited to secret crossings by *latrunculi*' (RIU 1129, Kovács 2008, fig. 2).

the Roman order, whether from outside or within. What is referred to in this case are the sizeable inroads that had occurred two years earlier.<sup>46</sup> The term invites comparison with the mounted *Brittunculi* mentioned in a report from Vindolanda: 'The Britons are unprotected by armour. There are very many cavalry. The cavalry do not use swords nor do the wretched Britons mount in order to throw javelins' (*Tab. Vind.* II.164) – obviously describing a raiding party.<sup>47</sup> The reality of raiding, and the role of mounted units in responding to it, is borne out by a lost altar put up by a cavalry prefect to Jupiter Dolichenus, 'the god of the most efficacious power', possibly at Corbridge, 'after the slaughtering a band (*manus*) of Corionototae'.<sup>48</sup>

### In conclusion

In the end, it is the anatomy of Roman frontiers, artificial ones in particular, which carries the message of their purpose. From their spatial organization, the

principal role of these systems appears to have been to deliver immediate response to the lower and middle spectrum of raiding at any point along the outer perimeter. Just as raiding bands could vary in size, ranging from small groups of cattle rustlers to the combined armed followings of tribal leaders, their clients and allies, Roman response was usually able to scale up accordingly at short notice, also because of the horizontal roads that were always provided early in the life of *limites*. The combined infrastructure of roads, towers, fortlets and forts helped to detect, assess and respond to the most common form of hostile infiltration, sc. raiding bands of varying size and composition, and forced such bands to act, and present themselves, as a coherent group – thus becoming an easier target for the frontier forces.<sup>49</sup> Another, unforeseen, effect of Roman frontiers was that they would have tended, over time, to increase the size, organisation and breaching capability of raiding parties, paving the way for the more robust work of the 3<sup>rd</sup> and 4<sup>th</sup> centuries.

<sup>46</sup>Kovács 2008. Note that the crucial *oppositis* relates to the forts (*praesidis*) not the towers. Cf. IGLR 238 (AD 337-340) which refers to a new fort designed to check *latrunculorum impetum*, i.e. of the Goths, thus contributing to 'the security of the provincial population'.

<sup>47</sup>Bowman 1994, 28–9, 106.

<sup>48</sup>*RIB* 1142. Cf. 946 for a dedication by the prefect of the *Ala Augusta* based at Old Carlisle, some 20km behind the Wall, after the slaughtering of a band of 'barbarians'.

<sup>49</sup>An aspect rightly underlined by McCluskey 2018.

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# **The purpose of Roman Frontiers**

## **Controlling movement in and out of the provinces**

### **The simple but unquestionable evidence**

## **ABSTRACT**

The Romans tried to use major rivers as frontiers of their Empire wherever possible. After the Empire consolidated its frontiers during the first century AD, the Romans spent a lot of effort to find substitutes for the natural demarcation lines of the *ripae* by building the *limites*. Land frontiers were nothing else but artificial rivers, acting as obvious lines of demarcation and physical barriers where no natural feature lent itself to act as such. The paper discusses what the main purpose of the Roman frontiers could be. By investigating both written sources and archaeological evidence, and analyses of the modern frontier as well, it is highly likely that the main reason for constructing and maintaining this elaborate line of control was to deal with the people who lived on the other side, i. e. controlling movement in and out of the provinces. In theory, on the Roman side of the world, all you needed to exercise a control system was a defined and well visible line, where the border control had to be carried out, and trained personnel distributed along this line to handle commuters. The known archaeological structures perfectly match with these requirements. And if we take a look at about 40 modern frontiers (the US and Mexico, Israel and Egypt, India and Pakistan etc.) we can also see that they were not fortified for immediate military or other purposes, but to control movement.

**KEY WORDS:** ROMAN FRONTIER, LIMES, RIPAE, TACITUS, BENEFICIARII CONSULARIS

Roman frontiers undoubtedly belong to those antique features which have been investigated best. There is a certain fascination in studying the immense efforts of the Romans building and maintaining these various installations along the outer rims of their Empire for centuries.<sup>1</sup> But even by focusing studies

on one or another of its challenging details, we must not forget that the main reason for constructing and maintaining this elaborate line of control was to deal with the people who lived on the other side. And at the same time we must keep in mind that Roman frontiers are not comparable to our modern borders between two

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<sup>1</sup>For the various manifestations of Roman frontiers cf. Breeze 2011, 53 – 165.

separate nations or systems, but we are talking about a frontier which was “the line of demarcation between two fundamentally different realms of thought, whose moral codes did not extend across that boundary”.<sup>2</sup> Being inside or keeping foreigners outside the Empire could quite easily become a rather fundamental question, up to an issue of live and death. So yes, over hundreds of years the Romans spent a lot of energy to take care that the “*barbari dividuntur*”, the Barbarians became and stayed separated.<sup>3</sup> And the *limes* with its various forms as *fossatum*, *palus*, *ripa*, *vallum* etc.<sup>4</sup> was the instrument to keep this separation working, and “working” could only mean certain groups of people were allowed to cross the *limes* – others not.

Thanks to an abundance of sources no-one could seriously challenge that there were (perhaps limited but) contacts between the Empire and the people on the other side of the *limes*.<sup>5</sup> The sources are various and cover literary as well as epigraphic evidence plus manifold archaeological remains. Sometimes we have direct evidence of the people who went in and out of the provinces, more often we can deduce the contact by trade goods they were dealing with. Without any doubt, every form of regulated traffic required to be supervised, all travellers, all border crossers, needed to be checked. Only the desire to control movement in and out of the provinces as the principal intention on the Roman side explains both, the written sources as well as the different archaeological features we find along the frontier.

In our context, the most important literary proof undoubtedly is G Cornelius Tacitus’ work on origin and habits of the different Germanic tribes he was familiar with. Written around 100 AD, the “Germania” is one of the most important authorities on the relations between Rome and the indigene peoples of Central Europe in those days. Tacitus tells us exactly what happened at the western part of the Danube frontier: The Germanic tribe of the Hermunduri, who lived outside the Empire, wanted to trade or maybe just liked to visit their Roman

friends: “... *Hermundurorum civitas, fida Romanis; eoque solis Germanorum non in ripa commercium, sed penitus atque in splendidissima Raetiae provinciae colonia. Passim sine custode transeunt; et cum ceteris gentibus arma modo castraque nostra ostendamus, his domos villasque patefecimus non concupiscentibus. In Hermunduris Albis oritur, flumen inclutum et notum olim; nunc tantum auditur*”<sup>6</sup>. ... *the state of the Hermunduri, ... loyal to Rome. Consequently they, alone of the Germans, trade not merely on the banks of the river, but far inland, and in the most flourishing colony of the province of Raetia. Everywhere they are allowed to pass without a guard; and while to the other tribes we display only our arms and our camps, to them we have thrown open our houses and country-seats, which they do not covet. It is in their lands that the Elbe takes its rise, a famous river known to us in past days; now we only hear of it.*<sup>7</sup>

These sentences belong to the most often commented passages in Tacitus’ work. But here, we do not have to look at the questions at issue as the main facts for our context are well beyond dispute: The homes of the Hermunduri at the springs of the river Elbe lay, as nobody could doubt, outside the Roman Empire in a part of the world where not only the mentioned *civitas Hermunduri* were living in the days of Tacitus but also a lot of other Germanic federations. They had to cross the frontier/border to get into the Empire. Consequently, the first unquestionable fact we learn is that there was movement of (certain) people from “outside” into the province. And, as the Hermuduri stayed only temporarily, like traders or friends, the possibility for movement must have been open in either direction. The second fact also comes immediately from Tacitus’ own words: as the Hermuduri were the only Germans who were allowed to enter the province, there must have been a possibility to distinguish individuals or groups of this “*fida civitas*” from other Germans. This paper is not the place to show how this distinction was accomplished – you could imagine a simple optical check by producing a characteristic “Hermunduri-style”-costume

<sup>2</sup>Alföldy 1952, 1.

<sup>3</sup>Historia Augusta, v. Hadr, 12,6.

<sup>4</sup>For the meanings of the terms cf. Planck *et al.* 2009

<sup>5</sup>von Schnurbein 2005; Breeze 2011, 3 – 51; Visy 2015; Galestin 2015.

<sup>6</sup>P Cornelius Tacitus, *De origine et situ germanorum* 41 f.; Bennario 1999.

<sup>7</sup>Translation after Church *et al.* 1876.

or more developed examinations like telling the parole, the help of bondsmen or – most probably – some kind of documents/passports. For our question the only fact that matters is that – following Tacitus – it was done somehow! At least certain Romans present along the frontier must have been able to recognize with whom they were dealing. As a third fact we learn that this control of movement was undertaken at the *ripa* itself, which is, as you know, just another expression for the Roman river frontier. The Hermunduri passed the control and were allowed to enter the province “*sine custode*”. And further we learn that this control was not only performed at a few places like major towns or larger military installations, but “*passim*”, thereby at any place.

In theory, on the Roman side of the world, all you needed to exercise a control system à la Tacitus was a defined and well visible line (where the border control had to be carried out) plus trained personnel distributed along this line (to handle commuters). It is obvious that the known archeological structures perfectly match with this requirements. We know the installations which are necessary and we have evidence that also the skills of the Roman soldiers/officials were sufficiently shaped to fulfill Tacitus description.

### Defined Frontier

Looking at Rhine, Danube and Euphrates, we see that wherever possible the Romans tried to use major rivers as frontiers of their Empire. They “continued to play an obvious role both as natural demarcators of territory and as simple geographical reference points”.<sup>8</sup> Regardless of the particular circumstances or the diplomatic efforts you might produce, passing a river is a signal. “Crossing the Rubicon” could neither be done by mistake nor denied. After the Empire consolidated its frontiers during the first century AD, the Romans spent a lot of effort to find substitutes for the natural demarcation lines of the *ripae* by building the *limites*. The effect of scratching a simple furrow in the ground is known from the time of Romulus and Remus. Our archaeological records demonstrate that the land frontiers were nothing else but artificial rivers, acting as obvious lines of demarcation and physical barriers as

rivers otherwise would do.<sup>9</sup> Therefore, it is unquestionable that the Romans preferred and – at places where no natural feature lent itself to act as such – created defined lines for control nearly everywhere at the rims of their Empire.

### Checkpoints

A special and amply commentated feature of Roman frontiers is the fact that so many military bases are placed directly at the frontier line. Disregarding the circumstance that even this thin cordon of troops would never have been sufficient to prevent a forced entry or even a military invasion into the province, this dispersion is unfavorable from a purely tactical point of view and might have caused more problems than benefits in military actions. Main parts of the striking forces of the *exercitus Romanus*, like the legions, were consequently based in the hinterland, if possible. But there were still a lot of troops stationed at the frontier-line itself. They were based at forts, fortlets or smaller posts and most probably even inside the towers dispersed along the frontier. So there was definitely no lack of accommodation at the *limites*. Personnel to fulfil the duty of controlling was simply available everywhere, as Tacitus told us with the expression: “*passim*”. Day and night, seven days a week any cross-border commuter could trust to find attention: the legal ones to get access or permission to leave the provinces, the trespassers to be hindered. Therefore, it was of course necessary to control the whole length of the frontier but neither was it possible nor necessary to give transit technically everywhere. Like rivers which were crossed at certain points only, where nature allowed suitable fording or ferrying, even the artificial frontier installations over land were leading crossers to defined points of transit. As mentioned above: an effective control implies that you are able to discourage illegal passage. During the development of the Roman frontiers, the first checkpoints were hence built at places of most frequent or intensive traffic. Following the principle of pragmatism, places of minor interest should have been equipped secondarily. This becomes obvious not only because of the fact that open frontiers generally preceded permanent frontier installations like earthen banks or wooden palisades but also by looking at such parts especially of

<sup>8</sup>Hanson 2014, 4.

<sup>9</sup>Visy 2015.



the artificial *limites* which were not overprinted by later upgradings. At places where we have enough archaeological evidence we can see approaches of a closed linear frontier system that started and stayed executed at strategic positions only.<sup>10</sup>

So, for simple reasons of limits in capacity, Rome had to concentrate its skilled personnel at such selected spots. Apart from the bits of the frontier where we might see some “not-so-clever-in practice-intervention” of an emperor himself, like Hadrian’s Wall, these spots mark the points where (normally pre-Roman) traffic routes encounter the artificial *limites* or the *ripae*. Generally, we may assume that these checkpoints were identical with forts and fortlet sites<sup>11</sup>, but there are still enough hints that even just a tower could act as a place where control was exercised<sup>12</sup>. In contrast to this, transit could not be given elsewhere. Keep in mind, that the actions taken to protect the frontier would never have been sufficient, of course, to prevent a forced entry or even a military invasion into the province.

### Skilled personnel

Even if the troops dispersed along the frontier line were of no great use in times of war, as for any larger scale combat the army had to be regrouped, respectively concentrated, the units along the *limes/ripa* could easily conduct the duty of controlling. At smaller bases yet we find not only common soldiers but their officers, too, sometimes even additional personnel of the provincial governor’s staff, like the *beneficarii consularis*. Leaving aside the obviously tricky question of the real duty of *beneficarii* in different provinces over time, the placing of their *stationes* shows references to those points along the frontiers where a stringent volume of traffic could be expected.<sup>13</sup> But even by focusing on the military units alone, it would be an interesting study to go for the rank of the officer in charge of a fort(let) on a proven traffic route. The important results from recent work at the limes in Egypt demonstrate that there an officer in the rank of a centurion wrote out the permits which travellers needed to join the province.<sup>14</sup>

The question remains, if this centurion was in charge of the checkpoint and if this pattern was operable everywhere.

One final argument, why the limes was built to control movement, may be offered: Over the past (more than) thirty years – between 1980 and today – the number of fortified borders on our globe has risen from 17 to more than 40. If you look technically at the fences between India and Pakistan, or between Israel and Egypt, or at the wall which is being built right now between the US and Mexico, we have to recognize that these contemporary installations bear a striking resemblance to the Roman *limites*. All of these 40 modern frontiers were not fortified for immediate military purposes, not to give travellers any protection, not for propaganda reasons and definitely not for the glory of their builders. They were (and are being) built solely to control movement.

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# The Purpose of Roman Frontiers: To protect communications and travel in the frontier zone

## ABSTRACT

This paper argues that one of the primary functions of military installations there was to protect people travelling in and through the frontier zone. Successive frontiers in Mauretania Caesariensis were characterised by linear deployments whereby the bulk of the provincial army was stationed along one principal highway which extended for most of the length of the province. This formed a pragmatic response to the elongated shape of Mauretania Caesariensis, ensuring the presence of units able to provide military coercion in all parts of the frontier zone, but secure communications between and movement of supplies to these widely spread units was obviously crucial. The second-century deployment seems to have taken shape during the reigns of Hadrian and Trajan. In addition to the garrison forts, watch towers are known along part of the highway. However, rather than marking a frontier line, with the purpose of controlling access into Roman territory, however, these towers are most convincingly interpreted as providing protection for soldiers, officials and others travelling along the highway. It is noteworthy that the known examples are located in areas of rugged terrain where travellers would have been particularly vulnerable to ambush. These were tempting ‘high value’ targets for bandits or disaffected tribesmen. It is likely that the army’s need to protect its own logistics and communications may explain many of the networks of military installations found on other frontiers.

**KEY WORDS:** TOWERS, *BURGI*, ANTONINE ITINERARY, MAURETANIA CAESARIENSIS, NORTH AFRICAN FRONTIER, ROADS, COMMODUS, BANDITRY

**T**his contribution to the debate on the purpose of Roman frontiers argues that one of the primary functions of military installations along the frontier zone was to protect people travelling in and through that area. Even if this was often not their only purpose nor even the principal one, it is certainly an important and under-recognised aspect of the overall matrix of

roles and functions that Roman frontier systems performed.

To substantiate this argument the study will focus on the frontiers in Africa and, in particular, Mauretania Caesariensis, using the example of one specific stretch of the frontier zone there.

The Roman military presence in Mauretania Caesariensis during the 2<sup>nd</sup> and 3<sup>rd</sup> centuries was characterised by two successive linear deployments, whereby the bulk of the provincial army was strung out along a principal highway which extended for most of the length of the province. This formed a pragmatic response to the province's very elongated shape, ensuring the presence of units able to provide military coercion in all parts of the frontier zone. However, this pattern of deployment created problems of its own.

The 2<sup>nd</sup>-century deployment seems to have taken shape during the reigns of Trajan and Hadrian. By the early years of Hadrian's reign much of the provincial garri-

son was distributed along a single route itemised by the Antonine Itinerary (*Itin Ant* 36:3 – 39:1, see below). This ran from the western end of the province through the plains of Oranie, along the Chélif Valley, before crossing the hills forming the watershed between the Chélif and the Isser river systems to reach the Beni Slimane plain. It then skirted the southern edge of the plain running through very broken terrain to reach the strategic crossroads of Auzia (mod. Sour el-Ghozlane), a walled town, perhaps dating back to the Mauretanian kingdom, where the *cohors I Aelia Singulariorum* was based (Salama 1955, map; 1978, 578, 583–584, 594 carte 3; Auzia: Lassère 1981; Laporte 2012, 150–155).

The Antonine Itinerary - a Calama [Auzia] <Rusuccurru> m. p. CCCXCIII	
Calama	Castellum Tingitanum
XX	XXII
Ad Rubras	Tigava municipium
XXX	XXXII
Ad Albulas (Praesidium Sufative 119)	Oppido Novo colonia
XIII	II
Ad Dracones	<b>Tigava castra</b>
XXIII	XVI
Ad Regias	Maliana
XXV	XVIII
Tasaccora	Sufasar
XVIII	XV or XVI
<b>Castra Nova</b>	Velisci
XX	XVI
<b>Ballene praesidio</b>	<b>Tanaramusa castra</b>
XVI	XVI
Mina	<b>Tamariceto praesidio</b>
XXV	XVI
<b>Gadaum castra</b>	<b>Rapido castra</b>
XVIII	XII
Vaga	[Auzia] <Rusuccurru colonia>
XVII	

We know where many of the garrison units were stationed based on inscriptions, the surviving remains of the forts themselves in a couple of cases (Rapidum and Tigava Castra: Laporte 1989, 67–98; Leveau 1977, 280–290), and the record of the Antonine Itinerary. The latter mentions a number of *castra* (forts) and fortlets or small forts (*praesidia*), implying that forts alternated with intermediate fortlets along some stretches, in what appears to be a regular pattern, for example *Thanaramusa Castra*, *Tamariceto Praesidium* and *Rapida Castra*, or *Castra Nova* and *Ballene Praesidium*, but it should be noted that many of the places mentioned along the route were long-established towns and cities. Some of the forts and fortlets were newly built under Hadrian (cf. Rapidum – *CIL* VIII 20833 – AD 122, *AE* 1975, 953 – AD 128–38, *AE* 1909, 10; and praesidium Sufative = Albulae - *AE* 1913, 15, AD 119), but the initial elements of the deployment were probably formed earlier, under Domitian and Trajan (cf. *AE* 1911, 125 – milestone of AD 114/115 between Tasaccura and Regiae), as widely separated units, advancing into the interior, erected bases and constructed connecting stretches of road (Salama 1955, map; 1977, 83, nos 25–26).

In addition to the garrison forts, watchtowers are known along the highway, most if not all of which seem to have been built during the reign of Commodus, and it is the function of these that is of greatest interest in this context. Towers have been attested both epigraphically and archaeologically between Auzia and Rapidum at the eastern end of the highway. Identical inscriptions reading *Imp. Caesar M Aurel. Commodus .... securitati provincialium suorum consulens, turres novas instituit et veteres refecit oper[a] militum suorum* ('The Emperor Caesar Marcus Aurelius Commodus .... concerned for the security of his provincials, constructed new towers and repaired old ones through the exertion of his soldiers') have been recovered from two locations overlooking this section of the route – *CIL* VIII 20816 = *ILS* 396 (for the site see Gsell *AAA*

14:99) and *AE* 1901: 220 (found near Dechmya c. 1-2 km from the first inscription: Robert 1901, 137).<sup>1</sup> An equally celebrated inscription was found at Albulae (Ain Témouchent) at the opposite end of the highway, and records that Commodus: ... *burgis novis provincia munita, miliaria conlapsa vetustate restituit* ('having fortified the province with new towers, restored milestones collapsed through age' – *CIL* VIII 22629 = *ILS* 5849 = *AE* 1952, 15).

It is therefore tempting to see in these two pieces of evidence, both executed under the governor Claudius Perpetuus (184-185), the implementation of a programme to furnish the entire length of the 'frontier road' with watchtowers intended to control north-south movement across it. These towers, strung along the road, could be interpreted as part of line of preclusive frontier control of the kind theorised by Luttwak (1976), regulating access into Roman territory.

However, this would be incorrect for several reasons. Firstly, the units of the provincial garrison were too few and too widely dispersed to effectively provide such frontier control. Thus, the stretch between the two regimental bases of Thanaramusa Castra (Berrouaghia) and Auzia, a distance of c. 70 km, was furnished with only one other, intermediate fort, Rapidum, occupied by the *cohors II Sardorum eq.*, plus one fortlet, Tamariceto Praesidium, as yet unlocated on the ground, but probably located at the crossing of the Oued El-Malah, midway between Rapidum and Thanaramusa Castra. Yet this is equivalent to around half the distance of Hadrian's Wall, which had eleven regimental forts in the equivalent distance, to say nothing of the curtain wall itself complete with its milecastles, turrets and ditch.

Secondly, there is no reason to believe the road marked the limit of Roman territorial control in the 2nd century and good reason to believe it did not, since it linked numerous long-standing, urban settlements, which

<sup>1</sup>It has been suggested that these two inscriptions were one and the same, see Laporte 1989, 220, for example. However the texts differ slightly in their survival, with different letters being lost or illegible on the two texts, and, more crucially, the chronology of their respective discovery and reporting seems to exclude this possibility. *CIL* VIII 20816 was already in a public square in Aumale (Sour el Ghozlane) by c. 1880, where it was seen and recorded by Purgold, whereas Robert, who notes that *AE* 1902, 220 was moved from Dechmya to the Esplanade d'Isly in Aumale through his efforts (1901, 138), does not seem to have been in post as administrator of the Commune of Constantine until the 1890s. It seems preferable to regard these texts as marking a similar programme to that revealed at Intercisa, on the Pannonian stretch of the Danube, where around a dozen identical inscriptions were found recording the erection of *burgi* and *praesidia* to deal with the clandestine infiltration by *latrunculi* (e.g. *CIL* III 3385, 10312–10313, *ILS* 395, 8913; Mócsy 1974, 196–197).



were already under Roman authority and which, most likely had civic *territoria* extending as far south as north. This is especially evident where the road runs along the Chélif valley, bisecting a series of plains, which were sandwiched between the Dahra and Zaccar ranges to the north and Ouarsenis Mountains to the south. These narrow, riverine plains must have been entirely under Roman control from quite an early date, as they formed the *territoria* of Augustan and Claudian colonies, Zucchabar and Oppidum Novum, or of long-standing native towns like Tigava (later a *municipium*) and Castellum Tingitanum, for example. By the 2nd century, Roman authority may have already been pushed further south into foothills of the Ouarsenis Mountains, but the Chélif valley still formed the most convenient lateral route so the forts and military road were placed there. In other words the road was in the wrong place to preclude entry to the entire province. Its primary function was to facilitate transport and communications.

Moreover, at night the towers would have been largely useless at preventing small groups slipping *across* the line of the road, in the absence of a linear barrier to impede movement. Even during daylight it would be difficult unless the towers were very closely spaced, which would have been expensive in manpower, precisely what the small and thinly spread provincial army of Caesariensis lacked an abundance of.

But if such towers were ill-suited to preclusive control of movement across the road-line they were much more useful in helping to maintain continuous surveillance over anyone moving along the highway and thus provide a measure of protection for travellers. Even at night the roadside towers could still have served to protect travellers by giving overnight shelter to those caught in the open as darkness fell (Safrai 1971, 229; Isaac 1990, 182).

If there were any doubts over the role of these towers this is dispelled by detailed analysis of exactly where they were located. The two dedicatory inscriptions (*CIL* VIII 20816 = *ILS* 396; *AE* 1901, 220) and associated surviving remains (Gsell AAA 14:99, cf. Robert 1901, 137–38) discovered at the eastern end of the main highway all belong to the section between Rapidum and Auzia where the road traverses very rugged terrain having left the broad Beni Slimane plain. By contrast, the inscription from Albulae (*CIL* VIII 22629

= *ILS* 5849 = *AE* 1952, 15) was found in the settlement itself and appears to represent a general record of tower-building and milestone erection throughout the province. There is clear evidence that the watchtowers alluded to were not restricted to the main east-west highway, but were also set up along other roads within the province, where they can have no relationship to the maintenance of a frontier control. Thus, a nearby *burgus*, again dated to the reign of Commodus, was set up by the procurator T. Flavius Serenus (185/191) on the Koudiat Lakhdar, a short range of hills traversed by the road from Albulae to Castra Puerorum (Les Andelouses), on the coast (*CIL* VIII 21662; cf. *AE* 1952, 15; Gsell AAA 20:26). This road was, in effect, the last link in maritime communications between the provincial capital and its westernmost military base (cf. *Itin Ant* 13:6). A similar, but later inscription (*CIL* VIII 8991, *AE* 1911, 119; Carcopino 1919, 172–173; cf. Gsell AAA 6:74) was found in the ruins of the circular tower on the slopes of the Tamgout of Azazga, in the formidable massif known as the Greater Kabylia, east of Algiers. Dated to 201, this refers to the rebuilding of a ruined tower - *turrem e ruina lapsam* ('tower fallen into ruins') – conceivably another of the Commodan towers or perhaps an even older one. The tower protected the route inland from the Augustan colony of *Rusazu* (Azeffoun), an area long under Roman control.

Thus, all the known roadside towers were located in areas of very mountainous or hilly terrain. Their actual role is best summed up by a dedication of 188 from neighbouring Numidia (*CIL* VIII 2495), recording the construction of the *burgum Commodianum speculatorium inter duas vias ad salutem commeantium nova tutela* ('the watchtower Commodianum, between two roads, as a new security measure for the safety of travellers'). The *burgus*, at Ksar Sidi el-Hadj, was positioned beside a route leading from the frontier towards the El-Kantara pass and the densely settled agricultural interior of Numidia (Baradez 1949, 184, 216–220, 239–242; cf. also *CIL* VIII 2494 from nearby Loth Bordj; Gsell AAA 37:54 and 58).

The towers were clearly intended to facilitate the protection of travellers, including officials, and soldiers, progressing *along* routes. They formed part of the effort to suppress petty brigandage, which was probably an endemic problem in the hill-country of North Africa, the known roadside watchtowers being situated in exactly the kind of hilly or mountainous terrain

where travellers would have been most vulnerable to ambush. Officials and soldiers, in particular, were tempting 'high value' targets for highwaymen, bandits or disaffected tribesmen as exemplified by the celebrated case of Nonius Datus. A legionary veteran and surveyor (*liberator*), Nonius Datus was sent from Lambaesis to Saldae on the Mauretanian coast in 152, to survey and supervise the construction of the colonia's aqueduct (*CIL* VIII 2728 = *ILS* 5795, for a recent improved translation and commentary see Adams 2016, 293–306, text 25; cf. Cuomo 2011). Despite having an escort, he was robbed and stripped – left *nudus* – by brigands along the route, probably in the mountains of the Lesser Kabylia. Hence much of the army's effort may have gone into protecting its own communications and that of the other official apparatus of the imperial state. Secure communications between widely spread units and movement of supplies to their bases was obviously a crucial requirement, necessitating the construction of significant amount of infrastructure.

Finally, it might also be worth thinking more closely about this aspect in relation to the installations found along other frontiers. For example, the addition of towers and intermediate fortlets, such as Haltwhistle Burn and Throp, to the military dispositions along the late Flavian/Trajanic Stanegate in northern Britain, has been seen as marking the evolution of a lateral communications road into a full blown defensive frontier system, a predecessor to Hadrian's Wall. Perhaps the measures to improve surveillance of the zone around the road were motivated by a desire to counter an infuriating increase in petty larceny on the part of *Brittunculi*, targeting the army's own supplies to and communications between the Stanegate forts, which were now more exposed to this kind of activity following the retreat from Scotland.

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# The Purpose of Roman Frontiers: To keep the troops busy

## ABSTRACT

It is argued that a constant concern of imperial Roman officers and commanders was keeping control of their own soldiers. *Milites* were wilful, acutely aware of their privileges and de facto power, and always potentially dangerous to their superiors and each other as well as the empire's enemies. Allowing troops to be idle invited trouble. The literary sources make clear the importance of keeping soldiers busy, if necessary by inventing things for them to do. Official efforts were made to extend the notion of *virtus*, 'real-manliness', as expressed in service (*militia*), to include not just skill at arms and prowess in battle, but also more mundane forms of physical toil for the state. Construction projects served this function very well. It is argued that keeping troops occupied was an important, if normally secondary consideration when creating frontier infrastructure.

**KEY WORDS:** *MILITES*, *VIRTUS*, *MILITIA*, *DISCIPLINE*, *CONTROL*, *CONSTRUCTION*

Of course, Roman frontiers did not have a purpose, singular. They were the accidental by-products of the failure of Roman military and political power to keep expanding indefinitely, as Rome had become ideologically structured to expect by the time the republic gave way to an imperial regime. Generations of, largely, remarkably successful warfare and conquest had engrained the centrality of aggression and the value of *Gloria* and *laus* to Roman concepts of *virtus*, 'real-manliness'.<sup>1</sup> The imperial republic thrived on the fruits of continual conquest - loot, war-slaves, new land and resources, more people to tax.

During the earlier Principate emperors, senatorial commanders, and the now-professional soldiery continued to desire victories and conquests to validate themselves by rivalling the achievements of their forebears. Yet around the start of the imperial era, from the North Sea to the Black Sea and the Euphrates, to the Upper Nile and Sahara, Rome began to come up against obstacles it could not overcome, whether ecological, logistic, socio-economic, political or directly military (in the case of Parthia, all of these at once).<sup>2</sup> Rome had to deal with the consequences of being unable to expand further. Roman frontier *installations and systems* were

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<sup>1</sup>McDonnell 2006; Phang 2009.

<sup>2</sup>Generally: Hanson 2002. On Parthia: Kennedy 1996.

responses, and attempted solutions, to the problems arising. So frontier *systems* were certainly purposeful. I will argue that *one* significant purpose of creating, maintaining and refining such systems was to keep troops busy.

The key point is that imperial *milites*, if for the most part uneducated and not very well-informed, were nevertheless acutely self-aware agents who combined a touchy honour-focused Roman masculinity with routinely bearing lethal weaponry as a profession.<sup>3</sup> In battle, they were famously dangerous foes; the metaphorical cutting-edge of empire, soldiers were also a double-edged sword.<sup>4</sup>

Despite - partly because of - the equally famous brutal discipline to which they were subject, *milites* were also dangerous to their own officers and commanders, as the mutinies of the legions in Pannonia and Germany AD14 exemplified.<sup>5</sup> That hard-bitten general Tiberius famously described wearing the purple as ‘holding a wolf by the ears’;<sup>6</sup> he doubtless had two wolf-packs especially in mind: his fellow senators, and his own soldiers. Idle *milites*, frustrated at the lack of opportunities to gain personal and collective *laus*, *gloria* and booty, and with time to think, were especially dangerous. Always prone to indiscipline and sometimes mutiny, they were vulnerable to sedition from ambitious aristocrats.

Historically, the large garrison of Britain was particularly troublesome, perhaps because its distance and relative isolation from the imperial patronage network led to special frustrations. There was famously a mutiny of Claudius’s expeditionary force in AD43 when the troops refused to embark.<sup>7</sup> Not long before this, the

bizarre antics reported of Caligula on the beaches opposite Britain may be a deliberately misrepresented account of similar, previous disaffection among the troops at the prospect of crossing *Oceanus*.<sup>8</sup> In AD69, during the uncertainty of the civil wars, a dispute between the governor of Britain, Trebellius Maximus, and Roscius Caelius, legate of *legio XX*, led to military disorder; the garrison sided with Caelius, auxiliaries hurling insults at Trebellius, who fled the province.<sup>9</sup> And in 185, a ‘delegation’ of 1500 men marched all the way from Britain to Italy to petition Commodus about the conduct of the Praetorian prefect.<sup>10</sup>

It is therefore not surprising that Julius Frontinus - who had himself commanded the army of Britain in the 70s<sup>11</sup> - in his collection of stratagems for generals, the historical examples he presents illustrate methods not just for dealing with foreign enemies, but also for maintaining control of your own troops. His emphasis is on keeping them busy; if they have something to do, it will occupy their attention, and keep them too tired to make trouble. He provided the example of the republican general P. Scipio Nasica setting his troops to building ships he didn’t actually need.<sup>12</sup> Idle troops could also of course be set to undertake works actually useful in areas of operations, not least road-building and other communications tasks. One of the most famous examples dated to 102BC, when Marius, ‘as [his] army had nothing to do’ set his famous mules to cutting a great canal to improve the navigation of the mouth of the Rhone, his hazardous supply route.<sup>13</sup> Hadrian’s Wall, the brainchild of another experienced soldier-emperor, is a further case in point. Getting the troublesome British legions to spend years quarrying, shifting and building with millions of tons of stone<sup>14</sup> was perhaps the ultimate military displacement activity

of Roman times - and I suggest was a significant, if underlying, reason the Wall system was made so unnecessarily massive and elaborate.

Sara Phang has explored how, in early imperial times, emperors sought to make a literal virtue out of such practices, by trying to establish in Roman military ideology that *labor* (toil) and *sudor* (sweat), long accepted as necessary parts of *militia*, could in the form of training and building work rank alongside campaigning as means of demonstrating martial *virtus*.<sup>15</sup> However, it is not clear that they were very successful in this, at least beyond the reign of Marcus.

I have recently completed a detailed study of the major late second- and early-third century urban military base at Dura-Europos on the Euphrates frontier, occupied by auxiliaries and legionaries.<sup>16</sup> This included a formal *principia* building and baths, but what is most striking about the Dura base as a whole is how far the garrison went to *avoid* new building; most of it comprised roughly converted existing civilian structures. Was this because, by AD200, it was already becoming difficult for commanders to get troops to undertake major building projects without provoking the kind of trouble they were trying to head off? A serious breakdown of discipline, with *milites* of *cohors XX Palmyrenorum* leaving their posts in numbers, is attested in the Dura papyri.<sup>17</sup>

In the third century, Roman *milites*, indulged by emperors and now ranked as privileged *honestiores*,<sup>18</sup> were acutely aware of their elevated status and dangerous power. In AD282 the emperor Probus, following the precedents of the great generals Marius (above) and Corbulo,<sup>19</sup> set his troops to canal digging, to drain a marsh near his native Sirmium. ‘At this the soldiers rebelled...’ and assassinated him.<sup>20</sup> Had manual toil increasingly sunk beneath the dignity of the arrogant quasi-mercenaries of the third century AD? Was this shift in martial culture a major factor in the changing

face of later Roman military installations and frontier systems?

Keeping the troops busy, then, was one purpose of creating Roman frontier installations and systems during the Principate, and I would say a fundamental one. But by the military anarchy of the third century, it seems the dynamics were changing.

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<sup>4</sup>James 2011, especially 24–28.

<sup>5</sup>Tacitus *Annals* 1.16–54.

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<sup>7</sup>Cassius Dio 60.19.1–3.

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<sup>10</sup>Cassius Dio 73.9.

<sup>11</sup>Tacitus *Agricola* 17.2.

<sup>12</sup>Frontinus *Stratagems* 4.1.15. see also Tacitus *Annals* 1.35: work ‘imposed sometimes from necessity, sometimes as a precaution against leisure’; and 11.20.

<sup>13</sup>Plutarch *Marius* 15.

<sup>14</sup>Hill 2004.

<sup>15</sup>Phang 2008, 201–48.

<sup>16</sup>James 2019.

<sup>17</sup>P. Dura 55A, AD 218–22.

<sup>18</sup>Justinian *Digest* 49.16; 18.1; Campbell 1984, 261.

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# The Purpose of Roman Frontiers – to create an edge to the Empire

## ABSTRACT

Many discussions in the Roman Frontier Studies over the last decades suggest that the purpose of the Roman frontiers was to create the edge to the Empire. However, this paper will try to present a few aspects to clarify this statement. The Romans were not concerned with the creation of the border, but with their military facilities to clearly limit their Empire. The approach of indoor versus outdoor results from the physical legacies as well as those in writing and pictorial tradition. Inside the frontiers all the aspects of Roman life can be found, connected with well-built roads insuring good connections and an easy exchange of news and goods. Outside, nothing of that can be found, no infrastructure, perhaps a path or two, and no real people, only barbarians and perhaps enemies. The Roman perception of their frontiers is evident from various pictorial sources (e. g. Marcus' column in Rome). Even in cartography, for example in the Tabula Peutingeriana, this is clearly expressed, on the one hand, on almost all edges nothing comes of the representation except water, on the other hand, *areae fines Romanorum* can be defined.

**KEY WORDS:** FRONTIERS, ROMAN WAY OF LIFE, MILITARY, BARBARIANS, TABULA PEUTINGERIANA

Let me start with the remark that the title proposed for my paper by the organizers of this session is inaccurate – the purpose of the Roman frontiers was not to create an edge to the Empire but the edge to it. Let me continue with a second preliminary statement. And that is to point out that once the headline is corrected we are talking about the obvious. Everything we have seen and discussed in the Roman Frontier Studies over the last decades indicates that: The purpose of the Roman frontiers was to create the edge to the Empire. Having said this I could end with this paper.

However, for the sake of the discussion I will present a few aspects to clarify this statement. If we look at our frontiers we have to ask ourselves, why else all the efforts? Why would the Romans have gone into all the sweat to build legionary fortresses, auxiliary forts, fortlets and watch towers? Why would they, including the Emperor himself – in the case of Hadrian certainly – would have seen the necessity for planning and would have put so much effort into building and overseeing elaborate linear physical barriers like Hadrian's Wall, the Antonine Wall or the Upper German-Raetian Limes? This is a general phenomenon not limited to the





Fig. 1 - Lower part of Marcus' column with the laurel wreath symbolizing the Roman Empire (bottom), the frontier(s) (most likely the Raetian Limes; middle) and the space beyond struck by war (G. Cupcea).

northwest. We know about similar structures in Dacia, but also in the desert e.g. in Tunisia.<sup>1</sup> And what about the alignment of military installations along the Rhine and the Danube in Europe or the Euphrates in the Near East? Together with the respective river they form a clear cut line separating the Romans from "others". Almost as obvious, edges are created in some mountainous regions e.g. in today's Turkey and in so many desert regions where there is literally naught beyond the last forts.

If we look with a broader perspective on the frontier regions one aspect becomes apparent: inside is everything, outside is nothing. Inside the frontiers we find all the aspects of Roman life – security, proper settlements, agricultural production, the amenities a senator or equestrian from Rome can expect (like baths,

mansions, filled granaries etc.), all connected with well-built roads insuring good connections and an easy exchange of news and goods. Outside, nothing of that can be found (or at least almost nothing). There was no infrastructure, perhaps a path or two, and no real people, only barbarians and perhaps enemies. A good Roman would go there only when told to discipline the unruly – in the case of the soldiers – or to make some money trading commodities otherwise inaccessible.

If you still have problems accepting the obvious have a look at some contemporary Roman sources. For example there is the SHA Hadrian stating that he – the Emperor – built a wall to separate the Barbarians from the Romans (Hadrian's Wall).<sup>2</sup> And similar "in many regions where the barbarians are held back not by rivers but by artificial barriers, Hadrian shut them off

by means of high stakes planted deep in the ground and fastened together in the manner of a palisade".<sup>3</sup> And around 100 years later the *fratres Arvales* came together in Rome "... because our (their) lord and Imperator, the holiest, the Pius, Marcus Aurelius Antoninus Augustus (Caracalla), highest priest, is on his way to cross the Raetian Limes (*per Limitem Raetiae*) to intrude the land of the Barbarians to extinguish his enemies".<sup>4</sup> As mentioned above, only under special circumstances Romans or the Emperor himself would cross the edge of the Empire. And if that happened, they had to deal with the ones beyond in a special way.

The Roman perception of their frontiers becomes evident from various pictorial sources. First I would like to draw your attention to the lower part of Marcus' column in Rome (Fig. 1). As a separator between the rectangular base and the spiral images telling the story of another Emperor beyond the edge of the Empire or rather his actions there a thick laurel wreath has been sculpted – clearly standing for the Roman Empire itself. At the very beginning of the spiral we see frontier installations – a palisade with tower-like structures and large stacks of hay or straw and wood, resembling welfare and rich provisions. There are good arguments to interpret the depicted as the Raetian Limes, provided in the early 160s with a continuous palisade.<sup>5</sup> But one could also argue that these installations stand generally for the well-equipped Roman frontiers or rather "the edge of the Empire" as such, as this image forms literally the basis for the campaigns executed by the Romans beyond, depicted above and all over the column, leading into the emptiness of the sky or rather the emptiness beyond the edge of the Empire.

Beyond that officially presented image the approach is verbalized on the Tabula Peutingeriana, too, where we read *expressis verbis* in the parts showing the east *areae fines Romanorum* as well as *fines exercitus Syriaticae et conmertium barbarorum* written in a large empty space followed by the description *deserta* (Fig. 2). That similar phrases appear not more often on the



Fig. 2 - Excerpt of the Tabula Peutingeriana sheet 9, showing the edge of the Roman Empire in the east (Rathmann 2016, 89/91; BLfD, S. Scherff/Österreichische Nationalbibliothek).

document at the different edges of the Empire is in my believe due to the odd shape of the Tabula, which did not allow more similar spaces – but one could argue that the obvious emptiness beyond the Roman towns and installations showing at the edge of most parts nothing but water speaks for itself.

And if this is not enough we should finally turn our view to a pictorial image to which colleagues recently drew our attention. On the stone I have in mind (Fig. 3) Rome respectively the Empire is represented by an eagle on a scepter, surrounded by strong walls with towers and gates.<sup>6</sup> Comprehensibly, the wall was seen in conjunction with Aristides 80 as the walls which the Emperor placed "... round the Empire, not the city". I think there are no more arguments necessary to accept that the Roman frontiers were created everywhere as the edge of the Empire, well secured through strong and well trained military units and their fortifications, now inscribed in parts as UNESCO World Heritage Sites.

<sup>1</sup>In 2012 the State of Tunisia put its "Frontières de l'Empire romain: Limes du Sud tunisien" with forts, fortlets and walls on the Tentative List for UNESCO World Heritage.

<sup>2</sup>SHA Hadrian 11, 2. For the latest discussion on Hadrian's Wall see Graafstal 2018.

<sup>3</sup>SHA Hadrian 12, 6 (translation [http://penelope.uchicago.edu/Thayer/E/Roman/Texts/Historia\\_Augusta/Hadrian/1\\*.html](http://penelope.uchicago.edu/Thayer/E/Roman/Texts/Historia_Augusta/Hadrian/1*.html) (22.4.2019). Now considered to refer to (parts of) the Upper German Limes. At Marköbel the preserved timbers of a palisade were dated to 119/120 AD. – Graafstal 2018, 11; Schallmayer 2003; Schallmayer 2005.

<sup>4</sup>Scheid 1998, Fragment 99a.

<sup>5</sup>Sommer 2012; for the latest description of the development of the Raetian Limes see Sommer 2018.

<sup>6</sup>Flügel – Meyr – Eingartner 2017.



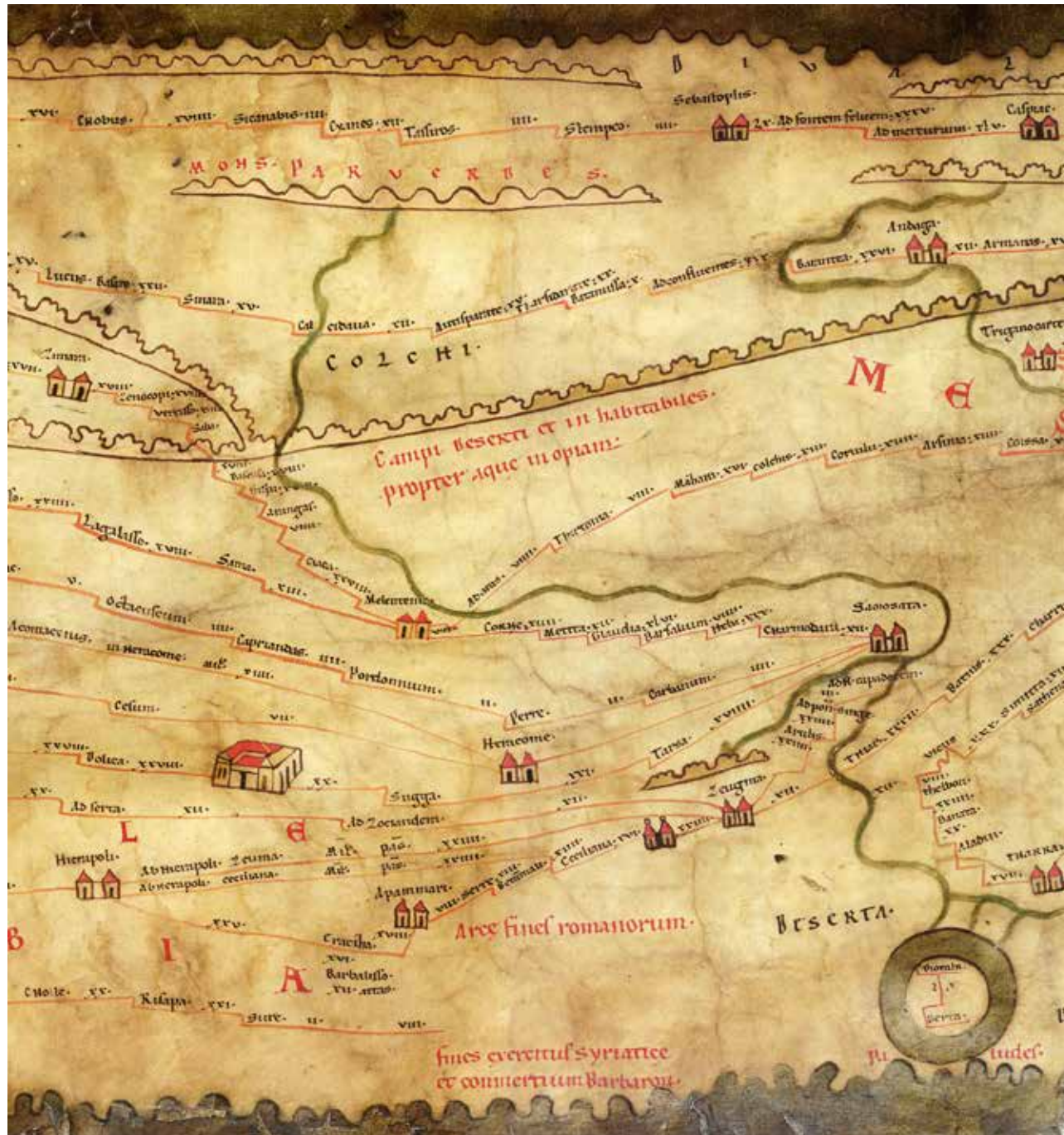


Fig. 3 - Relief from Rome, depicting the Roman Empire surrounded by its frontiers (Flügel, Meyr, Eingartner 2017, Fig. 4).

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## Zusammenfassung

Den Römern ging es nicht darum, eine Grenze zu schaffen, sondern mit ihren militärischen Einrichtungen ihr Reich klar zu begrenzen. Der Ansatz von drinnen versus draußen ergibt sich aus den physischen Hinterlassenschaften genauso wie aus der schriftlichen und bildlichen Überlieferung. Selbst in der Kartographie, z. B. in der Tabula Peutingeriana, kommt dies klar zum Ausdruck, indem einerseits an fast allen Rändern der Darstellung nichts mehr kommt, außer Wasser, andererseits *areae fines Romanorum* definiert werden.





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# "Gleaming more brilliantly than bronze"<sup>1</sup>: The representative value of military architecture at the limits of the Roman Empire

## ABSTRACT

This paper analyses the impact of military architecture on the Roman viewer taking into account the literary and archaeological evidence. It is clear that architecture is used to represent the power of Rome.

**KEY WORDS:** FRONTIERS OF THE ROMAN EMPIRE (FRE), MILITARY ARCHITECTURE, REPRESENTATION

The physical act of building military architecture, like that building a town, could be, in the words of J. De Laine, as important as the finished fortification itself and was considered to be an important pillar for the development of civilization at the edge of Empire. De Laine's interpretation becomes understandable if the enormous effort of man-power during the construction process of Roman architecture is taken into account<sup>2</sup>, which was "... symbolic of creating a piece

of civilization within the Barbarian wilderness ... The act of building Hadrian's Wall may have been as important as finishing it".<sup>3</sup> The demonstration of military power already during construction is evidenced by an inscription<sup>4</sup>, set up in AD 222 in Bu Njem (Libya), stressing "the immense labour by vigorous young soldiers", who, "notwithstanding bad weather conditions" brought the stone for the fort gate from far away and built the fort gate in *opus quadratum*, a masonry tech-

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<sup>1</sup>Aelius Aristides, Orationes 26,83.

<sup>2</sup>Bonetto and Peviato (2018, 325 Tab. 14.2) calculate 21.318 man-days for the construction of the Republican city walls at Aquileia (Italy). Additionally, the quarrying and transport from the quarries to over a distance of 50 km to the construction site and the tile production for the walls must be taken into account: These activities have been estimated with 147.700 man/days. The activities connected with provision of building materials therefore took seven times more the actual constructing process, which could be realized in only 2 to 3 years with 300 to 400 workers (Bonetto / Peviato 2018, 326–327 Tab. 14.3).

<sup>3</sup>De Laine 2002, 220.

<sup>4</sup>EDH 051092; R. Rebuffat, AE 1995, 1641; Adams 1999; Flügel *et al.* 2015, 395–396; 404–406 (with German translation).



nique, which had been a criterium for military strength and political power since the times of Homer<sup>5</sup>: Erik Graafstal demonstrated that the carefully selected use of rusticated gate masonry on Hadrian's wall was a purposeful exaggeration to enhance the monumental appearance<sup>6</sup>. The same comes true for the Mainz legionary fortress, where under the Flavians a massive stone wall substituted the Augustan-Tiberian timber-and-earth fortification's walls<sup>7</sup>. The monumentality of Roman military architecture was a mixture of various categories defined by Mark Driessen<sup>8</sup>, comprising "monumentality of Eternal glory, community and political monumentality".

Military architecture, in the eyes of the Romans, primarily had a representative value with the clear psychological goal to impress Romans and their enemies when approaching the Empire from outside, or to quote the Bu Njem inscription again: "Like a gem in a goldring, the fort is decorated by the gate". The same aspect of impressive military architecture in the landscape is also stated in an inscription<sup>9</sup> on a votive altar from a small sanctuary in the *scamnum tribunorum* at Regensburg (Fig. 1), where the *tribunus* Marcus Aemilius describes the "looming towers" of the legionary fortress when returning from a journey into his home town *Ateste-Este* near Padova in Northern Italy ("*rebitens turrigeras ad arces*")<sup>10</sup>. The contemporary Bu Njem inscription stresses this impressive height of the towers as well

("excelsae turres quarter divisae").

If Roman military commissioned *fibulae* in form of fort gates<sup>11</sup> (Fig. 2) or belt buckles with gates (Fig. 3)<sup>12</sup>, the motivation for these personalized objects may have lain in the aforesaid impressive aspect of the depicted buildings as well as in possible personal connections to the selected motive: In the case of the decorative belt buckle of Raszgrad in Bulgaria the *beneficiarius*-lance gives a clear hint to the assigned task of the legionary wearing it<sup>13</sup> and what was important in the perception of the gate in the eyes of the bearer of this sumptuous belt-buckle. The U-shaped protruding towers with four storeys and cone-type-roof represent the late second and third-century state of the art of defensive and representative gate architecture, as shown on Roman provincial coins from *Hadrianopolis*<sup>14</sup> and *Prusias ad Hypium* in the province of *Bithynia*<sup>15</sup> or evidenced by the *Porta Nigra* in Trier and the *Porta Praetoria* at Regensburg<sup>16</sup>.

However, the Roman view on Frontiers from inside the Empire was double-edged: Many inhabitants of the Empires, in the words of Aelius Aristides writing in A.D. 155, did not even "... know where their garrisons are based"<sup>17</sup> and if they did, they admired the "... walls round the Empire ... as far away as possible around the Empire ... worth seeing for those living inside the ring"<sup>18</sup>, as shown on a Severan relief with

<sup>5</sup>Cf. Aelius Aristides, *Orationes* 26,83 (cited in the title of this paper): "(a circuit of walls) ... , as Homer says of the palace wall 'fitted close and accurately with stones, and boundless in size and gleaming more brilliantly than bronze' But the ring, much greater and more impressive, in every way altogether unbreachable and indestructible, outshines them all..." (cited after Breeze 2011, 20).

<sup>6</sup>Cf. Graafstal 2020, 113; personal communication Erik Graafstal, Nijmegen.

<sup>7</sup>For the substitution in stone of previous walls cf. Burger-Völlmecke 2018 with a typology of building techniques used for substituting walls

<sup>8</sup>M. Driessen, Paper delivered at the Roman Archaeology Conference, Edinburgh 2018.

<sup>9</sup>EDH 050375/AE 1996, 1185.

<sup>10</sup>Dietz 1999; Dietz, Fischer 2018, 144–145 Abb. 111 a/b.

<sup>11</sup>Flügel 2007; Flügel, Obmann 2009; Flügel, Obmann 2013b; Flügel *et al.* 2015.

<sup>12</sup>Fischer 2018.

<sup>13</sup>Fischer 2018, 847–848 Abb. 8.

<sup>14</sup>Price, Trell 1977, 224 Abb. 504; Gordianus III

<sup>15</sup>Price, Trell 1977, 224 Abb. 505; Gallienus.

<sup>16</sup>See the new reconstruction of the Regensburg *porta praetoria*: Dietz, Fischer 2018.

<sup>17</sup>Aelius Aristides, *Orationes* 26,67. However, it must be considered that Aelius Aristides was writing from the perspective of an inhabitant of *Asia Minor* as a *provincia inermis*, where less than 1 % of the total inhabitants were Roman soldiers. The picture does not change significantly, however, when taking into account the estimated total number of 400.000 soldiers for the whole Empire: Only 5 to 7,5 % of all inhabitants of the Imperium Romanum belonged to the army (Speidel 2009, 475), which was therefore barely visible in the daily life of the provinces, as emphasized by Aelius Aristides.

<sup>18</sup>Aelius Aristides, *Orationes* 26,80.

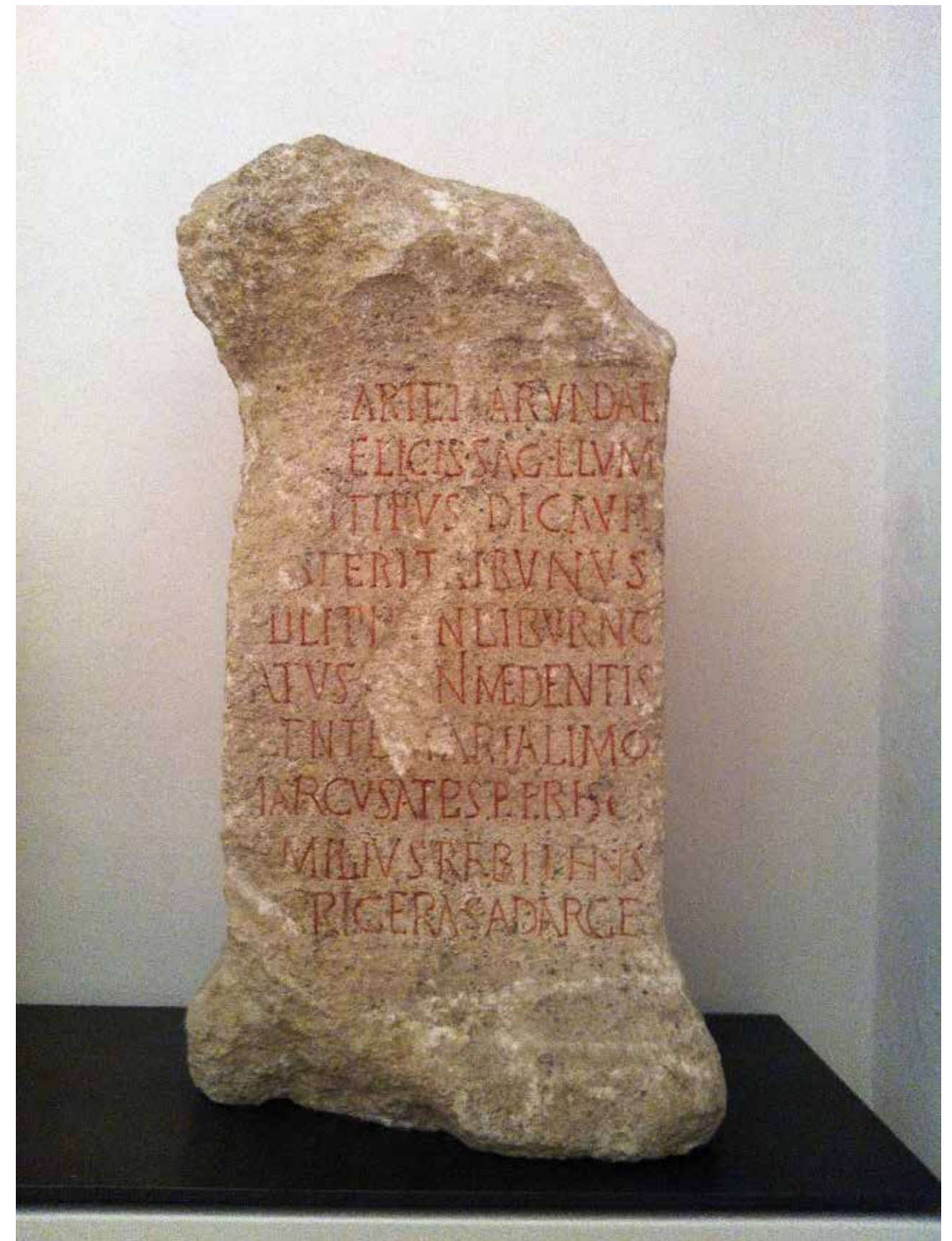


Fig. 1 - Regensburg, Votive altar of Marcus Aemilius describing the legionary fortress in the last two lines. Regensburg, Historisches Museum, Inv.No. Lap. 255 (photo: Christof Flügel).





Fig. 2 - Moosburg a. d. Isar-Pfrombach (Bavaria). Gate fibula (photo: Bavarian State Conservation Office).



Fig. 3.

Rasgrad (Bulgaria). Belt-Buckle with gate house (Photo Ortolf Harl; courtesy of Thomas Fischer).

the depiction of the Frontiers of the Empire from the city of Rome<sup>19</sup> (Fig. 4). The same group of addressees inside the Roman territory is reflected in the range of

motifs on the Antonine Wall distance slabs, showing the military achievements of the Roman army and therefore primarily intended for viewers inside the

<sup>19</sup>Meyr, Flügel, Eingartner 2017; Flügel, Meyr 2019.



Fig. 4 - Rome. Marble relief block (length 129 cm), found within the area of the *Porticus Octaviae*. Rome, Museo Centrale Montemartini, Inv.No. TM 2172 (photo: Christof Flügel and Hak-Design Rottweil).

Empire<sup>20</sup> with a clear message "We are back in action". The architectural achievement of the army resulted in the "*rigor valli*", the dead-straight course of linear fortifications in a rough landscape, which can be archaeologically traced in several parts of the Empire, like on the Fuchsberg at Zandt near Ingolstadt (Bavaria), where the Raetian Limes surmounted a difference of 80 meters in altitude without taking into account the local geomorphology or at the 80 km of the Upper German Limes between Welzheim and Walldürn (Baden-Württemberg)<sup>21</sup>. This propagandistic aspect of "taming the nature" was immortalized in Roman souvenir objects like the Ilam Pan<sup>22</sup>: The word "*rigor*" on the Ilam Pan is almost exclusively used in inscriptions from all over the Empire in connection with land-surveying (*limitatio*)<sup>23</sup> and therefore clearly emphasizes the achieved efforts of delimitating the course of the *vallum* in the western sector. Whereas the construction of the straight

course of the frontier was deliberately planned by the military engineers, the visibility of frontiers in the local landscape can partly be considered a "side-effect" of the construction process: For example, the provisioning of building material for the wooden palisade of the German Limes in its earliest phase required a 7 to 16 km-zone in front of the linear barrier<sup>24</sup>, which must have resulted in a good perception of the frontier from outside the Empire at least immediately after its construction. Where the course of the linear barrier followed eminent topographic features, like on the stretch of Hadrian's Wall in the Central Sector, the statement of political and community monumentality to put a symbolic barrier between the uncontrolled wilderness and the Roman civilization is self-evident: "Possessing the best parts of the earth and the sea the Romans have, on the whole, aimed to preserve the Empire by

<sup>20</sup>Breeze, Ferris 2016.

<sup>21</sup>Zandt: Koch *et al.* 2016; Welzheim, Walldürn: Kemkes *et al.* 2002, 173 Fig. 199.

<sup>22</sup>Breeze 2012, 3–4 fig. 1.3 (Ilam Pan) = EDH 052049 with misspelling „*rigore vali*“ instead of „*rigore valli*“ in the inscription.

<sup>23</sup>[https://edh-www.adw.uni-heidelberg.de/inschrift/suche?hd\\_nr=&land=&fo\\_antik=&fo\\_modern\\_fundstelle=&literatur=&dat\\_jahr\\_a=&dat\\_jahr\\_e=&hist\\_periode=&atext1=rigor&bool=AND&atext2=&sort=hd\\_nr&anzahl=20](https://edh-www.adw.uni-heidelberg.de/inschrift/suche?hd_nr=&land=&fo_antik=&fo_modern_fundstelle=&literatur=&dat_jahr_a=&dat_jahr_e=&hist_periode=&atext1=rigor&bool=AND&atext2=&sort=hd_nr&anzahl=20) (accessed June 7, 2019). In these inscriptions "*rigor*" is often used in the standard wording "*rigore recto*" (in various abbreviations), an *ablativus absolutus* translating as "after delimiting the course" of territorial boundaries (often referring to setting up *cippi*). As a technical term "*rigor*" describes "whatever is seen to stretch straight between two points", as defined by the Roman land-surveyor Balbus (*Balbi ad Celsum, expositio et ratio omnium formarum* III,4; cited after Tomlin, Hassall 2004, 35; cf. Tomlin 2018, 10). For detailed discussion of the Ilam Pan and the expression "*rigor*" see Flügel, Breeze 2021; Breeze, Flügel 2022; Breeze, Graafstal, Flügel 2022.

<sup>24</sup>Flügel 2020.





Fig. 5 - Celeusum-Pförring (Bavaria). Steel Visualization (2013) of the *porta principalis dextra* seen from the Vicus. Note the higher ground of the auxiliary fort in relation to the vicus area below (photo: Christof Flügel).

the exercise of prudence, rather to extend their sway over profitless tribes of Barbarians”<sup>25</sup>.

The role of topography in enhancing the monumental aspect of Roman military architecture was also stressed by Pseudo-Hyginus (de mun. castr. 56) recommending for the construction of camps a “... site which rises gently above the plain. On a distinctive site the *porta decumana* is set at the highest point.” Mauricios in his early-Byzantine Strategikon explicitly emphasizes that “... camps situated on high ground with a broad front will look more impressive”. The position of the *porta decumana* at the highest point for only representative purposes sometimes led to curious effects, namely fort gates without the function of pathways, which led directly into a precipice or a river valley below the fort,

like in Hardknott Castle or Eining. The height of fort gates, which can be reconstructed to a height of more than 16 meters also in auxiliary forts, in combination with topography, would have added a further dimension in order to impress both Romans and their enemies. Colour or decorative architectural elements, like specially shaped (rhombic or cubiform) tiles used to ornate the façade like in Pförring<sup>26</sup>, may have played a further role in planting a “symbol of civilization” in an untamed nature. In Gheriat el-Garbeia (Libya) the white façade of the fort walls in the beige-brownish desert accentuated the “alien character” of this military installation and its visibility at the edge of Empire<sup>27</sup>. Early Medieval Slavic toponyms in locations with Roman forts on the frontier in the provinces of *Moesia* and *Dacia*, like Belgrade, legionary fortress

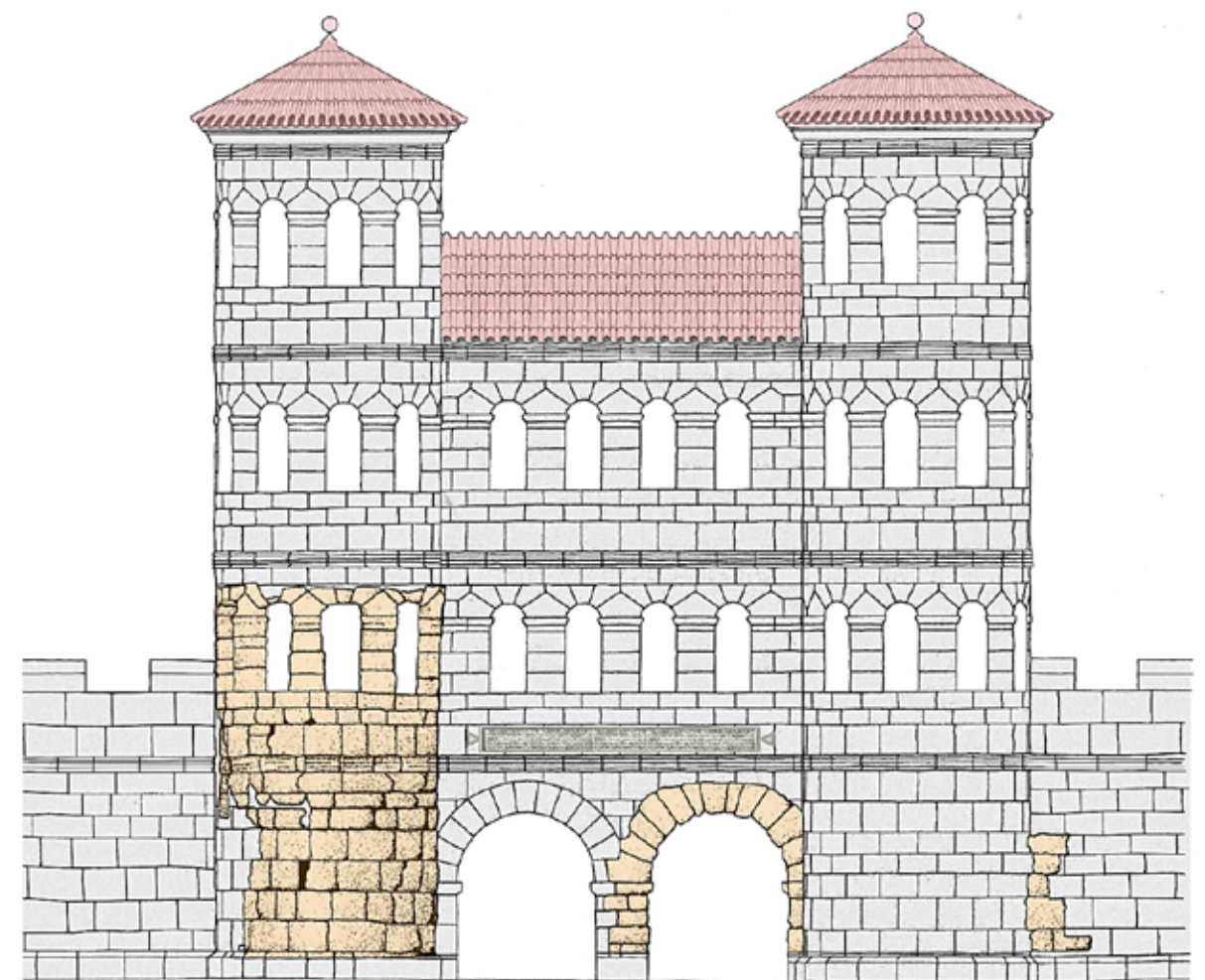


Fig. 6 - Regensburg (Bavaria), Reconstruction (2018) of the *porta praetoria* (courtesy of Thomas Fischer).

of *Singidunum*, Alba Iulia (named *Bălgrad* in the 6<sup>th</sup> century), legionary fortress of *Apulum* or Moigrad-*Porolissum* enhance the exterior aspect of the walls still visible in post-Roman times: All three toponyms can be translated as “white fortress”<sup>28</sup>.

To modern eyes the exterior view of a Roman fort with relatively low walls with only 6 metres height (as evidenced for example at the Regensburg legionary fortress<sup>29</sup>) in contrast to high-looming towers with

four storeys (*excelsae turres quarter divisae*) and flanking towers of the fort gates with 16 meters in auxiliary forts of the Northwestern provinces<sup>30</sup> (Fig. 5) or even 21 meters in legionary fortresses<sup>31</sup> (Fig. 6) may appear unusual. But as a political statement of “Rome, ruler of the world”, as described in a Trajanic graffito from Ephesos<sup>32</sup>, the fortified frontiers communicated impressive military strength as well as the temporary limits of the “*imperium sine fine*”, which, however, comprised the *whole orbis terrarum*, according to

<sup>25</sup>Appian, praef. 7.

<sup>26</sup>Schafitzl 2013, 38–40 cat.no. 20–31.

<sup>27</sup>Mackensen 2013, 101.

<sup>28</sup>Personal communication George Cupcea, Cluj.

<sup>29</sup>Aumüller 2013; Dietz, Fischer 2018, 142 Abb. 110.

<sup>30</sup>Flügel, Obmann 2013b (Pförring); Bloier 2018 (Passau-Innstadt).

<sup>31</sup>Dietz, Fischer 2018, 141 Abb. 107 (Regensburg).

<sup>32</sup><https://www.oecaw.ac.at/oecaw/forschung/epigrafik/ephesos-inschriften/> (accessed June 7, 2019).



State philosophy, as expressed in a Late-antique *Panegyrikon* with the words “*ipsa gentium domina Roma*”<sup>33</sup>. The fortified Frontiers of the Empire communicated Rome’s military and political identity to the outside world<sup>34</sup> and at the same time served as a symbol to intimidate the enemy<sup>35</sup>.

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<sup>34</sup>Thomas 2007, 109.

<sup>35</sup>Breeze 2018, 4; Driessen 2005.



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# LIMES XXIII

## Session 3

### Roman Roads

### Long Way to Travel...



## INTRODUCTION

Session organisers / Chairpersons:

Vladimir P. Petrović, Senior Research Associate, Institute for Balkan Studies of SASA

Francis Tassaux, Professor emeritus, Ausonius Institute of the University Bordeaux Montaigne

**R**oads and Routes, Stations, Ancient sources, Remains, Fluvial Transportation...

The Roman roads constructed across the territory of Roman Empire exerted an enormous influence on the development of the provinces. Namely, the development of the significant and complex system of ancient roads went through several phases. In the pre-Roman period the oldest roads were preconditioned by the landscape and the needs of the people to travel and trade goods. During the Roman conquests, roads had a prevailing military character. Led by the desire to extend the borders of the Empire to the Danube, in order to consolidate their power and rule on the conquered territories, to prepare the further conquests, to supply the army and population by various goods and to exploit natural resources, Romans built the main roads with different type of stations, recorded in the antique itineraries and inscriptions. Those roads were very often constructed along the paths of the pre-Roman roads. After the establishment of Roman state rule, the road system is used predominantly for the reasons of trade development, travel and postal system (vehiculatio). The various aspects of Roman road network include the main and secondary terrestrial communication lines, but also the fluvial transport, especially on the main river courses such as Danube or Rhine.

The study on Roman communication lines is based on the written sources, data from itineraries, travel records and results of archaeological excavations. Regarding the research of Roman road network and stations, as the ancient itineraries are frequently not completely reliable, the contemporary archaeological interpretations are applied. Apart from itinerary communications the directions and characteristics of local communications, that used to connect significant areas with main roads, are also very important.





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# L'intégration du réseau routier et fluvial dans l'atlas numérisé de l'*Illyricum* (IllyrAtlas)\*

## ABSTRACT

The Illyricum Digital Atlas, sets out this year, as an extension of AdriAtlas, the Antique Adriatic Digital Atlas. Like the latter, it will be made of a database connected to a geo-portal (WebGIS). Its goal is to cover the space between the Greek world and the Danube river, corresponding to the territories and the provinces of Dalmatia, Pannonia and Moesia Superior, from the II century BC and the Late Antiquity. It takes into account all the places named by the antique historical sources as well as all the sites having a certain importance under the historical and archaeological point of view. For example, beyond the set of the cities, it will include all forms of settlement of which we have a plan or a part of the plan. Every site will also have its own detailed file with images and bibliography. IllyrAtlas thus is, at once, an atlas, in the classical sense of the term, and an encyclopedia intended for everyone, published online under the open-access policy.

Within the database, together with the Map of the Sites, there will also be a Map of the Communication Routes, connected too to the geo-portal. This GIS will be much more complex to be compiled than the sites' one. If drawing the road network on a 1:500.000 or 1:1.000.000 map does not pose a problem (even if many paths remain uncertain), the question is much more delicate on a multi-scale map. Since the user will be allowed to zoom in up to big and very big scales, this can lead to aberrant situations where the roads are drawn in acrobatic positions or cannot in any case be topographically acceptable.

It is therefore important to arrive to the precise geo-location of each road, that implies a very difficult work, that involves at once all the modern tools of survey (particularly Lidar and analysis of multi-spectral images) and the field data, both under constant updates, without leaving aside, the ancient written sources, literary and epigraphic and the medieval, modern and contemporary documentation.

Moreover, it is important to represent the certitude level of a path or of a segment of the road, as well as its hierarchical level (imperial road, secondary road, local road, ...). Finally, we cannot forget the mapping of the navigable rivers, this too being complex enough, both on the scientific and on the technic plan.

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\*Cet article présente le projet d'une mise en ligne du réseau de communications routier et fluvial des territoires de Dalmatie, Pannonies et Mésie supérieure du IIe s. a.C. au VIe s. p.C., au sein d'IllyrAtlas, Atlas informatisé de l'Illyricum.



To tackle these questions, a research group composed by the database expert Nathalie Prévôt, the geomatitician Clément Coutelier and by Sara Zanni, post-doc Marie Skłodowska-Curie researcher, has been gathered at the Ausonius Institute.

## KEY WORDS:

### I. IllyrAtlas

Le projet IllyrAtlas – Atlas informatisé de l'*Illyricum* – a démarré en 2018. Sa définition géographique correspond à celle de l'Illyrie donnée par Strabon au début de l'Empire (7.1.1)<sup>1</sup> c'est-à-dire l'espace situé entre le monde grec ou hellénophone et le Danube : il comprend ainsi, pour le Haut-Empire, les provinces de Dalmatie, de Pannonie et une partie de la Mésie (future Mésie Supérieure), mais aussi celles de Norique et de Rhétie, caractérisées par un peuplement celtique et illyrien. Vu l'ampleur des territoires concernés, nous avons choisi de couvrir, dans un premier temps, les territoires de six pays actuels, soit, d'ouest en est, la Slovénie, la Croatie, la Bosnie-et-Herzégovine, la Hongrie, le Monténégro et la Serbie, en prévoyant une extension ultérieure aux pays voisins. Ses limites chronologiques vont du II<sup>e</sup> s. a.C. au VI<sup>e</sup> s. p.C.

*IllyrAtlas* le prolongement vers le Danube d'un premier atlas numérisé de l'Adriatique antique, *AdriAtlas*, couvrant déjà, par définition, la Dalmatie littorale et une partie de la Bosnie-et-Herzégovine et du Monténégro. Sa structure est identique et se compose d'une base de données et d'un géoAtlas au sein d'un SIG. La base de données multilingue PostgreSQL, initialement développée en java par Giovanni Zorzetti (Trieste), a été réécrite en Php et mise à jour par Nathalie Prévôt, de l'Institut Ausonius. Elle relie une table "Sites" à trois autres tables autonomes (Images, Websites et Bibliographie).

A chaque site sont attachées une fiche-mère et des fiches-filles par période. La fiche-mère comporte douze rubriques : état civil antique et actuel avec coordonnées géographiques, description, histoire des recherches,

sources antiques (littéraires et épigraphiques), bibliographie, iconographie, webographie, vulnérabilité, mise en valeur touristique. Les sous-fiches par époque sont organisées de la même manière mais comportent en plus la rubrique "Analyses" : il s'agit de l'étude de la documentation épigraphique et archéologique par thèmes et valeurs, à l'aide de mots-clés choisis dans des menus déroulants, afin de permettre des recherches thématiques et/ou chronologiques.

Cette base de données est liée à un Géoportail grâce aux coordonnées géographiques qui entraînent automatiquement la mise en place des sites sur la carte. Celui-ci se compose d'une série de couches (layers) permettant de superposer telle ou telle information et dispose des outils ordinaires de l'analyse spatiale.

Les deux Atlas numérisés sont fondés sur des collaborations internationales, coordonnées par une équipe d'Ausonius : le volet informatique et géomatique est suivi par Nathalie Prévôt, spécialiste des bases de données, et Clément Coutelier, ingénieur de recherche en géomatique, au sein du pôle AusoHNum ; le volet historique et archéologique est coordonné par Francis Tassaux et Yolande Marion. Les portails sont hébergés par le TGIR de Lyon-Villeurbanne du CNRS français et Gérard Foliot en assure la maintenance.

Tout rédacteur de notice de site peut la mettre à jour à chaque fois qu'il le juge nécessaire.

Actuellement les Bases de données d'AdriAtlas et d'IllyrAtlas ne concernent que des notices de sites ; la création de quatre autres tables est prévue : la géographie physique, les peuples et ethnies, les divisions

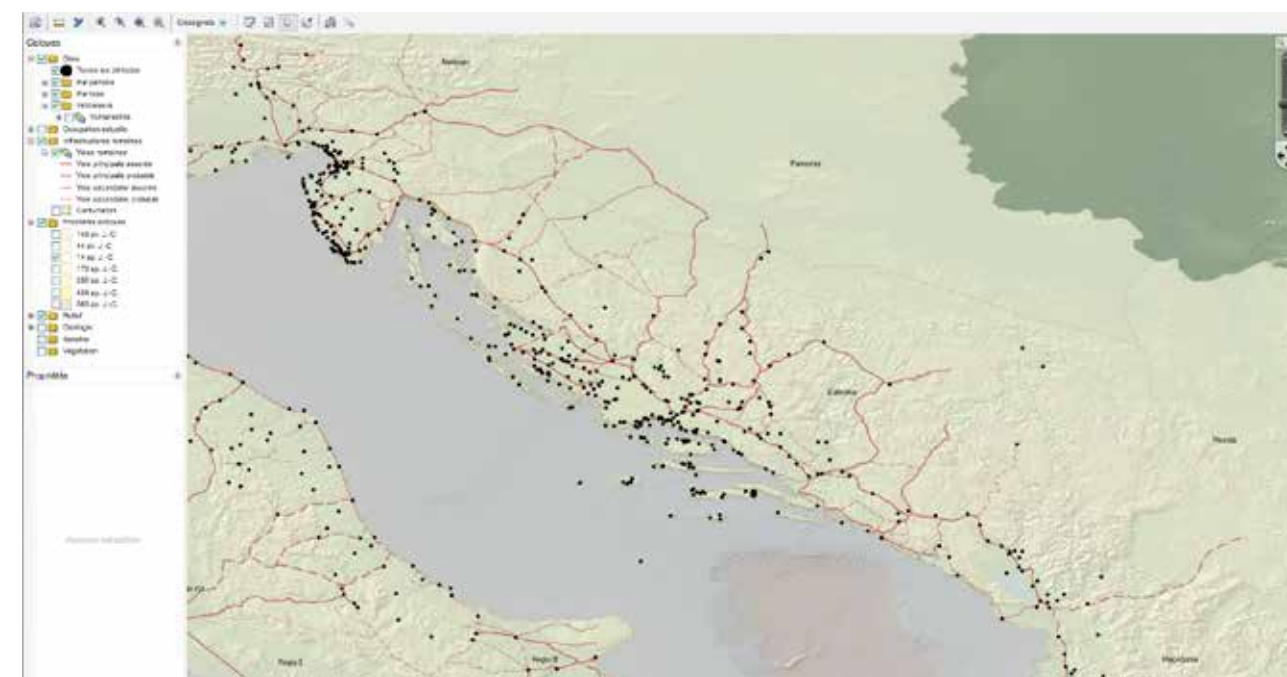


Fig. 1 - Capture d'écran du géoportail d'IllyrAtlas et AdriAtlas [http://adriaticummare.org/Map\\_AdriAtlas/](http://adriaticummare.org/Map_AdriAtlas/), 8 novembre 2019

politiques et administratives et les infrastructures, en commençant par le réseau routier (Figs. 1 and 2).

### II. Les routes : un héritage, de nouveaux outils et de nouveaux problèmes

II.1. Le réseau de communication antique que nous souhaitons mettre en ligne est d'abord l'héritier des grands atlas historiques et de tout un ensemble de travaux de synthèse ou d'études plus restreintes. La viographie du monde romain repose sur une méthodologie déjà bien établie dès la fin du XIX<sup>e</sup> s., fondée d'abord sur les documents écrits antiques : les milliaires et les Itinéraires routiers – *Table de Peutinger*<sup>2</sup>, *Itinéraire d'Antonin*<sup>3</sup> et *Itinéraire de Bordeaux à Jérusalem*<sup>4</sup>. Dès cette époque, une cartographie des routes pose la

question des incertitudes comme le font les Kiepert, dans leurs admirables cartes et dans celles établies pour le *CIL*<sup>5</sup> (Fig. 3). Les atlas classiques de la deuxième moitié du XX<sup>e</sup> s. reprennent à la fois les grands tracés et les principes de leurs prédécesseurs (hiérarchie et degré d'incertitude), tels le *Grosser Historischer Weltatlas*<sup>6</sup>, le *Westermann*<sup>7</sup> ou le Cornell & Matthews<sup>8</sup> (Fig. 4), suivis au début du XXI<sup>e</sup> s. par le *Barrington Atlas*<sup>9</sup> et le *Brill's Atlas*<sup>10</sup>. De leur côté, trois cartes de la *Tabula Imperii Romani* (TIR) couvrent entre 1961 et 1976 la grande majorité de l'espace concerné<sup>11</sup>.

Parmi les grandes synthèses, citons un essai de hiérarchie poussée à l'extrême avec L. Bosio<sup>12</sup>, qui souligne le rôle majeur de l'axe Aquilée-Danube. Mais les chercheurs ont utilisé surtout les cartes hors texte

<sup>2</sup>Miller 1916.

<sup>3</sup>Cuntz 1929.

<sup>4</sup>Cuntz 1929.

<sup>5</sup>Kiepert 1894-1914 reprise dans les cartes hors-texte du *CIL III. 1*; la légende précise : « viae publicae certae et exploratae, certae sed nondum exploratae, incertae »

<sup>6</sup>Bengston, Milojević 1954.

<sup>7</sup>Stier, Kirsten 1956.

<sup>8</sup>Cornell, Matthews 1982.

<sup>9</sup>Talbert 2000.

<sup>10</sup>Wittke, Olshausen, Szydlak 2010.

<sup>11</sup>TIR L33 1962, L34 1968 et K44 1976.

<sup>12</sup>Bosio 1990, carte hors texte.

<sup>1</sup>Marion 2006, 31–33.



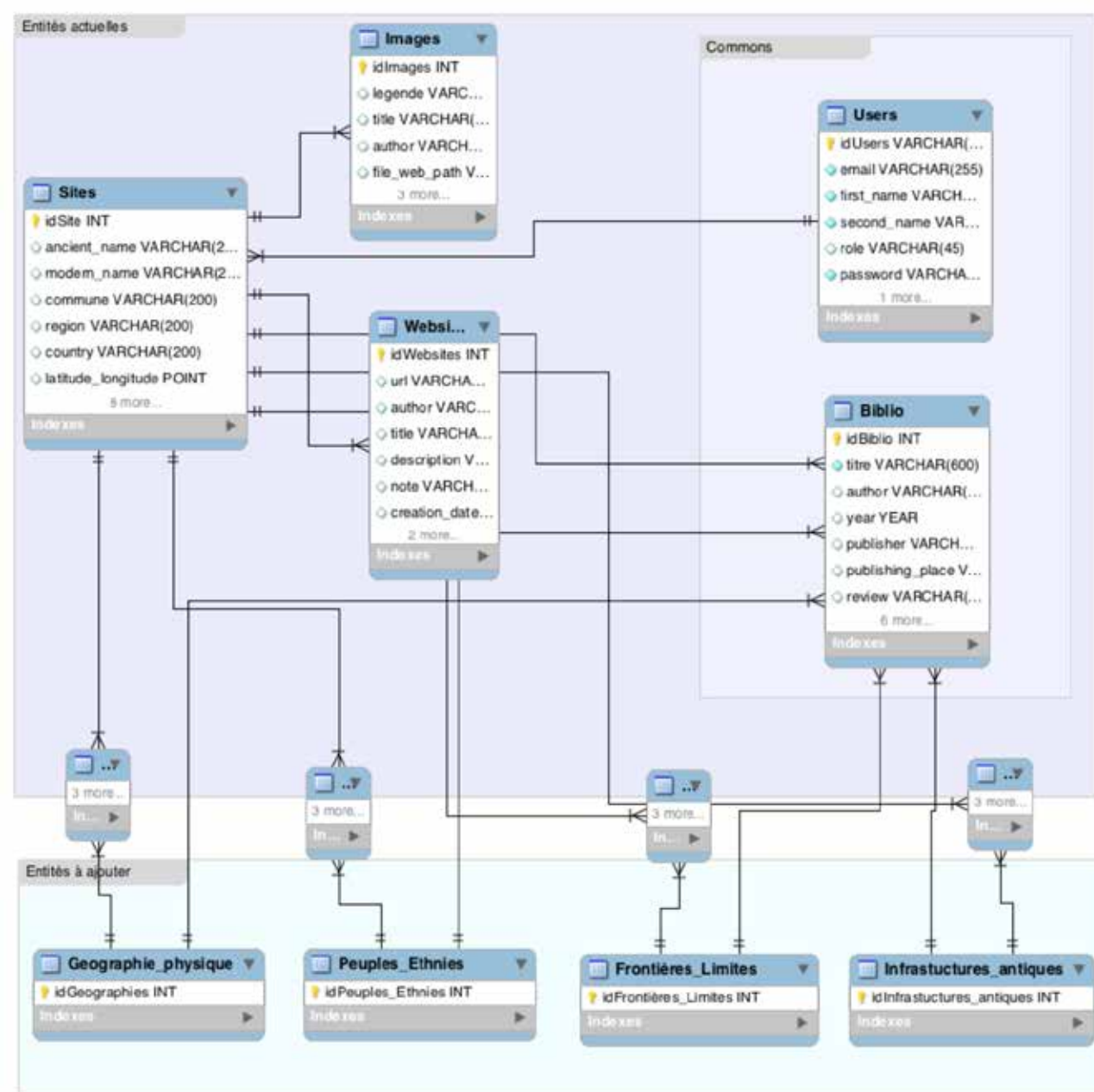


Fig. 2 - Le Modèle Conceptuel de Données (MCD) d'IllyrAtlas, N. Prévôt

de A. Móscy<sup>13</sup> sur la Pannonie et la Mésie supérieure. Enfin, on citera les cartes de J. Šašel<sup>14</sup>, de M. Šašel Kos et P. Scherrer<sup>15</sup> et de Z. Visy<sup>16</sup> (Fig. 5) auxquelles

il faut ajouter la toute récente étude de V. Petrović sur la Serbie<sup>17</sup>, précédée par les travaux déjà anciens de I.



Fig. 3 - Raetia, Noricum et Pannonia, carte hors-texte de Kiepert, CIL III.)



Fig. 4 - Le Danube, carte de Cornell &amp; Matthews 1984, p. 140-141.

<sup>13</sup>Móscy 1974.

<sup>14</sup>Šašel 1975.

<sup>15</sup>Šašel Kos et Scherrer 2003.

<sup>16</sup>Visy 2003 ; sur la partie hongroise de la Pannonie, voir aussi Láng 2005, Tóth 2006 ; sur la partie croate, voir I. Vukmanić dans le présent volume ; voir aussi le projet en cours *Corpus Limitum Imperii Romani* : Visy 2012.

<sup>17</sup>Petrović 2019.





Fig. 5 - Le limes Pannonien, Carte de Visy 2003.

Bojanovski pour l'ex-Yougoslavie<sup>18</sup>. Ž. Miletic s'est intéressé quant à lui aux grands axes de la Dalmatie<sup>19</sup>. La documentation épigraphique a été éditée dans les *Römischen Inschriften Ungarns (RIU)* et dans les *Inscriptions de la Mésie supérieure (IMS)*<sup>20</sup>, tandis que les milliaires du musée de Ljubljana<sup>21</sup> et du territoire de

*Neviodunum*<sup>22</sup> ont été l'objet de publications plus récentes. Ainsi, grâce à ses 22 milliaires, Milan Lovenjak montre que le grand axe impérial d'*Emona* à *Sirmium* n'a emprunté la vallée de la Save qu'à partir de *Neviodunum*, privilégiant un tracé par la vallée de la Krka (*Corcoras*) jusqu'à sa confluence avec la Save<sup>23</sup>. Enfin,

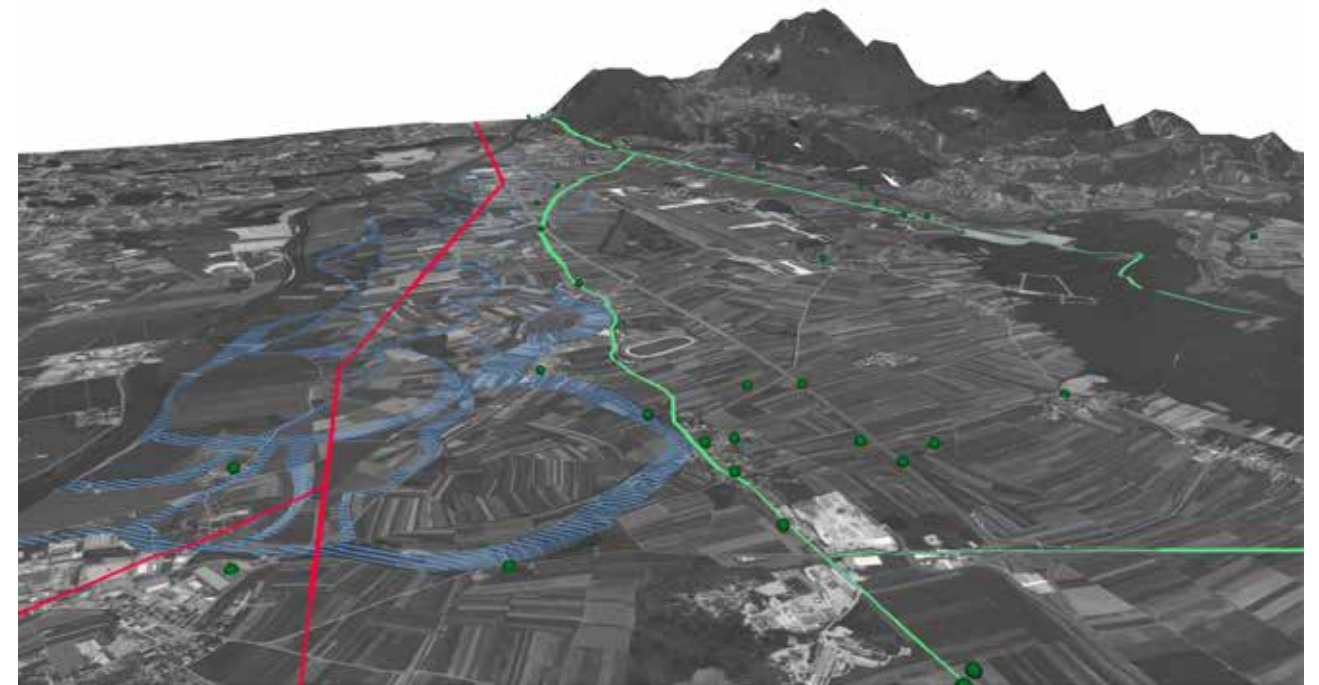


Fig. 6 - La route Aquileia-Singidunum à Neviodunum, Photomontage de S. Zanni, dans Arnaud 2018, p. 56. En rouge : le tracé du DARMC ; en vert : les tracés proposés par S. Zanni ; en bleu : méandres et paléoméandres de la Save.

Anne Kolb a édité le volume XVII/4, 2 du *Corpus inscriptionum Latinarum (CIL)* consacré à la Dalmatie, qui compte 354 milliaires<sup>24</sup>.

Une révolution dans la publication des voies est advenue avec la mise en ligne d'atlas classiques, comme le *Barrington Atlas of Greek and Roman World* dont les informations ont servi de base au *Digital Atlas of Roman and Medieval Civilizations (DARMC)*<sup>25</sup>, à *PLEIADES*<sup>26</sup>, ou encore au *Digital Atlas of Roman Empire (DARE)*<sup>27</sup>.

On dispose désormais pour la connaissance du réseau routier d'instruments particulièrement commodes, supprimant à la fois la contrainte du découpage par

cartes et celles des petites échelles. Toutefois, le fait de pouvoir utiliser une carte multiscalaire engendre un nouveau type de problème, car le réseau routier a été saisi à partir de cartes au 500 000<sup>e</sup>, au 1 000 000<sup>e</sup>, voire au 3 000 000<sup>e</sup> sur des tracés nécessairement schématiques. Dès lors que l'on a la possibilité de zoomer et de descendre à de grandes, voire de très grandes échelles, on se retrouve devant des situations aberrantes, dans lesquelles une voie en ligne droite traverse allègrement les fleuves et marais ou bien se trouve dans des positions acrobatiques sur des flancs de montagnes quasi verticaux (Fig. 6).

<sup>18</sup>Bojanovski 1974 et 1984.

<sup>19</sup>Parmi une riche bibliographie : Miletic 2006 ; voir aussi sa contribution avec Silvia Bekavac dans le présent ouvrage ainsi que celle de Ivo Glavaš.

<sup>20</sup>Cf aussi les *ILJug* = Šašel & Šašel 1963, 1978 et 1986, pour l'ensemble de la Yougoslavie ; Weber 1968-1971 sur les milliaires de la Pannonie autrichienne.

<sup>21</sup>Šašel Kos 1977, 469-482, n° 176-181.

<sup>22</sup>Lovenjak 2003.

<sup>23</sup>Lovenjak 2003, 333-375 et carte p. 334-335.

<sup>24</sup>Kolb 2012 = CIL XVII/4.2.

<sup>25</sup><http://darmc.harvard.edu>.

<sup>26</sup><http://pleiades.stoa.org/> Un article du 5 février 2019 <https://prefixmom.hypotheses.org/324>, *Préfixes*, Carnet de la bibliothèque de la Maison de l'Orient et de la Méditerranée, propose une sélection de ces nouveaux outils (Atlas en ligne, application web interactive de cartographie, Répertoire topographique ...) et en donne les principales clés d'utilisation avec leurs webadresses.

<sup>27</sup><http://dare.ht.lu.se/>



## II.2. Projet en cours de l'intégration du réseau routier dans *IllyrAtlas*

L'expérience acquise par Sara Zanni dans son étude de la voie d'Aquilée à *Singidunum*<sup>28</sup> est à l'origine directe du présent projet. Grâce à sa maîtrise des outils de la télédétection et de la géomatique ainsi que son retour constant au terrain<sup>29</sup>, elle a pu mettre au point une méthodologie de la recherche sur le réseau routier et son insertion dans un SIG, dont nous allons pouvoir bénéficier<sup>30</sup>.

La démarche suivie ici part donc de la carte en géolocalisant toutes les traces matérielles de routes anciennes. Dans un deuxième temps, on géoréférence l'ensemble des données issues de la télédétection (photographies aériennes, images lidar, images satellitaires multispectrales). Ensuite, dans un troisième temps, on répertorie les informations données par les sources écrites antiques : milliaires et autres inscriptions relatives à des routes, données des Itinéraires routiers antiques ainsi que les toponymes et la documentation d'époque médiévale, moderne ou contemporaine, qu'il s'agisse d'archives, de récits ou de cartes et cadastres anciens. Le quatrième temps est toujours celui de la vérification sur le terrain ; seule cette validation permettra d'établir des critères face à la triple incertitude qui touche le réseau routier romain : degré de la fiabilité de la chronologie, du tracé de la route (par tronçons) et de sa place dans la hiérarchie (voie impériale, voie secondaire, desserte locale).

C'est la combinaison des méthodes classiques et des nouveaux outils de la cartographie numérisée et de la télédétection, toujours suivie d'une validation sur le terrain qui permettra de progresser de manière sensible dans notre connaissance du réseau principal et secondaire de cette partie de l'Empire.

## III. La question de la circulation fluviale

Si la connaissance du réseau routier antique bénéficie de près de deux siècles de travaux, il n'en est pas de même de celle des cours d'eau navigables de l'*Illyricum*. L'observation des cartes actuelles souligne immédiatement la difficulté première d'établir le tracé d'une rivière dans le passé : nombreux méandres et bras morts caractérisent de larges sections des vallées fluviales.

En exploitant la cartographie militaire, qui, à partir de la fin du XVIII<sup>e</sup> s., permet d'arriver à une précision de 100 m et parfois de 50, voire même de 10 m, le géographe Gábor Tóth, de l'Université Eötvös Lóránd de Budapest, a mis en valeur les modifications spectaculaires du lit de la Mur, en l'espace de deux siècles<sup>31</sup>. Des travaux de ce type sont encore peu nombreux mais c'est leur multiplication qui permettra d'avancer réellement dans la compréhension du réseau de communication balkano-danubien. De plus, la collaboration entre archéologues, historiens et géographes est pleine de promesses comme le montrent déjà plusieurs publications de Slovénie<sup>32</sup> et de Croatie<sup>33</sup>. La révision de la documentation ancienne et actuelle sur la navigation et le transport fluvial montre en particulier la grande difficulté de circuler sur certains tronçons de la Save. En attendant le développement de ce type de recherches<sup>34</sup>, les fouilles d'épaves, d'aménagements de rive et d'installations portuaires comme celles de *Neviodunum*<sup>35</sup> restent les témoignages les plus sûrs.

## Conclusion

Ces perspectives, dans lesquelles le projet international de Sara Zanni s'inscrit pleinement, constituent un travail de longue haleine, supposant une collaboration entre différents chercheurs, équipes et centres de

recherches ; il implique une mise à jour sur un type de document qui désormais n'est plus figé, mais qui, au contraire, peut s'enrichir régulièrement au fur et à mesure des travaux et découvertes. Grâce aux nouveaux outils mis à notre disposition, nous pourrions peu à peu préciser et corriger notre vision du réseau routier et de ses rapports avec le réseau fluvial de cette partie centrale de l'Empire.

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<sup>29</sup>Zanni 2017 ; Zanni, éd. 2017 ; Zanni, De Rosa, 2019 ; Zanni, S., Lučić, B., De Rosa, A. (2019) et dans la présente publication.

<sup>30</sup>La même méthodologie est appliquée aux routes de l'Aquitaine antique, grâce à une carte participative qu'elle a développée avec le géomaticien Clément Coutelier, cf. Coutelier *et al.* à paraître.

<sup>31</sup>Tóth 2017.

<sup>32</sup>En particulier Turk *et al.* (eds) 2009, Gaspari, Erič (ed.) 2012 ; cf. aussi Gaspari 2017.

<sup>33</sup>Radman, Zubčić 2009, Divić *et al.* 2018 ; Zubčić *et al.* 2018 : travaux de l'équipe franco-croate à Kamensko, sur la Kupa, le *Colapis* de Strabon (4.6.10 ; 7. 5.2) et de Plinie (*NH*, 3.28).

<sup>34</sup>Par exemple Verbić, Berić 1994.

<sup>35</sup>Lovenjak 2003, 98–102 ; Lolić, Wiewegh 2012, 214–216.



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# De l'Adriatique aux Carpates : voies parallèles, chemins alternatifs, déviations routières

## ABSTRACT

Dans l'organisation des territoires, la mise en place de l'infrastructure de transport est une constante indispensable. Celle-ci s'appuie sur les réalités du relief, l'utilisation de chemins anciens, les informations humaines en vue de l'ouverture des voies stratégiques, militaires et commerciales, et leur aménagement. Ainsi, pour supporter et suppléer un axe principal sont réalisées des voies parallèles, des dédoublements qui nécessitent de gros travaux comme le long de la côte Adriatique et dans les Portes de Fer. Le long des vallées sont bâties des voies de pénétration qui, selon les époques, prennent plus ou moins d'importance. Enfin, comme un symbole de l'aboutissement de l'infrastructure nécessaire à la mobilité, on note la création de déviations et de raccourcis.

**MOTS-CLEFS:** BALKANS, RÉSEAU ROUTIÈRE ROMAINE, VOIES PARALLÈLES, CHEMINS ALTERNATIFS, DÉVIATIONS ROUTIÈRES, VOIES DE PÉNÉTRATIONS

Comme des fils de chaîne et de trame d'un métier à tisser, les infrastructures de transport participent de manière essentielle à l'aménagement d'un territoire à organiser.

La poussée romaine vers le nord-est, depuis les côtes de l'Adriatique à travers les Balkans jusqu'au Danube et au-delà, dont la fondation des assises provinciales de la Dalmatie, des Mésie, notamment de la Mésie supé-

rieure, et des Dacies en est la résultante, ne serait pas compréhensible sans la constante de l'aménagement des passages.

Cette activité indispensable s'appuie sur les réalités du relief, l'utilisation de chemins anciens, les informations humaines, en vue de l'ouverture des voies stratégiques, militaires et commerciales, et leur agencement.

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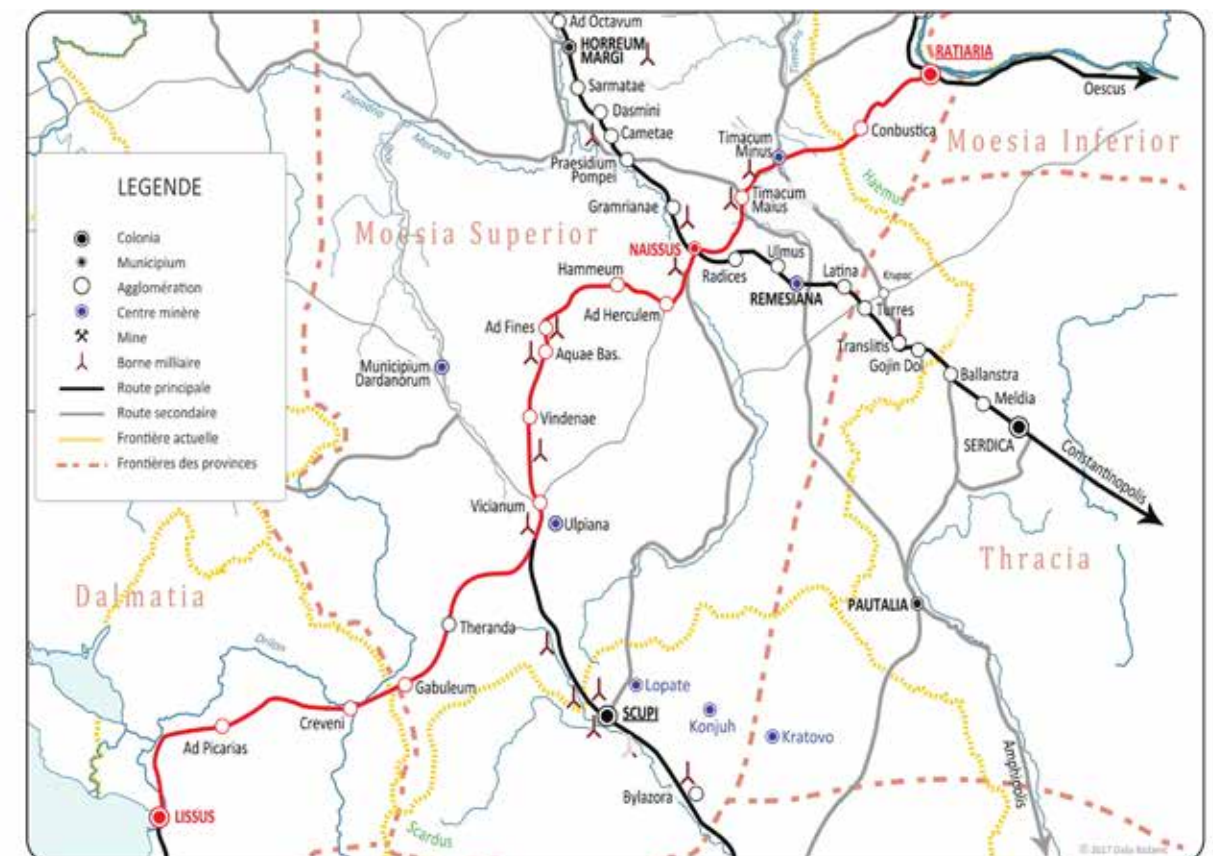
Carte 1 - Carte général du réseau routier romain dans les Balkans

Si le thème général des routes romaines dans la région a été étudié<sup>1</sup>, notre communication se veut un complément d'interprétation concernant quelques secteurs. Le parallélisme des situations provinciales pourrait ainsi indiquer, au-delà du bon sens de l'édification des voies, de l'économie d'effort dans la construction et de l'efficacité, qui s'appuie sur les données géographiques, que la densification du réseau accompagne l'approfondissement de la construction provinciale.

Dans un premier temps, nous aborderons le sujet des voies de pénétration dans les territoires qui, selon les époques, prennent plus ou moins d'importance. Ensuite, il nous a semblé important de discuter les cas des voies parallèles, des dédoublements qui nécessitent des gros travaux et, enfin, les situations des déviations ou des raccourcis, comme une forme d'aboutissement de l'infrastructure nécessaire à la mobilité.

Reprenant la métaphore initiale, pour ourdir un tissu il va de soi que des nœuds solides, dans notre cas des points d'entrée (ports, têtes de pont, ancienne frontière) doivent être établis, permettent le déploiement des voies importantes qui assurent le lien avec le territoire de l'arrière-pays, vers le cœur des nouvelles provinces. (Carte 1)

Pour ce qui est de la communication principale entre l'Adriatique et le Danube, l'artère majeure de communication trans-balkanique est la route Lissus–Naissus–Ratiaria, qui remonte aux premières décennies du premier siècle de notre ère<sup>2</sup>. Il s'agissait en partie d'un raccourci, en particulier la section Vicianum–Lissus, comme nous l'apprend une inscription d'époque d'Hadrien<sup>3</sup> sur la *via Nova* (Viminacium–Naissus–Scupi) et un *compendium* (Vicianum–Lissus). Son rôle pourrait être, d'une part, de permettre à l'armée de se déplacer le plus vite possible entre la côte adriatique



Carte 2 - Carte de la route Lissus–Naissus–Ratiaria

et la frontière du Danube et, d'autre part, de faciliter les conditions de transport des métaux vers Rome. De nombreuses légions utilisèrent la route Lissus–Naissus–Ratiaria à l'époque où Rome consolidait son autorité dans le centre des Balkans, à l'époque de l'établissement de la frontière sur les rives du Danube. Le fait que certaines villes importantes de la Mésie supérieure, telles que Municipium Dardanorum (Sočanica) et Ulpiana (Gračanica), ne soient pas mentionnées parmi les stations sur la route dans des itinéraires témoigne de l'ancienneté de la route. Ces villes ont été érigées apparemment, après la construction de l'axe principal de circulation entre l'Adriatique et le Danube. (Carte 2)

Entre la Dalmatie et la Mésie supérieure, bien qu'il n'existe pas de preuves ni dans les sources historiques ni dans les itinéraires, on suppose qu'à la station de Vicianum, sur la route Lissus–Naissus, se détachait une route secondaire vers Municipium Splonum, l'un des centres administratifs des mines romaines de l'est de

la Dalmatie, et qui débouchait sur le littoral à Narona, Risinum et Scodra<sup>4</sup>. Cette route reliait la partie méridionale de la Mésie supérieure, son district minier méridional de Dardanie, aux ports stratégiques situés le long de la côte adriatique. Le chemin de cette route allait au nord de Vicianum en direction de la montagne Kopaonik, par la vallée de la rivière Ibar. Il traversait la région actuelle de Novi Pazar, puis, plus loin, par Prijepolje, Mileševa, Kolovrat et Pljevlja jusqu'à Municipium Splonum, où la voie romaine se divise en trois ou peut-être plus de branches en direction de la mer Adriatique. Cette voie romaine avait une grande importance dans les activités minières, en particulier dans le transport terrestre des Balkans centraux vers les ports adriatiques les plus proches. Le grand réseau de routes secondaires comme Vicianum–Municipium Splonum–mer Adriatique a été construit principalement comme *viae metallica* lorsque les routes romaines avaient une importance économique dominante<sup>5</sup>. Les hypothèses de l'existence de la route Vicianum–Municipium Splonum–mer Adriatique sont étayées par de nombreuses

<sup>1</sup>Fodorean 2006 ; Madzharov 2009 ; Petrović 2019a.

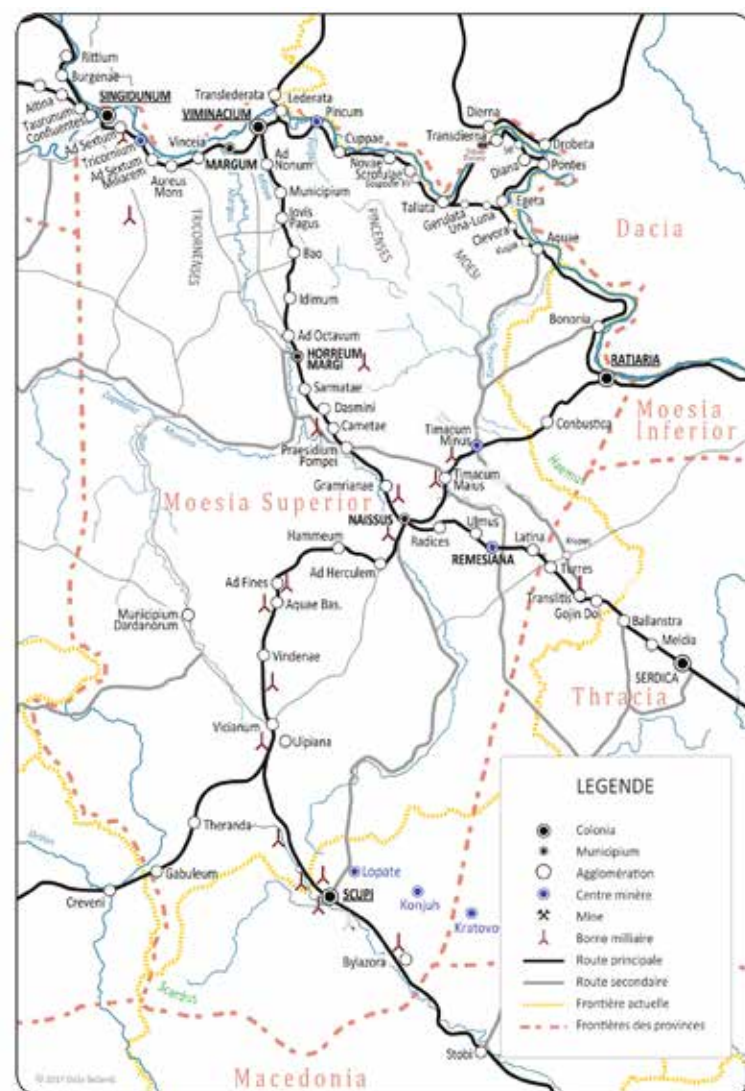
<sup>2</sup>Petrović 2019a, 101–102.

<sup>3</sup>IMS, II, 50 = AE, 1980, 786 = AE, 1984, 792. Dušanić 1996, 48, note 61, proposait de lire à la ligne 7 *Ma[re Hadriaco]* au lieu de *Ma[rgo flumine] in Dardania[m]*. Le *compendium* relierait ainsi plutôt la mer Adriatique que la rivière Morava à la Dardanie.

<sup>4</sup>V. P. Petrović 2019b, 257 et 266.

<sup>5</sup>Petrović 2019b, 266.





Carte 3 - Carte des voies romaines entre la Mésie supérieure et la Dalmatie

découvertes archéologiques et un nombre considérable des bornes miliaries<sup>6</sup>. Au XVII<sup>e</sup> siècle existait encore une route commerciale Dubrovnik–Foča–Pljevlja–Prijeopolje–Novi Pazar (via Ragusa) qui utilisait toujours le tracés des voies romaines<sup>7</sup>. (Carte 3)

Suite aux campagnes de Trajan contre les Daces, le pouvoir de Décébale s'effondra laissant la place aux nouvelles provinces romaines des Dacies. La progression des troupes au nord du Danube a bénéficié d'un côté d'un retour d'expérience dans le domaine de l'information dû aux campagnes précédentes menées par Domitien et de l'autre côté par le renforcement

en parallèle des infrastructures, notamment celles qui permettaient de relier les points les plus importants de passage du fleuve, grâce aux ponts, et les Carpates, puis au-delà en Transylvanie actuelle. (Photos 1 and 2) Des axes pénétrants vers le nord se dessinent en partant de Lederata, Drobeta et Sucidava. Les sites s'y prêtent : espace pour déployer les barques, des pentes accessibles sur les deux rives, des îles au milieu du fleuve<sup>8</sup>. Le plus à l'ouest, on retrouve le chemin le plus court qui relie le Danube à Sarmizegetusa, qui a pour point de départ le franchissement de Lederata–Stara Palanka, puis remonte dans un premier temps la vallée de la rivière Caraș vers Tibiscum (Jupa), par Arcidava



Photo 1 - Le pont Trajan



Photo 2 - Le pont Trajan - les vestiges archéologiques

(Varadia), Centum Putea (Surducule Mare), Berzobis (Berzobia), Aizis (Fîrlug), Caput Bubali (Valeadeni)<sup>9</sup>. En sortant des Portes de Fer, le double site de Pontes et Drobeta, relié entre les deux campagnes par le pont d'Apollodor, permet de se projeter par la difficile route de nord-est vers les Carpates et la vallée de la rivière Jiu prenant appui sur les camps de Putinei, Cătunele, Pinoasa, Bumbești et Vârtope, puis par le pas Vilcan vers Sarmizegetusa<sup>10</sup>. Enfin, le plus à l'est, le passage du fleuve s'effectue entre Oescus et Sucidava, d'où la route remonte la plupart du temps à l'ouest de la rivière Olt depuis la confluence avec le Danube par Romula (Reșca), Acidava (Enoșești), Rusidava (Motivești), Pons Aluti (Ionești Govorei), Buridava (Stolniceni), Castra Traiana (Sâmbotin), Arutela (Bivolari), Praetorium (Copăceni et Racovița), Caput Stenarum (Boița)<sup>11</sup>. Si, durant la période provinciale, le tronçon Lederata–Tibiscum conserve un intérêt stratégique pour la frontière sud-ouest de la Dacie supérieure, les voies qui ont pour point de départ la ville de Drobeta, parfois au gré du fonctionnement du pont, prennent leur essor, notamment vers Dierna et Tibiscum<sup>12</sup>. Sur la frontière orientale de la Dacie inférieure, le tronçon qui remonte la rivière Olt depuis Sucidava, nommé communément *limes alutanus*, se voit flanqué, dédoublé, à maximum une cinquantaine de kilomètres plus à l'est

d'un autre chemin qui relie les fortifications du *limes transalutanus* : Flamânda (Poiana), Putineiu, Băneasa (I-II), Roșiorii de Vede, Valea Urluii, Gresia, Ghioca, Urluieni (I-II), Fâlfani (Izbășești), Săpata de Jos (I-II), Albota, Purcăreni, Câmpulung Muscel (Jidova I-II), Rucăr, pas de Bran<sup>13</sup>. (Carte 4)

Pour ce qui est des dédoublements le long du littoral de l'Adriatique regardons la situation au sud de la province de Dalmatie, dans le Monténégro actuel. À la station Ad Zizium, la route principale de l'Adriatique se sépare en deux. La première tourne vers la mer, vers Epidaurum (Cavtat) et continue le long de la côte à travers Risinium, Buthua et Olcinium (Risan, Budva et Ulcinj) jusqu'à Scodra (Shkodra, en Albanie)<sup>14</sup>. La seconde traversait l'arrière-pays de l'Adriatique et fusionnait avec la route côtière, également à Scodra<sup>15</sup>. Les informations fournies par la Table de Peutinger et l'itinéraire d'Antonin apportent des données similaires. (Carte 5)

Le tracé de la route romaine à l'arrière-pays a été confirmé à plusieurs endroits (Momišići, Trubjela, Podbožur)<sup>16</sup>. La largeur de la route était relativement faible ne dépassant 3,60 m, ce qui est beaucoup moins que la largeur habituelle des routes principales dans la

<sup>6</sup>CIL, XVII/4, 571, 572, 572a, 572b.

<sup>7</sup>Bojanovski 1987, 64–65.

<sup>8</sup>Popescu 2012, 313–317 ; pour les débats concernant les traces des deux ponts d'Oescus-Sucidava, voir Madzharov 2009, 148–149.

<sup>9</sup>Fodorean 2006, 227–232.

<sup>10</sup>Vlădescu 1986, 103–104 ; Fodorean 2006, 235–237.

<sup>11</sup>Vlădescu 1986, 99–103 ; Fodorean 2006, 296–306.

<sup>12</sup>Fodorean 2006, 227–232 et 241.

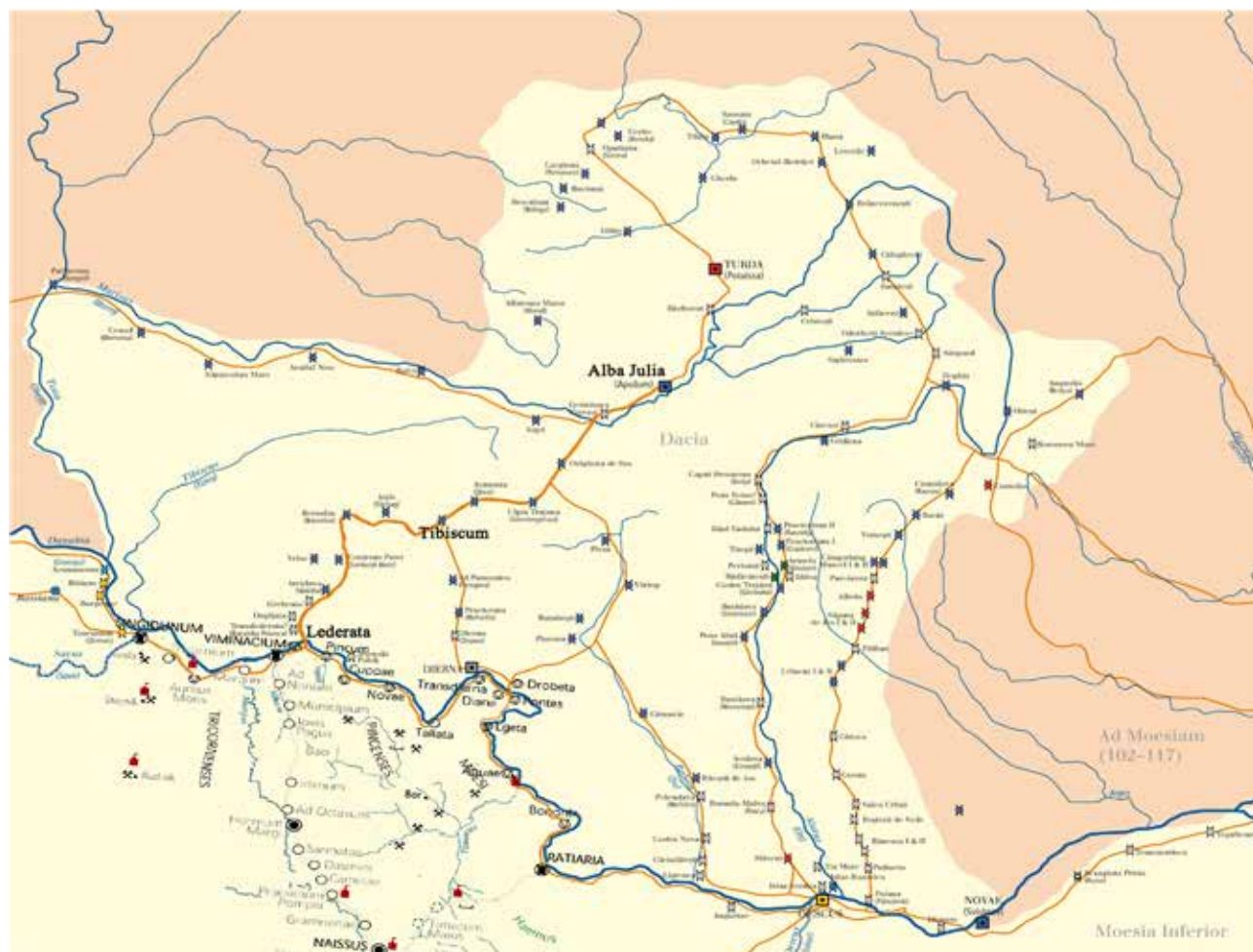
<sup>13</sup>Fodorean 2006, 306–309.

<sup>14</sup>Petrović 2015, 73–79.

<sup>15</sup>Petrović 2015, 82–86.

<sup>16</sup>Petrović 2015, 82.





Carte 4 - Carte des voies romaines en Dacie

région qui est d'environ 5 m. Essentiellement, le tracé de l'arrière-pays de l'Adriatique suit la communication moderne.

Concernant l'époque de la construction de la route les données qui nous ont été transmises par les bornes milliaires découvertes en grand nombre le long de la voie romaine sont indispensables. Il s'agit des bornes milliaires du règne de Claude, en 47 à Lučki Dol<sup>17</sup>, de celles de Kosijerevo<sup>18</sup> de l'époque du gouverneur Funisulanus Vetonianus, en 79–84, puis des celles de Kuside<sup>19</sup> de l'année 236, sous Philippe l'Arabe (244–

249) de Povije<sup>20</sup>, puis sous Trajan Dèce (249–251)<sup>21</sup> et enfin Herennius Etruscus à partir de l'année 251<sup>22</sup>. Ces informations offertes par les bornes milliaires confirmées par les monnaies découvertes dans la région de Nikšić<sup>23</sup>, datées entre 94 a. C. et l'époque de l'empereur Gallien (253–268), renforcent l'hypothèse d'une utilisation de longue durée de la route romaine. Cependant, le moment de la construction de la voie romaine demeure flou. Et si on le reliait à l'action de Publius Cornelius Dolabella<sup>24</sup>, gouverneur de la province de Dalmatie entre 16 et 20 p. C. ? Cette hypothèse pourrait être confirmée par une importante inscription trouvée

<sup>17</sup> *ILJug*, 962 = *CIL*, III, 10175.

<sup>18</sup> *ILJug*, 647.

<sup>19</sup> *ILJug*, 1012 = *CIL*, XVII/4, 529.

<sup>20</sup> *CIL*, III, 8285 = *CIL*, XVII/4, 537.

<sup>21</sup> *CIL*, III, 8286 = *CIL*, XVII/4, 538.

<sup>22</sup> *CIL*, III, 13321.

<sup>23</sup> Petrović 2015, 83.

<sup>24</sup> *CIL*, III, 1741 = *ILS*, 938.



Carte 5 - Dédoublages des voies le long du littoral de l'Adriatique

aux alentours d'Epidaurum qui mentionne Publius Cornelius Dolabella, le gouverneur de la province de Dalmatie, et, en creux, par l'absence d'agglomérations importantes parmi les stations de la route romaine tels que Doclea. On retrouve une situation identique sur la route côtière qui passe par Acruvium.

Néanmoins, il ne faut pas perdre de vue que tous ces aménagements ne font que renforcer, permettre une projection vers l'intérieur des terres, offrir des nouvelles solutions de mobilité liées aux aléas saisonniers concernant le principal axe de communication maritime.

Dans cette même perspective, on doit comprendre les travaux engagés depuis Tibère dans le Djerdap<sup>25</sup> et finalisés sous Trajan<sup>26</sup>, qui prépare son offensive nord-danubienne, comme un affermissement de l'axe principal de communication qui demeure le Danube. Ces travaux permettent la connexion définitive de la route du limes, creusée à travers les gorges des Portes de Fer, le long de la rive droite du fleuve entre les deux Mésies. La fin du chantier terrestre a permis une plus grande fluidité de circulation des unités, a engagé un déploiement et une densification accrue, tout le long du règne de Trajan, des troupes et des camps censés accueillir des troupes<sup>27</sup>, vers les bouches du fleuve, et aussi la construction d'une route qu'on peut qualifier

<sup>25</sup> Sous Tibère commence la mise en place du premier système défensif unique, qui s'appuie sur les premières routes creusées dans les Portes de Fer, avec la participation des légions *III Scythica* et *V Macedonica* (*CIL*, III, 1698 = 13813b = *ILJug*, 57 = 60 = *IMS*, I, 162 = *AE*, 1910, 176 à Gospodjin Vir, du 33-34 p. C.). Claude continue et améliore la construction de routes (*ILJug*, 56 = *AE*, 1944, 70) et densifie l'implantation des camps. Au gré des guerres de Domitien les routes sont restaurées (*CIL*, III, 13813c = *ILJug*, 58 = *AE*, 1896, 17 = 1944, 71a et *CIL*, III, 13813a = 13813d = *ILS*, 9373 = *ILJug*, 55 = *AE*, 1896, 18 = 71b) et des camps en pierre sont érigés.

<sup>26</sup> Šašel 1973, 80.

<sup>27</sup> Voir, par exemple, l'inscription *CIL*, III, 1642 du camp d'*Aquae* (Prahovo), datée de 99 p. C., ou les résultats des fouilles dans les fortifications de *Taliata* (Donji Milanovac), Boljetin, Gospodjin Vir ou Čezava dans les Portes de Fer.





Carte 6 - Les routes romaines dans les Portes de Fer

de secondaire sur la rive gauche<sup>28</sup>. La modernisation de l'infrastructure de la route de frontière va de paire avec la construction des ports, par exemple à Aquae<sup>29</sup> ou à Egeta<sup>30</sup> ou, entre les deux expéditions de Trajan, à Capidava<sup>31</sup>, avec l'amélioration du chemin de halage, la régulation du débit du fleuve et les canaux de navigation qui permettent le contournement des chutes dans le secteur Sip-Karataš<sup>32</sup>. Le fleuve devient ainsi entièrement navigable et les flottes des légions, celles de Pannonie dont le siège se trouvait à Taurunum (Zemun) et de Mésie avec principal port d'attache Noviodunum (Isaccea), peuvent s'en saisir car il semble impossible qu'aucune d'entre elles n'apparaillait dans le secteur danubien de la Mésie supérieure, de Singidunum à Ratiaria. Mais, il ne faut pas oublier que durant un siècle et demi, lorsque les Dacies étaient romaines, ce secteur

du fleuve, avec ses aménagements et passages, sans perdre de manière définitive son rôle militaire, est un cours d'eau intérieur à l'Empire.

En guise de conclusion, nous signalons, pour exemple, deux autres secteurs routiers, relativement courts. Dans le cadre de l'amélioration constante des infrastructures de transport, on remarque, comme un signe de l'approfondissement du réseau, qui accompagne la provincialisation, après la construction des grandes voies, leurs densifications et dédoublements par des routes secondaires, l'apparition de raccourcis.

Ainsi, sur le tronçon Taliata–Egeta<sup>33</sup> et peut-être Viminacium–Pincum<sup>34</sup>, une seconde route s'éloigne du fil de l'eau, en raccourcissant les distances, laissant au

nord les sites de Transdierna et Pontes d'un côté, puis, Lederata de l'autre ; justement les endroits où le gros de l'armée romaine a franchi le Danube. On peut avancer plusieurs explications parmi lesquelles, un gain de temps pour les échanges locaux, un souci de sécurité, en permettant à la fois de ne pas encombrer ces points stratégiques, de s'en éloigner en cas de danger, mais aussi de faciliter un éventuel afflux de troupes. (Carte 6)

Lors des campagnes de Trajan en Dacie, les troupes qui remontaient dans le défilé de la rivière Olt, au niveau du village actuel Jiblea, ont abandonné la trop difficile progression dans les gorges et ont dû s'en éloigner vers l'est, en contournant le massif Cozia, pour rattraper le cours de l'eau une trentaine de kilomètres plus au nord, au niveau du camp de Praetorium-Copăceni. Les camps de Rădăcinești ou Titești sont les témoins de ce détour<sup>35</sup>. Néanmoins, dès la fin du règne d'Hadrien, quand le *numerus burgariorum et veredariorum* assurait la protection et l'entretien des voies<sup>36</sup>, a été creusé dans la roche, rappelant les méthodes de construction utilisées dans les Portes de Fer<sup>37</sup>, le raccourci de Jiblea à Copăceni, le long de l'Olt. Cette fois-ci, le raccourci devient la voie principale et sa construction tardive s'explique par le manque de temps lors de la guerre.

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<sup>28</sup>Fodorean 2006, 241.

<sup>29</sup>Petrović 1991, 295–298 ; Petrović 2018a, 386–393.

<sup>30</sup>Petrović 1984, 153–166 ; Petrović 1986, 369–377.

<sup>31</sup>Opriș 2006, 240.

<sup>32</sup>Pour le canal romain de navigation près de Sip voir, *ILJug*, 468 = *AE*, 1973, 475 ; Petrović 1970, 31–40 ; Petrović 2018b, 387–396.

<sup>33</sup>Petrović 2019, 80.

<sup>34</sup>Petrović 2019, 74.

<sup>35</sup>Fodorean 2006, 302.

<sup>36</sup>*CIL*, III, 13795 = *IDR*, II, 587.

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# **Aspects regarding the roads of Roman Dacia. State of research, new data, new perspectives**

## **ABSTRACT**

The paper provides data concerning the roads of Roman Dacia. After a short introduction, we present information regarding the primary sources which offer insights about the roads. First, we discuss some general aspects about the roads depicted in the Peutinger map in the area of the former province Roman Dacia. Then, we present data about the milestones discovered in Dacia. These are 9 milestones, the earliest being dated shortly after the conquest of the province. Further on, we discuss some scenes from the Trajan's Column which provide visual images regarding the construction of roads north of the Danube River, starting with the first military campaign. Then we present and describe the main roads of Roman Dacia. We conclude with some final references.

**KEY WORDS: ROMAN ROADS, DACIA, MILESTONES, THE PEUTINGER MAP, INFRASTRUCTURE**

### **1. Short introduction**

**T**he study of Roman roads and of its adjacent topics in Europe and in Romania has experienced in the last 25 years more attention for several reasons. First, the interest on the elements of the Roman frontier constantly grew in those countries which established the inclusion, within the UNESCO list, of the Roman limes.<sup>1</sup> Romania is a proper example from this point of view. Another reason of the growth of the interest regarding the Roman roads is the intensive use of non-invasive

methods for the identification of sites, which lead to the discovery of new road sectors. Such situation is available not only for Romania, but also for Hungary and the Czech Republic. The first project involving aerial photographs after 1990 in Romania managed to identify not only new sites of Dacian and Roman period, but also complex structures, including road sectors.<sup>2</sup> Again, I will use Romania as example. Projects based on the use of aerial photographs covering the territory of the former Roman Dacia have succeeded to identify new road sectors,<sup>3</sup> new rural settlements, or parts

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<sup>1</sup>Details about the limes project in Romania: <http://limesromania.ro/ro/articole/despre-proiect/>.

<sup>2</sup>Oltean 2007, 191–192, 195.

<sup>3</sup>Cociş *et al.* 2018, 93–118.

of *vici militari*. Preventive archaeological researches have also revealed new sectors of roads.<sup>4</sup>

This paper resumes the state of research regarding the roads of Roman Dacia, to reveal data about new discoveries and to detail the historical importance of the road network during the process of implementing the Roman presence in the areas north of the Danube.

## 2. Sources

We were able to identify several categories of primary sources regarding the roads in Dacia: 1. The Peutinger map; 2. The milestones; 2. The reliefs on Trajan's Column. We shall examine them briefly.

### 2. 1. The Peutinger map and the roads of Roman Dacia

In the past ten years some important contributions on the Peutinger map have been published.<sup>5</sup> We have also succeeded to present some new data regarding this document and its information related to Dacia.<sup>6</sup> We indicated the mentioning, in the Peutinger map, of three roads. The first is depicted in the segment VI 2 and it is the road from Lederata to Tibiscum, with eight toponyms and seven distance figures summing 73 miles: Lederata-XII (Roman miles); Apus flumen-XII; Arcidava-XII; Centum Putea-XII; Berzobis-XII; Aizis-III; Caput Bubali-X; Tivisco (depicted by a vignette). The second road starts from Dierna, on the Danube River, and ends at Porolissum, mentioning twenty-four settlements and a total distance of 270 Roman miles. These are: Tierva-XI (Roman miles); Ad Mediam-XIII; Pretorio-IX; Ad Pannonios-IX; Gaganis-XI; Masclianis- XIII; Tivisco-XIII; Agnavie-VIII; Ponte Augusti-XV; Sarmategte-XIII; Ad Aquas-XIII; Petris-VIII; Germizera-VIII; Blandiana-VIII; Apula-XII; Brucla-XII; Salinis-XII; Potavissa-XXIII; Napoca-XVI; Optatiana-X; Largiana-XVII; Cersie-III; Porolisso. The third road, depicted in the

segments VI 4, VI 5 and VII 1, mentions from Drobeta via Romula to Apulum seventeen settlements and a total distance of 439 miles. These are: Drubetis-XXX-VI (Roman miles); Amutria-XXXV; Pelendova-XX; Castris Novis-LXX; Romula-XIII; Acidava-XXIII; Rusidava-XIII; Ponte Aluti-XIII; Burridava-XII;<sup>7</sup> Castra Tragana-VIII; Arutela-XV; Pretorio-VIII; Ponte Vetere-XLIII; Stenarum-XII; Cedonie-XXIII; Acidava-XV; Apula. Seventeen settlements are mentioned and a total distance of 379 Roman miles (Fig. 1).

Therefore, the Peutinger map, using a limited amount of space, depicts in Dacia, north of the Danube River, 48 settlements and a total distance of 703 Roman miles.<sup>8</sup>

We have reached several final remarks regarding these roads. These were, obviously, the lines of advance taken by the Roman marching columns during the Dacian wars. In many cases, the repetition of the value of 12 miles (or values close to it, like 13, 11 or 9 miles) indicates the distance covered during marches by the Roman army, the *iustum iter*. The absence from the Peutinger map of other important roads, such as the route Drobeta – the Vâlcăni Pass – Ulpia Traiana Sarmizegetusa (in fact the shortest route from the Danube to Ulpia), or the road along the valley of the Mureș River, or the frontier roads from the northern and eastern parts of Dacia, can be logically explained because of the lack of space of a general document depicting the routes of the entire Roman Empire. To conclude, we believe that, in the case of Dacia, but also for other provinces (we have studied the situation from Pannonia and Moesia),<sup>9</sup> the Peutinger map used as sources early military itineraries, created by the army, and, possible, other documents, such as *formae* or *formulae provinciarum*.<sup>10</sup>

### 2. 2. The milestones of Roman Dacia

We know, so far, of only nine milestones in Dacia.<sup>11</sup> Presently the milestones are recatalogued and inter-

<sup>4</sup>Simion et al. 2014, 211–258, especially pl. XX.

<sup>5</sup>Talbert 2010; Albu 2014; Rathmann 2016.

<sup>6</sup>Fodorean 2016, ch. 6: 83–100.

<sup>7</sup>New data regarding the localisation of Buridava or other settlements along the valley of the Olt River in Nemeti, Dana 2017, 207–230.

<sup>8</sup>Fodorean 2016, 83–84.

<sup>9</sup>Fodorean 2016.

<sup>10</sup>Fodorean 2016, 161.

<sup>11</sup>Fodorean 2006, 63–82.

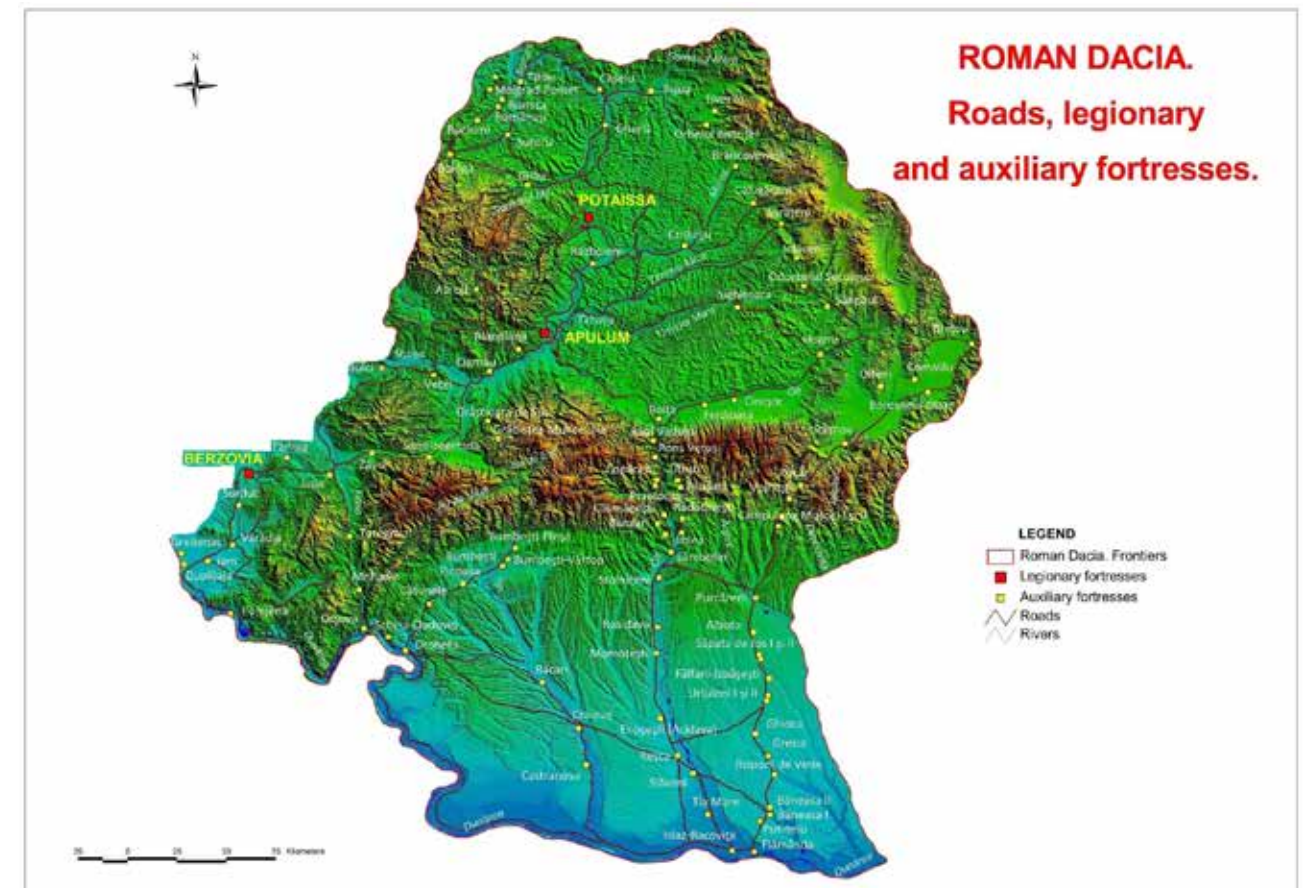


Fig. 1 - Roman Dacia. The roads, the legionary fortresses and the auxiliary forts.

preted by a scientific team lead by Anne Kolb.<sup>12</sup> The figures regarding the number of these artifacts are still puzzling. More than 6000 are known in the entire Roman Empire. But the scarcity of these in some provinces still remains hard to explain. We know only one milestone in Sicily, but circa 140 in Sardinia; circa 70 milestones in Britannia, but circa 152 in Noricum;<sup>13</sup> 270 milestones in Gallia Narbonensis,<sup>14</sup> 338 in Panno-

nia<sup>15</sup> and 180 milestones on the territory of Bulgaria.<sup>16</sup>

The milestones from Dacia were discovered in Aiton (Cluj County, dated in 108 A.D.),<sup>17</sup> Mera (Cluj County, dated in 169-176 A.D.),<sup>18</sup> Almașu Mare (Sălaj County, dated in 236 A.D.),<sup>19</sup> Veșel (Hunedoara County, the ancient Micia, dated in 251-253 A.D.),<sup>20</sup> Lăpușnicel (Caraș-Severin County, dated in 251-253 A.D.),<sup>21</sup>

<sup>12</sup>Details at <http://www.research-projects.uzh.ch/p4532.htm>. The project is entitled Roman Milestones - CIL XVII Miliaria Imperii Romani. An important international colloquium, entitled *Viae Romanae / Roman Roads: New evidence - new perspectives*, where we participated (the programme here: [http://www.balkaninstitut.com/eng/uploaded/Programm\\_VIAE\\_Juni2017.pdf](http://www.balkaninstitut.com/eng/uploaded/Programm_VIAE_Juni2017.pdf)), was held in Zürich, in 1-2 June 2017. Our contribution, Fodorean 2019, and the others, will be published in a future volume.

<sup>13</sup>Fodorean 2006, 29.

<sup>14</sup>König 1970.

<sup>15</sup>Kiss 2007.

<sup>16</sup>Madzharov 2009, 58.

<sup>17</sup>CIL III, 1627: Imp(erator) / Caesar Nerva / Traianus Aug(ustus) / Germ(anicus) Dacicus / pontif(ex) maxim(us) / [tribunicia] pot(estate) XII co(n)s(ul) V (sic) / imp(erator) VI p(ater) p(atriciae) fecit / per coh(ortem) I Fl(aviarum) Ulp(iam) / Hisp(anorum) mil(liariam) c(ivium) R(omanorum) eq(uitatim) / a Potaissa Napocae / m(illia) p(assuum) X; Winkler 1982, 587–589; Fodorean 2016, 89–90.

<sup>18</sup>Fodorean 2006, 68–71; Piso 2011, 321–323.

<sup>19</sup>Fodorean 2006, 71–73; Piso 2011, 323–324.

<sup>20</sup>Fodorean 2006, 74–75; Piso 2011, 324–326.

<sup>21</sup>Fodorean 2006, 75–79; Piso 2011, 326–328.



Băbiciu de Sus (Olt County, dated during Septimius Severus' reign, possible in 205 A.D.),<sup>22</sup> Gostavățu (Olt County, also dated during Septimius Severus' reign),<sup>23</sup> Racovița-Copăcenii (ancient Praetorium, dated in 236 A.D.),<sup>24</sup> and Sucidava (Celei, dated in 326-333 A.D.) (Fig. 2).<sup>25</sup>

The earliest milestone known so far is the one discovered in Aiton and dated in 108 A.D. Its presence here represents a solid proof for the rapid organization of the future province. Aiton is located between Potaissa (Turda) and Napoca, exactly 10 miles (14.785 km) north of Potaissa (Fig. 3). Beside the discovery of the milestone, field investigations carried out within the territory of the village have indicated, possibly, the existence of a *mansio* in the northern part of the current village (Fig. 4).<sup>26</sup> Also, remains of a former rural settlement in Aiton are documented through the discovery of wall foundation, coins, and ceramic fragments.<sup>27</sup> The milestone indicates how rapidly the Romans succeeded to fulfill their tasks of organizing the road network into the new conquered territory. Another important aspect related to this artifact is the final formula from the inscription, *a Potaissa Napocae*, which represents the first epigraphic evidence of Potaissa and Napoca. The infantry unit which participated to the construction of this road sector is *cohors I Flavia Ulpia Hispanorum milliaria civium Romanorum equitata*. Interestingly, the same troop participated in the wars against the Dacians and after 106 A.D. it was garrisoned at Orheiul Bistriței (Bistrița-Năsăud County), along the north-eastern frontier.

### 2.3. The reliefs of Trajan's Column and the construction of roads in Dacia

We have already emphasized the importance of the study of the reliefs from the Trajan's Column for the knowledge of the building activities of the Roman army.<sup>28</sup> The scenes of the Trajan's Column represent the translation of the lost work of Trajan, *De Bello dacico*. The opinions regarding the importance of these scenes were so diverse during the time. Some have exaggerated the historical value of the monument; others have perceived the Column as a propagandistic monument or a manifestation of the imperial theology.

There are 11 scenes on the Trajan's Column - XV, XIX, XXIII, LVI, LX, LXV, LXIX, XCII, CXVII, CXXVII, and CXXIX – presenting soldiers involved in the construction of roads or small bridges. The first one - scene XV – presents a group of auxiliary soldiers close to a Roman fort, connected with a bridge by a zigzag representation of a road.<sup>29</sup> It is quite possible that the scene represents a synthetic representation of a fortified road, but there are no other indices to identify in the terrain this road.

Other two scenes (XIX and XX at Cichorius) present soldiers working on the construction of forts and roads. They are legionary soldiers, involved in the construction of a bridge. In the second plan, in the interior of a fort, Trajan is represented in frontal position.<sup>30</sup>

Another scene where soldiers are involved in similar actions is XXIII. Several legionary soldiers are cutting some trees in a forest. There are, obviously, actions which serve to clear the terrain for the construction of a future road.<sup>31</sup>

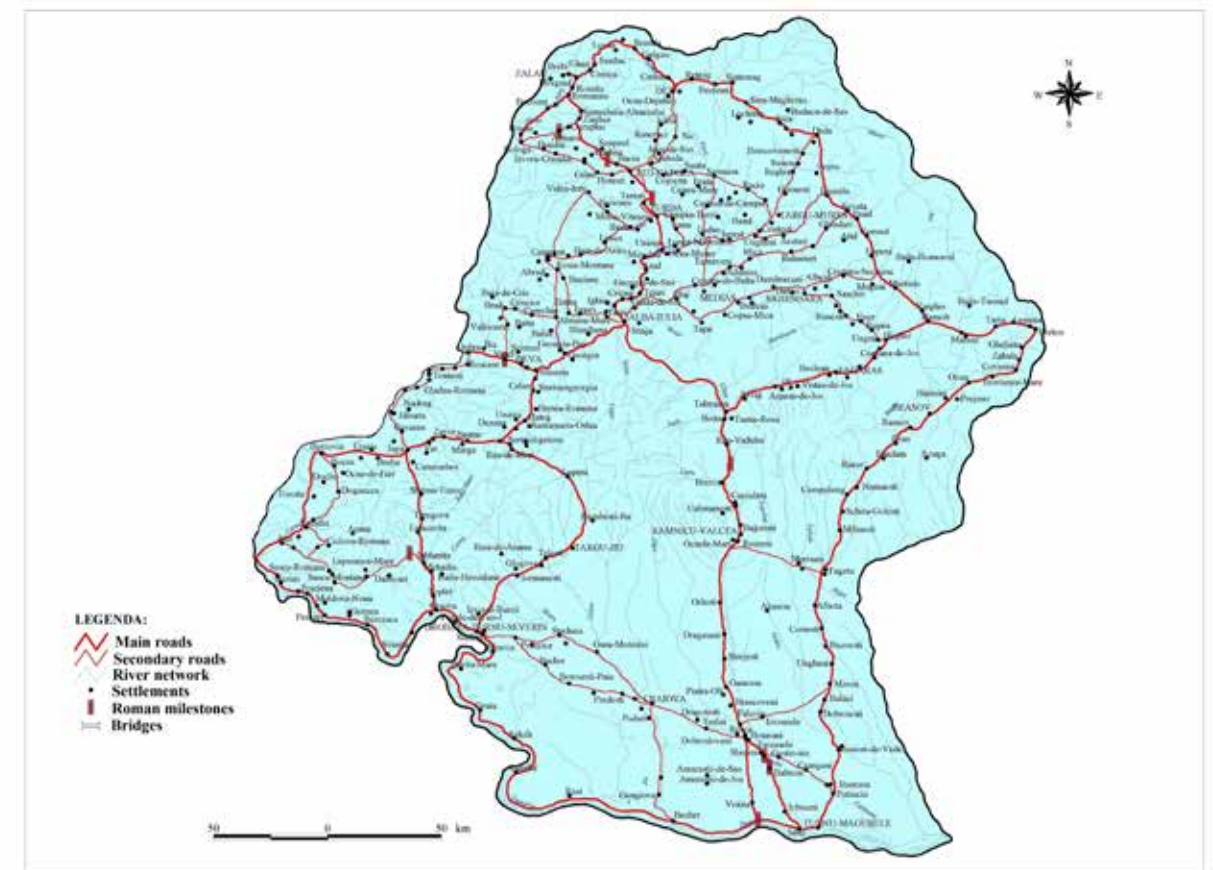


Fig. 2 - Roman Dacia. The roads, the main settlements and the location of the milestones.

Scene LVI<sup>32</sup> is presenting ten legionary soldiers who open a road into a forest. One can observe how the infrastructure of the road was made, using a layer of gravel. Scene LVIII also illustrates a road and a wooden bridge. Along the road, Trajan is represented riding a horse.<sup>33</sup>

Scene LII is also worth to be mentioned in this context. Trajan receives a group of *comati*. In the back of this representation, a group of legionary soldiers build a road into the forest, in a mountain area. One can see the rocky terrain and the trees.<sup>34</sup> Scene LXIX is representing a mountain area, where eight legionary soldiers open a road into a forest.<sup>35</sup>

Scene XCII presents also soldiers involved in the construction of a road. A mountain landscape is represented, separated in the left side by a representation of several trees. Again, the episode refers to the construction of a road in a hilly area. In the second plan the viewer can observe a fort. The road is represented by a zigzag line with seven segments.<sup>36</sup>

The scenes CXXIV-CXXVI present, as in other cases, several legionary soldiers who cut the forest and build a wall of stone.<sup>37</sup>

Finally, the last scene of the Trajan's Column with similar depictions is CXXXI.<sup>38</sup> The soldiers represented

<sup>22</sup>Fodorean 2006, 80.

<sup>23</sup>Fodorean 2006, 80.

<sup>24</sup>Fodorean 2006, 80–81.

<sup>25</sup>Fodorean 2006, 81–82, where I proposed for dating the year 328 A.D.; Piso 2011, 328–329, proposing 326–333 A.D.

<sup>26</sup>Fodorean 2015, 217–232.

<sup>27</sup>Fodorean 2006, 133.

<sup>28</sup>Fodorean 2004, 410–423.

<sup>29</sup>In Coarelli 1999 the scene is presented in pl. 14 (scenes XIII / XIV–XVI).

<sup>30</sup>Coarelli 1999, pl. 17 (XV–XVIII–XX). The Italian historian has already emphasized that this is the only case on the entire Column where *Optimus Princeps* is represented in a frontal position.

<sup>31</sup>Coarelli 1999, 64, pl. 20 (XVII / XXII–XXIII).

<sup>32</sup>Coarelli 1999, 101, pl. 57 (XXXIX–XL / LV–LVI), 102, pl. 58 (XL / LVI–LVII).

<sup>33</sup>Coarelli 1999, 103, pl. 59 (XLI / LVII–LVIII), 104, pl. 60 (XLI / LVIII–LIX); Fodorean 2004, 415–416.

<sup>34</sup>Coarelli 1999, 98, pl. 54 (XXXVII–XXXVIII / LII–LIII); Fodorean 2004, 416.

<sup>35</sup>Coarelli 1999, 121, pl. 77 (XLIX / LXVIII–LXIX).

<sup>36</sup>Coarelli 1999, 152, pl. 108 (LXVI–LXVII / XCI–XCII); 153, pl. 109 (LXVII / XCII); Fodorean 2004, 417.

<sup>37</sup>Coarelli 1999, 197, pl. 153 (XCIII–XCIV / CXXIV–CXXV).

<sup>38</sup>Coarelli 1999, 200, pl. 156 (XCVI / CXXVIII–CXXX), 201, pl. 157 (XCVI–XCVII / CXXIX–CXXXI).



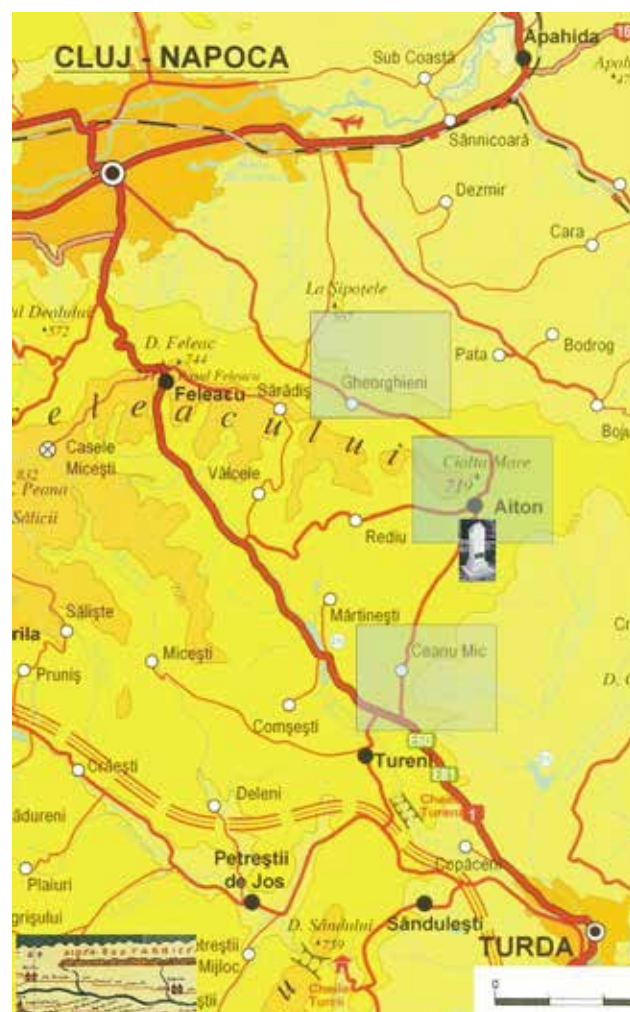


Fig. 3 - The location of Aiton on a current map.

here are involved in the construction of a road along a river.

To conclude, the scenes depicting legionary soldiers involved in the construction of roads and bridges show a certain repetition, because of the programmatic message transited by the Column. For this reason, and not only for this one, the attempts to locate in the terrain these scenes are very difficult. It is important to understand that the repetition of such scenes had a simple, but very effective purpose: to transmit the message of the superiority of the Roman army, the discipline and the work capacity of the Roman soldiers.

### 3. The main routes of Roman Dacia. State of research and new discoveries

#### 3.1. Lederata/Dierna - Tibiscum - Ulpia Traiana Sarmizegetusa - Apulum - Potaissa - Napoca - Porolissum

Obviously, the most important road in Dacia is the one starting from the Danube, at Lederata/Dierna. One branch, the western road, followed the line of the forts from Vărădia, Surducu Mare, Berzovia and Fărlug, towards Jupa (Tibiscum) where another fort was erected. The eastern branch followed the line of the Timiș valley, connecting, from Dierna, the forts from Mehadia and Teregova. This eastern branch reaches Tibiscum where it joins the other one. From this point, the main imperial road continues towards north, following the line of the most important settlements in Roman Dacia: the fort from Zăvoi (Agnaviae?); the custom site from Marga (Pons Augusti?); the city of Ulpia Traiana Sarmizegetusa; the thermal complex from Aquae/Ad Aquas (today Călan, Hunedoara County); the fort from Cigmău; the city and the legionary fortress of Apulum; the fort from Războieni-Cetate; the city and the legionary fortress from Potaissa (today Turda, Cluj County); the city of Napoca; the fort from Sutor (Optatiana?); the fort from Romita (Certiae?); the fort from Porolissum (Moigrad Sălaj County).

During this first campaign (101-102 A.D.) the Roman military units penetrated into the territory of the Banat using these two roads, which rapidly became part of the main artery of Dacia. These military roads indicated on the Peutinger map represent the lines of advance taken by the Roman marching columns during the Dacian wars. The camps and stations built immediately after the conquest replaced the provisory ones built by the army during the military campaigns. In many cases, the distance between the stopping points is 12 miles (sometimes 13, 11 or 9).

After 106 A.D., the *legio XIII Gemina* at Apulum (today Alba Iulia, Alba County) and the *legio III Flavia Felix* at Berzobis (today Berzovia in Banat) were garrisoned in Dacia. It is important to emphasize that both were strategically placed on Dacia's main Roman road, exactly 72 Roman miles south and north of the Dacia's main city, Ulpia Traiana Sarmizegetusa. This proves that accurate measurements along roads were made from the beginning of the Roman presence north of

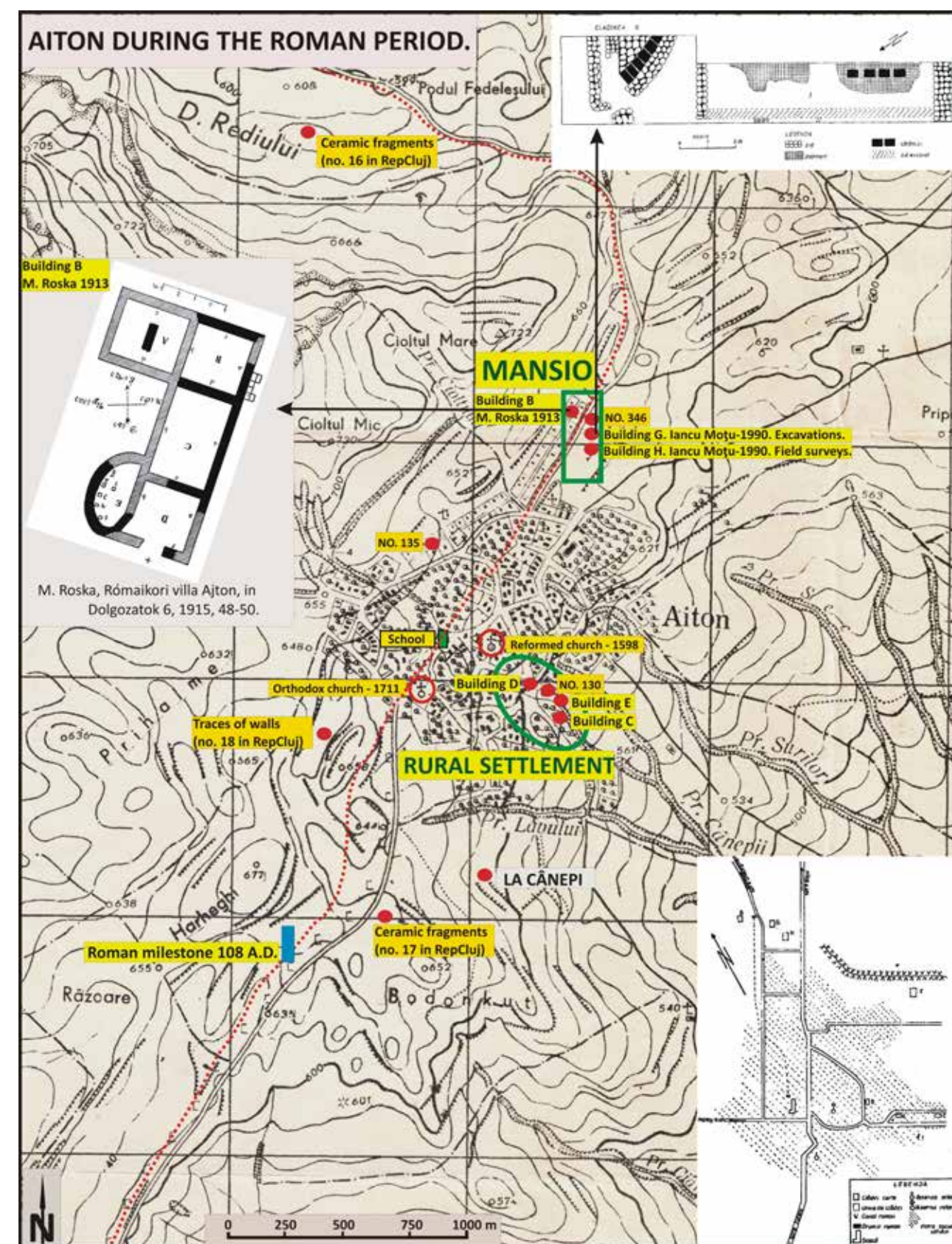


Fig. 4 - The topography of Aiton on a modern map, scale 1:20.000.

the Danube. These data were grouped into written or painted *itineraria*, first used by the army.

After the final conquest of Dacia, the Romans succeeded to finish the construction of the main artery of the





Fig. 5 - The main imperial road East of Sarmizegetusa.

province, its so-called ‘highway’.<sup>39</sup> The total length of this road is of circa 450 km. The next step that happened in the next decades, was to choose the location and to build future cities. All the major cities of Dacia (Dierna, Tibiscum, Ulpia Traiana Sarmizegetusa, Apulum, Potaissa, Napoca and Porolissum) are located along this road. Also, the legions which defended the province were garrisoned along this artery. The crossroads of Dacia was Apulum. The major part of the *villae rusticae* is located along the same road, close to these major cities. The same artery was depicted in the Peutinger map.

Some sectors of this road were identified on the terrain, mapped and described. For example, a sector of this road was identified in 2006 east of the city of Ulpia Traiana Sarmizegetusa, on a total length of circa 16 km (Figs. 5 and 6).<sup>40</sup> In fact, this road sector is also well documented in the modern maps, where it is depicted as a former road with the toponym “Trajaner Weeg”<sup>41</sup>, “Trajans Weg” or “Römische Strasse” (Fig. 7).<sup>42</sup> It is also represented on the current map, and also marked with the toponym “Drumul lui Traian” (“Trajan’s road”).

On the territory of Banat, several road sectors were identified in the terrain and approximately mapped. An



Fig. 6 - The same imperial road at the exit from Sarmizegetusa towards East.

old study published 42 years ago shed some light on the main roads in this area.<sup>43</sup> This study was completed by some recent contributions dealing with the same topic.<sup>44</sup>

The same Roman road’s route was the subject of another article, where we tried to map the discoveries north of Apulum and to also map the road.<sup>45</sup> Along the sector close to the village of Șibot, the road was identified in the terrain and mapped due to a large archaeological excavation.<sup>46</sup> The same imperial road was identified in the terrain from the fort of Războieni-Cetate to the north, towards the villages of Călărași and Bogata until

the entrance in the current city of Turda.<sup>47</sup> Sectors of this road between Ceanu Mic and Aiton were identified by us in the field, together with traces of a rural settlement.<sup>48</sup> Unfortunately, in some areas, the road had been affected by agricultural work (Fig. 8).

### 3. 2. Research concerning other roads in Dacia

In close connection to the main road is the route connecting the fort from Cigmău with the thermal complex from Germisara (Geoagiu-Băi, Hunedoara County).<sup>49</sup> This is a very well-preserved sector of a Roman road (Fig. 9), comparable with the one from the entrance in

<sup>39</sup>Fodorean 2012, 255–279.

<sup>40</sup>Fodorean 2007, 365–384.

<sup>41</sup>This toponym is recorded on the Habsburg maps created during the first military survey (Die Josephinische Landesaufnahme / *Erste Landesaufnahme*), between 1763 and 1785.

<sup>42</sup>These toponyms are recorded on the Habsburg maps created during the second military survey (for Transylvania in 1853–1858 and 1869–1870). Details: <https://mapire.eu/en/map/secondsurvey-transylvania/?layers=osm%2C54&bbox=2618235.7483663233%2C5902890.746681482%2C2636427.761098195%2C5908623.523802869>.

<sup>43</sup>Răuț *et al.* 1977, 135–159.

<sup>44</sup>Bozu 2008, 81–105; Timoc 2013, 645–656.

<sup>45</sup>Fodorean 2016a, 383–387.

<sup>46</sup>Simion *et al.* 2014, 211–258.

<sup>47</sup>Fodorean 2017, 187–203.

<sup>48</sup>Fodorean 2015a, online: <http://www.antiquity.ac.uk/projgall/fodorean345>.

<sup>49</sup>Fodorean, Ursuț 2001, 203–220.



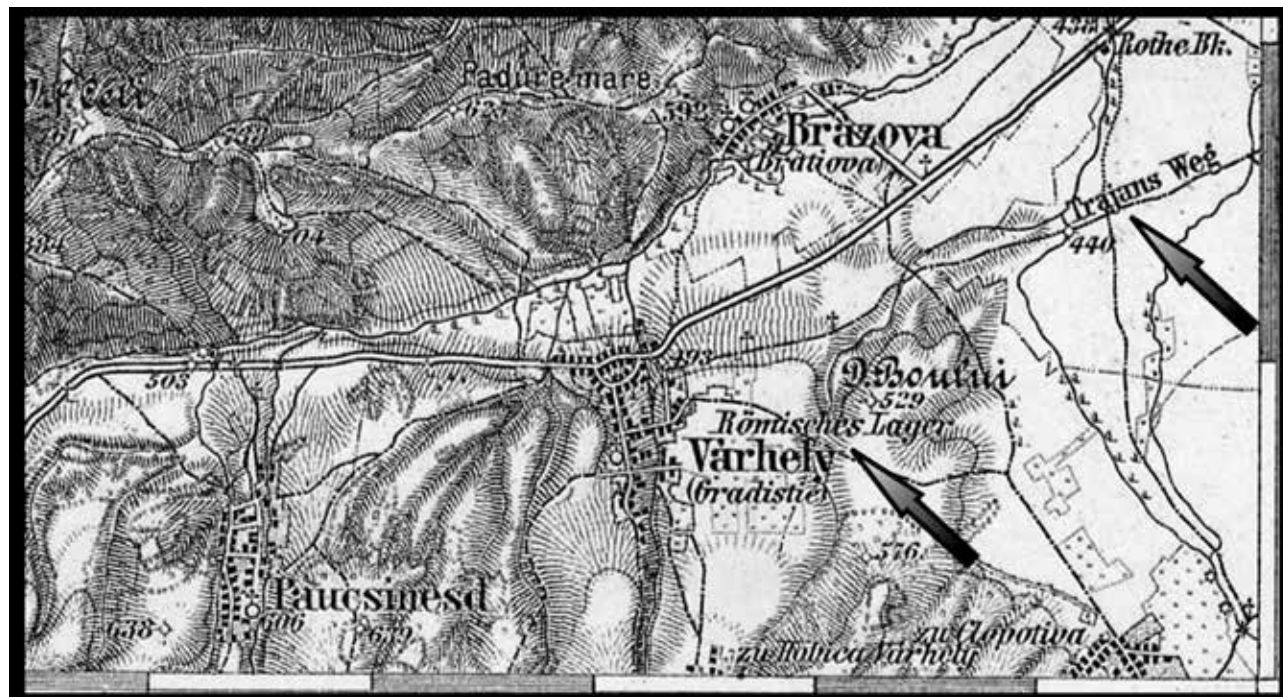


Fig. 7 - Fragment from a modern map of the XIXth century, depicting the main imperial road with the toponym "Trajans Weg".



Fig. 8 - The main imperial road at the exit from Ceanu Mic.



Fig. 9 - The road from Geoagiu-Băi.

the city of Porolissum. The road from Războieni-Cetate to Gligoreşti and further on along the valley of the Mureş river was mapped and discussed several times.<sup>50</sup> Recently, preventive archaeological excavations carried out in the area of the village Gligoreşti have revealed the structure of the Roman road.<sup>51</sup> The road connecting the small forts located along the so-called *limes Transalutanus* has also been identified in the field in several sectors.<sup>52</sup>

#### 4. Final remarks. Perspectives

The research of roman roads represents a continuous task for us, which never stops. Anytime, with the occasion of a preventive archeological excavation, or after fieldwalking, or doing aerial researches, new sectors of roads will be identified in the terrain. The road represents a major part of the Roman landscape. Therefore, knowing accurately the route network, will also

improve the knowledge regarding the organization of the entire province. So it will take some time until we will add new data, especially for certain road sectors with little knowledge, such as the road along the valley of the Mureş river from Apulum towards Micia, the frontier roads connecting the forts from the eastern part of Dacia, the road Drobeta-Bumbeşti - Vâlcan Pass - Sarmizegetusa, the roads along the rivers Târnava Mică and Târnava Mare, or the important road along the valley of the Olt river, the so-called *limes Alutanus*. The identification of such new sectors in the future will be a challenge for us, especially because, as years pass by, agricultural road, the extension of the current infrastructure, the construction of new residential areas, endanger the archaeological patrimony, including the Roman road. Therefore, in the spirit of the Valletta Convention, we need to contribute for the protection of this patrimony, for us but even more for the future generations.

Foto credits: F. Fodorean.

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# Beneficarii consularis stations along the Roman road Aquileia – Dyrrachium: State of research

## ABSTRACT

Aquileia - Dyrrachium main road is the most important road on the east Adriatic coast and in the Roman province of Dalmatia. Along this road, the system of Roman military camps from Burnum to Bigeste was established. After the Roman legions left the Province of Dalmatia at the beginning of the 2<sup>nd</sup> century A.D. the care for the safety of the province was taken over by auxiliary units and *beneficarii consularis* stationed in the governor's office and the BF COS stations. Out of fifteen BF COS stations, eight of them: Avendo, Burnum, Magnum, Pons Tiluri, Novae, Naronae, Diluntum and Doclea were situated along the Aquileia - Dyrrachium main road. So far, not a single BF COS station has been excavated in the area of the Roman province of Dalmatia, therefore, we can only assume their location based, exclusively, on the finds of BF COS votive altars. Along the route of the Aquileia - Dyrrachium main road it is only possible to closely determine the position of three stations: Burnum, Magnum and Novae. The circumstances behind the findings of BF COS votive altars don't give us exact data on the precise location of these stations.

**KEY WORDS:** AQUILEIA - DYRRACHIUM MAIN ROAD, *BENEFICIARII CONSULARIS*, STATION, BURNUM, MAGNUM, NOVAE, PONS TILURI, DILUNTUM

**T**he backbone of the Roman traffic system in the first century A.D. is the strategic military road leading from Aquileia to Dyrrachium.<sup>1</sup> Along this route in front of Roman colonies on the Dalmatian coast – Iader, Salona and Naronae, a system of Roman legionary camps, Burnum – Bigeste, was located.<sup>2</sup> Legionary camp in Burnum is located at the very easternmost

border of Roman Liburnia and the final point is the auxiliary camp in Bigeste. Aquileia - Dyrrachium main road enabled the communication between the Roman legionary camps established in the middle of the territory, once ruled by the Delmatae. The care for the safety and the control of the traffic, after the legions left the province of Dalmatia for the Danube Limes,

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<sup>1</sup>Miletić 2006, 125.

<sup>2</sup>Wilkes 1969, 143.

was, since the second century A.D., taken over by the *auxilia* and the *beneficarii consularis*. The *beneficarii consularis* represent legionaries who have been dispatched from their main unit from the Danube Limes to the provincial governor's office and they are the most numerous members of the governor's office with one *beneficiarius* for every legionary centuria.<sup>3</sup> The majority of the Roman garrison in the Roman province of Dalmatia consists of *cohors III Alpinorum*, *cohors I Belgarum* and *cohors VIII Voluntariorum civium Romanorum*.<sup>4</sup> They are again dispatched along the strategic line Burnum – Bigeste which is never abandoned by the Roman army.<sup>5</sup> It is hard to determine the precise role of the *beneficarii consularis* in the provincial administration just by their title, nevertheless, based on inscriptions and historical sources, it is clear that they were used for a series of assignments for the provincial governor's office.<sup>6</sup> Their dispatch in stations shows they were a part of an organized system of the provincial administration.<sup>7</sup> *Beneficarii consularis* were usually stationed for six months, and they would leave votive altars, mostly dedicated to Jupiter, in the sanctuaries of the station's complex.<sup>8</sup> BF COS stations in the Roman province of Dalmatia are mostly situated along the main roads, at important traffic junctions and mining districts.<sup>9</sup> The biggest number of stations is expectedly situated along the most important road route in the province of Dalmatia – the Aquileia – Dyrrachium main road, where the majority of the Roman military force of the province is concentrated. From a total of fifteen BF COS stations in the Roman province of Dalmatia, eight of them: Avendo, Burnum, Magnum, Pons Tiluri, Novae, Naron, Diluntum and Doclea are situated along the Aquileia – Dyrrachium main road line.<sup>10</sup>

All our current knowledge about the existence of the BF COS stations in the province of Dalmatia is based on the discoveries of votive altars. These are all accidental finds, and no archaeological excavations were conducted on any of the locations where a BF COS stations could be expected. The current total of 50 known BF COS votive altars from province of Dalmatia seems substantial but one must point out that, by unearthing the sanctuary of the Sirmium BF COS station complex, more than 80 votive altars were found *in situ*.<sup>11</sup> Nevertheless, on certain locations along the Aquileia – Dyrrachium main road, such as Burnum, Magnum and Novae, we can try to determine the exact positions in which the complexes of BF COS stations with their sanctuaries were located.

The former legionary camp in Burnum became a *municipium* after the legions left province, during Hadrian's reign, at latest.<sup>12</sup> A total of five BF COS votive altars was found there.<sup>13</sup> A precise information about the place of discovery was noted for the altar which was dedicated to Jupiter by *beneficiarius consularis* of the legion V Macedonica – Titus Aurelius Potens.<sup>14</sup> The altar was found on the cadastral parcel No 4914 in Ivoševci. On a cadastral map of Burnum which belongs to the cadastral municipality of the township Ivoševci, the parcel 4914 is located adjacent to the castrum's west rampart at the junction of roads leading in the direction of Promona, Sidrona and Scardona.<sup>15</sup> This position would correlate to the logic of locating the BF COS stations adjacent to the defensive fortifications of the Roman settlements or camps (or only a few hundred meters away), as it can be seen in the examples of Sirmium in Pannonia or Roman army camps in Stockstadt, Obernburg and Osterburken in Germania.<sup>16</sup>

<sup>3</sup>Rankov 1999., 23–25; Glavaš 2016, 39.

<sup>4</sup>Alföldy 1987, 273.

<sup>5</sup>Wilkes 1969, 143; Alföldy, 1987, 271

<sup>6</sup>Mirković 1991, 255–256; Schallmayer 1991, 400–406; Ott 1995, 82–154; Dise 1995, 72–85; Rankov 1999, 27–29.

<sup>7</sup>Rankov 1999, 27–29.

<sup>8</sup>Dise 1997, 286–292; Nelis-Clement 1994, 252.

<sup>9</sup>Schallmayer 1991, 403.

<sup>10</sup>Glavaš 2016, 17.

<sup>11</sup>Mirković 1991, 252.

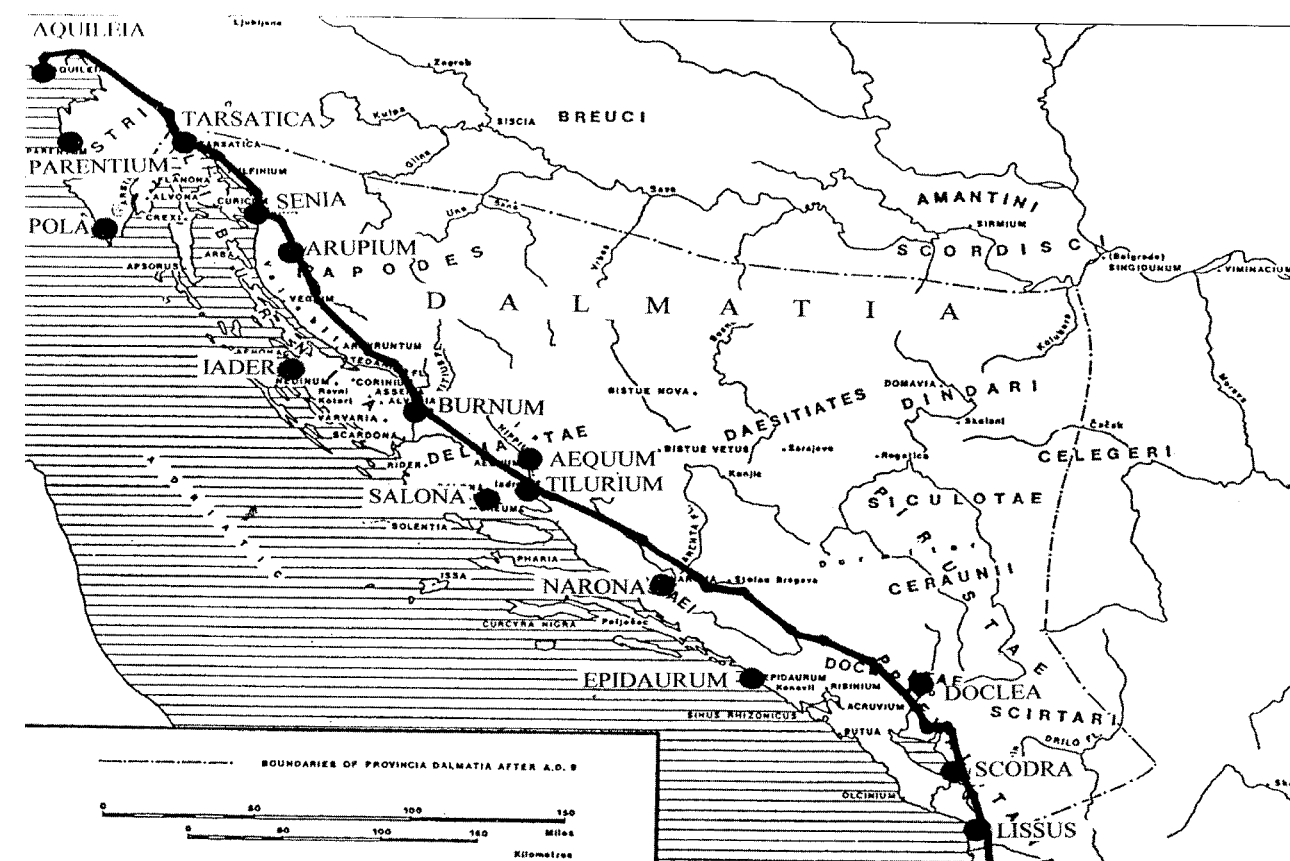
<sup>12</sup>Cambi *et al.* 2007, 12.

<sup>13</sup>Glavaš 2016, 18–19.

<sup>14</sup>CBFIR 449.

<sup>15</sup>Kubitschek 1924, 216; Cambi *et al.* 2007, 22.

<sup>16</sup>Jeremić 2006, 168; Schallmayer 1994, 176–184.



Map 1 - Roman main road Aquileia – Dyrrachium (taken from Milić 2006)

Due to the fact that we are dealing with a single votive altar find, and the circumstances behind its discovery cannot be confirmed today, it could have been located at the different side near the defensive rampart of the military camp.

Next BF COS station along the Aquileia – Dyrrachium main road line is attested in Magnum. Magnum is located in the Šibenik –Knin County, at the south-east edge of the Petrovo polje on Balina Glavica at the settlement Umljanovići near the spring of the River Čikola.<sup>17</sup> It became a *municipium* during the reign of Marcus Aurelius, at latest.<sup>18</sup> A total of seven BF COS votive altars was found in Magnum.<sup>19</sup> All of the votive altars were found by Marko Vrbatović from a nearby village Kljaci in 1897. While cleaning off his land from stone piles along his field, he discovered walls and among them fragments of votive altars.<sup>20</sup> The follow-

ing year, 1898, Lujo Marun arrived at Balina Glavica – the location of Roman Magnum archeological site, in order to investigate the site and buy off the findings.<sup>21</sup> By reexamining the terrain and the cadastral plan, it was determined that the stone piles on the cadastral parcels 572/2, 573 and 580 (all in the cadastral municipality Umljanovići) were probably the stone piles dug over by Marko Vrbatović at the end of 1897. The rock piles are located near the west foot of the Balina Glavica, wherefrom a straight line leads in the direction of a former Vezović bridge, which was used as a crossing over Čikola from the area of Balina Glavica and could represent the position of the Roman bridge. Only archaeological excavations will be able to confirm if there is a BF COS station complex with its sanctuary on the described locations.

<sup>17</sup>Wilkes 1969, 239.

<sup>18</sup>Glavaš 2012, 97.

<sup>19</sup>Glavaš 2016, 21.

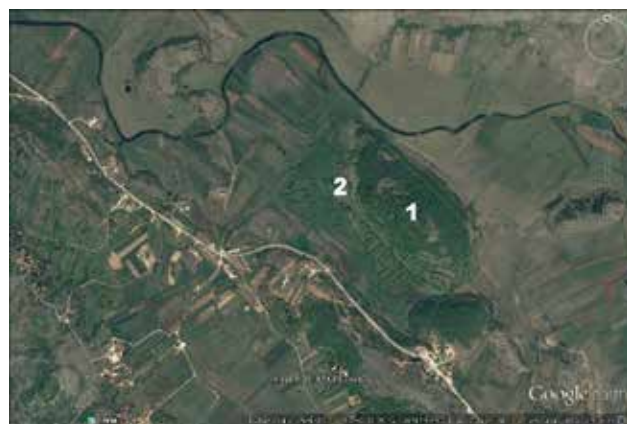
<sup>20</sup>Radić 1898, 55.

<sup>21</sup>Marun 1998, 91.





Map 2 - Position of BF COS station in Burnum (1 legionary camp, 2 auxiliary camp, 3 amphitheater, 4 campus, 5 BF COS station)



Map 3 - Position of BF COS station in Magnum (1 Balina glavica, 2 BF COS station)

The center of the *municipium* in Novae and the BF COS station along the Aquileia - Dyrrachium main road were situated in today's Runović at the southeast part of the Imotski field.<sup>22</sup> A total of eight BF COS votive altars was found in Novae.<sup>23</sup> Altars were found *in situ* at the archeological site called Kamenja near the parochial church in Runović and as *spolia* during the excavation of an early Christian basilica at the nearby archaeological site - Crkvina in Zmijavci.<sup>24</sup> BF COS votive altars found in the early Christian basilica at

the archeological site Crkvina (Bublin) in Zmijavci were probably taken from the sanctuary of the nearby BF COS station near the parochial church in Runović. There hasn't been a systematic archeological survey at the area of Imotsko polje, more precisely on the Kamenja archeological site near the parochial church, where we could expect the location of the *municipium*'s centre. The votive altar which was in the sanctuary of the station on 195 A.D. placed by an unnamed *beneficiarius consularis* from upper Pannonia was in 1890. dug out from a field right next to the parochial church in Runović.<sup>25</sup> According to data from CIL, other older finds of votive altars came from the same location, thus, it is reasonable to assume that this was the location of the BF COS station with its sanctuary in Novae.

Out of the rest of BF COS stations which were situated along the Aquileia - Dyrachium main road, only the findings of BF COS votive altars at the settlement Pons Tiluri and Diluntum give general information about the possible locations of BF COS stations. BF COS station in Pons Tiluri was situated underneath the legionary castrum in Roman Tilurium (Gardun near Trilj), where a transitional settlement developed at the location of an important crossing over the river Cetina, known from the historical sources also as Ponteluri.<sup>26</sup> It is where two BF COS votive altars were found at Cetina's riverbed.<sup>27</sup> Cetina's basin was deepened several times, and first major work started just before Second World War when the work was also conducted on the sand river island, which was then located at the middle of the river flow between today's arch bridge and the suspended bridge in Trilj.<sup>28</sup> On that occasion, oak beams which belonged to the construction of the Roman bridge and a votive altar dedicated by Gnaeus Tullius Faventinus were found.<sup>29</sup> During the later deepening of Cetina's basin at the position of the former island, more construction elements from the bridge were found.<sup>30</sup> Some authors assume that there was a Roman station or an office

<sup>22</sup>Wilkes 1969, 244–245.

<sup>23</sup>Glavaš 2016, 24.

<sup>24</sup>Glavaš 2016, 24.

<sup>25</sup>CBFIR 463; Patsch 1900, 338.

<sup>26</sup>Zaninović 1996, 287.

<sup>27</sup>Glavaš 2016, 23.

<sup>28</sup>Milošević 2009, 171–172.

<sup>29</sup>CBFIR 489; Gunjača 1935-1949, 50.

<sup>30</sup>Milošević 2009, 172.



Map 4 - Position of BF COS station in Novae (1 Kamenja site, 2 parochial church in Runović, 3 BF COS station)

for officers charging the bridge toll on that location.<sup>31</sup> Nevertheless, it is justifiable to assume, based on the current finds, that a BF COS station could have been located at the area around the Roman bridge across the river Cetina. Due to the fact that the Cetina's riverbed in Trilj, was deepened and it was embanked in the 1980s, new excavations on the same location which would solve the question of the BF COS stations position at Pons Tiluri settlement is unlikely.

Roman Diluntum was situated in today's Stolac in Bosnia and Hercegovina, and it was elevated to a status of *municipium* during Hadrian's reign.<sup>32</sup> Three BF COS votive altars were found in Stolac, one possibly *in situ*.<sup>33</sup> Due to the fact that BF COS stations are, as a rule, found in the immediate vicinity of Roman settlement's centers, this find would suggest the location of the station. However, as there is no detailed information about the find and there hasn't been an archaeological excavation in Diluntum so far, the exact position of the BF COS station is still hard to conclude.

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**CBFIR**

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**GZM**

*Glasnik zemaljskog muzeja Bosne i Hercegovine*

**HA**

*Histria antiqua*

**OA**

*Opuscula Archeologica*

**SHP**

*Starohrvatska prosvjeta*

**VAHD**

*Vjenik za arheologiju i historiju dalmatinsku*

**ZPE**

*Zeitschrift für Papyrologie und Epigraphik*

**Sažetak**

Magistralni pravac Akvileja-Dirahij glavna je rimska cesta na istočnoj jadranskoj obali i provinciji Dalmaciji. Duž te ceste nalazio se sustav rimskih vojnih logora, od legijskog logora u Burnumu do pomoćnog logora Bigeste. Nakon odlaska legija iz provincije Dalmacije početkom 2. stoljeća, brigu oko sigurnosti u provinciji preuzimaju pomoćne postrojbe i konzularni beneficijariji raspoređeni u ured namjesnika i po stanicama unutar provincije. Konzularni beneficijariji dio su organiziranog sustava provincijske administracije. Od ukupno petnaest stanica konzularnih beneficijarija, duž magistrale Akvileja-Dirahij smješteno ih je čak osam: *Avendo*, *Burnum*, *Magnum*, *Pons Tiluri*, *Novae*, *Narona*, *Diluntum* i *Dokleja*. Do sada na prostoru nekadašnje rimske provincije Dalmacije nije otkopana niti jedna stanica, pa o njihovom položaju zaključujemo na temelju nalaza zavjetnih žrtvenika konzularnih beneficijarija. Na trasi magistralne ceste Akvileja-Dirahij, moguće je pobliže odrediti lokaciju samo tri stanice: *Burnum*, *Magnum* i *Novae*. Na tim mjestima znaju se pozicije gdje su zavjetni žrtvenici otkopani. Okolnosti nalaza zavjetnih žrtvenika konzularnih beneficijarija na ostalim lokacijama duž magistrale Akvileja-Dirahij ne daju nam sigurne podatke o točnim pozicijama stanica.





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# Die Bedeutung des Siedlungsplatzes Gamzigrad für das Sicherheitssystem der Provinz *Dacia ripensis*

## ABSTRACT

Die befestigte Anlage von Gamzigrad ist eines der besterhaltenen römischen Denkmäler in der Provinz *Dacia ripensis*. Durch seine geografische Lage kommt dem Ort bereits vor der Errichtung des Palastes von Kaiser Galerius eine wichtige strategische Funktion bei der Reorganisation des Verteidigungssystems an der unteren Donau nach der Aufgabe der dakischen Provinzgebiete zu. An Hand der Ergebnisse deutsch-serbischer Gemeinschaftsforschungen im Umfeld des Palastes soll diese Frage untersucht werden.

**KEY WORDS:** DACIA RIPENSIS, TETRARCHY, INFRASTRUCTURE, ADMINISTRATION.

Die Ruinen von Gamzigrad stehen nicht zufällig seit 2007 auf der Welterberliste der UNESCO, denn es handelt sich zweifellos um das imposanteste Architekturensemble aus römischer Zeit in der spätantiken Provinz *Dacia ripensis* (Abb. 1). Schon Felix Kanitz, der in den 60er Jahren des 19. Jahrhunderts Gamzigrad besucht hatte, sah darin „ein seltenes Beispiel römischer Befestigungskunst im europäischen Osten“<sup>1</sup>. In seiner Beschreibung vermerkt er auch „die Rudimente einer zweiten Reihe von Rundthürmen, welche... eine zweite Befestigung innerhalb der ersten gebildet

haben mochten“<sup>2</sup> und die er auch auf seiner Zeichnung der Ruinen von Gamzigrad angedeutet hat. Durch die seit 1953 laufende archäologische Erforschung konnte diese Anlage als Palast des Kaisers Galerius identifiziert werden<sup>3</sup>. Das war vor allem der Entdeckung einiger einschlägiger Funde zu danken. Zunächst kam in den 80er Jahren des 20. Jahrhunderts das Mittelstück einer Archivolte zu Tage, auf der ein von zwei Pfauen flankierter Lorbeerkranz mit der Inschrift FELIX ROMVLIANA dargestellt ist<sup>4</sup>. Einige Jahre später tauchte noch ein gut erhaltener Porträtkopf aus rotem

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<sup>1</sup>Kanitz 1868, 316.

<sup>2</sup>Kanitz 1868, 317.

<sup>3</sup>Vgl. zusammenfassend zur Forschungsgeschichte von Gamzigrad Živić 2003, 20 – 27 ; Popović 2011.

<sup>4</sup>Srejić 1985, 51 – 67.





Abb. 1 - Romuliana-Gamzigrad. Gesamtansicht des Palastes von Osten.

Porphyr auf, der eindeutig einen Tetrarchenkaiser wiedergibt, höchstwahrscheinlich Galerius<sup>5</sup>. Hinzu kam noch ein mit Reliefs verzierter Pilaster aus grauem, örtlichem Kalksandstein. Darauf ist eine Standarte mit drei figürlich geschmückten Medaillons abgebildet<sup>6</sup>. In den zwei oberen erscheinen jeweils zwei mit dem *paludamentum* bekleidete Männer – die amtierenden Herrscher der zweiten Tetrarchie, während das Paar in dem dritten Tondo zwei Männer in togaähnlichem Gewand zeigt – die *seniores Augusti* Diokletian und Maximian Herculus, durch deren Rücktritt im Jahr 305 Galerius vom Caesar zum Augustus avancierte<sup>7</sup>. Dass die Interpretation als Palast des Galerius mit der äußeren, jüngeren Festungsmauer zu verbinden ist, belegt auch der Fund einer Münze des Galerius, geprägt zwischen 308 und 311, die in dem Mörtelstrich des nördlichen Flankenturmes am Westtor geborgen wurde<sup>8</sup>.

Wenn also die äußere Befestigungsanlage von Gamzigrad mit dem Galeriuspalast *Romuliana* zu identifizieren ist, bleibt die Frage nach Bedeutung und Datierung der schon von Kanitz erwähnten inneren Mauer, die offensichtlich vor der Errichtung des äußeren Mauerringes niedergelegt worden war. Dragoslav Srejšević und Miloje Vasić gehen davon aus, dass Galerius bereits in seiner Zeit als Caesar, spätestens nach seinem Sieg über die Sarmaten im Jahre 297 mit dem Bau von der Befestigung von *Romuliana* begonnen habe und nach seinem Aufstieg zu Augustus den Bauplan geändert habe<sup>9</sup>. Sichere archäologische Evidenzen für diese Annahme liegen bisher nicht vor. Vielmehr spricht manches dafür, dass ein deutlicher Zeitraum zwischen der Entstehung der beiden Mauern vergangen sein dürfte. So konnten vor dem Eingang zum südlichen Torturm des jüngeren Westtores die Reste eines Bauwerks mit

<sup>5</sup>Srejšević 1992/1993, 41 – 47.

<sup>6</sup>Srejšević 1991, 179 – 185.; Bergmann 2020, 305 – 346.

<sup>7</sup>Vasić 2007, 52 vermutet, dass sich diese Darstellung erst auf die im Jahre 308 zustande gekommene dritte Tetrarchie bezieht, an deren Spitze ebenfalls Galerius stand.

<sup>8</sup>Vasić 2007, 52.

<sup>9</sup>Srejšević 2011, 47; Vasić 2007, 51.

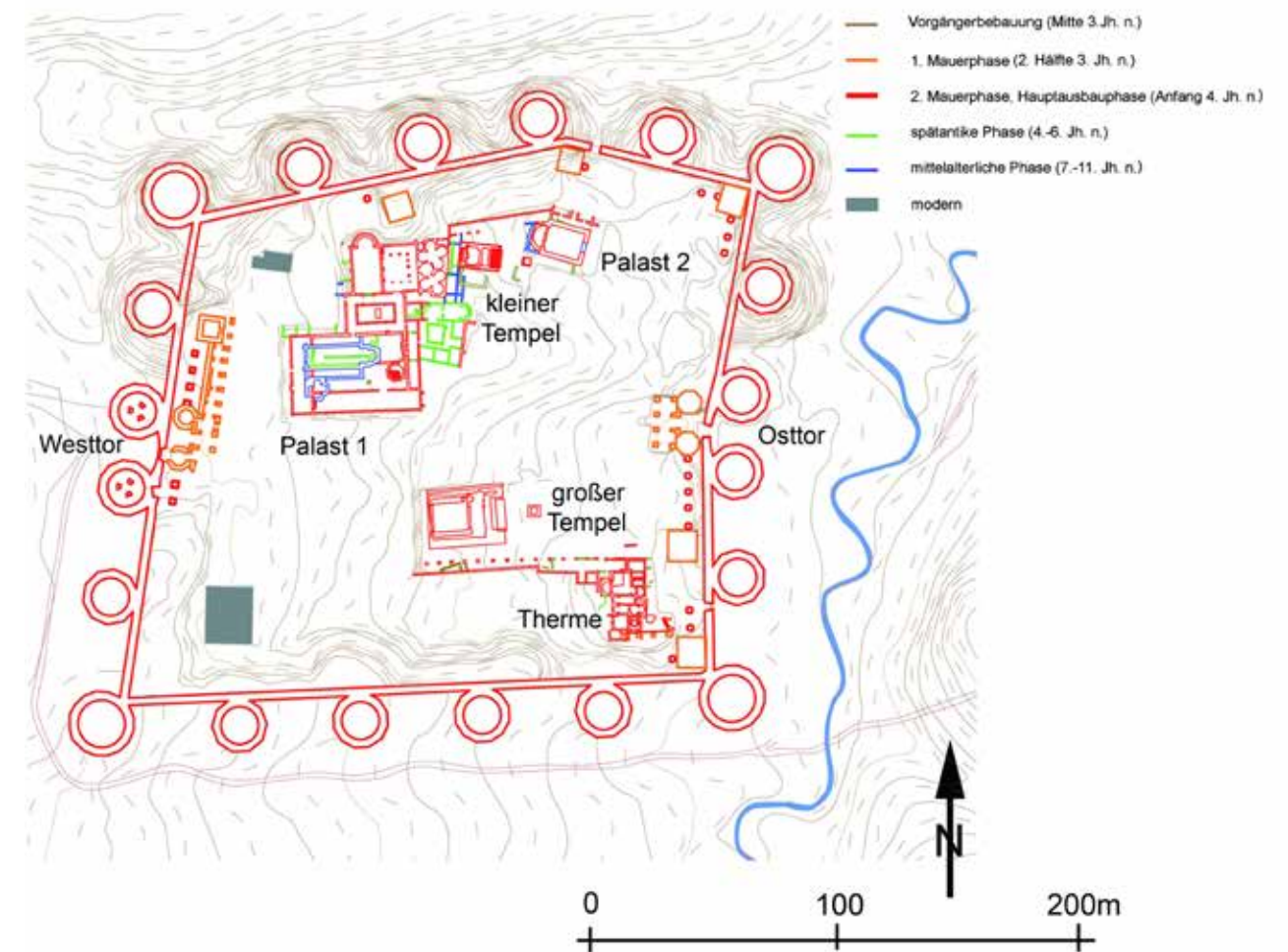


Abb. 2 - Romuliana-Gamzigrad. Grundplan des Palastes und der älteren Festungsanlage.

Hypokaustum nachgewiesen werden, das die ältere Kurtine überlagert und von einem Pfeilerfundament der jüngeren Portikus geschnitten ist, also nach der Zerstörung der älteren Festungsanlage existierte, aber noch vor der Errichtung des jüngeren Mauerringes aufgegeben worden ist<sup>10</sup>. Die Flankentürme an den Toren der beiden Festungswerke weisen zwar einen ähnlichen polygonalen Grundriss auf, und die weit nach außen vorspringenden Zwischentürme der äußeren Mauer sind ebenfalls polygonal ausgelegt und besitzen runde Innenräume, aber sowohl die Eck- wie auch Zwischentürme der älteren Anlage haben eine

viereckige Grundfläche und ragen sowohl nach innen wie auch nach außen über die Kurtine hinaus (Abb. 2). Das spricht ebenfalls für einen gewissen zeitlichen Abstand, zumal die viereckigen Zwischentürme an Festungsanlagen aus dem dritten Viertel des 3. Jahrhunderts bekannt sind<sup>11</sup>.

Auch im Innenraum der Festung finden sich zahlreiche Hinweise für Bauaktivitäten vor der Errichtung des Galeriuspalastes<sup>12</sup>. So befindet sich zwischen dem Vestibül des Palastgebäudes und dem nördlichen Parallelgang ein vermutlich nicht überdachter Hofraum,

<sup>10</sup>Petković 2011b, 186 – 188.

<sup>11</sup>v. Bülow 2016a.

<sup>12</sup>Petković 2011b.





Abb. 3 - Romuliana-Gamzigrad. Konchenbau im Nordostflügel des Zentralgebäudes mit Resten einer älteren Hypokausteneinrichtung.

in den ein oktogonaler Raum hineinreicht, welcher mit Hypkausten ausgestattet ist<sup>13</sup>. In seiner Südwand ist eine überwölbte Wandöffnung für die Heißluft erkennbar, aber es gibt keine Anschlüsse an Nachbarräume. Eben solche Wandöffnungen gibt es auch in der Empfangsaula und in den Außenwänden des Stibadiums an der Nordostecke des Gebäudes (Abb. 3). Doch hier ragen sie über die heute sichtbaren, mit Mosaiken ausgelegten Fußböden hinaus und sind durch eine dicke Mörtelschicht und marmorne Wandplatten weitgehend zugesetzt. Vermutlich gab es ursprünglich auch hier eine Hypokaustheizung, die jedoch entfernt wurde, als die Fußböden tiefer gelegt und mit Mosaiken ausgestattet wurden<sup>14</sup>.

Die bisherigen Untersuchungen haben jedoch keine Anhaltspunkte für eine genaue Datierung dieser früheren Bauphase ergeben. Um möglichst neue Anhaltspunkte für die absolute Chronologie zu gewinnen, wurden im Rahmen eines serbisch-deutschen Gemeinschaftsprojektes zwischen 2004 und 2012 die Forschungen auf Flächen außerhalb der Festungsanlagen ausgedehnt. Da es sich dabei im Wesentlichen um bewirtschaftete Ackerflächen handelt, waren hier aber oberirdisch keine Siedlungsstrukturen auszumachen. Mit Hilfe geomagnetischer Feldmessungen konnten jedoch im näheren Umfeld des Palastes zahlreiche Baustrukturen prospektiert werden, von denen einige durch kleinflächige Sondagegrabungen

auch archäologisch untersucht wurden<sup>15</sup>. Die neu entdeckten archäologischen Objekte konzentrierten sich hauptsächlich auf einer annähernd 7 ha großen Fläche nördlich des Palastareals (Abb. 4). (Anm. einfügen: v.Bülow 2020, 83 –116. Diese war von einer 90 cm dicken Mauer umgeben, besaß je einen Durchgang in der Ost- und der Westseite, aber keine Türme. Die virtuelle Achse zwischen den beiden Toren durchlief eine Rundstruktur, die aus einem Kranz von 16 Einzelfundamenten für Stützen mit einem Gesamtdurchmesser von ca. 35 m gebildet wurde. Im Zentrum erhob sich eine 3 m starke Säule auf einem etwa 1 m mächtigen Fundament. Funde, die Anhaltspunkte für die Datierung oder die Funktion dieses Monumentes geben könnten, kamen in den kleinen Untersuchungsflächen nicht zu Tage. Allein Fragmente von drei Wandziegeln mit dem Stempel der *legio III Flavia* können einen Hinweis auf einen militärischen Kontext geben, etwa als Siegesmonument oder als offizielles Grabmal<sup>16</sup>. Bemerkenswert an dem Befund dieses Bauwerks ist, dass an seiner Nordseite vier Stützenfundamente in eine von West nach Ost abschüssig verlaufende Erosionsrinne abgerutscht sind, die vermutlich in Folge eines Erdbebens entstand und zur Zerstörung des Rundmonumentes geführt hat<sup>17</sup> (Abb. 5).

Auch ein 106 m langes und 23 m breites dreischiffiges Gebäude in der Nordostecke der „Nordfläche“ ist vermutlich bei dieser Naturkatastrophe zerstört worden, da die hier untersuchten Mauern trotz einer stabilen Fundamentierung um etwa 5° aus der Vertikalen nach Ost geneigt sind<sup>18</sup>. In der Schuttschicht dieses Gebäudes kamen auch 13 Bronzemünzen zu Tage, die zwischen 270 und 285 geprägt worden sind<sup>19</sup>. Die im Bereich des Rundmonumentes und des dreischiffigen Großbaues zu Tage gekommene Keramik ist nicht früher als

2. Hälfte 3. Jahrhundert zu datieren<sup>20</sup>. Man muss also von einer relativ kurzen Nutzungsdauer dieses Areals ausgehen, ehe es noch deutlich vor der Errichtung des Galerius-Palastes durch eine Naturkatastrophe zerstört worden ist<sup>21</sup>. In diesem Zusammenhang könnten auch die Schäden an der älteren Festungsmauer des Palastgeländes und an der dazugehörigen Innenbebauung entstanden sein.

Demnach hat Galerius nicht einen siedlungsfreien Raum gewählt, um seine Residenz zu errichten, sondern er fand eine beschädigte Festungsanlage mit einem militärisch konnotierten Monument in der Nachbarschaft vor.

Was machte aber diesen Ort interessant für einen Wiederaufbau durch den Kaiser? Gamzigrad liegt ziemlich genau im geografischen Zentrum der Provinz *Dacia ripensis* an einem kleinen Zufluss des Crni Timok (*fl. Timacus*), der sich nach etwa 15 km mit dem Beli Timok vereinigt (Abb. 6). Hier befand sich ein Kastell, von dem Reste am Stadtrand von Zaječar erhalten sind. Nach weiteren etwa 40 km mündet der Timok nahe des Kastells *Aquae* (heute Prahovo) in die Donau. Südlich von Gamzigrad führt die Straße im Timoktal bis *Naissus* (heute Niš). Nach etwa 40 km zweigte bei dem entfernten Kastell *Timacum minus* (bei dem Dorf Ravna)<sup>22</sup> eine Straße nach Nordosten ab, die zur Provinzhauptstadt *Ratiaria* (bei dem Dorf Arčar, BG<sup>23</sup>) führte. In *Naissus* bestand Anschluss einerseits an eine große, von Norditalien bis zum Bosphorus verlaufende Heerstraße sowie an eine Südverbindung nach *Lissus* (Lezha, AL) an der Adriaküste. Somit bildete der Timok eine wichtige Trasse, die das Mittelmeer mit der Donau unterhalb des unpassierbaren „Eisernen Tores“ verband<sup>24</sup>.

<sup>13</sup>Čanak-Medić 1978, 100 – 101 Abb. 81 E. Dieser Raum besitzt zwar einen Durchgang zum nördlichen Korridor, hat aber möglicherweise nach der Einrichtung des Kaiserpalastes keine Funktion mehr erfüllt.

<sup>14</sup>In der Fundamentierung des Mosaiks im nördlichen Korridor wurde eine zwischen 309 und 311 geprägte Münze des Licinius gefunden, s. Vasić 2007, 52 und 41 Abb. 10, 4, so dass die Datierung in galerische Zeit gesichert erscheint.

<sup>15</sup>v. Bülow, Schüler 2007; v. Bülow *et al.* 2009; v. Bülow 2020, 99 –100.

<sup>16</sup>v. Bülow *et al.* 2009, 130 – 135 (v. Bülow); Petković 2011a, 40; Petković 2011b, 188.

<sup>17</sup>v. Bülow 2016b.

<sup>18</sup>v. Bülow 2020, 96 –99.

<sup>19</sup>Die Bestimmung der Münzen wurde von Miloje Vasić vorgenommen und wird zusammen mit den Grabungsbefunden publiziert werden. Es handelt sich um Prägungen der Kaiser Aurelian, Florianus, Probus und Carinus, s. Vasić 202, 103 – 104 Nr. 1 –13.

<sup>20</sup>Conrad 2020, 147 – 153.

<sup>21</sup>Diese Annahme kann auch dadurch erhärtet werden, dass in einer tabernenartigen Doppelraumreihe entlang der Ostmauer der „Nordfläche“, die in den Zerstörungsschutt des Großbaues einschneidet, also einer späteren Bautätigkeit zuzuordnen ist, je eine Münze von Valeria Galeria Augusta, geprägt 310/311, und Licinius aus den Jahren 316/ 317 gefunden worden sind. Die Publikation dieser Befunde ist ebenfalls in Vorbereitung.

<sup>22</sup>Petrović 1995, 37 – 50; Ilijić 2009; Ilijić 2015.

<sup>23</sup>Dintchev 2002.

<sup>24</sup>Mirković 2003, 4 – 8.



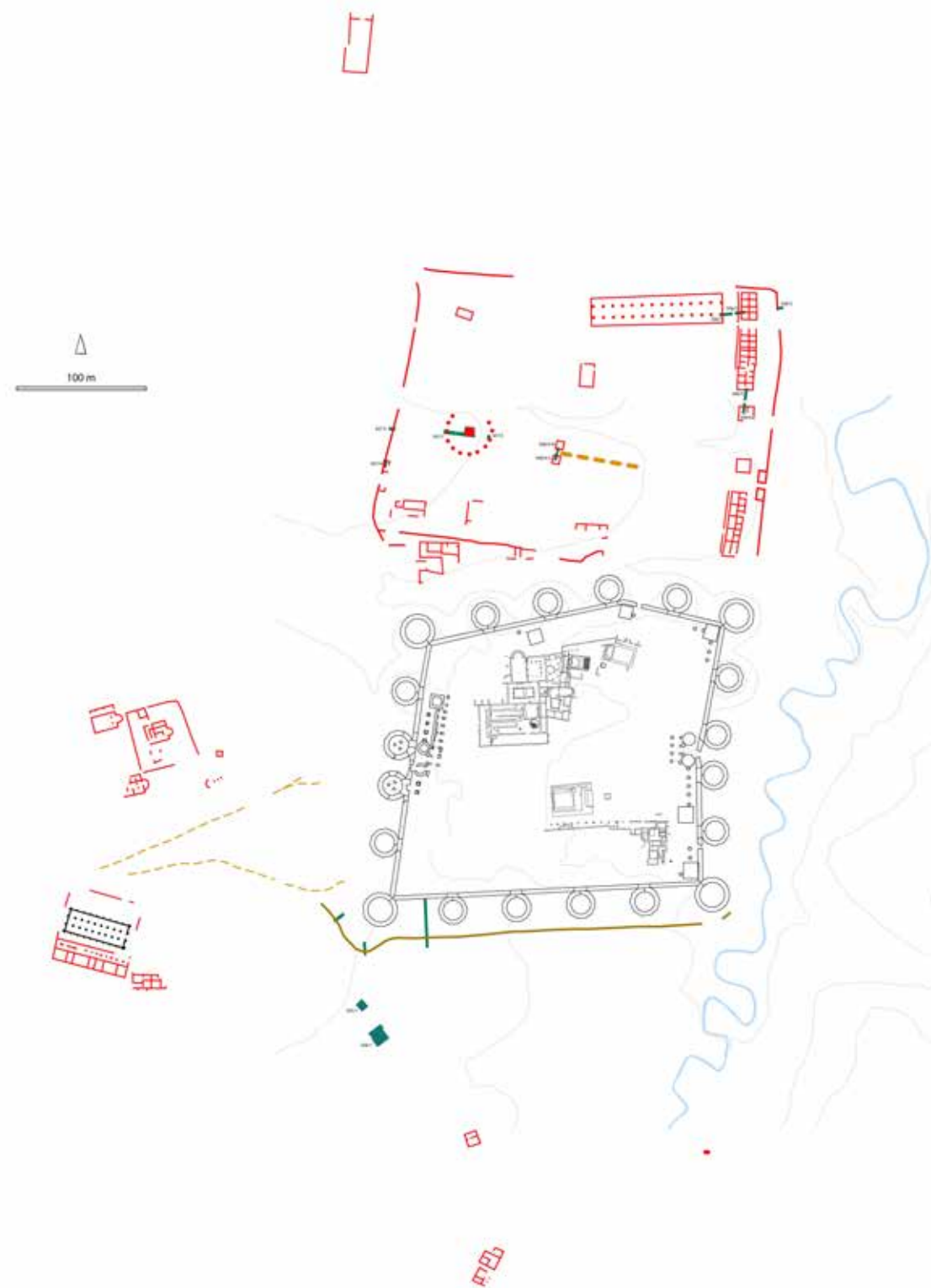


Abb. 4 - Plan der nördlich des Palastes Romuliana prospektierten Siedlungsfläche, Umzeichnung des geomagnetischen Gradienten-Kartierung.

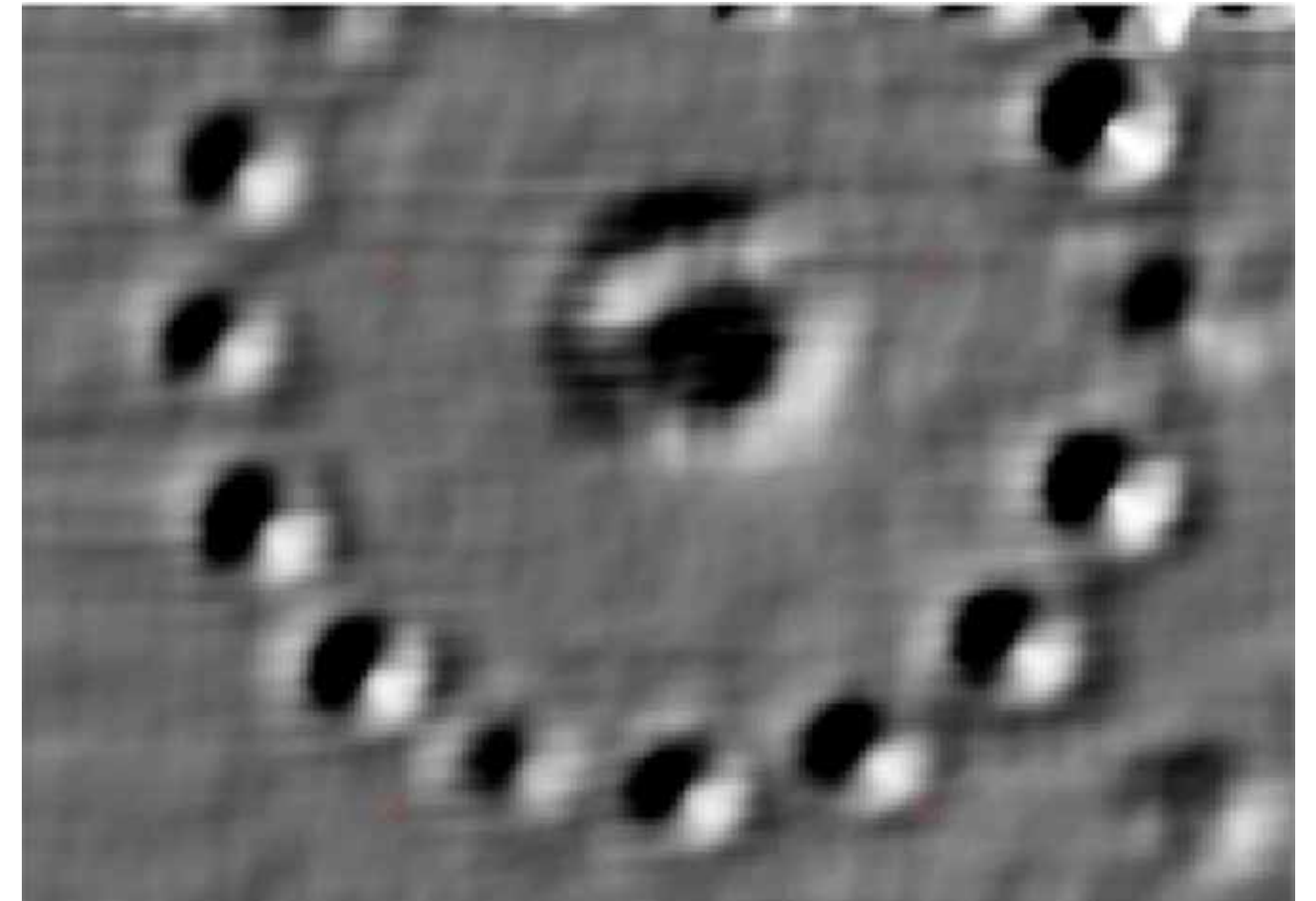


Abb. 5 - Geomagnetisches Messbild des durch eine Erosionsrinne zerstörten Rundmonumentes nördlich des Palastes Romuliana.

Etwa 80 km westlich von Gamzigrad liegt das befestigte Munizipium *Horreum Margi*, wo die große Heerstraße den Fluss *Margus* (Veliki Morava) kreuzt und eine Straße im Flusstal nordwärts bis zum Kastell *Margum* an der Donau führt<sup>25</sup>. An Hand von römischen Ruinen und alten Straßenspuren hat schon Felix Kanitz eine von hier ausgehende Straßenverbindung zum Timoktal rekonstruiert, die etwa der Trasse der modernen Straße von Paraćin nach Zaečar folgt<sup>26</sup>. Dabei durchquert sie eine an verschiedenen Erzlagerstätten reiche Landschaft, das heute sogenannte Serbische Erzgebirge. Wenige Kilometer nördlich dieser Route liegt die moderne Stadt Bor, wo zahlreiche Funde zu Tage gekommen sind, die römerzeitliche Bergbauaktivitäten belegen. Einschlägige Befunde sind jedoch durch den heute noch betriebenen Kupferabbau voll-

ständig zerstört<sup>27</sup>. Die dieses Gebiet durchziehenden Straßen dienten vorrangig dem Transport von Erzen und aufbereiteten Metallen und stellten die Verbindung zu den zwei Hauptrouten her. Die eine führte durch das Moravatal an die Donau oberhalb des für die Schifffahrt nicht passierbaren „Eisernen Tores“, des Donaudurchbruchs durch die Karpaten, und stellte damit eine wichtige Versorgungsrouten von Süden an die Limeszone der mittleren Donau sicher. Die zweite verlief durch Timoktal von Süden an die Donau unterhalb des Defiles und erreichte so die Limesprovinzen an der unteren Donau.

Dass in diesem provinzübergreifenden Kommunikationsnetz der Ort Gamzigrad eine zentrale Position einnimmt, hatte schon Djordje Mano-Zisi bei den ersten Forschungsgrabungen erkannt und folgerte daraus,

<sup>25</sup>Vasić 1990.

<sup>26</sup>Kanitz 1892, 89 – 91. Auch Mano-Zisi (1956, 67) nimmt eine Straßenverbindung zwischen *Horreum Margi* und dem Timoktal bei Gamzigrad an, sicher nachgewiesen ist diese aber bisher noch nicht

<sup>27</sup>Die Funde sind im Museum in Bor ausgestellt, eine einschlägige Publikation liegt jedoch bisher nicht vor.

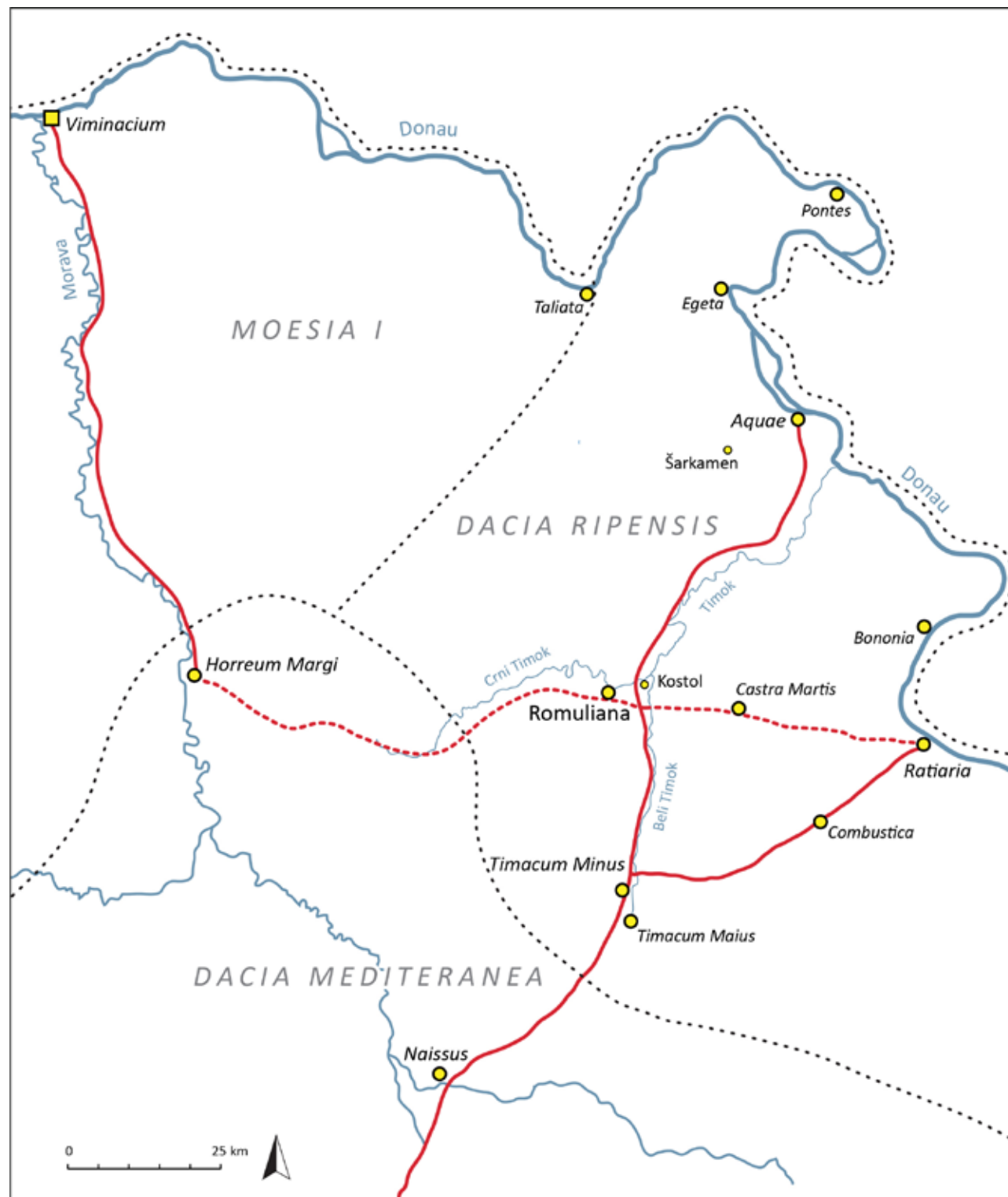


Abb. 6 - Schematische Karte der Hauptstraßen in der Provinz Dacia ripensis und den Nachbarregionen.

dass sich hier ein administratives Zentrum für die Minen und Steinbrüche dieser Region befunden haben

muss<sup>28</sup>. Für eine militärische Funktion der Erstanlage von Gamzigrad spricht auch, dass im Zerstörungs-

<sup>28</sup>Mano-Zisi 1956, 67.

schutt der Festungsmauer zahlreiche Ziegel mit dem Stempel der *legio V Macedonica* gefunden wurden<sup>29</sup>. Diese Legion war nach der Aufgabe der norddanubischen Provinzen um 270/ 275 aus Dakien wieder nach *Oescus* (bei dem Dorf Gigen, BG) in der Provinz *Dacia ripensis* verlegt worden, und Angehörige dieser Legion waren offensichtlich am Bau der Erstanlage von Gamzigrad beteiligt. Die in Gamzigrad gefundenen Ziegelstempel können folglich einen Hinweis auf die Datierung der Erstanlage etwa in die Regierungszeit von Kaiser Aurelian geben.

Vermutlich in derselben Zeitspanne wurde, wie die Ergebnisse der geophysikalischen Prospektion zeigen, auch das Areal nördlich der Festungsanlage bebaut. Daran scheinen ebenfalls Militärangehörige beteiligt gewesen zu sein, wie die gestempelten Ziegel der in *Singidunum* (heute Belgrad) stationierten *legio IIII Flavia* belegen<sup>30</sup>. Beide Baukomplexe besaßen also einen militärischen Charakter und waren höchstwahrscheinlich funktional miteinander verbunden. Die geografische Lage der stark befestigten und zugleich repräsentativen Anlage im geschützten Limeshinterland lässt auf eine besondere strategische Bedeutung dieses Platzes in Zusammenhang mit der Reorganisation des Donaulimes am Übergang zur Spätantike schließen. Von hier aus erfolgte wahrscheinlich Kontrolle des Straßennetzes, das die für die Militärwirtschaft wichtige Bergbauregion durchzog<sup>31</sup>. Und zugleich waren die hier ansässigen Beamten und Militärs für die Sicherheit der Transportwege zur Truppenversorgung in den neu ausgebauten Limeskastellen oberhalb und unterhalb des Eisernen Tores zuständig.

Allerdings scheinen diese Anlagen nach bisheriger Kenntnis kaum länger als zehn oder 15 Jahre in Funktion gewesen zu sein, bevor sie durch eine Naturkatastrophe zerstört worden. Kaiser Galerius war sich der strategischen Bedeutung des Platzes bewusst, als er wenige Jahre später ausgerechnet hier eine Residenz als administratives und militärisches Verwaltungszentrum errichten ließ, die ihm darüber hinaus möglicherweise als Alterssitz nach dem für 313 geplanten Rücktritt hätte dienen sollen. Nach seinem Tod im

Jahre 311 verlor der Palast jedoch seine Funktion und verfiel allmählich.

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<sup>29</sup>Čanak-Medić 1978, 89–90; Lalović 1983, 163. 165, Kat.-Nr. 336 – 339; Mirković 1997, 429–430; Christodoulou 2002; v. Bülow 2016, 299.

<sup>30</sup>Benea 1983, 157 – 158.

<sup>31</sup>Es gibt keine zwar Belege dafür, dass die Festung von Gamzigrad der Sitz eines *procurator metallorum* war, aber aus seiner geografischen und strategischen Lage lässt sich auf eine vergleichbare Funktion des Platzes schließen, vgl. dazu Dušanić 1977, 69 – 76; Dušanić 1995.



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#### Abbildungsnachweis

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Abb. 2 – 5: Gamzigrad-Archiv, RGK Frankfurt/Main;

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# **The road to be taken: a GIS-based analysis of the spatial & networking patterns pertaining to the Roman conquest of Sarmizegetusa Regia, Dacia**

## **ABSTRACT**

The upland landscape surrounding the Iron Age Dacian capital of Sarmizegetusa Regia in the Orăştie Mountains (Romania) and the events which led to its conquest by Rome have long caught the attention of specialists and the wider public. However, the traditional research methodology previously applied left open considerable questions of its socio-historical dynamics, including our understanding of networking across a landscape lacking both historical sources and archaeological evidence for ancient roads. Based on the newly-available assessment of the Late Iron Age and early Roman archaeological landscape and on high and mid-resolution topographic data this paper represents our first attempt, subsequently expanded by separate studies, to employ GIS-based spatial analysis to understand site location, mobility and visibility between Roman military sites and Dacian citadels within the wider landscape. This helped formalise and test spatial and historical hypotheses, as part of a wider interdisciplinary archaeological research in order to help build a better understanding of this iconic warfare landscape.

**KEY WORDS: ROMAN WARFARE, DACIA, GIS, SPATIAL ANALYSIS, CONNECTIVITY, VISIBILITY, IRON AGE**

## **Background**

Our understanding of Trajan's wars in Dacia as a process is very limited from an integrated landscape perspective. This is necessary to clarify date and function of sites, discover new sites and to better understand logistics and networking at play. Historical sources mention a first campaign in 101-2 AD and a second one in 105-6 AD, both involving Roman troops crossing River Danube from bases in Moesia

and Pannonia and moving across the landscape over hundreds of kilometres towards the target central site of the Dacians at Grădiştea Muncelului (Sarmizegetusa Regia) (Fig. 1). Archaeologically, such movements are documented through evidence of camps required to accommodate overnight Roman troops in transit through enemy territory and to attack indigenous strongholds (e.g. Jones 2012). In Dacia, however, the only such sites identified so far are located in the Orăştie Mountains of the Southern Carpathians, within vicinity of

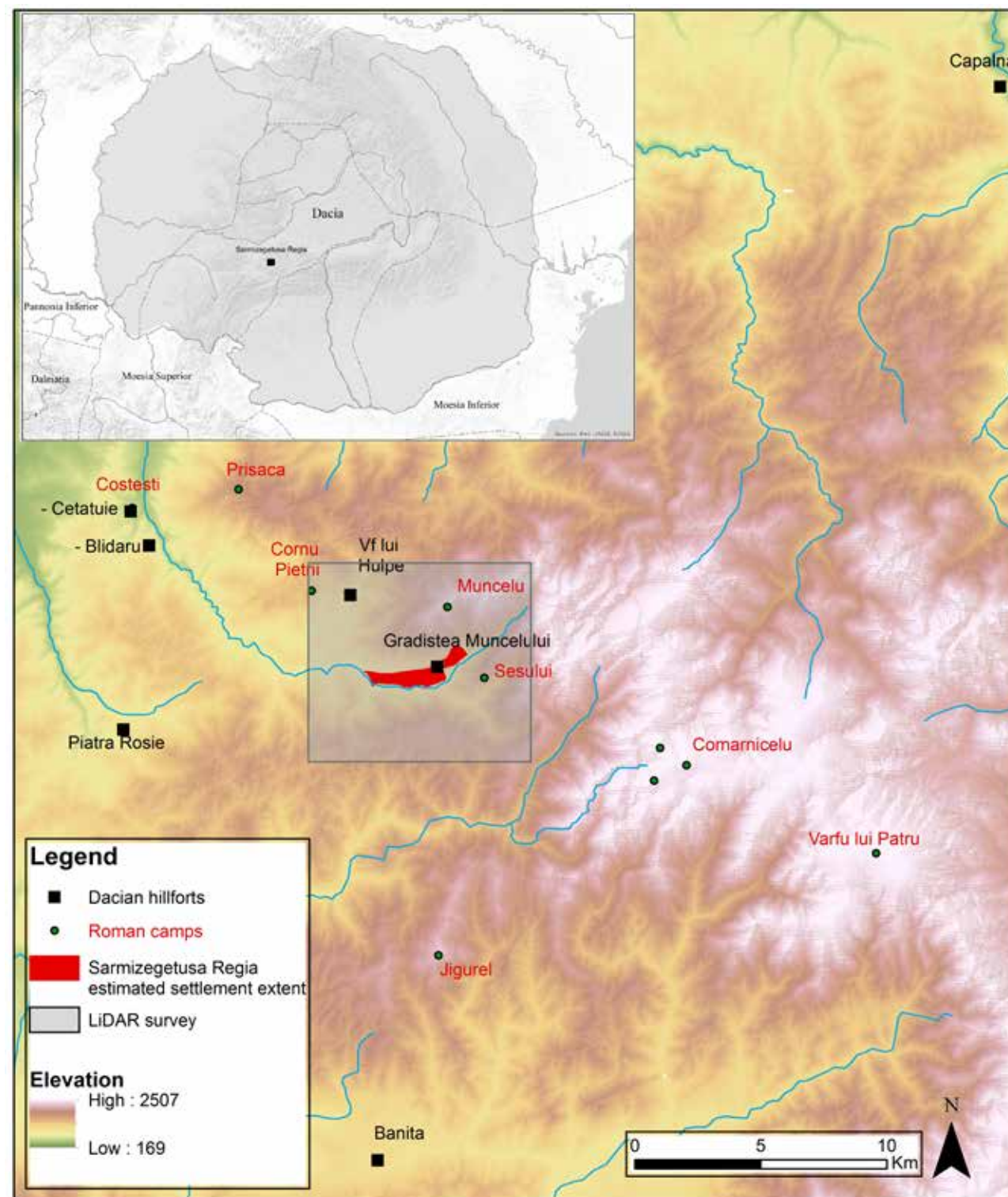


Fig. 1 - Location map of the study area.

Sarmizegetusa Regia itself. The advance routes taken by the Roman army to reach these locations are simply theorized.

The camps at Vârful Pătru and Jigurel, the cluster of three camps at Comarnicel have been known for some time (see Ștefan 2005, with bibliography). The pres-

ence of another one on Prisaca hill has been proposed (Daicoviciu *et al.* 1959), unfortunately without further investigation. These come at some distance away from potential Dacian targets and have been interpreted as part of army movement. While a small camp at Costești below the Dacian citadel on Cetățuie hill is assumed to have been directly linked to the attack and conquest

of that site, at Sarmizegetusa Regia it is the small enclosure on Muncelu hill which has been traditionally assumed to have the principal role in its epic fall. A recent reassessment of the archaeological landscape surrounding Sarmizegetusa Regia based on airborne LiDAR evidence (Oltean, Hanson 2017) agreed with Ștefan's (2005) interpretation of its character as a Roman fort/fortlet, while at the same time providing further insights into the presence of the Roman army on site and in the area. Additional camps previously unknown were identified on Șesului and on Cornu Pietrii hills, and on Grădiștea Muncelului hill it proposed a complex sequence of fortification and destruction. This evidence helps us better understand site locations in relation to each other, to strategic targets or to local topography, but fails to give a more clear understanding of Roman army's connectivity network potential and of its ability to control of the surrounding landscape.

Based heavily on Trajan's Column imagery, it is generally assumed that Roman advance through Dacia involved a heavy impact on the existing landscape through deforestation, and the construction of roads alongside other installations. Diaconescu (1997) assumes that the construction of the main (military) road network of Dacia attested by Peutinger's Table was in progress already during the Trajanic campaigns. But this gives no indication of how Sarmizegetusa Regia was accessed from the Mureș and the Olt River valleys, as no traces of Roman road have been yet uncovered in the Orăștie Mountains uplands, despite the otherwise good conditions for preservation of archaeological topography.

#### Connectivity and military control of upland landscape

Uplands are traditionally considered as natural barriers, inhospitable and marginal areas, with harsher living conditions, despite of their strategic and economic importance (e.g. Carreras *et al.* 2019). Nevertheless, during military operations such as in relation to conquest, upland spaces provide crucial advantages by providing necessary safety and cover-up, alongside superior possibilities for visual control and timely intervention across the surrounding landscape. Earlier theories put forward in interpreting Roman army's movements during the conquest of Dacia have been very crude with respect to the very fragmented local topography. At best assumptions are based on ethno-

graphic evidence which have not been convincingly tested (e.g. Daicoviciu *et al.* 1989: 217–223). Our study uses GIS spatial analysis and topography-related GIS modelling to discuss the potential for spatial interrelationship between Roman camps and Dacian hillforts, considering their strategic need for controlling mobility and visibility in this upland landscape. This brings more insight into the strategic role of the Roman army bases from the Orăștie Mountains and their potential interrelationships during the conquest of Dacia.

Currently, GIS-based spatial analysis has a demonstrated potential in understanding and modelling ancient movement and perception in upland areas lacking evidence for ancient pathways and roads (Verhagen *et al.* 2019). Movement and perception are structural mechanisms of human interaction with the natural world and major issues in the analysis and interpretation of archaeological contexts (Verhagen 2018). GIS analysis can build on specific landscape parameters affecting human agency, from the more general, such as an instinctive avoidance of slope steepness (e.g. Llobera and Sluckin, 2007), to the more specific, such as the importance of troops' ability to network and maintain constant contact with supporting units in any military operations in hostile territories at this scale.

The present study tests the theoretical possibility of whether the Roman camps within the study area were part of the same conquest event. Apart from the enclosures on Muncelu Hill and at Grădiștea Muncelului itself, all the Roman military sites in our study area are of a temporary nature (camps). Occupied for a short period of time, Roman camps by definition had no permanent internal structures and consequently left limited archaeological evidence notoriously raising problems in dating their occupation (Jones, 2012). With the exception of Prisaca whose character is uncertain, all camps within the study area have been linked to the events of the Dacian Wars, particularly with the conquest of Sarmizegetusa Regia during the campaign of 105-106 AD (Ștefan, 2005 with earlier bibliography). More recent interpretations however advocate that the Roman army may have come considerably closer to Sarmizegetusa Regia in the first phase of the conflict than previously estimated, sufficiently so to force king Decebalus into unsatisfactory peace arrangements and for the Romans to leave a garrison on site (Oltean, Hanson, 2017).



## Methodology

As stated above, strategic needs in the context of this study included the ability of Roman troops to: move securely on the ground and to oversee access paths between bases and towards Dacian hillforts as target for attacks; maintain visual contact with support teams to effectively communicate danger and to orchestrate joint action; and to act/react in a timely manner in case of fast developing events. In order to model the spatial relationships between Roman military sites, Dacian hillforts and the surrounding landscape, we used spatial analysis tools in ArcGIS 10.5.1 based on a LiDAR-derived Digital Terrain Model (DTM) for the immediate surroundings of Sarmizegetusa Regia (Oltean, Hanson, 2017) (Fig. 2). Data from the Shuttle Radar Topography Mission (SRTM) 1 Arc Second ~30 m DEM developed by the NASA helped expand the analysis for the entire area of Orăștie Mountains.

Models derived from both datasets have limitations. Though at very high spatial resolution, LiDAR-derived DEMs can be affected by modern-day features, so additional processing is needed to remove or soften these features. Also, the accuracy and resolution of the more general models like those based on the medium resolution SRTM or from the ASTER satellite data, is not good enough for more detailed and realistic landscape studies (Herzog 2014; Verhagen et al. 2019). In addition, the quality of historical and archaeological datasets used may also have an effect on the modelling of (paleo)environmental and socio-cultural variables (e.g. Herzog, 2013, 2014; Verhagen et al., 2019; Kempf, 2019). Our study uses morphological observations combined whenever possible with existing excavation/survey data to help construct broad chronological estimate of relevant archaeological features and sites.

Viewshed calculations are the standard method to digitally estimate the ability of individuals to see around them from a given location within a landscape setting (Llobera, 2003). Individual viewsheds were obtained by us using the Viewshed tool in the ArcGIS Spatial Analyst extension<sup>1</sup> in order to assess the effectiveness of visual control from specific sites across the sur-

rounding landscape. In addition to these, total and cumulative viewsheds were also calculated to assess the visual prominence of sites within the wider landscape and their visual interconnections (Wheatley, 1995; Llobera, 2003; Llobera et al., 2010).

In order to study mobility patterns between the settlements and their potential inter-relationships, two types of analyses were carried considering only human movement. In order to do so, an anisotropic cost model was created, which considers that the cost of displacement depends on the direction of movement, taking into account how slope influences human movement effort in biomechanical terms (metabolic energy expenditure) (Llobera, Sluckin, 2007). This also takes into account an embedded friction model in which watercourses (previously extracted using ArcGIS hydrological tools) were penalized as areas not suitable for human movement (Fábrega-Álvarez, Parcero-Oubiña, 2007). From there and based on an accumulated cost model, we first calculated least-cost paths (LCP) between sites using the Path Distance and Cost Path tools in the ArcGIS Spatial Analyst extension. These are standard analyses indicating the most convenient routes of travel between two different sites from the point of view of local topography and physical effort required. In addition to these, however, we used focal mobility network analyses (MADO: *Modelo de Acumulación de Desplazamiento Óptimo*; Fábrega Álvarez, 2006), which are based on a given cost model and use hydrological tools from the ArcGIS Spatial Analyst Tools (Flow Direction and Flow Accumulation). In contrast to LCP calculations where both start and terminus locations are required, MADO allowed us to calculate optimal paths of movement across the landscape from a given location but without a specific destination. Particularly useful when a clear rapport between sites has not been yet confirmed archaeologically, MADO allowed us to identify potential networks of natural mobility across the study area (Llobera et al., 2011). In this way, the viability of certain routes can be analysed with greater precision.

The final step in our analysis was the extraction of time isochrones from the reclassification of the cost model.

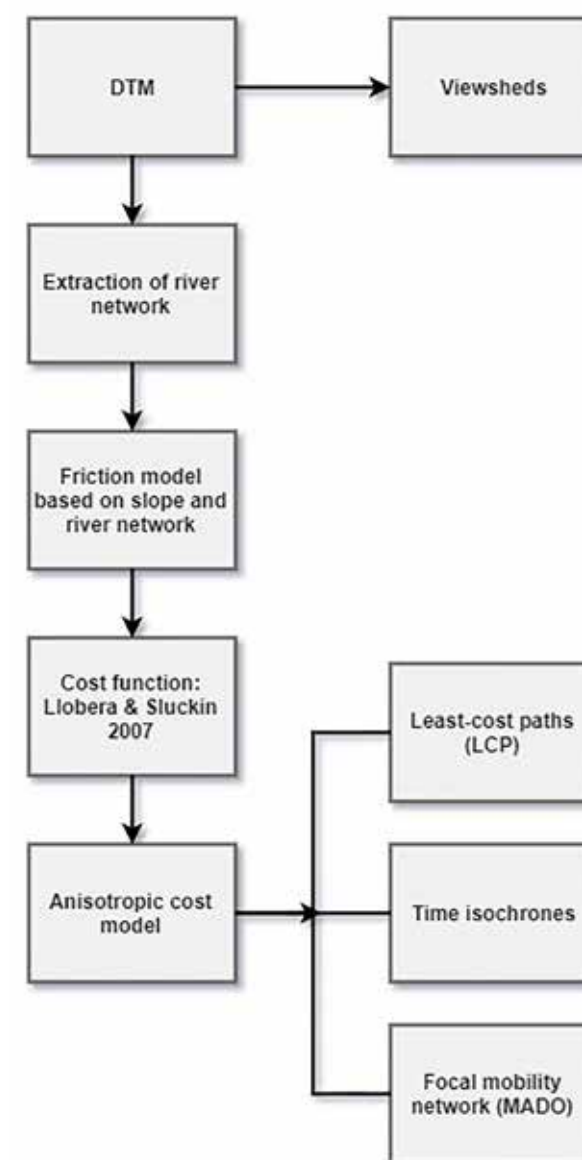


Fig. 2 - Methodology flowchart.

These were divided into 15 minutes intervals and covered a range of up to two hours. An average speed of 5 km/h has been applied for human movement. These allowed us to estimate the extent to which travel times may have been a factor affecting movement decisions.

## Discussion

The GIS analyses described above have revealed a number of interesting aspects in terms of the efficiency of known Roman army positions in controlling the landscape and defeating Dacian resistance.

MADO analyses applied to the Dacian strongholds at Sarmizegetusa Regia (Fig. 3) and Vârfu lui Hulpe (Fig.

4) have identified their most efficient access routes into the surrounding landscape, which revealed to what extent the position of Roman encampments nearby would have obstructed their possibilities to connect with the outside world as expected in a siege scenario. Accordingly, while neither of the latter seriously hinders any major communication route at Vârfu lui Hulpe, at Sarmizegetusa Regia both bases on Muncelu and Șesului hills would have been successful in cutting main access towards north and south-east. Indeed, at Muncelu hill the communication route is cut by two parallel east-west oriented ramparts which seem to precede the fortlet and whose function has not been clarified before (Oltean, Hanson 2017: 438). This indicates that, while Vârfu lui Hulpe may not have seen a substantial siege, minimal siege installations would have been in place for Sarmizegetusa Regia. MADO analyses also highlighted the most efficient routes for attackers from Șesului hill and from Muncelu hill to reach various locations in the target. This indicates that the areas to the east of the hillfort including the area of the sanctuaries might have been especially exposed to eventual attacks though reaching of the western civilian sector would have been sheltered by the presence of the hillfort itself.

In order to understand how could the troops from Șesului and Muncelu hills have reached their advanced positions, LCP and MADO analyses have been performed on a wider area using SRTM data to cover more distant bases to the south, south east and north-west. These indicate that local topography favours less a direct attack on Sarmizegetusa Regia from either Comărnicești or Jigürel, which seems to confirm the transitory character of these sites. The cluster of camps on Comărnicești hill sits ideally on the shortest natural communication pathways (LCP) between Vârfu lui Pătru and the bases on Muncelu, Șesului, and even Jigürel. MADO analysis further indicates that the position on Comărnicești conveniently allows suitable contact on the ground if necessary with other areas of strategic interest such as Piatra Roșie, Costești-Cețățuie, Vârfu lui Hulpe or Prisaca. Moreover, while a transfer from Jigürel to Șesului is not to be excluded, advance for the troops from Jigürel via Comărnicești seems to us more likely. It is therefore reasonable to interpret Comărnicești as an essential node of distribution and communication from a southern and southeastern route in the process of securing the strategic core of Dacia.

<sup>1</sup>We have taken into account an OFFSETA (observer point height) of 6 m, corresponding to the estimated mean height of the Dacian citadel walls, and of 2.8 m for the Roman camps, considering 1.2 m for the height of the rampart and 1.6 m for an average height of the human being. The viewsheds were calculated from several points uniformly distributed within the perimeter of the hillforts and the Roman bases.

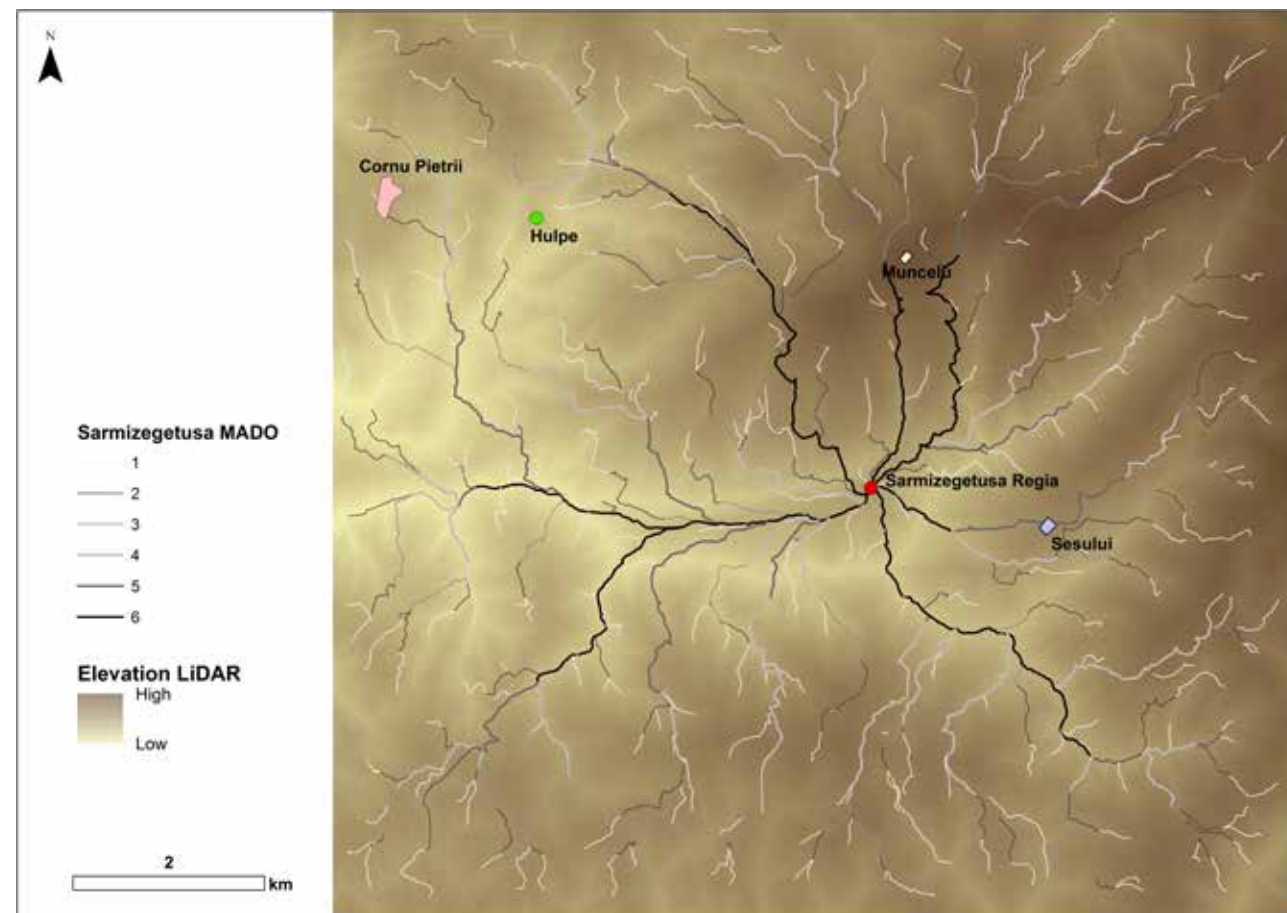


Fig. 3 - Focal mobility network (MADO) from Sarmizegetusa Regia.

For a Roman advancement towards Sarmizegetusa Regia from the Mureș River valley in the north, Muncelu hill seems more likely a terminus base than Șesului hill. However its potential for communication with other bases further afield like Costești-Cetățuie is not clear. Our MADO analysis for the Muncelu hill base indicates that its natural position is not only appropriate to secure a direct contact with the camp on Vârful lui Patru, but also with that at Costești-Cetățuie. Both MADO and LCP calculations indicate that transiting between Costești-Cetățuie and Muncelu would have been easier and most direct via the Prisaca hill rather than Cornu Petrii hill camp. The former would only involve a 500m detour from a major communication route, followed with some variation also by the LCP analysis of movement from Costești to Muncelu which is only 350m away from Prisaca. By contrast, the camp at Cornu Petrii is located at some 4.5km to the south of the natural pathway of communication between Costești and Muncelu. This seems to indicate that if the Roman troops at Cornu Petrii have reached that position via Costești, it is likely to have happened independently from the communication between Costești

and Muncelu, either using a hilltop approach via Prisaca, or independently along the Valea Rea. The former scenario is more likely, based on the general approach to movement across this upland landscape.

In terms of visibility, the viewshed analyses calculated allow us to better understand to what extent visibility from key sites across the landscape could have increased the ability of Roman troops in the study area to control visually their immediate and more distant surroundings, and how this ability would have impacted on their ability to move on the ground. The results confirmed our expectations that from the three Roman bases closest to Sarmizegetusa Regia, the one most in visual command over the surrounding landscape was at Muncelu hill, positioned on one of the most dominant peaks in the region. Its visual command secures connection with both Șesului hill and Cornu Petrii camps as well as with the more distant camps at Jigürel, Comărnicești and Costești Blidaru, or with Dacian targets at Vârful lui Hulpe and Piatra Roșie. Surprisingly however, its visible range covers very poorly its assumed strategic target, the Dacian

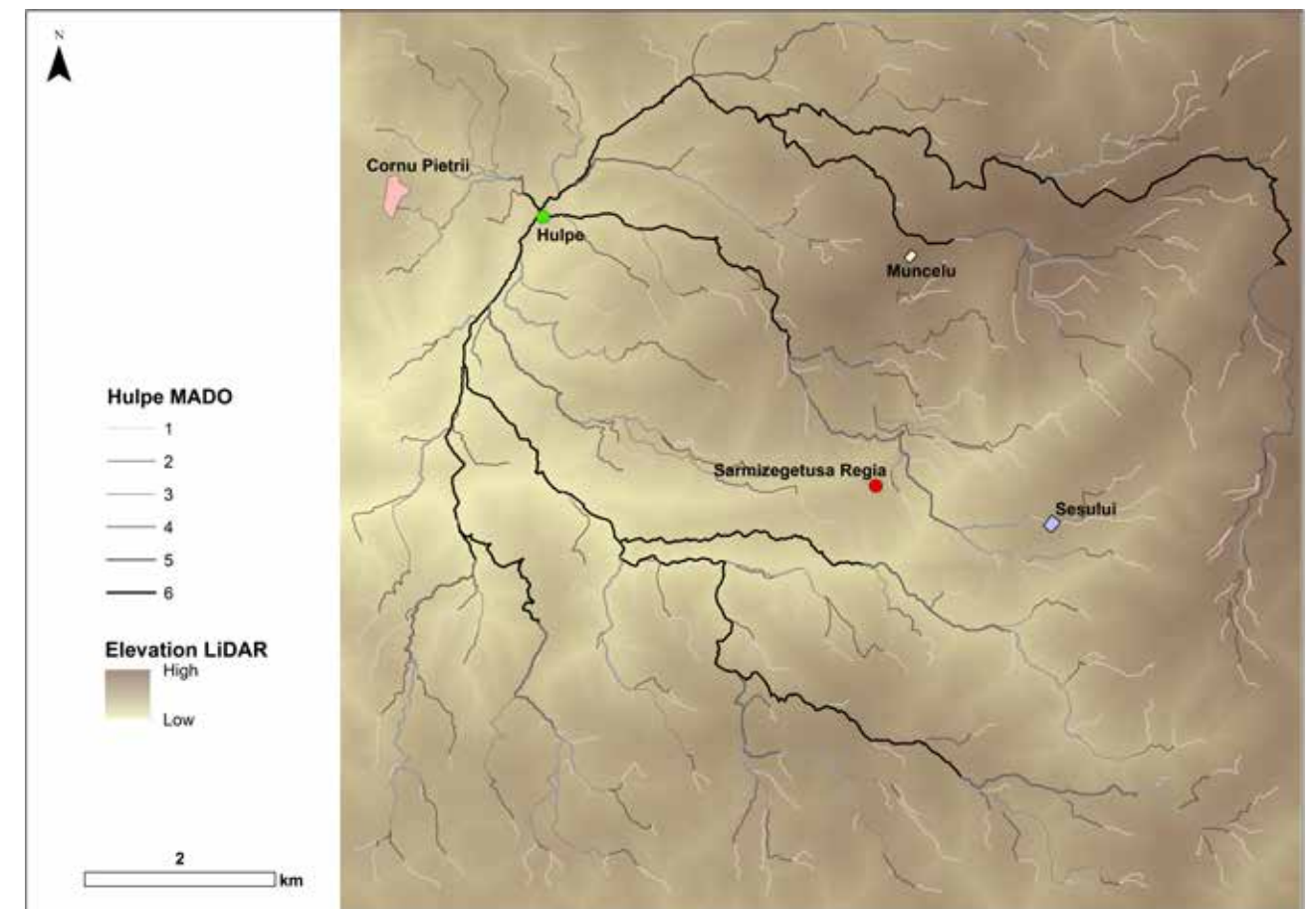


Fig. 4 - Focal mobility network (MADO) from Hulpe.

hillfort at Sarmizegetusa Regia, the main approach to it and much of the outer civilian settlement. This situation would serve poorly any eventual attackers from Muncelu towards Sarmizegetusa Regia. On the contrary, Șesului Hill enjoys excellent visual contact towards the hillfort and the settlement on Grădiștea Muncelului hill, or towards Muncelu and the access route between the two. Its own most direct access route towards the hillfort is visible only for the latter part as it ascends the Grădiștea Muncelului hill on approach to the target. The former part however is fully visible from Muncelu and therefore the complementarity of Șesului and Muncelu bases in terms of their reciprocal visual coverage of access routes towards the hillfort may well indicate that they may have acted at least at some point in tandem. Otherwise, the visibility from Șesului hill camp across the landscape is considerably more limited than that from Muncelu, with camps and Dacian targets invisible with the exception of the camp at Jigürel. Therefore, if its tandem operation with Muncelu is to be assumed, as soldiers on Șesului hill would have relied on their colleagues on Muncelu for visual connectivity beyond its immediate area. Like

from Șesului hill camp the visibility from Cornu Petrii is fairly limited and, while allowing communication with Muncelu, Costești Blidaru, Comărnicești and Jigürel, it does not help control visually the closest hillfort from its own location and potential target at Vârful lui Hulpe. This would have been a significant inconvenient in the event of this camp engaging in sustained warfare activities there.

Visibility would have been important not only for warfare but also to bring an added level of security for personnel in transit on the ground (Fig. 5). Visual communication with Șesului or Sarmizegetusa Regia would have been impossible from Comărnicești, which had otherwise within its range the sites at Muncelu, Vârful lui Pătru, Jigürel and to some extent Cornu Petrii. Its ability to look over its natural approach lines (MADO) was patchy but efficient for the area in immediate vicinity; by contrast, Muncelu and Jigürel's ability to overlook its own natural approach lines was more intense at larger distances away. At Prisaca the latter is perhaps the most extreme, with only a narrow area of visibility to the SE, but considerably broader coverage



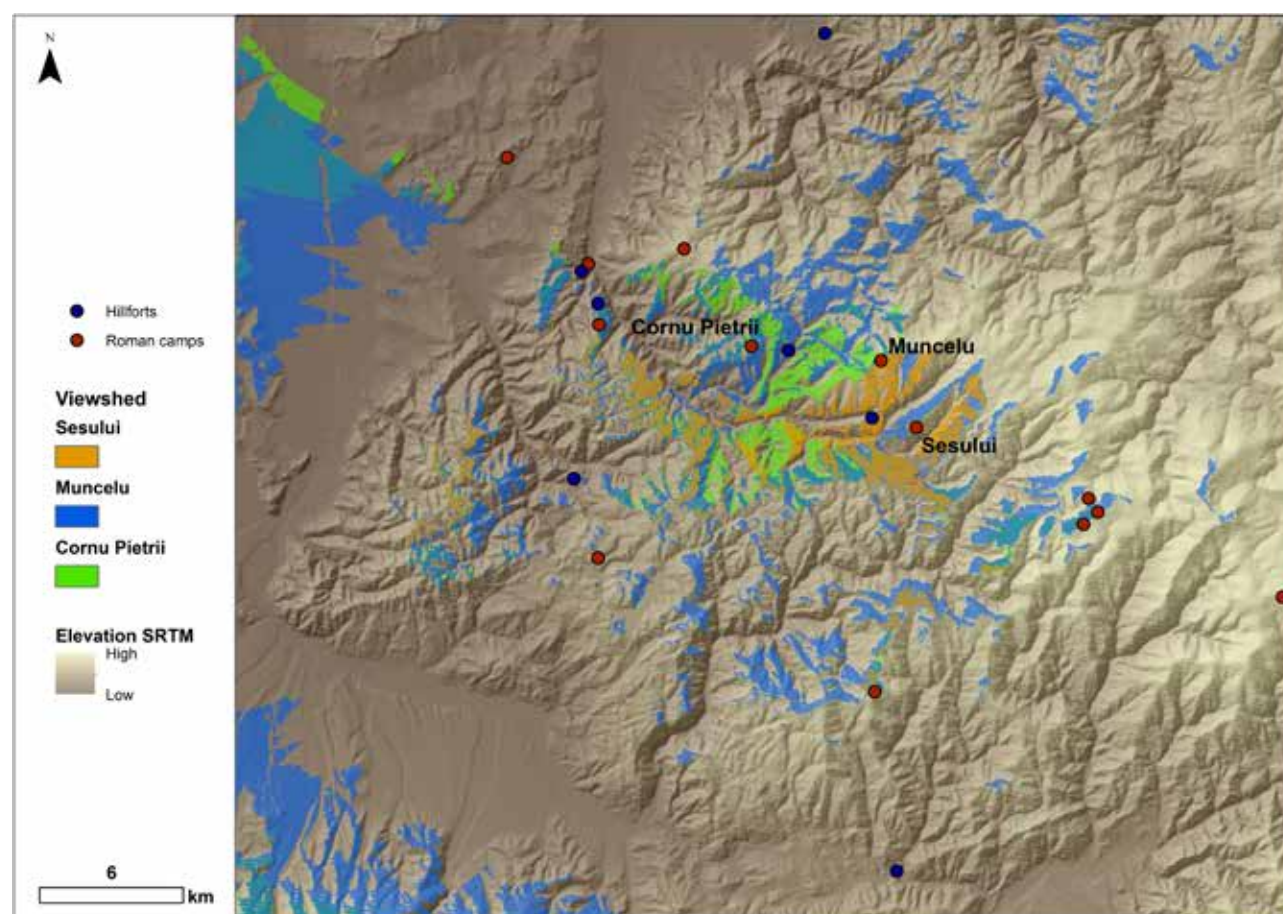


Fig. 5 - Viewshed analysis from Sesului, Muncelu and Cornu Pietrii.

beyond 5 km away from the site. Nevertheless, like in the case of Muncelu and Șesului attack on Sarmizegetusa Regia, complementarity in visibility may also have a role, as the small area of visibility from Prisaca extends the range of visual coverage from Muncelu over its main communication route with the camp at Costești-Cetățuie.

Finally, heavily dependent on local topography in upland landscapes but with key strategic implications, is the ability of troops to reach across the landscape within a convenient time frame. Isochrones calculations at 15 minutes intervals allowed us to estimate the areas that could be reached within up to two hours from relevant locations. Accordingly, despite its potential central role as a distribution/control base, at Comărnicești no camps other than the ones within the cluster itself fall within convenient reach (Fig. 6). By contrast, both Șesului and Cornu Pietrii could be reached from Muncelu within a two hours interval. Coming back from Sesului, the base at Muncelu is at the limit of what could be reached within the same amount of time; all other bases including Comărnicești or Jigulești require

considerable longer effort. Nevertheless, the combined isochrones between known camps reveal a smooth and comfortable coverage of the landscape in the southern/southeastern sector indicating a strategically appropriate spatial distribution to ensure that along the corridor all points could have been reached from any one base within two hours or less. To the north however, a large gap of coverage exists between what was accessible within two hours from either Muncelu and from Costești Cetățuie. Both leave aside the sites at Cornu Pietrii and Prisaca and leave unsecured a large swath of the landscape. This indicates a further need for either of the two to be part of the system helping the transit of the Roman army between Costești Cetățuie and Muncelu. In terms of their coverage, from Cornu Pietrii neither Costești-Cetățuie nor Muncelu is accessible within two hours, but the camp at Costești-Cetățuie could be reached from Prisaca in about one hour and a half. Adding to this the fact that Prisaca also covers slightly more of the communication line to Muncelu from the north-west, it indicates that the site on Prisaca hill was overall better positioned to play a role in this mobility route than Cornu Pietrii.

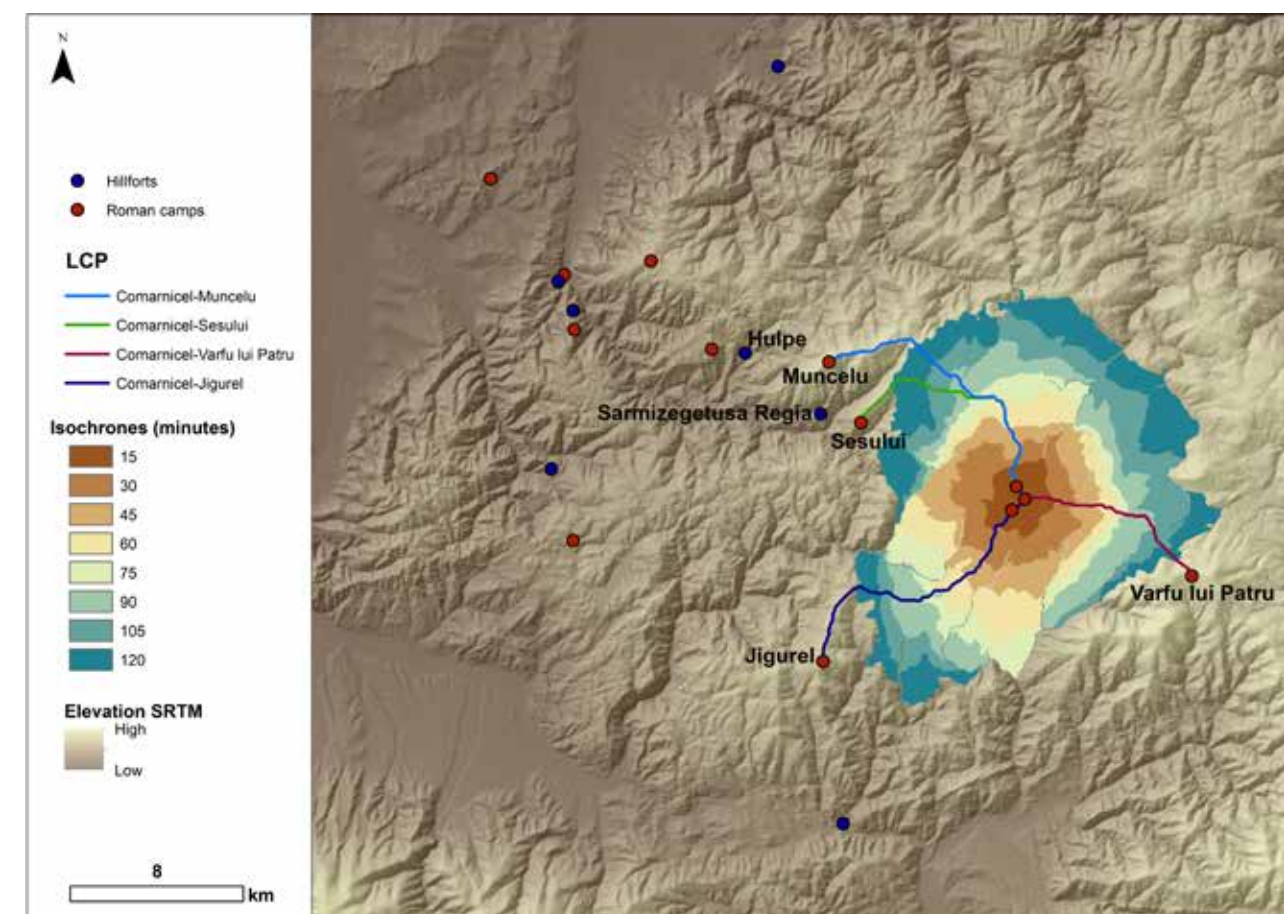


Fig. 6 - Accessibility from Comărnicești.

Isochrones also bring into focus interesting details in relation to how efficient warfare activities could have been conducted at Sarmizegetusa Regia from Șesului hill and Muncelu. Accordingly, while the most rapid access under the walls of the hillfort would have been from Muncelu (15 minutes) than from Șesului (90 minutes) the journey back to safety would have taken considerably longer for the soldiers to Muncelu (90 minutes) than those returning to Șesului (75 minutes).

### Conclusions

The present study successfully demonstrates that the distribution of Roman army bases within the area of the Orăștie Mountains was sufficiently complex to secure convenient communication between troops in the area both in terms of ground movement and by visual contact. Some sites enjoyed better positions than others, but each presented their own advantages. Though our modelling is hindered by the lack of appropriate site dating, the above spatial analysis indicates therefore that if the theoretical assumptions used to estimate

ground movement, visibility and travel time implications are correct, virtually all the existing confirmed or suspected Roman military bases in the Orăștie Mountains outside Sarmizegetusa Regia would have been needed as part of either mobility scheme or direct warfare against targets.

Our analysis confirms the potential of Comărnicești to have acted as a nodal army distribution or coordination point in the advance from southeast towards Sarmizegetusa Regia. Similarly, in the strategic scheme of attacking Sarmizegetusa Regia we now can understand better how a siege might have taken place. In that sense, Șesului and Muncelu troops would have needed each other in order to complete their mission safely and efficiently. Though the morphology of the enclosure itself does not sit comfortably with a temporary presence at the latter, the possibility to help Șesului troops from that location and the ability to strike the target from Muncelu are undeniable.



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## **A spatial approach to mapping Roman roads and buried archaeological sites in the Srem region. The case study of Tapavice site.**

### **ABSTRACT**

The main goal of the "From Aquileia to Singidunum: reconstructing the paths of the Roman travellers – RecRoad" project, developed at Université Bordeaux Montaigne in collaboration with the Sremska Mitrovica Institute for Protection of Cultural Monuments was to detect and map the Roman thoroughfare connecting the Roman cities of Aquileia (Aquileia, Italy) and Singidunum (Belgrade, Serbia) using different sources and methods, including Sentinel-2 multispectral images, historical maps and surface survey results. The attention of this paper will focus on the methodologies applied to identify buried archaeological features and on the results obtained combining data coming from different kind of sources in the Tapavice site (Vojvodina, Serbia): in this area, an archaeological site was identified through remote sensing analysis, while its chronological framing was determined thanks the surface surveys on the ground. The pottery fragments collected show a time-span going from proto-history to the Roman period.

**KEY WORDS: REMOTE SENSING, GIS, HISTORICAL MAPS, SURFACE SURVEY, ROMAN ARCHAEOLOGY, SREMSKA MITROVICA, RUMA, TAPAVICE, SERBIA**

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## 1. Introduction

Tapavice is a buried archaeological site located in Vojvodina (Serbia) that was identified and mapped through the combination of different techniques, ranging from the analysis of multi-spectral satellite images, of historical maps up to archaeological surface survey and pottery classification. The identification and study of the Tapavice site was performed within the framework of the RecRoadProject, of which this study is an integral part. The main goal of the data presented in this paper is to acknowledge the importance of integrating spatial techniques within the archaeological research workflow, to improve the results and speed up the survey procedure.

Some interesting results were also obtained on other sites of the Srem region<sup>1</sup>: the case of Tapavice is particularly meaningful because the satellite images enabled the identification of two areas of concentration of archaeological materials. This evidence was explained during the archaeological survey and the analysis of the collected archaeological materials, showing that probably the site can be split in a Northern area, characterized by the presence of abundant materials spanning from the Neolithic period (Vinča cultural group) to a scarce Roman presence (I century AD), and a Southern area where the Roman presence appears to be much stronger (I-VI century AD).

## 2. Geographic and historical framing

Tapavice is located in the territory of Golubinci village, even if it is closer to the settlement Popinci, 33 km to the west of Belgrade, while it is 36 km to the east of Sremska Mitrovica and at 20 km to the south-east of Ruma. Tapavice is included in the Stara Pazova municipality, within the Srem district, one of the three administrative districts of the Serbian Autonomous Province of Vojvodina. This district derives its name from the Roman city of *Sirmium*, placed where the modern city of Sremska Mitrovica stands today: that was the

most important Roman settlement of the region, followed by the city of *Bassianae* (Donji Petrovci) and the camp of *Singidunum* (Belgrade). The region was conquered by the Romans at the end of the I century BC: the fortress of *Sirmium* was thus built and played a central role in the Great Illyrian Revolt in AD 6-9. After the complete conquest of Pannonia, *Sirmium* was to become the economic capital of the region, thanks to its strategic position. When the Tetrarchy was constituted, in AD 293, *Sirmium* became one of the four capitals of the Empire. If the foundation of the main Pannonian cities was consequent to the Roman conquest, the same reason pushed to the establishment of the road network, which was primarily designed in response to the needs of Rome and not to local instances or habits<sup>2</sup>.

The historical sources report the presence of two main land routes connecting the Italian peninsula to the Danube *limes*: one followed the course of the river Drava and one ran along the river Sava. The Drava itinerary is mentioned by the *Itinerarium Antonini*<sup>3</sup> and by the *Itinerarium Burdigalense*<sup>4</sup>: it passed from *Poetovio* (Ptuj, Slovenia) and *Celeia* (Celje, Slovenia). The itinerary following the course of the river Sava is drawn only on the *Tabula Peutingeriana*, where its main stages are reported and located in *Neviodunum* (Drnovo, Slovenia), *Siscia* (Sisak, Croatia) and *Marsonia* (Slavonski Brod, Croatia), before reaching *Sirmium*, *Bassianae* and *Singidunum*<sup>5</sup>.

From a geographical point of view, the site is located in the middle of the plain enclosed by the Sava and the Danube rivers, part of the much larger Pannonian Plain, a very fertile region where cereals are the main crop (about 70%)<sup>6</sup>. The predominance of the cultivation of cereals in this landscape is very helpful in the perspective of remote sensing analysis based on multi-spectral satellite images.

## 3. An integrated research approach

The research presented in this paper was achieved within the “*From Aquileia to Singidunum, reconstructing the paths of the Roman travelers* -RecRoad Project”, which main goal is the reconstruction of the Roman itinerary from *Aquileia* (Aquileia, Italy) to *Singidunum* (Belgrade, Serbia) along the course of the Sava river<sup>7</sup>. Regarding the Serbian territory, the project was conducted in collaboration between the AUSONIUS Institute (UMR 5607) of the Université Bordeaux Montaigne (France) and the Institute for the Protection of the Cultural Monuments of Sremska Mitrovica (Serbia) thanks to a Marie Skłodowska Curie Fellowship (Grant Agreement n. 660763) granted to Université Bordeaux Montaigne.

The research methodology included the integrated analysis of several information sources, among which satellite remote sensing and historical maps played a central role. At first, different kinds of satellite images were analyzed in order to detect and map the anomalies that could possibly be reconducted to the presence of archaeological remains<sup>8</sup>. Subsequently, the map of the anomalies was compared with the existing archaeological information about the area included between Sremska Mitrovica and Belgrade, under the jurisdiction of the Institute for the Protection of the Cultural Monuments of Sremska Mitrovica. From this first comparison, 60 crop-marks had been identified on different satellite images and 13 of them matched with sites included in the dataset of 50 archaeological sites already filed in the Institute’s archive. In some cases, the results of the archaeological research performed by the Institute in the late 60s increased the probability that the traces mapped through remote sensing techniques corresponded to the Roman road, since they could easily be integrated. To confirm this hypothesis and to better define the origin and function of the archaeological evidences, the researchers performed an archaeological surface survey, focused on the areas of the anomalies: this enabled the collection of pottery fragments and other autoptic materials.

To resume, if 13 crop-marks match archaeological sites and stretches of the Roman road previously documented, 47 anomalies still did not match any established archaeological evidence and 36 sites filed in the Institute’s archive were not documented by the satellite images. This is probably due to the dimensions of these sites and to their inconsistency in terms of visibility (e.g.: isolated graves, hearth remains, etc.). Nevertheless, the comparison between the two datasets, the archive documentation and the remote-sensing crop-marks, allowed the researchers to better focus the survey campaign on those areas where they had the higher probability of identifying Roman sites, traces of the Roman road or archaeological sites of other periods, thus optimizing the resources spent on the field<sup>9</sup>. The archaeological site of Tapavice was chosen as a case because of the quality of the archaeological material collected on the field: the documentation collected to identify it, furthermore demonstrates the importance of combining different types of data to recover as much information as possible.

## 4. Mapping the Tapavice site from the space

### 4.1. Visible range satellite images

Looking for buried archaeological remains on satellite images usually means to look for anomalies that can mostly be classified as shape and color anomalies in the normal pattern of the fields. We will now analyze what evidences enabled the identification of the Tapavice site through remote sensing analysis.

The first step will be the analysis of images in the visible range: one GoogleEarth image acquired on 23 April 2015<sup>10</sup> (Fig. 1) showed an area where the fields had a singular shape. It seems to be a junction point where different field orientation patterns meet. The northern and eastern part of the image show fields oriented accordingly to the main modern road, nevertheless, there clearly are two diagonal lines – probably ditches – apparently converging towards the center, but disappearing at the margin of an almost triangular parcel. In the

<sup>1</sup>Zanni *et al.* 2019.

<sup>2</sup>Burghardt 1979, 4–5, 7–12.

<sup>3</sup>*It. Ant.* 128.6-132.1.

<sup>4</sup>*It. Burd.* 559.11-563.14.

<sup>5</sup>Zanni 2017, 150–152.

<sup>6</sup>Mihailović *et al.* 2014.

<sup>7</sup>Zanni 2017, 152–160; Zanni *et al.* 2019, 3–4.

<sup>8</sup>Zanni, De Rosa 2019.

<sup>9</sup>Parcak 2009, 173–192.

<sup>10</sup>Google Earth PRO V. 7.3.2.5776. (May 22, 2015). Golubinci, Serbia. 44°55'53.94"N 20°03'47.08"E Eye alt. 5.01km. DigitalGlobe 2019. <http://www.earth.google.com> [July 28, 2019].



Fig. 1 - GoogleEarth PRO image of the Tapavice area, recorded on May 22, 2015. Elaborated by Sara Zanni.

southern half of the circle, it's possible to outline the irregular direction held by a third channel, probably following the natural water flow direction. Besides, we can also distinguish some lighter spots inside the fields, suggesting that there is something different in the soil composition.

#### 4.2. Multi-spectral satellite images: Sentinel-2 images

Since the analysis of the GoogleEarth image shows some evidence of the presence of something unusual in the fields of the Tapavice area, it was advisable to widen the spectrum of the research and to collect some more data using different kinds of information sources. Our choice fell on the Sentinel-2 multi-spectral images. They constituted the bulk of the gallery of

satellite images for the RecRoad project, since Sentinel-2 satellites had been launched between 2015 and 2017 and the images had already been released by the European Commission Earth Observation Programme Copernicus. These images are freely available for scientific and commercial purposes and constitute a gallery of the whole planet, constantly updated, thanks to the revisit time of five days at the Equator. This latter characteristic enables a continuous coverage of the different stages of the crops' growth, that is highly relevant for the archaeological purposes. The images are produced by a constellation of two twin satellites (Sentinel-2A and Sentinel-2B), carrying a wide swath high-resolution multispectral imager with 13 spectral bands. The spectral characteristics of the images are resumed in Tab. 1 and had previously been assessed as specifically suitable to identify anomalies generated

Sentinel-2 Bands	Central Wavelength (nm)	Resolution (m)
Band 1 – Coastal aerosol	0.443	60
Band 2 – Blue	0.490	10
Band 3 – Green	0.560	10
Band 4 – Red	0.665	10
Band 5 – Vegetation Red Edge	0.705	20
Band 6 – Vegetation Red Edge	0.740	20
Band 7 – Vegetation Red Edge	0.783	20
Band 8 – Near Infra-Red (NIR)	0.842	10
Band 8A – Vegetation Red Edge	0.865	20
Band 9 – Water Vapour	0.945	60
Band 10 – SWIR-Cirrus	1.375	60
Band 11 – SWIR	1.610	20
Band 12 – SWIR	2.190	20

Tab. 1 - Sentinel-2 bands with the corresponding central wavelengths and spatial resolution. Data from Druschet al. 2012. In grey, the five bands corresponding to the optimal spectral region for the detection of crop-marks.

by buried archaeological remains before the launch of the satellites<sup>11</sup>. The optimum spectral regions for the detection of crop-marks is included in the range between 700 nm and 800 nm<sup>12</sup> that correspond to five different bands of the Sentinel's images, characterized by a spatial resolution varying from 10 m (Red and NIR bands) to 20 m (the three Vegetation Red Edge bands), as displayed in Tab. 1.

Since the RecRoad Project was the first to practically use the Sentinel-2 images in archaeological research, it was necessary to try and find the most appropriate way of combining the bands to obtain the best results. After several tries, we selected a Sentinel-2A image recorded on June 16<sup>th</sup>, 2016<sup>13</sup>.

At first, we tried to apply the broadly known NDVI (Normalized Difference Vegetation Index) algorithm<sup>14</sup>, often used to assess crops' health through the comparison of Infra-Red and Red bands, with the following formula:

$$NDVI = (NIR - Red) / (NIR + Red).$$

The index measures how the chlorophyll absorbs light, in the Red band, and how it reflects it, in the NIR band,

depending on the leaves' structure. The resulting values are always less < 1: the vegetation is healthier where the values are closer to 1, the ground will be less vegetated where values are closer to 0. The application of the algorithm resulted in the normalized image in Fig. 2, which does not deliver any more evidences about the presence of an archaeological deposit than the Google Earth image.

Examining the spatial resolution of each band, it was clear that exploiting only the bands with the highest spatial resolution would be a good practice to extract more data from the images. Consequently, we tried to combine bands 4 (Red) and 8 (NIR), through the Semi-Automatic Classification Plugin<sup>15</sup> developed for QGIS exploiting at once their spectral characteristics and their higher spatial resolution, thus obtaining a 10 m pixel size image<sup>16</sup>:

$$RN = Red + NIR.$$

Analyzing Fig. 3, we can mark a concentration of anomalies in the triangular parcel (a) and the trace of the obliterated ditch cutting across the same parcel (b). In the southern site, we can furthermore identify a strongly marked anomaly, almost trapezoidally shaped (c).

<sup>11</sup>Agapiou *et al.* 2014.

<sup>12</sup>Agapiou *et al.* 2014, 2183–2185.

<sup>13</sup>S2A\_OPER\_MSI\_L1C\_TL\_MPS\_20160616T131744\_A005138TDQ.

<sup>14</sup>Parcak 2009, 92–94.

<sup>15</sup>Congedo 2016.

<sup>16</sup>Zanni, De Rosa 2019, 8–9.



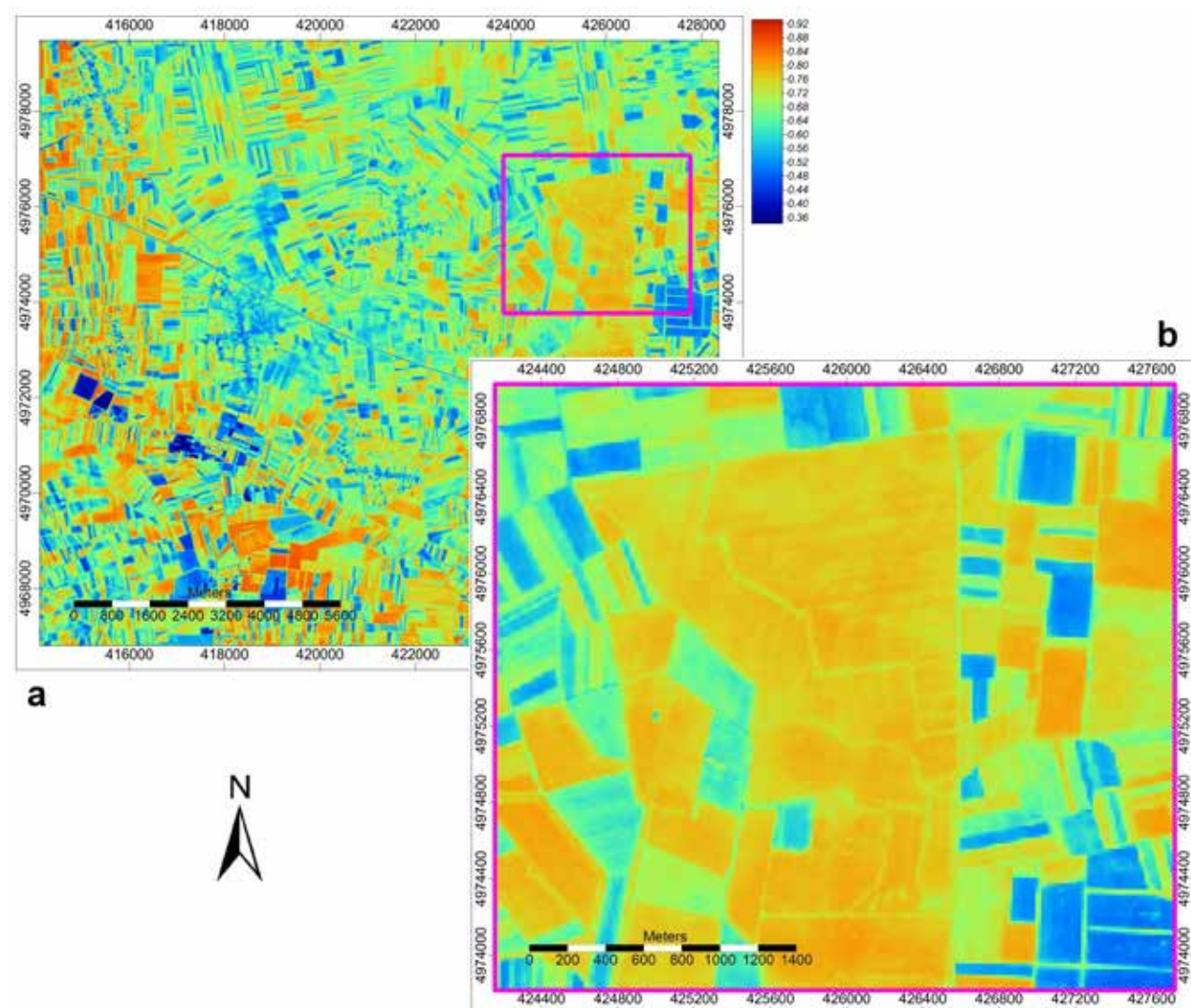


Fig. 2 - NDVI applied to the Sentinel-2A image recorded on June 16, 2016, normalized to 0-1 interval. a) The portion of Serbian territory to the North-East of Popinci. b) Detail of the Tapavice site. Elaborated by Sara Zanni and Alessandro De Rosa.

## 5. Historical maps analysis

If the satellite images help us in the identification of possible archaeological sites, they do not give any information about their chronology and function. To determine if the site had hosted any settlement in the most recent centuries, as it happened in other locations identified for the project<sup>17</sup>, we geo-referenced and analyzed four historical maps produced by the Austro-Hungarian monarchy from 1763 to 1914:

- First Military Survey of the Austrian Empire (Josephinische Landesaufnahme)<sup>18</sup> produced in 1763–1787;
- Franciscan Cadastre (Franzische Landesaufnahme)<sup>19</sup> produced in 1806–1869;
- Third Military Survey of the Austro-Hungarian Empire (Franzisco-Josephinische Landesaufnahme)<sup>20</sup> produced in 1869–1887.

<sup>17</sup>Zanni *et al.* 2019.

<sup>18</sup>Available through <http://mapire.eu>.

<sup>19</sup>Available through <http://mapire.eu>.

<sup>20</sup>Available through the website: <http://lazarus.elte.hu/hun/digkonyv/topo/3felmeres.htm>, courtesy of the Eötvös University, Department of Cartography and Geoinformatics.

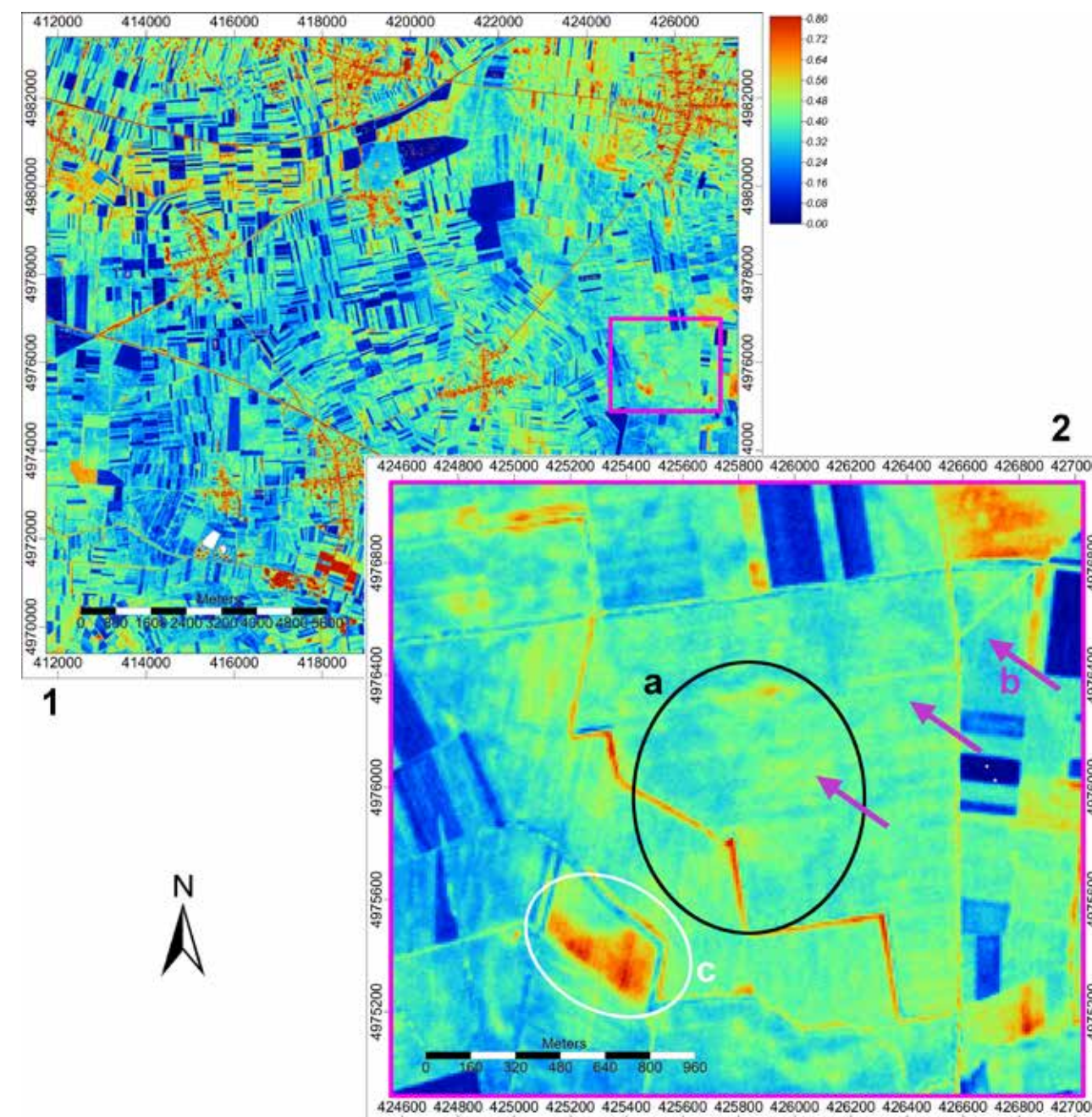


Fig. 3 - RN applied to the Sentinel-2A image recorded on June 16, 2016, normalized to 0-1 interval. 1) The territory of Popinci and Golubinci; 2) Detail of the Tapavice area. Within (2): a. Concentration of anomalies in the triangular parcel; b. Trace of an obliterated ditch; c. Trapezoidal anomaly in the Southern area. Elaborated by Sara Zanni and Alessandro De Rosa.

- Special Map of the Austro-Hungarian Empire (*Spezialkarte der Österreichisch-Ungarischen Monarchie*)<sup>21</sup> produced in 1877–1914.

As it has already been extensively explained in other papers, different geo-referencing methods were necessary to perform this task, depending on the technical characteristics of each map<sup>22</sup>.

<sup>21</sup>Available through the website: <https://digitalcollections.nypl.org/collections/spezialkarte-der-osterreichisch-ungarischen-monarchie>, courtesy of the New York Public Library Digital Collections.

<sup>22</sup>Molnár, Timár 2009; Podobnikar 2009; Affek 2013; Zanni *et al.* 2019, 12–14.



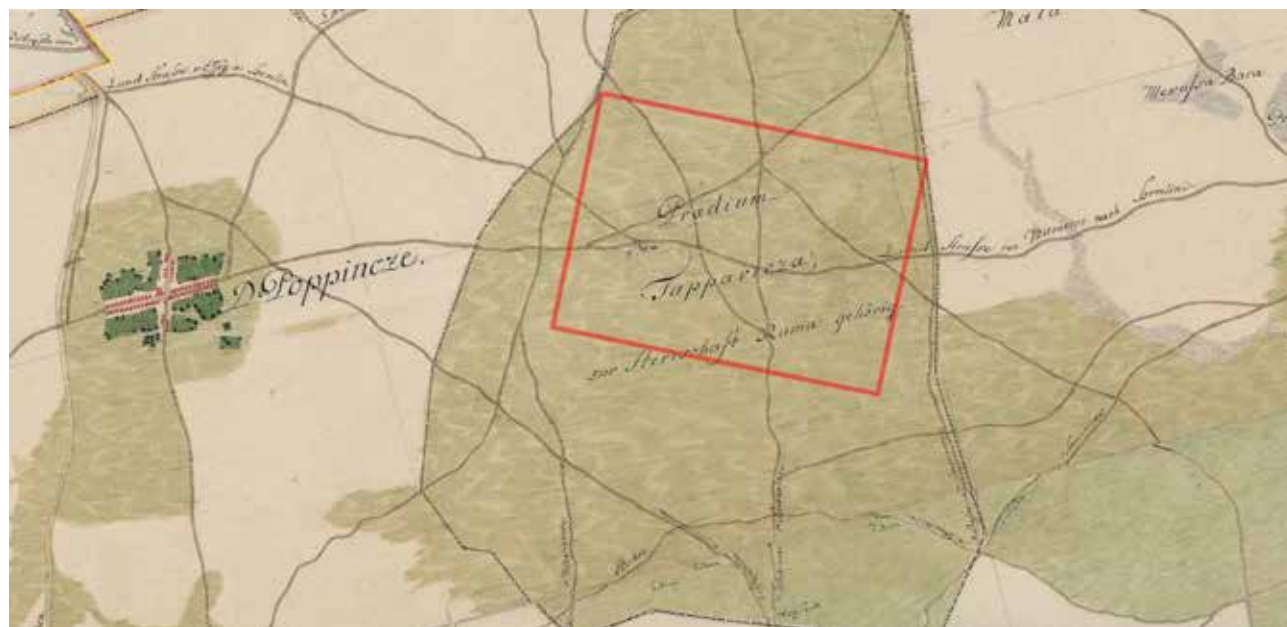


Fig. 4 - Detail of the First Military Survey of the Austrian Empire of the Popinci area. The red rectangle marks the Tapavice site.

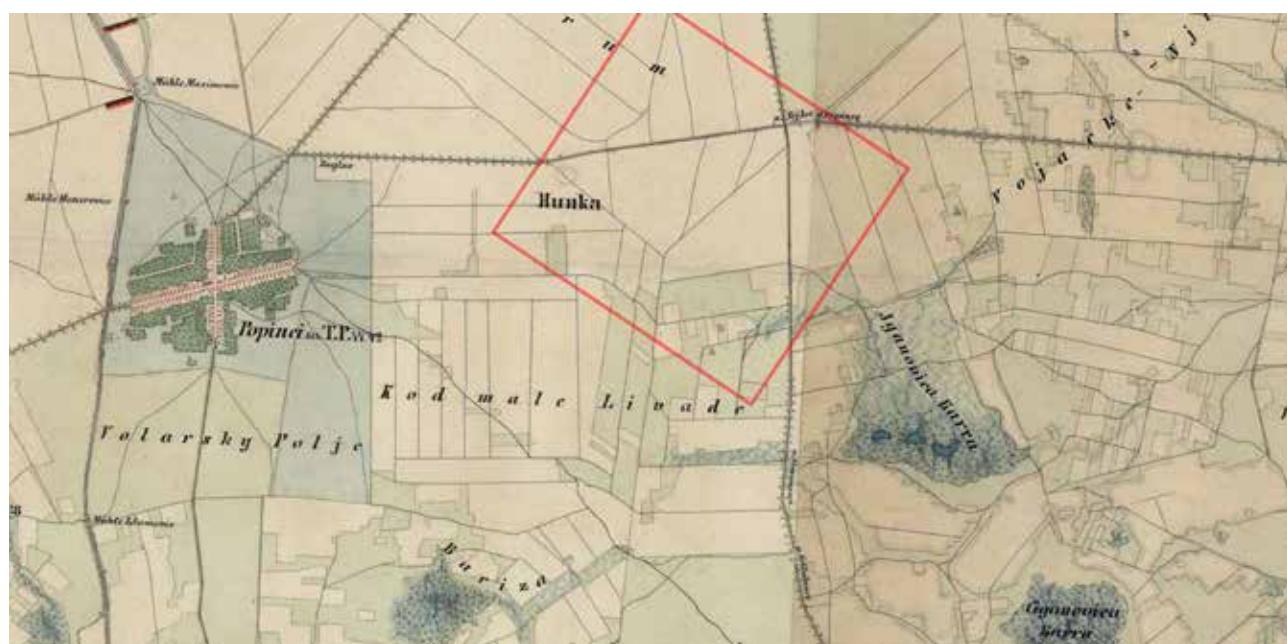


Fig. 5 - Detail of the Franciscan Cadastre of the Popinci area. The red rectangle marks the Tapavice site.

In the detail of the 1<sup>st</sup> Military Survey of the Austrian Empire (Fig. 4), we can see the situation at the Tapavice site (marked in red) in the second half of the 18<sup>th</sup> century. Two converging lines probably correspond to the obliterated ditches that we identified in the Sentinel-2 image, while a west-east road crosses horizontally the territory and it is marked as “*Land Strasse von Mitrovicznach Szemlin*”, where *Mitrovicz* is of course Sremska Mitrovica and *Szemlin* is Zemun.

In the detail extracted from the Franciscan Cadastre (Fig. 5), the situation has already quite changed: we can still see the ditches, but the road connecting Sremska Mitrovica to Zemun has disappeared, similarly to the picture depicted in the 3<sup>rd</sup> Military Survey (Fig. 6).

Finally, the *Spezialkarte* of the Austro-Hungarian Empire, produced over the last decades of the 19<sup>th</sup> century and the first years of the 20<sup>th</sup>, before the beginning of World War I, acknowledges some changes. In Fig.



Fig. 6 - Detail of the Third Military Survey of the Austro-Hungarian Empire of the Popinci area. The red ellipse marks the Tapavice site.



Fig. 7 - Detail of the Special Map of the Austro-Hungarian Empire of the Popinci area. The red ellipse marks the Tapavice site.

7, the ditches are still there, but we also see a farm, called *Jurković Salaš*, located in the parcel. Curiously enough, there are no traces of it in the satellite images.

## 6. The Archaeological record and the survey results

After the assessment of the situation at the location of the Tapavice site over the last three centuries, it was necessary to verify what kind of evidences were vi-



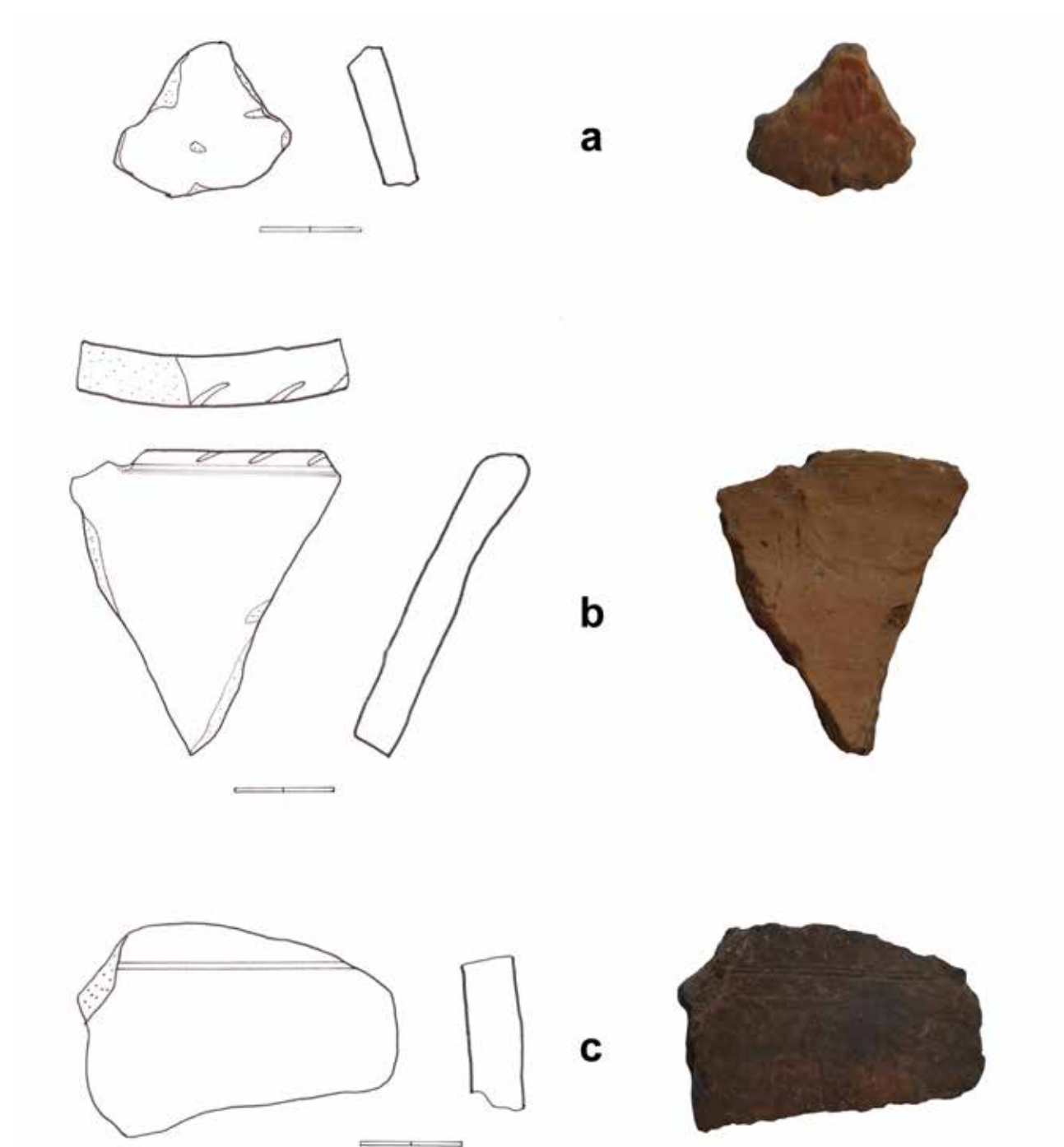


Fig. 8 - Samples of the pottery fragments collected during the archaeological surface survey in the Northern area of the Tapavice site. a) Neolithic pottery: Vinča cultural group. b, c) Early Iron Age pottery: Bosut IIIa and III b cultural group. Graphic by Biljana Lučić.

sible on site, through a focused archaeological surface survey.

Through the analysis of the archaeological materials, mostly pottery shreds, it was possible to distinguish two areas within the Tapavice parcel. The Northern one (Fig. 3a), is characterized by the abundant presence of prehistoric pottery. The materials probably correspond

to a multi-layered stratigraphy, since the analysis of the pottery fragments revealed the presence of:

- Rare neolithic material, from the Vinča Cultural Group (Fig. 8a);

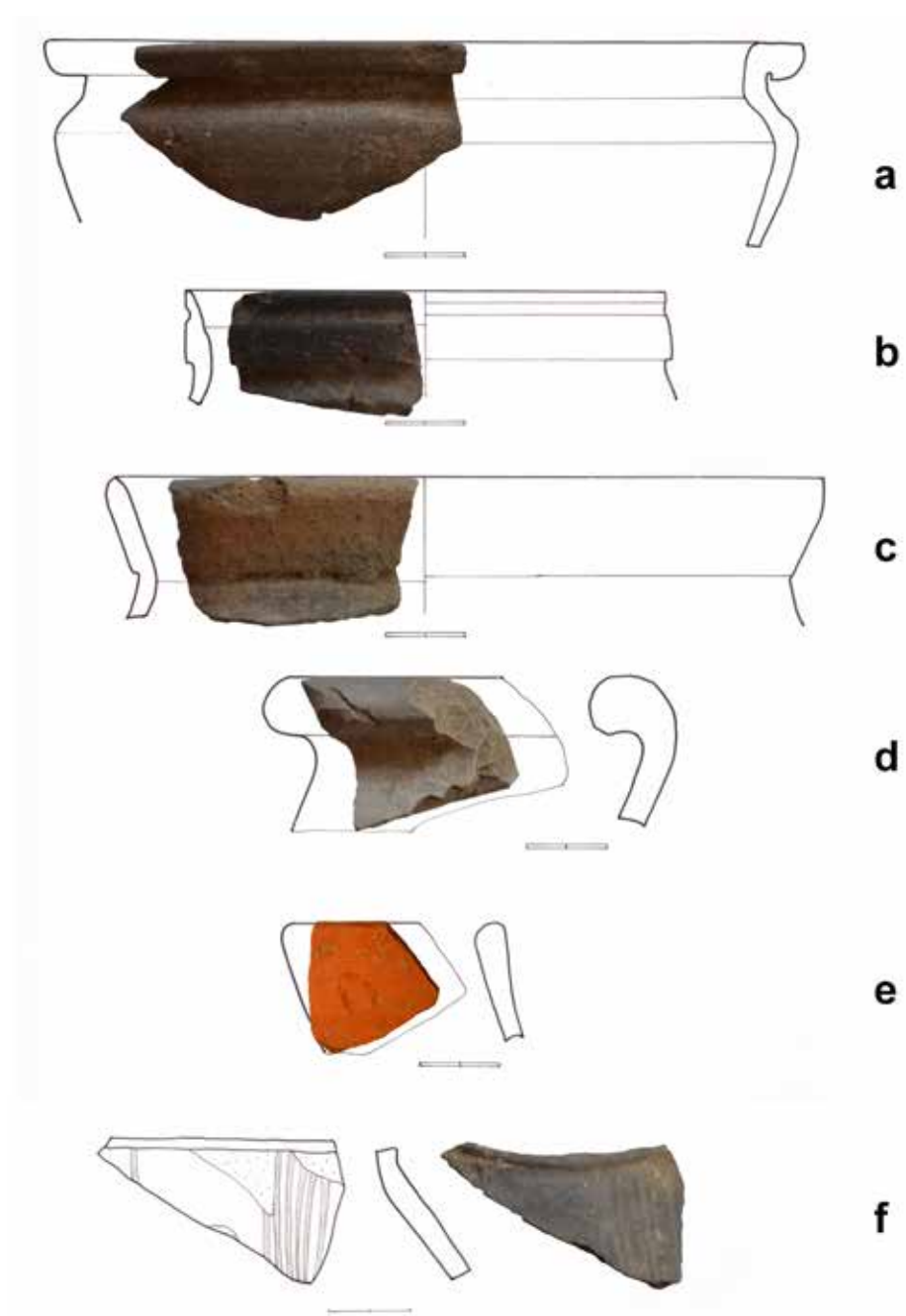


Fig. 9 - Samples of the pottery fragments collected during the archaeological surface survey in the Southern area of the Tapavice site. a-e) Roman period to Late Antiquity. f) Fragments of prehistorical pottery. Graphic by Biljana Lučić.

- Materials dated to the Early Iron Age and, in particular, to the Bosut IIIa and IIIb phases<sup>23</sup> or Bosut IV a and IVb<sup>24</sup>(Fig. 8c, b.);
- Abundant La Tène materials<sup>25</sup>;
- Scarce fragments correspondent to the early Roman period (1<sup>st</sup> century AD) and the later centuries including the late antiquity as well<sup>26</sup>.

<sup>23</sup>Tasić 1971; Popović 1981.

<sup>24</sup>Medović, Medović 2011

<sup>25</sup>Jovanović, Jovanović 1988.

<sup>26</sup>Brukner 1981; Davidović 2009.

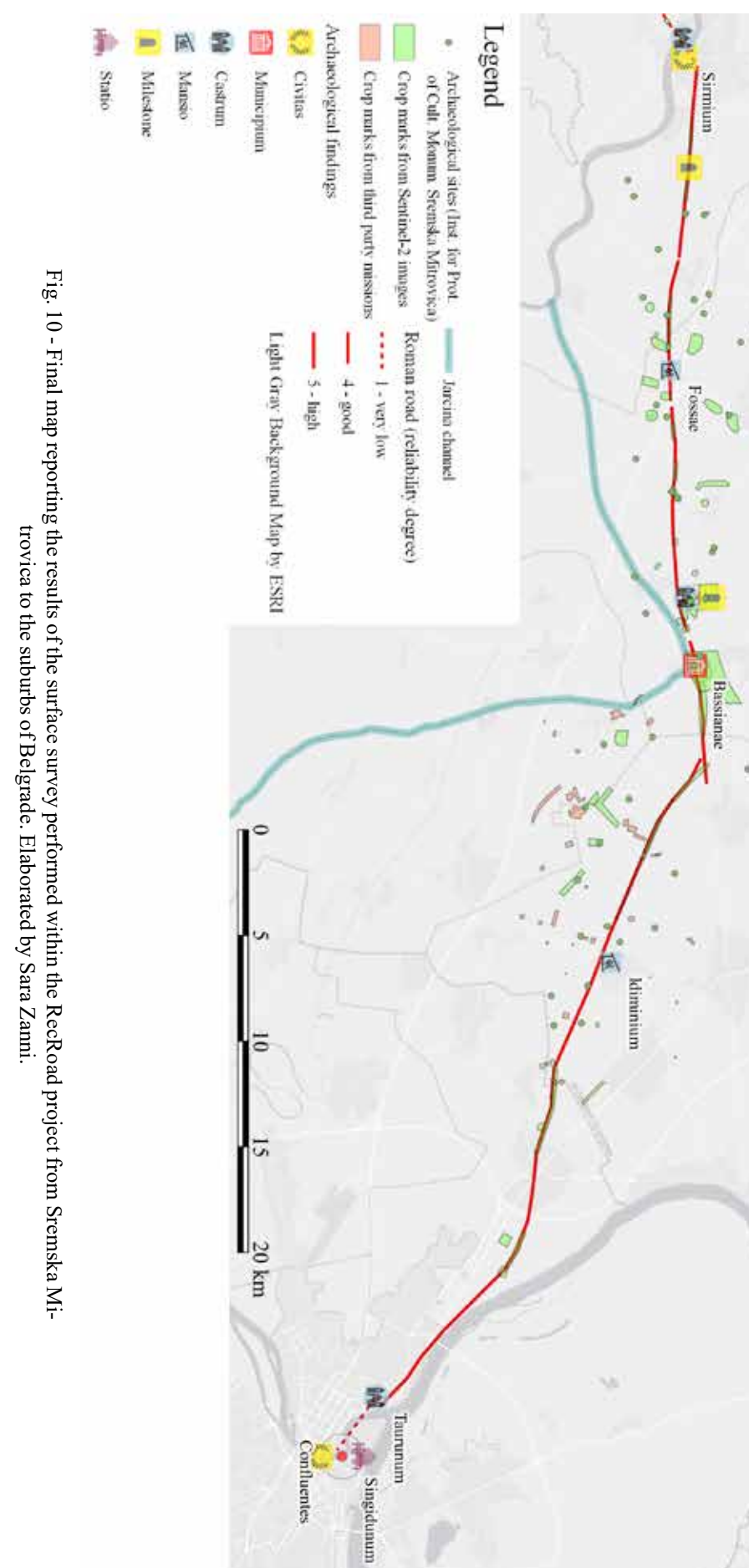


Fig. 10 - Final map reporting the results of the surface survey performed within the RecRoad project from Sremska Mitrovica to the suburbs of Belgrade. Elaborated by Sara Zanni.

The Southern area (Fig. 3c) was identified on the satellite RN image thanks to the evident trapezoidal anomaly, is, on the contrary, characterized by a larger presence of Roman pottery (Fig. 9a-e) and only by a small number of fragments dated to Prehistory (Fig. 9f). Nevertheless, the materials still inform us of a multi-layered stratigraphy.

## 7. Conclusions

The Tapavice study case exemplifies how the RecRoad research workflow enabled the collection of a whole set of integrated data that helped the identification and interpretation of the archaeological site. On the whole, Fig. 10 shows the results of the surface survey aimed at verifying the presence of buried archaeological remains in correspondence with the anomalies detected through the processing of the satellite images. The red line is the segment of the Roman road mapped from Sremska Mitrovica to the suburbs of Belgrade. The orange and green polygons indicate the anomalies identified on the satellite images and the green dots correspond to the geographical coordinated of the archaeological sites mapped in the archive of the Institute for the Protection of the Cultural Monuments of Sremska Mitrovica. To conclude, it is important to stress once more, how it was possible to validate the layout of the Roman road on the ground and the presence of archaeological sites in the surrounding landscape, over 70 km of length in only 6 days of field operations, thanks to the increased efficiency of the multi-disciplinary methodology improved by mobile technologies.

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**Résumé**

L'objectif principale du projet "From Aquileia to Singidunum : reconstructing the paths of the Roman travelers – RecRoad", développé à l'Université Bordeaux Montaigne en collaboration avec l'Institut pour la Protection des Monuments Culturel de Sremska Mitrovica, était l'identification et cartographie de l'itinéraire romain qui reliait la ville romaine de *Aquileia* (Aquilée, Italie) et *Singidunum* (Belgrade, Serbie), en utilisant différentes méthodes et ressources, y comprises les images multispectrales Sentinel-2, les cartes historiques et les résultats des prospections de terrain. Cet article donnera une perspective sur les méthodologies employées pour l'identification d'éléments archéologiques enterrés et sur les résultats obtenus en combinant les données dérivées par divers types de sources sur le site de Tapavice (Vojvodina, Serbie). Dans cette localité, un site archéologique a été identifié à travers des analyses de télédétection, tandis que sa chronologie a été déterminée à travers des prospections de terrain. Les tessons de céramique prélevés donnent une chronologie qui se prolonge de la Protohistoire à l'époque romaine.

# LIMES XXIII

## Session 4

## Hold the Line!!!







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# Roman military campaigns in the eastern hinterland of Aquileia and the western Balkans: hobnail evidence

## ABSTRACT

The paper discusses the typology and chronology of the Late Republican/Early Augustan military hobnails, in particular those dated from about 60 to 15 BC and found in Slovenia, Croatia, as well as Bosnia and Herzegovina.

**KEY WORDS:** ROMAN ARCHAEOLOGY; OCTAVIAN'S ILLYRIAN WARS; ROMAN MILITARY FINDS; HOBNAILS; DELMINIUM.

Recent in-depth research into Roman Late Republican and early Imperial hobnails has shown that the most relevant criterion in their dating is the type, i.e. the pattern on the underside (Fig. 1).<sup>1</sup>

The earliest reliable evidence for hobnails of the Alésia A, B C and D types (Fig. 1) comes from Lampourdier (southern France), the site of a Roman army camp from 105 BC. They are very well represented at sites related from Caesar's Gallic Wars to Octavian's Cantabrian Wars. Types B and D hobnails probably disappeared after c. 20/15 BC, while the A and C types continued in the early Principate. Regarding Type C, hobnails of the Principate differ from earlier hobnails in that they

consistently bear smaller and more numerous raised dots, which are aligned at the perimeter.<sup>2</sup>

Heads of hobnails from earlier sites (including the sites related to the Cantabrian Wars, 29–19 BC) are on average larger (above 12 mm in diameter) than those from later sites (including the Dangstetten fortress).<sup>3</sup>

Large heads (above 12 mm in diameter) seem to be exclusive to the hobnails earlier than the Middle Augustan period, while hobnails with smaller head diameters (12 mm and less) are characteristic of Middle Augustan and later sites. Nevertheless, there are some hobnails of the B and D types, presumably predating

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<sup>1</sup>Istenič 2019.

<sup>2</sup>Istenič 2019.

<sup>3</sup>Istenič 2019; Kielb Zaaraoui 2018.

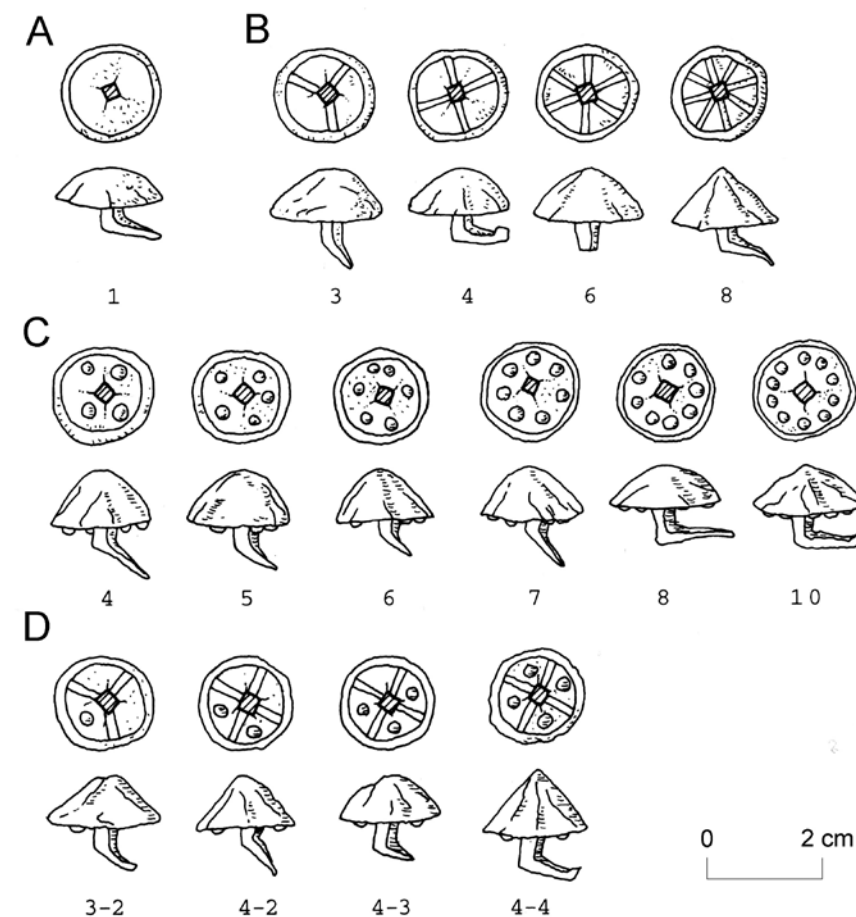


Fig. 1 - A-D type hobnails, scale 1 : 2. Sources: Brouquier-Reddé – Deyber 2001, Pl. 93: 138

20/15 BC (see above), with head diameters below 13 mm.<sup>4</sup>

The distribution of Type B and D hobnails, as well as those of the A and C types (cf. Fig. 2), with head diameters of at least 13 mm, in the wider eastern hinterland of Aquileia (most of it on the territory of Slovenia), indicates military activities taking place in the Italian/Slovenian border zone and in western, central and south-western Slovenia towards the end of the Late Republican (starting in c. 60 or perhaps 80 BC) and in the Early Augustan period. These hobnails have been recovered from hillforts, Roman forts, battlefields, cult

sites and a river. Their presence at hillforts is probably mostly related to the strategic position of the sites.<sup>5</sup>

The clearest archaeological and historical evidence for the dating of the hobnails comes from three battlefield sites in the Tolmin-Cerkno region, probably associated with Octavian's Illyrian Wars in 35–33 BC.<sup>6</sup> Most other hobnails seem to be related to roughly the same period. Few sites have provided evidence of a slightly earlier dating; considering the historical background, they might be connected to the presumed Roman military action in south-eastern Slovenia following the incursion of the Iapodes to Tergeste and Aquileia in 52 BC.<sup>7</sup>

According to ancient writers, the Roman army was deployed to the western Balkans on several occasions during the time when the discussed hobnails were in use.<sup>8</sup>

In Caesar's time, only the coastal part of the future province of Illyricum and a small part of its hinterland were under Roman military control, but not yet administratively organised as a province.<sup>9</sup> We know from written sources that the Delmatae, the most formidable Roman opponent in the region, defeated a "strong military detachment" led by C. Cosconius, probably in 50 BC. In 48/47 BC, they annihilated the army led by Gabinius.<sup>10</sup> The Romans continued military activities with varying success until the region was finally under firm Roman control by the end of the *Bellum Batonianum* (AD 6–9).

Octavian's Illyrian Wars (35–33 BC) was a major military action in the region. The heaviest fighting was directed against the Iapodes and Delmatae who were among the most dangerous Roman adversaries. Appian mentions several of their (hillfort) sites (cf. Fig. 2) that the Romans only conquered with great effort, including Octavian being twice wounded.<sup>11</sup> From this time, one would therefore expect abundant Roman military finds in the region.

Following the published evidence, Type B and D hobnails only occur at four sites (List 1; Fig. 1).

### List 1

Sveta Trojica near Stargrad in the Paklenica National Park (Croatia): two hobnails of Type D, diam. c. 20 and 12 mm, and two of Type B, diam. c. 15 and 11 mm,<sup>12</sup>

Gardun/*Tilurium* (Croatia): 17 hobnails of Type D and 12 of Type B, diameters as shown in Fig. 3.<sup>13</sup> Several Type C hobnails from the site are most probably contemporaneous with the B and D type hobnails.<sup>14</sup>

Lib planina near Borčani, south-east of Tomislavgrad (earlier Duvno; Bosnia and Herzegovina): hobnails of the B and D types.<sup>15</sup>

Grad at Nakovana on Pelješac peninsula (Croatia): hobnails of C and D types.<sup>16</sup>

Sveta Trojica is the site of a prehistoric hillfort of the Liburni enjoying a dominant and naturally well-protected position. The hobnails were found near a Late Augustan to Early Tiberian grave with Roman weapons, in a surface layer at the foot of the hill, probably eroded down the slope. Nevertheless, they indicate Roman military presence roughly between 60 and 20/15 BC at this strategic location on the route that connected the Lika region with the Adriatic and led across the Velebit mountains that are difficult to cross.<sup>17</sup>

Gardun/*Tilurium* yielded the discussed hobnails, as well as a brooch of the Alesia type,<sup>18</sup> which indicates Roman military presence at the site in the Caesarean to Early Augustan period.<sup>19</sup> Several of the Jezerine type

<sup>4</sup>Istenič 2019.

<sup>5</sup>Istenič 2019.

<sup>6</sup>Istenič 2005a; Istenič 2015.

<sup>7</sup>Istenič 2019.

<sup>8</sup>Šašel Kos 2005.

<sup>9</sup>Šašel Kos 2005, 335–336 fig. 79. Šašel Kos 2015, 65. Illyricum was organised as a senatorial province in 27 BC and was later, presumably at the end of the Pannonian-Dalmatian rebellion (AD 6–9), divided into Upper and Lower Illyricum, later provinces of Dalmatia and Pannonia.

<sup>10</sup>Šašel Kos 2005, 339–340, 345, 347–353

<sup>11</sup>Šašel Kos 2005, 422–450

<sup>12</sup>Tonc *et al.* 2013, 247, 249 fig. 1: 1–4. The measures were taken/deduced from the figure.

<sup>13</sup>Ivčević 2014, 185 pl. 14: 137–141; Ivčević 2017, 237–276 pls. 5: 34–48. 6: 49–58. The hobnail in Ivčević 2017, 276 pl. 6: 57 is not included in Fig. 3 because its diameter does not survive.

<sup>14</sup>Ivčević 2017, 237–276 pls. 5: 34–48. 6: 49–58. Regarding the criteria for dating Type C hobnails, see Istenič 2019.

<sup>15</sup>Notes taken during a 2006 visit of the site, kindly led by Darko Periša, and the examination of a part of a private collection of finds from the site (J. Istenič, private archive). The number of the hobnails and their diameters were not recorded (at least two of Type D and one of the B type). Also see Šašel Kos 2005, 304, 305.

<sup>16</sup>Perkić *et al.* 2022

<sup>17</sup>Tonc *et al.* 2013.

<sup>18</sup>Ivčević 2014, 170 pl. 5: 51.

<sup>19</sup>Cf. Istenič 2005a.



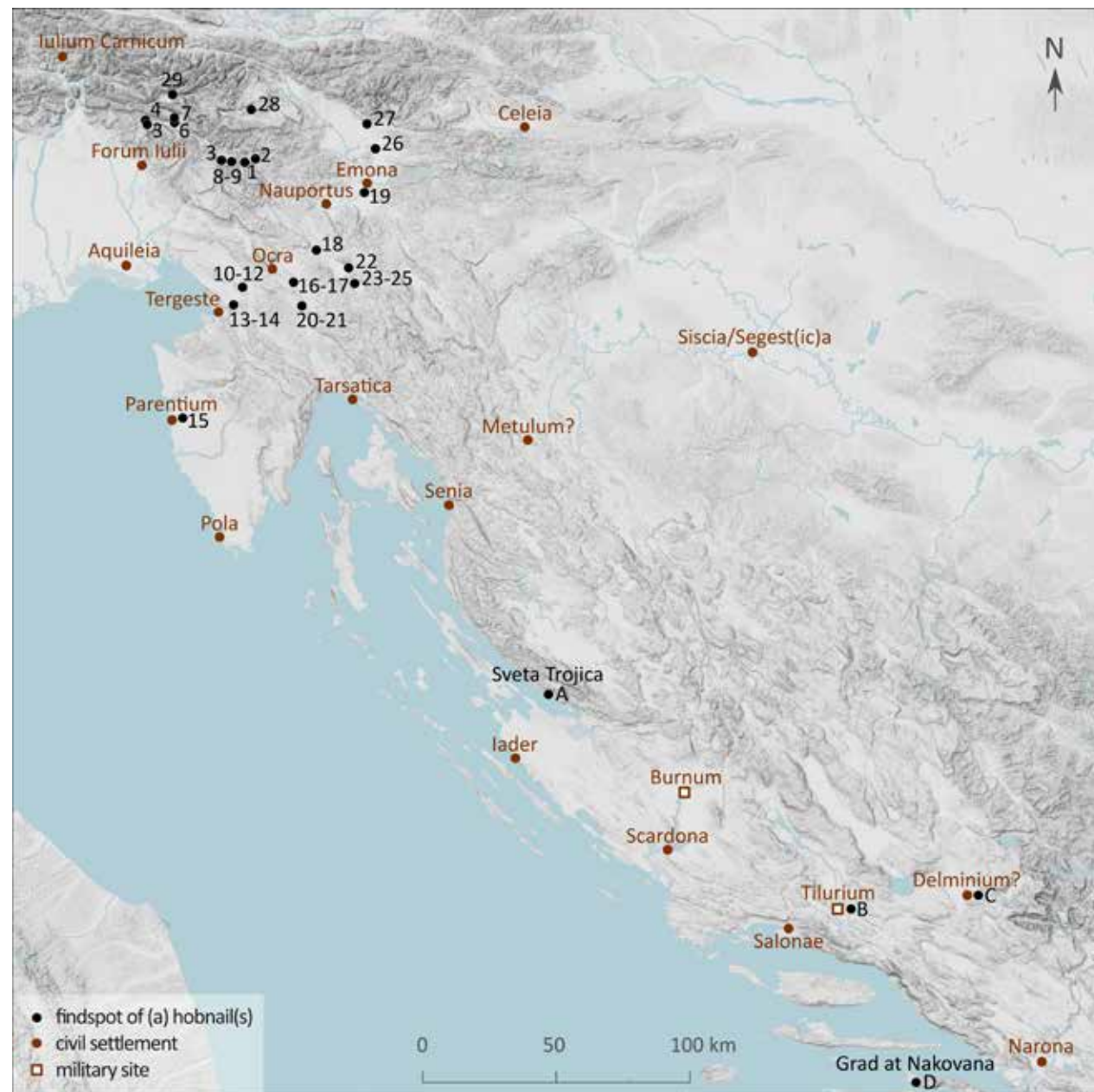


Fig. 2 - Findspots of the B and D type hobnails in the eastern hinterland of Aquileia and the western Balkans. The most important settlements from the time of Octavian's Illyrian Wars (35–33 BC) are also marked.

1 – Grad near Reka, 2 – Gradišče in Cerkno, 3 – Vrh gradu near Pečine, 4 – Gradec near Sedlo, 5 – Sv. Helena near Podbela, 6 – Gradič in Kobarid, 7 – Tonovcov grad near Kobarid, 8 – Gradišče in Polje, 9 – Berlotov rob, 10 – Tabor above Povir, 11 – Strmca above Povir, 12 – Tabor or Strmca above Povir, 13 – Grocciana piccola (Mala Gročnica, hinterland of Trieste, Italy), 14 – Roman roads in the hinterland of Trieste, 15 – Kaštelir near Nova vas, 16 – Baba near Slavina, 17 – Ambrožev grad near Slavina, 18 – Stari grad above Unec, 19 – the River Ljubljanica at Rakova Jelša, 20 – Grmada above Zagorje, 21 – Gradišče at Čepna, 22 – Žerovnišček, 23 – Nadleški hrib, 24 – Ulaka-tabor, 25 – Ulaka, 26 – Gobavica above Mengeš, 27 – Straža above Šmartno, 28 – Dunaj near Jereka, 29 – Ravelnik near Bovec.

For sites A–C see List 1; for the bibliography and details regarding the hobnails from sites 1–29, see Istenič 2019.

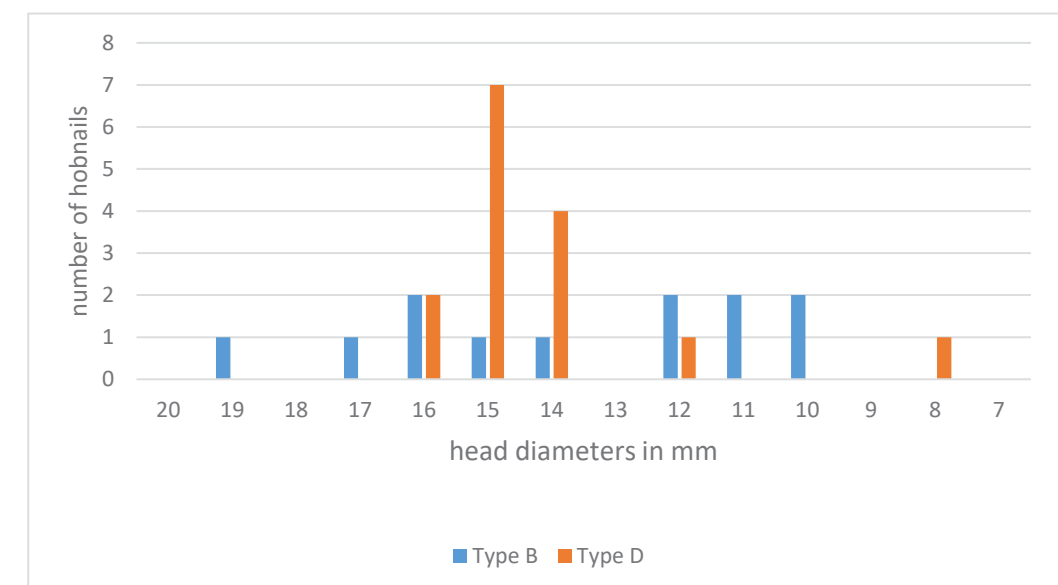


Fig. 3 - Head diameters of Type B and D hobnails from Gardun/Tilurium (Croatia).

brooches<sup>20</sup> might be roughly contemporaneous, which would suggest a dating after the Caesarean period as the examples come from Octavianic<sup>21</sup> and later, but not Caesarean contexts.

Roman missiles and hobnails found at the hillfort Grad at Nakovana and on its slopes are probably related to a Roman military attack at the hillfort during Octavian's Illyrian wars 35–33 BC.

Numerous Roman iron catapult bolts, arrowheads and javelins, as well as lead slingshot were collected at Lib planina near Borčani,<sup>22</sup> but only few were published (Fig. 4).<sup>23</sup> Most of the tri-bladed tanged arrowheads are of Zanier's Type 1a (Fig. 4: c–g); they and the slingshot have close parallels among the finds from the battlefield sites in the Tolmin-Cerkno region (Slovenia), dated to 35 BC.<sup>24</sup> Socketed iron catapult bolts with large pyramidal heads (Fig. 4: h–i) are typical of the Late Republican period.<sup>25</sup> Most of the missiles from the site may be traces of a Roman military action from the Octavianic period, as the arrowheads of Zanier's

Type 1a are not known from earlier contexts<sup>26</sup> and a Roman assault during Octavian's Illyrian Wars is well in agreement with the geopolitical situation of the site. Several archaeologists and historians identified Lib planina near Borčani as *Delminium*, the capital of Delmatae, which – according to ancient writers – the Romans attacked and burnt during the First Dalmatian War (156–155 BC).<sup>27</sup> Such an important and very well protected site might have been attacked several times, especially as the process of the Roman conquest of the territory of Delmatae that included gaining and then again losing military control over parts of the territory lasted nearly two centuries. A study that would include a full catalogue of finds from the site and their in-depth research would show if there is any archaeological evidence of a Roman military assault earlier than the Octavianic period.

To my knowledge, the only other published militaria from the discussed period and region are three catapult bolts presumably found at/near the hillfort at Viničica near Josipdol (south of Ogulin, Croatia).<sup>28</sup> The site may

<sup>20</sup>Ivčević 2014, 170 pl. 5: 47–49.

<sup>21</sup>Istenič 2015, 52 pls. 2: 2–3. 5: 6.

<sup>22</sup>Cf. Fn. 15.

<sup>23</sup>Oreč 1984, 101 fig. 1: c–j.

<sup>24</sup>Istenič 2005a, 78. 81 fig. 3: 1–16. 4: 11–20; Istenič 2015, 56. 57 pls. 3: 12–15. 6: 1–29. 7: 1–9.

<sup>25</sup>Istenič 2005a, 79. 80 fig. 4: 1–5; Istenič 2015, 56 pl. 4: 1–7.

<sup>26</sup>Istenič 2005a, 78; Istenič 2015, 56.

<sup>27</sup>Šašel Kos 2005, 296–306.

<sup>28</sup>Radman Livaja 2001, 132. 133. 138 Pl. 3: 1–3.

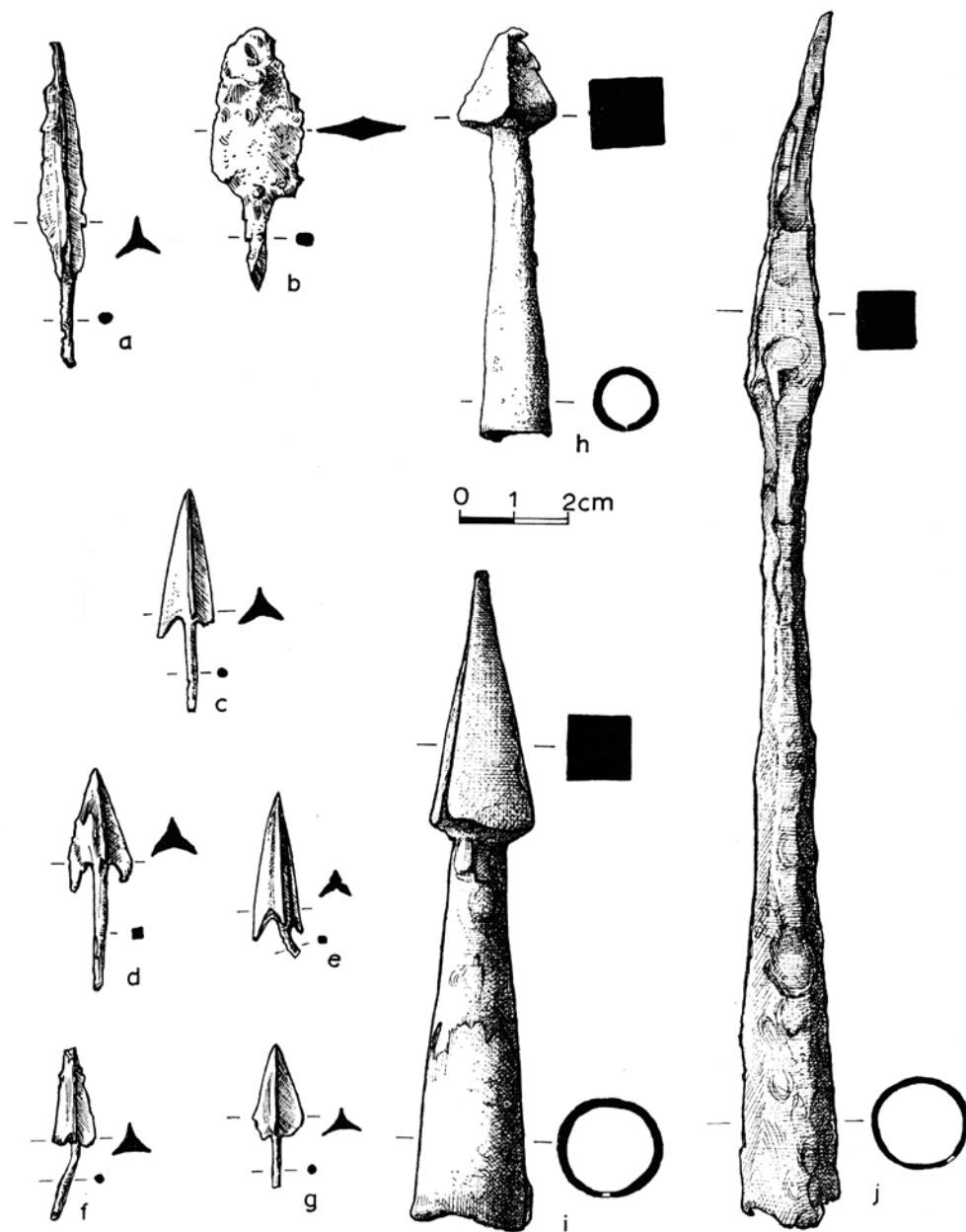


Fig. 4 - Metals finds from Lib planina near Tomislavgrad (Bosnia and Herzegovina). Except arrowhead a, which is Late Roman, and perhaps b, they may be from the Octavianic period. From Oreč 1984, Fig. 1.

be Metulum, the main hillfort of the Iapodes that the Romans besieged and captured in 35 BC after heavy fighting; Octavian led the Roman army in person and was wounded.<sup>29</sup> Preliminary reports on the archaeological research carried out at the site since 2002<sup>30</sup> do not mention any evidence of a Roman military attack.

Given the information from the written sources and the comparison with the sites from Slovenia, one would presume that the scarcity of archaeological evidence related to the Roman military involvement in the region (NW Croatia, Bosnia and Herzegovina) in the (Caesarean-)Octavianic time is rather the result of the state of research. Publications dealing with these mil-

itaria in museums and private collections would have great potential for the research of the Roman conquest of the region, as well as for the development of the very late Republican militaria.

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<sup>29</sup>Šašel Kos 2005, Appian 432–437; Radman Livaja 2001, 132–134; Olujic 2007a, 122–127.

<sup>30</sup>Olujic 2007b; Olujic 2011.



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# **My Home is My Castle Combat in built-up areas in the Roman army**

## **ABSTRACT**

The purpose of this article is: to prove, that occasionally there was warfare in built-up areas during the Roman period.

In this article we bring to a discussion the two major cases of Combat in built-up areas in Roman Judea, Gamla and Jerusalem: Gamla was a densely populated town (6 hectare) built and protected with its steep topography and a labyrinth of narrow steep allies. Jerusalem was a very well protected city (100 hectare). both posed a very problematic and challenging battle ground for the roman army.

This paper will deal as well, with the tactical-strategic meaning and outcomes of this unusual battle grounds for the roman army, while examine and compare the urban build-up battlefield in both sides of the roman empire, east and west.

We claim that the ordinary house in the Eastern empire differed from the one in the West. This difference led to a different type of fighting between the eastern provinces and the western regions.

At the same time, there is evidence of combat on an additional level - the subterranean level.

In the Western empire there is very little subterranean complexes and the phenomenon is almost nonexistent.

This is the main reason why the two Jewish revolts lasted for a relative long time, (66-70, 132-135 A.D.) much longer when taking in to account the unbalanced military Equation between the powerful roman army and the Jewish limited military abilities.

This could bring to a more realistic view of the '*bellum judaicum*' from the roman's aspect, as a Many casualty - high intense war.



**KEY WORDS: ROMAN ARMY, COMBAT IN BUILT-UP AREAS, SUBTERRANEAN FIGHTING, BATTE OF GAMLA: THE SIEGE OF JERUSALEM**

In the abundant Roman combat literature, and in contemporary research, three tactics for achieving victory are described: the battle, the siege and the breaching of walls. The Romans are the attackers and the enemy city is breached. After the walls are breached the war is over, the enemy stops fighting, and the stage of destruction begins.

In the modern world an additional stage of war developed, namely combat in the built-up area itself. The entry of the army into the city symbolizes the beginning of this stage, which is likely to be prolonged. In the democratic world, battles in built-up areas became complicated due to an effort to prevent (or at least to reduce) harm to the civilian population and the municipal infrastructure.<sup>1</sup>

But even armies that refrained even from making such declarations sometimes found it difficult to capture large built-up targets. For example, the momentum of conquest of the German army was checked in Stalingrad.<sup>2</sup>

The modern army finds combat in built-up areas very difficult. It devotes long training exercises to preparations and develops weapons and tactical approaches. And still it's a difficult and exhausting stage, which in democratic countries sometimes ends only years after the war, in court. Of course, such problems of morality, public opinion, rhetoric, demagoguery and law were nonexistent in the Roman world.<sup>3</sup>

The purpose of this article is to prove

1. That occasionally there was warfare in built-up areas during the Roman period, in some instances.
2. That combat in built-up areas most probably took place in additional cities, but such details about their capture were not preserved.
3. To discover what conditions were required in order to enable significant combat in built-up areas.
4. Whether the leaders of the army understood that there was a problem with combat in built-up areas, and whether they prepared for it. (combat doctrine, training, weapons, etc.)
5. Why there is a lack of awareness of this combat method and it is not included in the general literature from the Roman period.

#### Combat in built-up areas – the historical evidence

This type of combat is familiar from the following sources:

1. Josephus' description of the siege and capture of settlements during the Great Revolt, in Gamla and Jerusalem (66-70 A.D.).
2. Archaeological excavations in Roman Judea, mainly from Yotapata and Jerusalem (66-70).
3. A very short and general historical description of the Second Jewish Revolt by Dio Cassius (132-135 A.D.).
4. Archaeological findings primarily from the Second Revolt (132-135), primarily in the

Judean plain, and to a small extent in the Galilee, in the Lydda plain and the Judean hills (very little).

5. Sparse evidence in the rabbinical literature (the national Jewish memory of the two revolts).

#### Historical descriptions

##### a. The capture of Gamla

Gamla is 6 hectare hilly town in modern Golan, Israel. The capture of Gamla is described in details by Josephus Flavius (Wars VI, 1), which is the only historical source for it. In addition, the town has been excavated<sup>4</sup>. The siege lasted for about three weeks. The legions that breached Gamla believed that it was the end of the combat (Wars IV,1,4), but encountered fierce fighting in built-up areas, which forced them to withdraw temporarily from Gamla (ibid. 5).

The description indicates that the rebels were not alarmed by the entry of the Romans into the town, and contrary to expectations, they did not flee, surrender or commit suicide, but ascended to the top of the upper town that was built on a mountain peak.

The streets in Gamla are spread out along the lines of altitude in the city, and the ascent from one level to the next is via steep streets of stairs. The rebels prevented the ascent of the Romans, attacking them from the roofs and throwing stones at them. The Romans, who had not planned for such a situation, went up to the rooftops and captured the roofs of one level, and from there tried to penetrate the courtyards and homes of the higher level.

##### The description of the Jewish ambush in Gamla

This stage requires a deeper focus and attention to the smaller details given in Josephus' account, which could yield very interesting and important finds that could lead to some conclusions. For that we must go back to Josephus' account, which speaks for itself:

*"...then did the Romans bring the battering rams to three several places, and made the wall shake then they poured in over the parts of the walls that were thrown down, with a mighty sound of trumpets and noise of armour, and with a shout of the soldiers, and brake in by force upon those that were in the city." (Wars IV,1,4)*

Further along in this account is the next surprising description by Josephus:

"But these men (the Jews, R.O.) fell upon the Romans for some time, at their first entrance, and prevented their going any further, and with great courage beat them back; and the romans were so overpowered by the greater multitude of the people, who beat them on every side that they were obliged to run into the upper part of the city. Whereupon the people turned about, and fell upon their enemies, who had attacked them, and thrust them down to the lower parts, and as they were distressed by the narrowness and difficulty of the place, slew them; and as these Romans could neither beat those back that were above them, nor escape the force of their own men that were forcing their way forward, they were compelled to fly in to their enemies' houses, which were low; but these houses, being thus full of soldiers, whose weight they could not bear, fell down... and when one house fell, it shook down a great many of those that were under it, as did those do to such as were under them. By this means a vast number of the Romans perished; for they were so terribly distressed, although they saw the houses subsiding, they were compelled to leap upon the tops of them; so that a great many of those that got from under them lost some of their limbs, but still a greater number were suffocated by the dust that arose from this ruins."

The people of Gamla supposed this to be a divine sign, assistance afforded them by God, and heedless of the damage they suffered themselves, they pressed forward, and pushed the enemy down from the roofs... There were a great number who, upon their falling down from the tops of the houses, stabbed themselves and died in that manner; nor indeed was it easy for those that were beaten back to flee, for they were so unacquainted with the roads, and the dust was so thick, that they wandered about without recognizing one another, and fell down dead among the crowd.

<sup>1</sup>The effort to prevent damage to civilians is divided between the declaration of the desire to prevent any destruction, and the act itself, in which the effort was to reduce the damage, at most.

<sup>2</sup>The same army needed 40 days to capture a hostile city such as Warsaw. There are also more proximate examples, such as the first Gulf War in Iraq and Kuwait in 1991, and once again in 2001 in Iraq and the conquest of Baghdad, in 2017 the battle against ISIS in the city of Basra, and the recent civil war in Syria. In all these examples, the urban fighting stage was the hardest, longest and most destructive to both sides.

<sup>3</sup>There were conquerors who wanted to be seen as cruel and easily succeeded in doing so. There were also those who wanted to be seen as merciful and conciliatory, or as balancing between these two tendencies. The influence of these considerations of self-awareness on the decisions of the commanders requires study, which is out of place here.

<sup>4</sup>Berlin 2006; Syon, Yavur 1993; Gutman, Rappel 1994; Bar-Kokhba 2010, 7–36; Syon 2008, 53–67; Aviam 2008, 39–53.



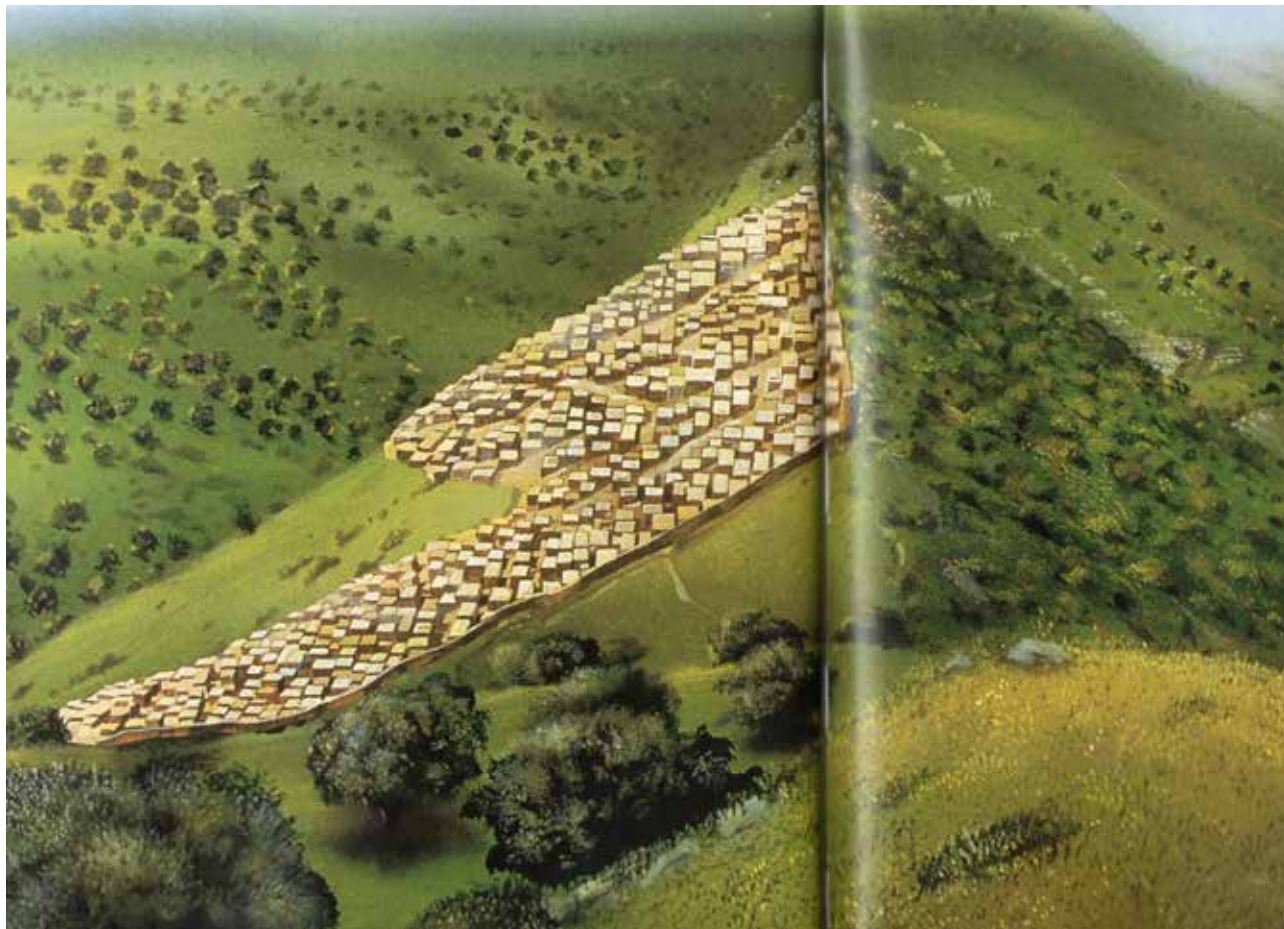


Fig. 1 - Isometric reconstruction of the town of Gamla, based on the archeological digs of the S. Gutmann Excavations, (source: Gutmann, Rappel 1994)

Proof of the extreme severity of the battle conditions for the Roman side can be seen very concisely in Josephus' remark: (Wars IV,1,5)

"now a great number of Romans fell in this battle, among whom was Ebutius, the tribune (Milieria) who have done great remarkable..."

As we can learn from this description, the first major Roman attack on the city walls was very forceful, as they poured through the openings in the walls and overwhelmed the Jewish defenders who could not withstand them. The Jews had to retreat and go up into the alleyways with many of them perishing as they did so. The Roman invaders, strongly encouraged by their

apparent success and feeling victorious and in control of the situation, pursued the Jews up the hill to the steep and narrow alleys. This means that the major attack began in the lower-inner parts of the town wall. The described chase took place towards the upper part of town. This led to a head-on collision with the surprised Romans. Now the Jews were leading a counterattack.<sup>5</sup>

Josephus describes a surprising tactical maneuver performed at this stage by the Jews, which can also be seen as a trap or a preplanned ambush.<sup>6</sup> The Jews suddenly stopped their retreat and flight.

This surprise attack was based on the Jewish warriors' location: up high at the top of their town. This was a

<sup>5</sup>We believe that this attack was planned long before it happened and was set exactly to this specific timing and moment.

<sup>6</sup>Ortner 2017, 279–284. However, we can't rule out a much simpler and less sophisticated explanation: a simple spontaneous reaction of the Jews to the evolving and changing situation at the moment of the Roman invasion to the city. Perhaps an act of despair. Whether this was the cause or not, there is no doubt that the Jews succeeded beyond all expectations, and that the Romans were caught "in the wrong place at the wrong time." We can assume that the true dimensions of the Romans' defeat were far greater than the little that Josephus decided to reveal to his readers in his carefully calculated description.



Fig. 2 - The steep alleys and houses (remain) built one on top of the other. (photo R. Ortner)



Fig. 3 - The steep remains of the wall line of Gamla. (photo R. Ortner)

position that gave them greater advantage as they attacked the Roman troops that were trying to ascend the steep narrow alleys, allowing them to kill and disable many of them, according to Josephus' account.

As this battle continued, the steep narrow alleys turned into a bottleneck and prevented much of the Romans' ability to react or to maneuver appropriately using their tactics - the Romans' heavy-duty armored equipment certainly did not help them either to function properly. In addition, Josephus explained that the first of the Roman soldiers who penetrated deep into the town before the 'Jewish maneuver' began, were busy pursuing the Jews and now found themselves, surrounded



Fig. 4 - One of the steep stepped streets of Gamla, ascending to its upper higher areas. (Photo, D. Safrai)

and fiercely attacked, being pushed back and down into a cruel battle for their lives, while their unaware fellow soldiers kept coming up from their rear, applying pressure in the opposite direction.

That created a situation in which the Romans were trying to retreat through the blocked narrow alleys and were unable to do so, due to their comrades' constant flow from behind that blocked their escape route.

This scenario was the worst for the Roman legionnaires, because the Jews unexpectedly turned the site into an impossible battleground for the Romans (Wars IV, 1, 4) while hitting their most vulnerable point, since they were dependent on a 'layout formation' tactic ('set battle') and accustomed to obeying tactical commands and orders. Once a Roman tactical formation was broken and dispersed, it was extremely difficult to stop the whole layout formations collapse and a panicked retreat of the soldiers.

This conclusion is quite surprising when we take in to account that the besieging Roman Army enjoyed considerable advantages over the Jews, in military man-



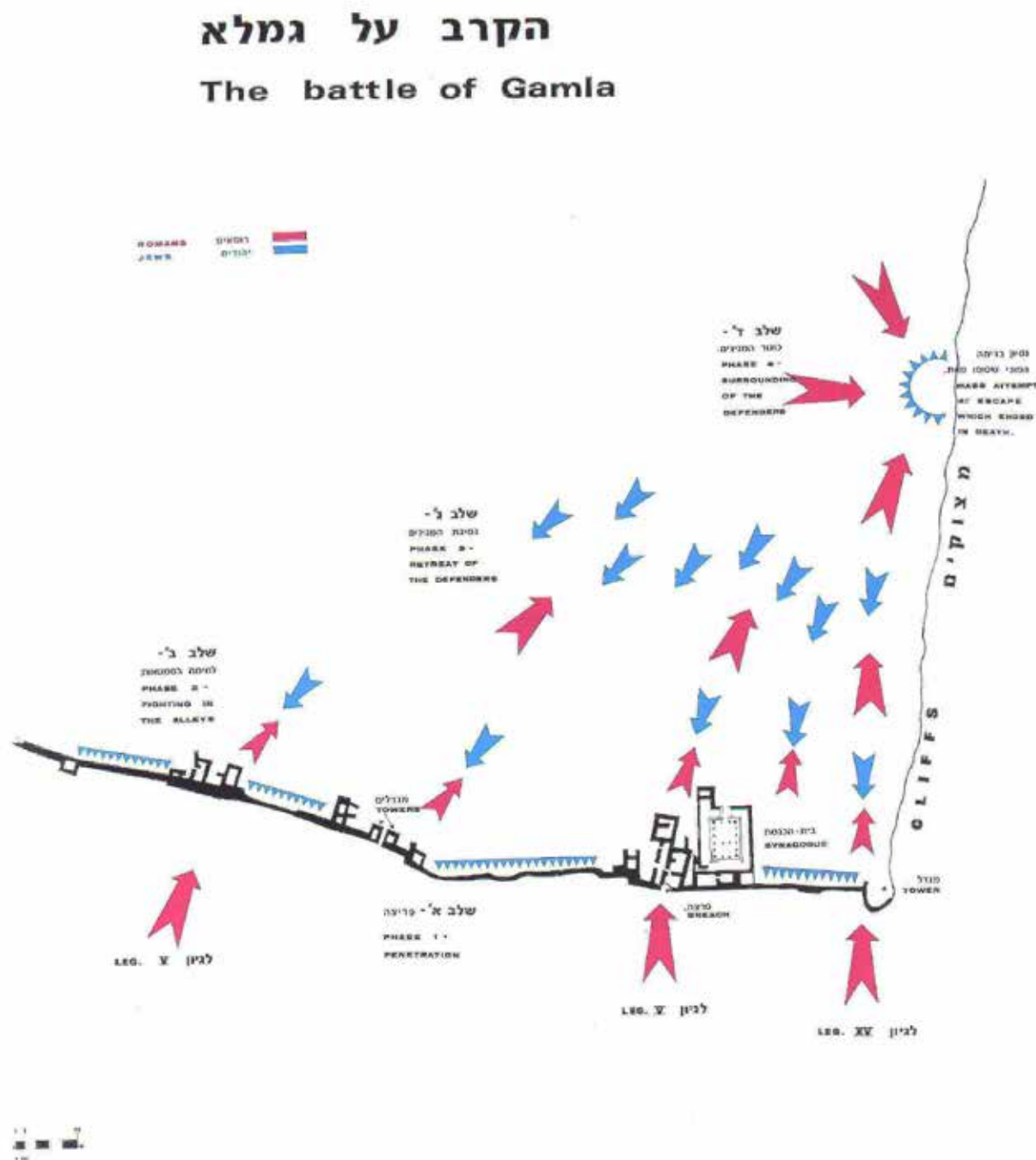


Fig. 5 - Source: Gutman, Rappel 1994.

power, logistics, weapons and massive preparation in order to achieve their major mission, the capture of Gamla.

In fact, most of Josephus' methodical propaganda throughout his entire book (*The Wars of the Jews*), depicting the Roman Army as the ultimate "War Machine" that excelled in organization, self-discipline, supreme fighting skills and field tactics, was not a true description of this battle.

This conclusion can be seen in the 'reproof speech', that Josephus attributes to the Chief Roman General Vespasian: (*Wars IV, 1, 6-7*)

..."but this cautiousness in war, and this madness of zeal (of the Jews r.o), is not a roman maxim. While we perform all that we attempt by skill and good order."

A more interesting part appears in the next sentence, where the general reminded his soldiers in the form of a rebuke: "that procedure (of madness and zeal r.o) is on the part of barbarians and is what the Jews chiefly support them self by."

Regarding the Roman Generals, it can be said that they did exercise military judgment and discretion, while demonstrating an ability to learn from their mistakes, but all this would have not helped them to recover from the major mistake described above, without access to an army that was large enough to provide extra reserve manpower, exactly for a situation like this.

The failure to break into the city caused the Romans a strong sense of frustration and demoralization, as described by Josephus (*Wars IV,1,6*):

"And now Vespasian comforted his army, which was much dejected, by reflecting on their ill success, and because they had never before fallen into such a calamity, and beside this they were greatly ashamed that they had left their general alone in a great danger."

However according to Josephus-Vespasian's speech, the major cause for the downfall was not the great fighting spirit and skills of the Jewish fighters but: "...but the difficulty of the place was the occasion of their (the Jews r.o) advantage, and of our disappointment."



Fig. 6 - Roof Construction with stones, in Corazin, Galilee. This was the system of roofing also in Gamla. (photo D. Safrai)



Fig. 7 - Roof construction with wood support poles and branches, covered with a layer of plaster, between the roof support stone arches. (photo D. Safrai)

He further explained that the Romans' principal mistake was that they did not secure the lower parts of the city, but instead were tempted to continue chasing their enemies to the upper city, being misled into believing that victory was at hand.



Josephus tells of the collapse of the roofs on which the Romans were positioned. The roof broke and a large cloud of dust arose that disturbed the Romans. Today, when we are familiar with the construction method in Gamla, these descriptions can be understood. The roofs in Gamla rested on strong stone arches. On the level between one arch and the next they spread poles and branches and covered them with a layer of plaster. The Romans stood on the branches and from their weight the roof broke. (Figs. 6 and 7)

This phenomenon didn't bother the rebels. We assume that they were very familiar with the roofs and stood on the arches themselves, so that they didn't fall the way the Romans did. A cloud of dust surrounded the Romans and prevented them from shooting, but the Jews were still able to shoot arrows and to throw stones on the dust-covered Roman ranks. Josephus does not give details about the stage of rethinking (Wars IV,1,7). The siege continued without the Romans entering the city, and only after a while did they penetrate the town, exploiting their numerical advantage and the relative freshness of the forces, who were less tired out by the siege than were the city's inhabitants (IV,1,8). He doesn't say how long it took to make new plans.

In any case, the second entry came by surprise, as the conquest began from the top of the city. There are no details about the Jewish resistance. Probably the Jews who earlier on were able to defeat the Roman troops didn't sit by idly, but Josephus focuses on those who fled and those who requested a pardon (IV,1,9) and the resistance, if it existed, was forgotten.

The combat in Gamla was two-dimensional: horizontal - in house-to-house combat, and vertical - in a war on the roofs, with the rebels attacking from above. We don't claim that the Jews actually planned this method of combat, but the situation gave rise to successful improvisation. Although Josephus mentions the tunnels dug by the rebels that were used for escape, φυλακαί, in effect no such tunnels have as yet been found in the excavations in Gamla.

Josephus doesn't explain the tactical component. He attributes to Vespasian a speech to raise morale (IV,1,7) rather than an analysis of the tactical developments after the failure of the first invasion of Gamla. We can learn from him that the Romans realized after the fact that by chasing the Jews who were retreating from the

breaches they had made in the town wall, without stopping and planning ahead, they may have unknowingly fallen into the trap.

Vespasian reprimanded his soldiers. (IV,1,6). Of course, the mistake is attributed only to the soldiers. The general is naturally responsible only for the victories. That of course is an apologetic tendency that conceals tactical criticism of the army. The truth is that the Roman soldiers didn't behave impulsively, but followed the usual procedure. Vespasian himself entered the town and participated in the mistaken attack (IV,1,5). So, Josephus doesn't analyze the nature of the mistake, and explains it as due to haste and a surplus of courage.

It's interesting that in Gamla during the failed battle Titus was in Syria rather than Judea (IV,1,10). And during the successful attack he actively stood at the head of the fighters. Is that a coincidence? Or did they wait for his return and for his advice and planning? Or perhaps this is only a part of the self-image of the Roman emperor?

#### b. The siege of Jerusalem

The area of Gamla is six hectares, while that of Jerusalem inside the walls was over one square kilometer. It is somewhat less steep than Gamla, and is also completely built in stone (below). The city includes five geographic spaces: 1. Suburbs, 2. An area bounded by the third wall, 3. An area bounded by the second wall, 4. The Temple Mount and the Antonia city fortress, 5. The upper city.

The first campaign in a built-up area began when the Great Revolt broke out, in Hyperberetos (October) 66. For 10-11 days the small Roman army, backed by the army of Jewish king Agrippa II, fought against the rebels (Wars II, XIX, 4-6). Josephus focuses on its attempt to capture the Temple Mount, and only one isolated sentence reveals that the battles took place in the upper city as well (ibid. 4). Already during these events we hear of the use of the subterranean level (Ibid. 4-5; wars, VI, IX, 3). Josephus speaks only about hiding there, but as we will see below, Josephus didn't understand the subterranean phenomenon and his descriptions fail to reflect the utilization of this dimension (below).

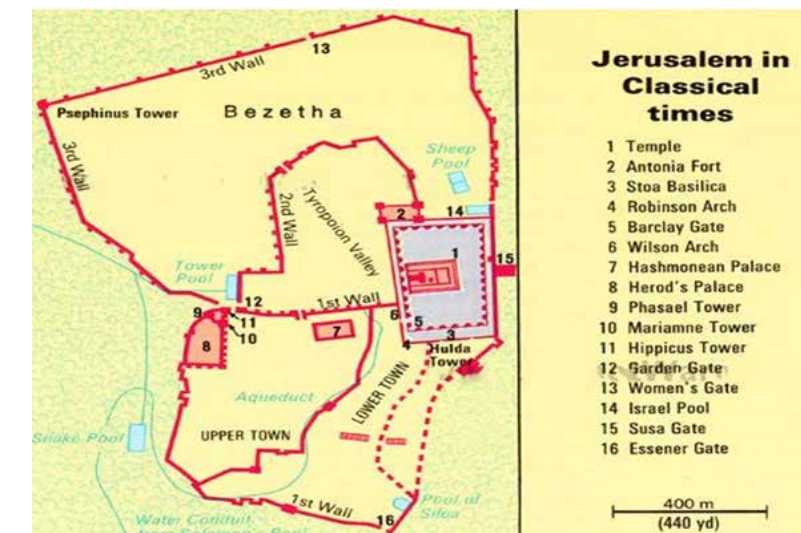


Fig. 8 - City map (source planetware.com website)

The main and last siege of Jerusalem lasted for about five months.<sup>7</sup> The first wall was captured on the 7<sup>th</sup> of Artemisios - Ἀρτεμίσιος (July) 70. The second (Antonia and the Temple Mount) was captured five days later, it's not clear how many of them were days of active combat.

After the wall was breached the Romans entered the city. Josephus reflects Titus' belief that this meant the end of the battle. Apparently, the Romans had already breached the area of houses between the second wall and the city. At this stage the description is vague, and it turns out that the Romans were chased away from the built-up area. In other words, inside the built-up city the battle began in the built-up area, after which the Roman army retreated.

Josephus, who rarely describes Titus' failures, doesn't explain that (Wars V,III,3). Afterwards another battle develops in which the Jews seal the breach after three days of fighting. It is quite possible that at this point Josephus "conceals" combat in the built-up area that was captured, and describes it as vigorous fighting. After a relatively long siege on the Temple Mount, it was captured on the 9<sup>th</sup> of Ilaios, which is the Jewish 9<sup>th</sup> of Ab (after two and a half month of siege!!!). Only on the 7<sup>th</sup> of Gorpaios, after three weeks of fighting, was the upper city captured ((Wars VI, IX, 1). This was after it had already been surrounded on all sides by a

Roman force three months earlier. The Roman army was already positioned above the upper city (in the area of towers that is now called the 'Armenian Hill').

What held back the Romans?

Josephus himself gives a stereotypical description of a wall that must be captured with batteries. But such a description is impossible. The upper city, which was commanded by Simon Bar Giora, was a steep promontory on the east and south. From these directions it is surrounded by the Jerusalem wall. From the west there is a deep valley (the "Valley of Dung") that runs between the upper city and the Temple Mount. The cliff on which the upper city was built rises sharply up to the Valley of Hinom and constitutes an obstacle to passage.

Although during the Roman period there were buildings along it and passage was possible, the military tactical difficulty is clear. But from the north about half a kilometer of connecting the Upper city to the main city (Illus. 8 above) only in the eastern part it is undermined and turned into a canyon. In the western part the ascent is moderate. In the past the first wall was built there, which at the time of the revolt had already been swallowed up within the built-up area. It is doubtful whether it was complete, and in any case, buildings were constructed along it that lowered its height.

<sup>7</sup>The siege began gradually, and according to Josephus lasted for 15 days, Wars V, I, 1; 7:302. A slightly different opening date can be proposed.



A breach of the wall at this point should not have taken much time. Three weeks was the period of time required to breach the walls of Gamla, Yotapata and Jerusalem (the second wall and the Temple Mount wall). This is a long and unrealistic amount of time.

It is quite likely that the Roman army preferred to breach the upper city by means of batteries from the east (from the "Valley of Dung") or the south rather than making its way in the built-up area and via the second wall, which was in the middle of the build area.

In that case, the Roman army had to delay inside Jerusalem itself, in order to cleanse the city. And in effect it chose a "classical" military solution of attacking the walls, rather than fighting in built-up areas. Below we will see that there is additional evidence of that.

### The subterranean fighting

#### Jerusalem

Until now we have discussed battle in a built-up area on the level of houses and roofs. At the same time there is an additional level - the subterranean level.

In Jerusalem the Jews used underground spaces, cisterns, drainage tunnels and tunnels for escape and attack against the Romans<sup>8</sup>. The Romans finally understood that, and we have also been told that they broke into these canals and tunnels with the assistance of collaborators, which is how they were able to find and catch rebels who hid in them.

"Many of the leaders of the people and the high priests went down to the tunnels and hid there" (Wars 2:170). After the Romans had killed or taken into captivity all those who could be seen, they began to search for those hiding in the tunnels, split the ground and killed all those they encountered. Here too more than 2,000 dead people were found, some who had killed themselves with their own hands, some who had died by the hands of their friends, but most of them died of starvation" (Wars VI, IX,4).

<sup>8</sup>Wars 6, 7, 3-4 (366-367); 6-9, 4 (370).

<sup>9</sup>This was recently discovered in the City of David excavation, beneath a section of a graded street paved with large stone slabs. The street and the drainage canal beneath it ascended from the Siloam Pool northward, up the Tyropoeon Valley to the area of the 'Ophel', or to be more exact, to the southwestern corner of the Western Wall. Reich 2007, 153-154. Bar-Cochva - Horvitz 2014, 92-93. among the many items that were found in the site, were several weapons, food containers, pots and jars, that were used by those who were hiding in those tunnels.



Fig. 9 - The graded street with the breaches and the drainage canal that was discovered in the City of David excavations. The opening holes made by the Romans are circled. (source: Reich 2007, 154)

Archaeological research in Jerusalem has recently produced a number of discoveries and impressive evidence of that.<sup>9</sup> A good example is a network of drainage canals that was turned into a cave used for hiding and refuge in Jerusalem. In the section under discussion, which is several dozen meters in length (along the western rock cliff of the City of David hill), and almost 30 meters wide, thick and massive stone steps have been exposed. Beneath the floor was a covered drainage canal for rain, which allowed for walking in a bent-over position, and sometimes crawling.

The discovery is related to our topic of discussion: In four places in the eastern flooring of that street breaks and breaches were discovered, which made it possible to penetrate to the level of the drainage canal below.

The size of the breaches enabled people to enter and exit. According to the conclusions of the excavators, the breaches were created on purpose and required

great effort, and were not a result of the collapse of some heavy element. The researchers believe that the major historical context that explains these breaches are the soldiers of the Roman legions who created them after the conquest of the city, in their pursuit and search for Jewish escapees or rebels, who hid in such drainage canals.

Some of the canals were originally used as drainage systems and for channeling runoff, sewage and rain outside the city. This enabled the war refugees, other refugees or Jewish fighters to escape outside the confines of the occupied city, to the area of the Siloam Pool, and from there they could secretly try to continue to flee to Kidron canyon towards the Judean Desert. It should be noted that based on the findings of this dig, it is not certain that they were successful in doing so. Although Josephus mentions the hiding places, he doesn't attribute a combat role to them, but describes them only as a place of refuge and an escape route. However, weapons have been discovered at these excavations, so that those who used the tunnels were not innocent and peaceful refugees. We should also add that, for a Roman soldier, there is not much difference between a fighter and an armed refugee who emerges to steal food. Both look the same and are treated the same way.

In Yotapata, Josephus doesn't mention combat in built-up areas, but hiding places were also discovered.<sup>10</sup> Josephus describes hiding himself in cisterns. On the other hand, in Gamla no tunnels were found, and the rocks at the site make it very difficult to build underground structures, because of the basalt soil.

### Tunnels and burrows in Judea

In the past 20 years a large number of tunnels and burrows have been discovered all over Roman Judea, in

the Jewish villages and cities in the Judean Plain (the Jerusalem hills, the Beit El hill, the Lod Plain), the South Hebron hills and to a certain extent in the Galilee.<sup>11</sup> The phenomenon is familiar both in the historical research based on the single description of Dio Cassius, and on the relatively rich archaeological findings of a networks of caves used for hiding.<sup>12</sup> The first burrow that was discovered (in Khirbet Eqed) was explained as an attack tunnel, in other words, a subterranean base for attacking the Roman road.<sup>13</sup> Afterwards, when more such burrows were discovered, the researchers tended to see them as caves for hiding. There is no question that these spaces were also used for hiding. But that is not a full explanation of their use.

Recently, Shimon Dar suggested that these tunnels were used in the context of combat as well. In other words, as attack bases, for escape and for transporting fighters into the occupied area, and so on.<sup>14</sup> These tunnels are mentioned already in Dio Cassius' summary. He specifically mentions their use in combat (as opposed to hiding). The phenomenon itself is also mentioned in the rabbinical literature, where it is usually called "a hiding place."<sup>15</sup>

Most of the sites have yet to be excavated, and the information is based on a survey. The tunnels that were surveyed are usually dated to the "Roman period." The rabbinical literature also speaks generally about this period. Some of the tunnels were certainly in use during the Second Revolt, but some may be dated to the Great Revolt. The rabbinical literature also alludes to details about Roman tactics: sending scouts to identify openings, lighting fires at the entrances to tunnels: "They caused a house to go up in smoke, they caused a tunnel to go up in smoke" (B. Yev. 115a).

What is the explanation for the difference in the reason given for excavating the burrows in Josephus, as com-

<sup>10</sup>Aviam 2008, 39-53.

<sup>11</sup>Kloner 1982, 4-24.; B. Zissu 2011, 262-283; Tsafir, Zissu 2002, 6-36; Kloner, Zissu 2003, 261-268; Zissu 2018, 19-49; Zissu 2009, 90-136; Zissu 2013, 29-52; Shavtiel 2008, 223-235; Leibner, Shavtiel 2015, 127-143; Kloner, Zissu 2001, 73; Sahar 2001, 91; Eshel, Porat 2009, and many more, most of them in Hebrew.

<sup>12</sup>Dio Cassius, History, 69: 12: 1 ff.; Kloner, Zissu 2003, 181-216; for a further rich research on the tunnel complexes see here note no. 12 above.

<sup>13</sup>Gihon 1982, 33-43; Bar-Cochva 2010, 27, 30, see there notes 55-56. For the military tactical-strategic aspects of tunnel and hiding complexes warfare, see Mor 1991, 98-190; Stiebel 2009, 309-338.

<sup>14</sup>Dar 2016. Dar in his article has a series of modern parallels. Compare: Gichon 1982, 33-43.

<sup>15</sup>Safrai 2011, 33-44.

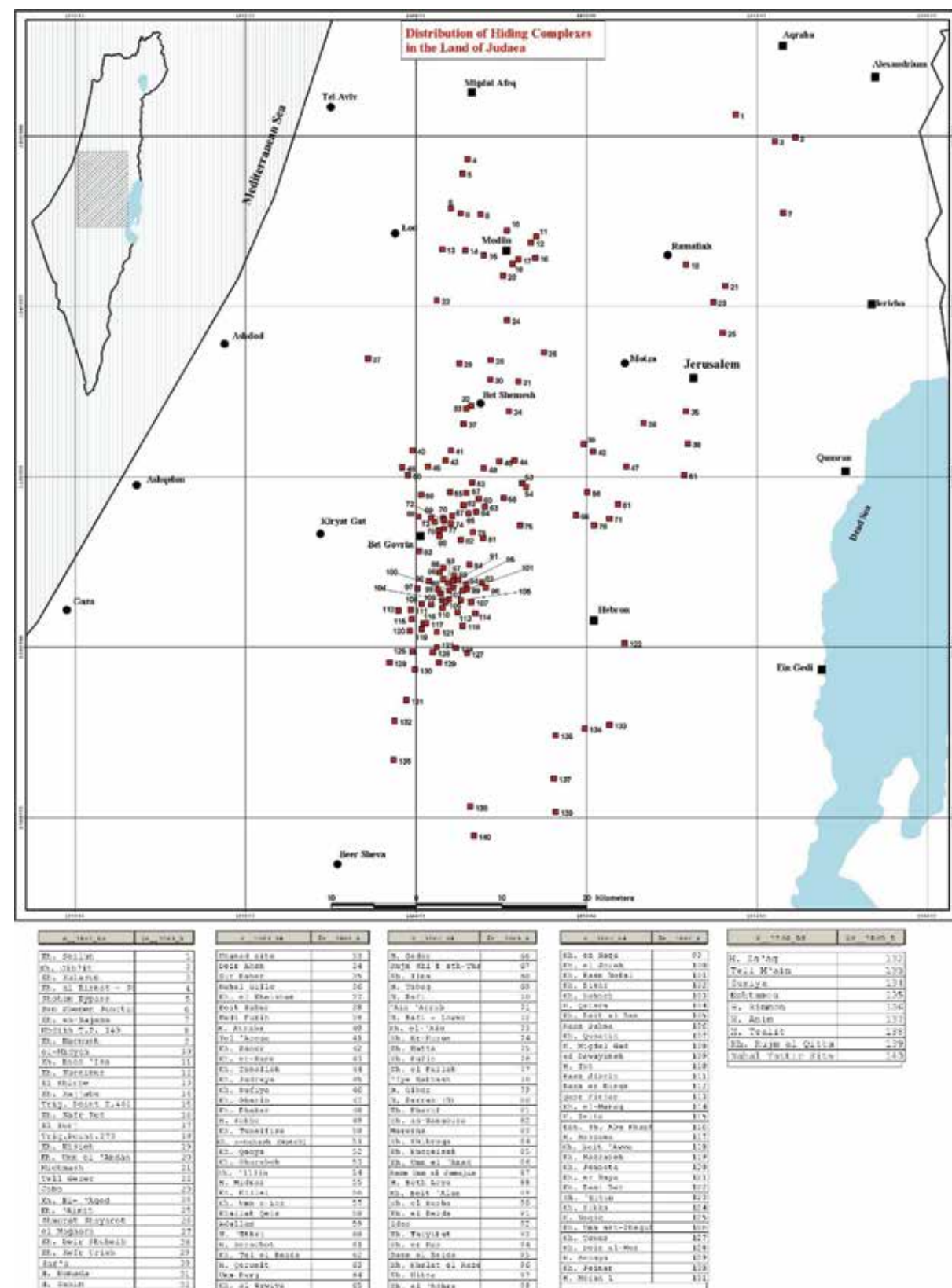


Fig. 10 - Map of distribution of the tunnels and hiding/fighting complexes in the province of Judea.  
(Source B. Zissu 2018)

pared to Dio Cassius? It may be a chronological difference between a description of the First Revolt (66-70) and the Second Revolt (132-135). But in our opinion what we have here is a change in understanding and awareness.

It is usual that the military leadership, and as a result the early research fail to understand the phenomenon and its tactical significance.<sup>16</sup> That becomes clear only later. On the battlefield itself the commanders or the junior officers improvise the solution, and in the absence of wisdom and planning they fail to prepare a suitable combat doctrine, equipment and training in time. Another advantage of the underground tunnel's tactic: it allowed the Jews to escape and disappear from the upper surface of the battlefield at the appearance of a strong big Roman army.<sup>17</sup> And more important, on the strategic level, using this tactic helped conserve the Jews' ability to keep fighting in other battles that were chosen on a more convenient battleground for the Jews. This could probably explain the exceptionally long periods of time it took the Romans to defeat the Jews.<sup>18</sup>

To further clarify this tactic, we can assume that when the Jews managed to orchestrate a multiple force attack from several directions, when the Romans were not arranged in their battle order and formations, or when they were not expecting and preparing for a battle, they could cause considerable damage to the Romans' military layout. Perhaps in optimal conditions (described above) they could even win an entire battle.

However, it is clear that once the Romans became aware of these attacks and mainly of the Jews' methods, and got ready for them and began to develop the correct



Fig. 11 - A Typical subterranean Hiding Tunnel in Horvat Nakik. (Photo B. Zissu).

tactic against them, the advantage and efficiency of the Jewish tactics began to diminish.<sup>19</sup>

The last major strategic advantage and importance of the 'tunnels tactic' was that these hiding places served Jewish warriors as their tactical parallel to a Roman camp.

The Roman camp was of major tactical importance as it provided the Roman soldiers a safe place to rest and organize before going out to the battlefield. It served the same purpose, in the case of a need to retreat. We suggest that for the Jews, their underground caves and tunnels served the same tactical-combat purpose - namely "camps" that provided a secure area, very similar to the Roman field camp.

However, in the Jewish version of "camps" there was an important additional advantage - that of being hidden and well concealed from the enemy and protected from the weather. Protecting and securing their "gates" was

<sup>16</sup>We can find a well-known example of that in the military operation in the Gaza Strip in 2014, which was mentioned above. It turns out that the IDF knew about the defense and attack tunnels in Gaza, but didn't understand the phenomenon. Later, when the phenomenon was exposed, they exaggerated its importance and saw it as a tie-breaking tactic, a danger to Israel's survival and so on. Stories spread among the public about military plans to occupy the Jewish state, and so on. Only after three years were methods developed that made the effort of digging far more efficient and less threatening. And yet, there has been no major military confrontation in which the tunnels played a role.

<sup>17</sup>This tactic was very useful in a 'set battle' field just before the first combat clash. By doing so, the Jews saved themselves from a costly defeat, which was usually the result of such battle, taking into account the military unequal forces. For most The Romans had many more troops. At the same time the Jews did not control 'set battles' tactic and therefore usually chose to avoid it.

<sup>18</sup>The first revolt lasted up to seven years including the capture of the last rebel stronghold of Masada in 73 C.E. The second revolt, up to three years.

<sup>19</sup>The basic principle of the Roman tactic was to locate the secret entrance and exit hatches and then blocked them. Throwing clay jars filled with smoking fire into the caves (B. Yev. 115a) in addition, they used special equipment designed for fighting inside tunnels, which was operated from specially built camps that were positioned near cave and cliff sites. From these camps the Romans could lower troops by ropes (such as the Hever Kenyon cliff and the Roman base).



achieved quite easily, by blocking the narrow approach and entry to the caves.<sup>20</sup>

Almost all the secret tunnels that were discovered are located in the built-up area in villages and towns<sup>21</sup>. If they were also designed for activity in the context of a military event, they were integrated into the action in these areas. As we have seen, this method of combat existed. And we have before us a complete and complex phenomenon.

### On the nature of combat in a built-up area

Activity in a built-up area is the weapon of the defeated. Usually it is impossible to win by this tactic. Nor is it possible to minimize damage to the defeated city (town) – on the contrary, it will increase. The goal is to cause as much damage as possible to the enemy, and to gain time. That's all. However, on the larger tactical level, combat in a built-up area also causes losses to the occupying army (to both sides).

But that is not the main advantage for the conquered. Combat in a built-up area greatly slows the rate of the victory and requires the occupier to invest a long period of time.

Sometimes, under certain circumstances, time is a strategic asset. Delaying the campaign by a number of years (two to three years) is likely to be of strategic importance in the final analysis. In any case, for the defeated, slowing the pace, and the small tactical achievements on the battlefield in the built-up area, provide the losing (and weaker) fighters with a source of pride and hope, and balance the feeling of military failure and humiliation. These are national assets in terms of self-awareness, which are of great importance in combat and in the ensuing life of enslavement, as well as in terms of the economy.

### Some remarks on built area combat

a. A basic condition for the success of activity in a built-up area is the popular mobilization of all the members of the community. Without their mobilization the defending army has no chance. That is why in revolts and battles between the large armies - Persia-Parthia vs. Rome, Arabs vs. Byzantines and so on, there were no battles in built-up areas.

That is also why there were almost no wars in built-up areas between the cities of the East and the conquering Roman army, because the East was not conquered from national kingdoms, but from semi-Hellenistic kingdoms, with a few exceptions such as Judea, perhaps, the kingdom of Syria-comagene and Egypt, and later Palmyra and similar regions. On the other hand, the West – Spain, Gaul, Britain and Germany - were conquered from nations with a national-religious consciousness. And it makes no difference if we call them tribes or nations.

b. The locals are aware that combat in built-up areas is a zero-sum game, after which there is no rehabilitation and no chance of surrender. This is the reason to refrain from such combat, but if it has begun it must be continued until the inevitable end.

c. The locals were very familiar with the alleys of their city/fortress, while the Romans could not have a prepared battle plan (a very good example is the "ambush" in Gamla, as described above).

d. The Romans could anticipate a long series of local battles that were not in the routine battle format, a mixing of combat units and an absence of central leadership. None of the Roman advantages of size and organization was reflected.

<sup>20</sup>Once we acknowledge this observation, it could well explain the surprising and exceptional resistance of the small Jewish nation during the Jewish-Roman conflict. It could also consider as one of the key elements that allowed the Jews to prolong their 'Jewish wars' far beyond any expectations, given the unbalanced equation of military power in the Jewish – Roman conflict. We believe that the discovery of many underground structures and tunnel networks, which were also used as "underground camps" (as suggested above) for preparation for military conflict, during the events of the two major Jewish revolt, enabled the Jews to maintain vital fighting abilities for long periods of time, especially in the second Bar-Kokhba revolt. One proof for this claim can be found in Dio Cassius' account, which emphasized the Jews' large-scale subterranean war preparations. From his account, which focused mainly on the tunnels made by the Jews, it is understandable that he was describing a strange and unusual fighting method (from a Roman perspective).

<sup>21</sup>The only small tunnel in a Polis is in Gaba. See Safrai, Linn 1988, 209–212.

### The battlefield – the house and the complex

The urban communities in the West, and in particular the pre-Roman cities, were less crowded than in the East.<sup>22</sup> They are characterized by relatively wide streets (a width of 3-4 meters around each complex.<sup>23</sup> In the towns in the East and in Judea the narrow alleys prevented the Roman army from organizing, and they were even unable to set up a *testudo* formation in order to conduct the battle inside the city. In the context of this discussion we would like to focus on the basic unit of the house. The ordinary house in the Eastern empire differed from that in the West.<sup>24</sup>

The "Eastern" house is built entirely of stone, usually large chiseled stones<sup>25</sup>, with one layer of stones placed on top of the other without cementing materials, in the method of alternating bricks, or on a wall built from two stones. The "Western" house is built of various combinations of large quarried stones, a conglomeration of small stones with cementing material, trees and plaster. These combinations of materials differ of course from one region to another. But in all of them the construction is not as strong as in the "Eastern" house.

In the 'East' too, in the plain's regions, there were brick houses or a combination of stones and bricks, but construction using only stone was far more prevalent, since

there are more hilly areas. The secondary walls of the rooms inside the house in the East were of stone of almost the same thickness as the external walls, while in the Western empire there were made of plastered bricks or other insulation materials.<sup>26</sup> (Figs. 6 and 7 above).

The main difference is in the roof. In the Western empire the roof is almost always slanted, covered with a ceiling of branches, or rarely – and mainly in the homes of the wealthy - with tiles. But the roof is always slanted. It is not a living area but at most leaves an interior attic between the room and the roof. It's impossible to go up to the roof, since it doesn't hold much weight.

In the East the roof is horizontal and is used as a parallel living area. It was used as a storage area, a work space, for laundering, bathing and so on.<sup>27</sup> The flat roof was prepared by a number of methods: sometimes wooden planks with branches on them, covered by a layer of plaster, and sometimes stone arches along the width of the room with stone slabs on top of them (this method was used in the houses in the Judean Golan). Between these two methods there was a variety of secondary options, including arched roofs with branches and wooden planks on top, and on top of them branches, and other such methods.

<sup>22</sup>Multi-lingual site on European Oppida.

<sup>23</sup>This discussion includes an examination of rural towns in an area of about 40-60 dunams. These include Nomentum (nomantia - Spain, Baroña, Tegra, Borneiro, Fazouro, Viladonga, Elviña, Troña and Cerdeira. In Asturias, Coaña, Chano in León, Manching in Germany (380 ha)., and so on. See Collis, J., *Oppida, earliest towns north of the Alps*, Department of Prehistory and Archaeology, University of Sheffield, 1984; G. Dominique *La Celtique Méditerranée: habitats et sociétés en Languedoc et en Provence, VIIIe–Ile siècles av. J.–C.* chapter 4 *La « civilisation des oppida » : dynamique et chronologie*. Paris, (2004).; G. Woolf, "Rethinking the Oppida", *Oxford Journal of Archaeology* 12, (1993), pp. 223–234. In Palestine, in Galilee, Gamla, Yotapata, Beit Zaida, H. Hamam, Magdala (Tarichea). In Judea and Samaria H. Hermeshit, Umm Rihan and other Dozens of settlements. See, Safrai 1994, 39–75. There were also bigger cities, Hellenistic-style cities, and of course also isolated houses or small villages, and other types of settlement. These are not the subject of this article.

<sup>24</sup>The expression 'East' and 'West' here are general. The 'East' here is mainly the province of Judea, for which the description of the revolts has been preserved. But the houses in the other provinces in the East are similar (Syria, Arabia and so on). The 'house' in ancient Egypt was more similar to a 'house' in the Western empire). Neither is the "West" uniform of course, but it includes the Celto-Iberian cities in Spain, Gaul, Germany, Britain, etc.

<sup>25</sup>There has yet to be a summarizing archaeological study published on the average size of the stones. From our examinations, the average small stone was roughly, about 40 x 25 x 25 cm. (weighting 100-110 kg.) and ordinary large stones are 60 x 30 x 30 cm. (140 kg. per stone).

<sup>26</sup>In the research there are very few comparative studies. Therefore, we are basing ourselves largely a general feeling, based on our experience. For example, the density of residences has yet to be quantified. However, in the digital site (Multi-lingual site on European Oppida) there are about 140 towns in the areas of Spain, Portugal, France, Germany, Switzerland, Britain and Eastern Europe, where in small Judea alone there were more rural towns. For attempts to reach the number of towns in Judea of this type, see: Ben David 2011, 36–212. In the whole province there were around 800-900 Townships of different sizes. This doesn't enable us to present calculations about population density, since the entire population includes residents of villages and isolated homes, as well as wanderers, and we haven't come to discuss this comparative question.

<sup>27</sup>Hirschfield 1995, 318.



Fig. 12 - 'Western' typical roof consisting of wood planks type in Numentia – Spain (photo D. Safrai)

A more unusual method is the use of pyramidal roof of stones. In all the cases where we can reconstruct the house the roof is flat and tiled (very few slanted roofs).<sup>28</sup> The height of the house is usually impossible to examine using archaeological methods. We assume that throughout the empire the average height was identical, although there is no proof of that.

These differences in the architecture of the house were not designed for military purposes, they stemmed from a large number of engineering decisions. For example, the slanted roof provides protection against rain, and mainly prevents the accumulation of snow and the penetration of water. At the same time, a flat and rain-proof roof must be heavy, and therefore, there is a need for strong walls to hold it up. The secondary walls inside the house must also hold up the roof, and therefore are built of strong stone.

The use of the roof in the East for living space was possible thanks to the rainless summery weather, and because of the harsh weather in summer (the heat inside the house). It was needed mainly due to the crowded living conditions and a fuller exploitation of the area used for construction. Rural construction is extremely dense, the houses are small, and there were no other storage places.

In the West the population density per dunam in the built-up area is lower than in the East (only very generally and roughly, of course), there was less shortage

of space and therefore the urban communities (cities, towns and large town and large villages) were built with less density. This made it possible to enlarge the house and to provide additional storage spaces, and there was no need to use the roof. In addition, in Judea wood in general, and trees for construction in particular, were rare and expensive, whereas in the East, as in most parts of Syria, wood is more accessible. All these are needs for ordinary times, but they also made the house in the Eastern empire more strongly fortified.

We will describe the thought process of a Roman centurion who entered an occupied city like Gamla. The area of combat is limited – every house is a center for warfare. It's impossible to activate large units on the battlefield. There is no way to activate a cohort or a Centuria. The force has to split into squads or into several multi-squad teams. So that every Decurion (low rank field commander) became a junior general.

The military force was posted in the narrow street. From this area there are vertical apertures that open up into the street (alley). The Romans don't even have room to operate the battering ram, but of course the door of the "courtyard" (complex) cannot withstand the hammerings. At the same time the closed opening is breached. The Roman attackers are attacked with a barrage of stones and arrows from above by the Jews (from the rooftops).

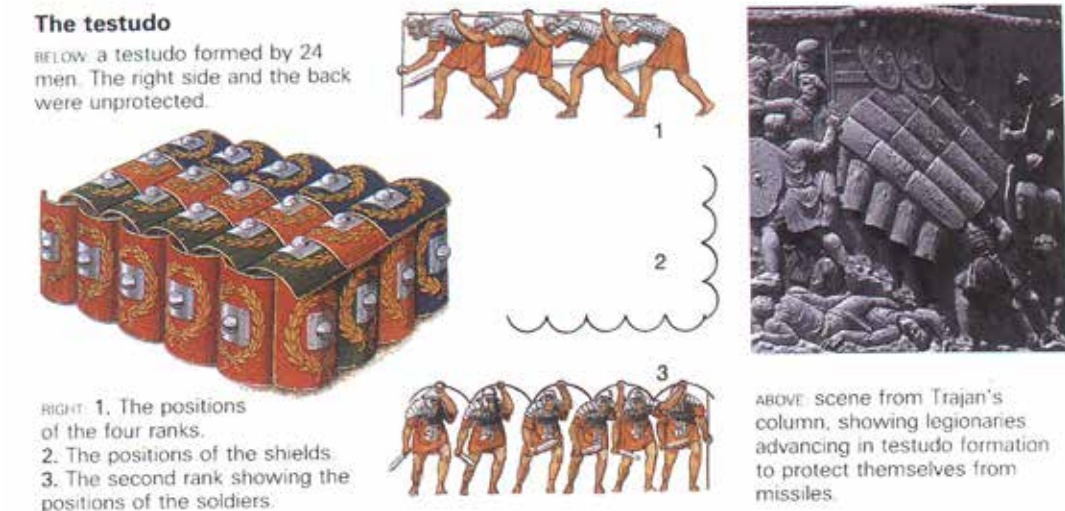


Fig. 13 - Reconstruction of testudo formation. (Source: Connolly, 1997,22)

The Roman army has a commonly used tactical solution, the *testudo*. The group is protected from three directions.<sup>29</sup> But the back is completely exposed and the right wing has no protection. Such a testudo supports those breaching the opening, but it is exposed to those shooting arrows from behind. In order to protect the back of the testudo there is need for another testudo posited behind the first team and facing the opposite direction. But the width of the alley usually prevents the use of two testudo formations. (Fig. 13)

Of course, after a short battle, in which the Romans suffer losses, the opening will be breached. The force enters the courtyard. There are a number of openings from the courtyard and its structure is irregular. It creates navigation problems, but these are relatively small. The team organizes once again in the courtyard in the testudo formation and breaks into the living rooms. The courtyard is sometimes sufficiently wide for the placement of two testudos. Now the force bursts into the rooms. In the transition from light to darkness it can't see a thing.

The opening is narrow (80-100 cm), only one-armed fighter can enter, and he is attacked from all sides, in-

cluding from intermediate levels, from a balcony or from the opening to the second floor.

In the Western empire the solution was simple. The Romans would toss a burning torch onto the roof, and then continue to move quickly all over the city and destroy the nests of resistance. Almost certainly the fire would have jumped from one roof to the next and crossed the streets, and if it was extinguished for some reason or other, it could be reignited. Therefore, the occupied population knew from the start that the battle in the built-up area was a lost cause, and wouldn't even give them the satisfaction of a partial victory or a fair fight. The absence of multi-level combat also narrowed the possibilities of fighting on the ground.

In the East, tossing a torch onto the roof was insignificant (the fighters would have extinguished it, and the fire would have nothing to catch onto). Even tossing a torch into a room didn't help much, since the fire didn't have much to consume.

After occupying the ground-floor room the Roman soldiers had to get rid of the resisters in the cellars. Sometimes the besieged fled via the tunnels and the roofs to other houses. After occupying the ground level, they

<sup>28</sup>Domed roofs, which are common in the East today, were not common in the Roman East.

<sup>29</sup>In testudo formations depicted on the Arch of Marcus Aurelius, there are two units, with 4 x 4 soldiers in each. The fighters present four shields in front, and four on top, and four shields on the left side. It's not clear where the four other shields are located. It's possible that the last row will position its defender behind their backs, but that's a position in which it is hard to fight, and it doesn't appear in the pictures. The details of the formation are not entirely clear.



had to occupy the roof separately. Here too the ascent to the roof was dangerous. The opening was narrow and only one fighter could pass through it.

What made the fighting even more complicated is the option of those under siege to flee from the house via the upper level or via the tunnel, and afterward to return to the already conquered house that was occupied. This required guarding every square meter that was captured, and alertness against a surprise attack and against harassment. The fighting didn't end in a single day. Therefore, the Roman army had to decide whether to remain in the area already occupied, or to organize for undisturbed sleep in a camp outside the settlement.

If the army withdrew, the besieged population entered and retook the occupied area. If the army remained in place, it suffered from a long night during which it was harassed by the besieged population. Even a very well-trained soldier loses some of his capability after a sleepless night. And after several nights of interrupted sleep his effectiveness and caution deteriorate.

There was a series of exhausting one-on-one battles, in which the Roman advantage was confined to training, stamina and the great amount of practice. That was as opposed to the opening conditions, which worked in favor of the locals.

We can't answer the question as to why tunnels were not excavated between the houses in the West. The fact is that such phenomena are rare.<sup>30</sup> The idea may not have come up, or the locals didn't organize in time for that, or the entire idea of action in built-up areas was hopeless. In any case, in the Western empire there is very little subterranean hiding and tunnels and the phenomenon is almost nonexistent.

We assume that such a scenario of combat in built-up areas also took place in settlements about which this information wasn't preserved, starting with Yotapata and ending with the Second Revolt at many sites. It is not mentioned for the same reason that Vegetius doesn't discuss this stage – out of lack of awareness, and perhaps also because it is included in the major battles for the conquest of the Western provinces.

## Conclusion

Combat in built-up areas in the East in general and in Judea in particular was conducted simultaneously on three levels: 1. The ground level 2. The roof level 3. The subterranean level, which we discussed above.

Josephus, like Vegetius and like the Roman commanders were unaware to this type of fighting. We suggest viewing the aspect of combat in built-up urban areas and the underground hiding/attacking complexes as a newly observed element, caused (the Roman aggressor) heavy losses in the final stages of the sieges against the Jews', and this is the main reason for the relative long period of fighting of the two rebellion in Judea.

We estimate that in addition to the lack of awareness, Josephus, faithful to his subjective and tendentious approach, chose to downplay these facts and figures in order not to undermine Roman military glory.

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## **Roman garrisons on the edge of the eastern frontier**

### **ABSTRACT**

Pontus-Caucasian frontier was formed in order to serve the purpose of reinforcement of Roman positions in Caucasus and to take the region under good control during the 70s of the 1<sup>st</sup> century AD. The Roman fort of Apsarus located at modern Gonio, close to Batumi was one of the most significant places of the Caucasus defensive line where auxiliary units of cohorts II Claudiana, I SAGI, C·COH(ors) AVR(elius) C(ivium)·R(omanorum), Coh(ortis)∞(milliariae) and probably vexilatio of Legio X Fretensis were served in the 1<sup>st</sup>-3<sup>rd</sup> AD. Another vexilatio of Phasis garrison, VEXFA was stationed at Petra (modern Tsikhisdziri, close to Kobuleti), eastern outpost of Apsarus. A much larger Roman garrisons were located to the west of Apsarus: λογχοφόροι (spear-bearing) from Rhizus (modern Rize), Cohors Apuleia civium Romanorum at Hissoporto (modern Arakli) and Cohors I Lepidiana at Καὶνὴ παρεμβολή (new camps) close to Trabzon. All garrisons stood there since 2<sup>nd</sup> century AD to the turn of the 5<sup>th</sup> century AD. There is almost all evidence for present day on the garrisons stationed on the edge of Imperium Romanum, i.e. Lazica (modern western Georgia) and its southern adjacent. Archaeologically are studied only Apsarus and Petra, which played important role in the defense of the southern part of Caucasian frontier.

**KEY WORDS: ROMAN FORTS, GARIRISONS, EASTERN FRONTIER, ROMAN ARMY, PONTUS-CAUCASIAN FRONTIER**

## Introduction

Eastern Black Sea littoral (Fig. 1) was routed by the Roman commander Pompey already in 65 BC, but only after a decree of Emperor Nero in AD 63, this region along with Kingdom of the *Pontus Polemoniacus* became part of the province of Galatia.<sup>1</sup> So called Pontus-Caucasian frontier formed during the 70s of the 1<sup>st</sup> century AD when Rome had actually lost Armenia and there emerged an urgent necessity to concentrate much more troops along the frontier territories with the Armenia Major, Syria and even along the whole eastern frontier. As to the other one dividing Rome from Cappadocia and Armenia Minor, it was completely modernized and its terminal links were Melitene, i.e. the *XII Fulminatae* and Satala, i.e. the *XV Apolinaris* legions with their headquarters. These districts were regarded as the main distributors of Roman garrisons to Pontus, Colchis, Cappadocia and Armenia during the 1<sup>st</sup>-3<sup>rd</sup> centuries AD.<sup>2</sup>

The Roman forts built along the eastern Black Sea littoral played important role in the defense of the Caucasian border. Their aim was to defend the Roman territory from the barbarians and at the same time represented the base for conducting military operations beyond the boundaries of the Empire.

## Garrison stationed at the fort of Apsarus

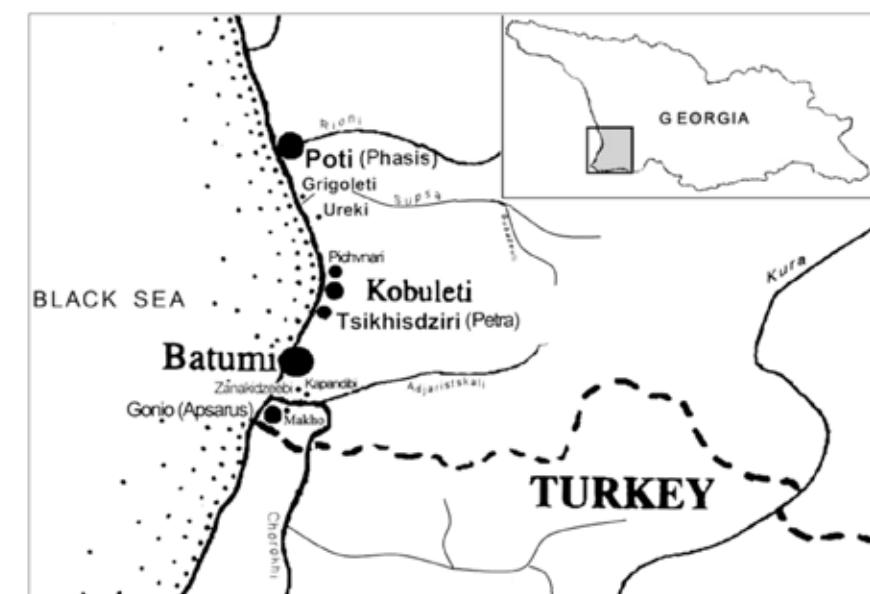
Apsarus was one of the most significant fortifications of the Caucasus defensive line. In AD 134 Arrian, the governor of Cappadocia, travelled around the Black

Sea littoral and described the situation in the region in his *Periplus* (6). Arrian mentions five *στειραι* stationed in Apsarus.

Other sources also report on the Roman garrison at Apsarus. Thus, according to base inscription found at Abellae, Italy, patron of colony of Abellae, Marcio Plaetorio Celer decorated by Trajan for his participation in the Parthian war (113-117), had commanded the Roman *numerorum* stationed at Apsarus (Fig. 2).<sup>3</sup>

A fragment of papyrus dated to the 2<sup>nd</sup> century AD found in Fayum, Egypt mentions Marcian, the veteran of the *cohors II Claudiana* (Fig. 3). According to Michael Speidel this cohort represented the auxiliary cohort of the Roman army stationed in Cappadocia in the mid 2<sup>nd</sup> century AD.<sup>4</sup> The presence of this cohort at Apsarus is confirmed by the two stamped bricks fragments found during the archaeological campaigns in 1995 and 2012 at the central part of the fort where the headquarters is suggested to be. The first reads CO (H) and the numeral II, on the other - (C) OH and the numeral II (Fig. 4). These suggest have to be the abbreviation of *Cohors II Claudiana*.<sup>5</sup> Apart from documental confirmation of the Fayum inscription, this find is also important in a way that it makes the above mentioned Speidel's conclusion more trustworthy.<sup>6</sup>

For the confirmation of the garrisons stationed at Apsarus two stamped bricks are also interesting found here (Fig. 5). It reads SAGI backwards and numerical sign I that indicates the cohort of archers (*Sagittarius-Sagittariorum*).<sup>7</sup> *Cohors I sagittarius* was based in Dacia during the whole



1. Ancient and modern maps of eastern Black Sea area

Fig. 1 - Ancient and modern maps of eastern Black Sea area (Merab Uzunadze, Batumi Archaeological Museum)

1<sup>st</sup>-3<sup>rd</sup> centuries AD, but the inscriptions on the brick, outline of letters, size of stamp frames and shape are different and shows that these military units were not same.<sup>8</sup> The cohorts stationed at Apsarus are mainly brought from Cappadocia. As was mentioned above, there were several cohorts those Arrian did not use against the Allani. Among them was *Cohors III Syrorum Sagittariorum* as well. According to Michael A. Speidel's careful hypothesis, this cohort might have been stationed at Apsarus and the stamped

brick with the inscription SAGI I was made by them in Apsarus. *Cohors III Syrorum sagittariorum* is mentioned in a diploma dated to AD 101 that was given to a Roman soldier from Cilician Anazarbos. It points to the existence of the garrison in Asia Minor or Syria. Speidel tries to connect *Cohors III Syrorum sagittariorum* with *cohors III sagittariorum* and concludes that if these cohorts are one and the same then the military units must have transferred to Cappadocia from AD 75/76 till 80

<sup>1</sup>Suetonius, Nero 18

<sup>2</sup>Леквинадзе 1969, 75–93; Speidel 1986, 657–660; Mitford 1977, 507–510; Кигурадзе et al. 1987, 88–92; Лордкипанидзе 1989, 347–348; Braund 1994, 152–169; Mamuladze et al. 2001, 35; Kakhidze 2008, 303–314; Kakhidze, Burkadze 2016, 65–68; გამყრელიძე, თოდუა 2006, 60; Zerbini et al. 2012, 49–55

<sup>3</sup>Ельницкий 1938, 310–311; შპაიდელო 1985, 135–136; Speidel 1986, 657

<sup>4</sup>Speidel 1986, 658–659

<sup>5</sup>შამულაძე et al. 2000, 91–92; Мамуладзе et al. 2002, 35 Fig. 2

<sup>6</sup>*Cohors II Claudia* or *cohors II Claudiana* is also known from one more inscription – Themenothyrai, Phrygia. From the *cursus honorum* of one of the Greek soldiers it becomes clear that he was *επαρχος στειραζ β (II) Κλαυδιαζ*. It is possible to connect this inscription to the *cohors II Claudiana* found in Fayum (Speidel 1983, 29, note 41). It should also be taken into consideration that this cohort was stationed in Cappadocia in the 2<sup>nd</sup> century AD and Arrian does not name it among the cohorts enumerated for the battle against the Allani (RE, 1900, 273).

<sup>7</sup>The archers appear in the Roman army during the Punic Wars. There were famous archers from Sicily, Crete and Syria. Pompey was supported by the Pontus archers' units in the Civil War (RE, 1920, cl. 1744). Part of the Sagittarius is met in *numeri* as well. The number of the Sagittarius corps increased in the Diocletian's epoch. About 60 archers cavalry and 30 infantry units are mentioned in "Notitia Dignitatum". They were mostly stationed in eastern Roman provinces (RE, 1920, cl. 1745; 1972. cl. 446). It was a specifically armed auxiliary military unit. Such type of military units used to be stationed in Syria, Danube line and other Roman provinces (Штраепман 1946a, 259; 1946b, 207; Johnson 1987, 23–37).

<sup>8</sup>შამულაძე et al. 2000, 92; Мамуладзе et al. 2002, 35 Fig. 3. The inscriptions given on the stamps of the same legions or cohorts are almost identical. In most cases it did not matter in which fort they were stationed at what period. E.g. the width of the frames of their stamps varies from 1.9 to 2.2 whereas the width of the Apsarus stamp is 2.6. There is a vivid difference in letter outlines too. While, e.g. the stamps of *Legio XV Apolinaris* found in different forts of the Imperium Romanum are almost identical in size, stamp shape and letter outline (Кигурадзе et al. 1987, 90 Fig. 4<sup>a</sup>; Brandl 1999, 635 taf. 55).



as far as they are not mentioned in any of the Syrian sources. The scholar considers that this cohort might have finally been stationed at Apsarus.<sup>9</sup>

Overall, the archaeological evidence found in Apsarus shows that in Apsarus of the 1<sup>st</sup>-3<sup>rd</sup> centuries AD another auxiliary Roman troops also stood: *C·COH(ors) AVR(elia) c(ivium)·R(romanorum)* (Fig. 6),<sup>10</sup> *Coh(ortis)∞(milliariae)* (Fig. 7)<sup>11</sup> and perhaps engineering forces of *Legio X Fretensis*. X-stamps discovered on tiles and pipes (Fig. 8) make us think that this unit worked in Apsarus to build a water system.<sup>12</sup>

There are also two stamped tiles known from Apsarus. On one of them only two Latin letters have been preserved - CO (Fig. 9) while on the other – only C. Obviously, these letters should mean ‘cohort’. Apart from this, some more stamped tiles have been found but, unfortunately, the inscriptions have been erased. All the discovered stamps are of rectangular shaping and they belong to the A type<sup>13</sup> or 1a type<sup>14</sup> of stamped tiles.

**Vexillatio Fasiana?**

An earlier fortification structure of Tsikhisdziri outpost seems to be built at the same time and it was quite near to Apsarus that perfectly coincides to the practice of fortifying the approaches of newly established strategic points even at the end of the 2<sup>nd</sup> century AD.

A Roman stamped brick with the letters *VEXFA*, found at Tsikhisdziri, is especially noteworthy. It is dated to the 2<sup>nd</sup>-3<sup>rd</sup> centuries AD. Some of the scholars suggest

that the last two letters of the inscription are abbreviated names of above mentioned XII and XV legions: *VEX (illationes) F (ulminatae) et A (pollinaris)*.<sup>15</sup> Others connect *FA* to Phasis, and correspondingly, to Cappadocian subdivision of *singularis*.<sup>16</sup>

*Pedites singularis* would stay in Phasis for a short time, AD 129-131 and soon return to the main headquarters. In this case the brick was found at Tsikhisdziri should be made in the workshop located at Phasis by the soldiers of the above mentioned unit carried out some engineering works at Petra. Apparently, there the construction activities were carrying out by legions of *V Macedonica, I Italica and XI Claudia*. The construction works of these legions are documented in Saudi Arabia.<sup>17</sup>

Concerning to Sulkhan Mamuladze,<sup>18</sup> Petra inscription should be more closer with the Latin inscription of the 2<sup>nd</sup> century AD found at Vagharashpat (later Echmiadzin), where the *vexillationes* of legions of *XII Fulminata* and *XV Apollinaris* were jointly involved in the construction of the Armenian capital.<sup>19</sup> The fragments of bricks with inscriptions of *LEG(io) XV* from the fort of Pytius also confirm that the soldiers of this legion took part in the construction of the fort in northern part of eastern Black Sea, Colchis at the end of the 2<sup>nd</sup> century AD or early 3<sup>rd</sup> century AD.<sup>20</sup>

<sup>9</sup>Speidel 2009, 619–620

<sup>10</sup>According to M.A. Speidel (2009, 612 note 111) it is better to understand the first letter inscripted on the bronze candelabrum unearthed at the central part of the fort in 1997 as the abbreviation for *centurio* and to read *c(enturionis) coh(ortis) Aur(eliae) c.R.*

<sup>11</sup>According to M.A. Speidel (2009, 617) and some other authors (ხალვაში, ასლანიშვილი 2014, 336) this unit stamped on tile discovered at southern part of the fort in 2007 corresponds to *Cohors milliaria equitata civium Romanorum* also known from an inscription of AD 177 as part of a detachment which included soldiers from both Cappadocian legions and which was sent to Armenian Kainepolis after AD 166.

<sup>12</sup>It is well known that this legion performed similar works in Palestine (Штраерман 1946b, 207). The repair unit officer - *CTAT [oves]* engraved on the amphora handle found at the 2<sup>nd</sup> century AD level again at the central part of the fort of Apsarus (Khalvashi *et al.* 2018, 555) even more reinforcing this assumption.

<sup>13</sup>Spitzlberger 1968, taf. 3

<sup>14</sup>Brandl 1999, 306

<sup>15</sup>Леквинадзе 1969, 77–78; Mitford 1974, 164 Note 24

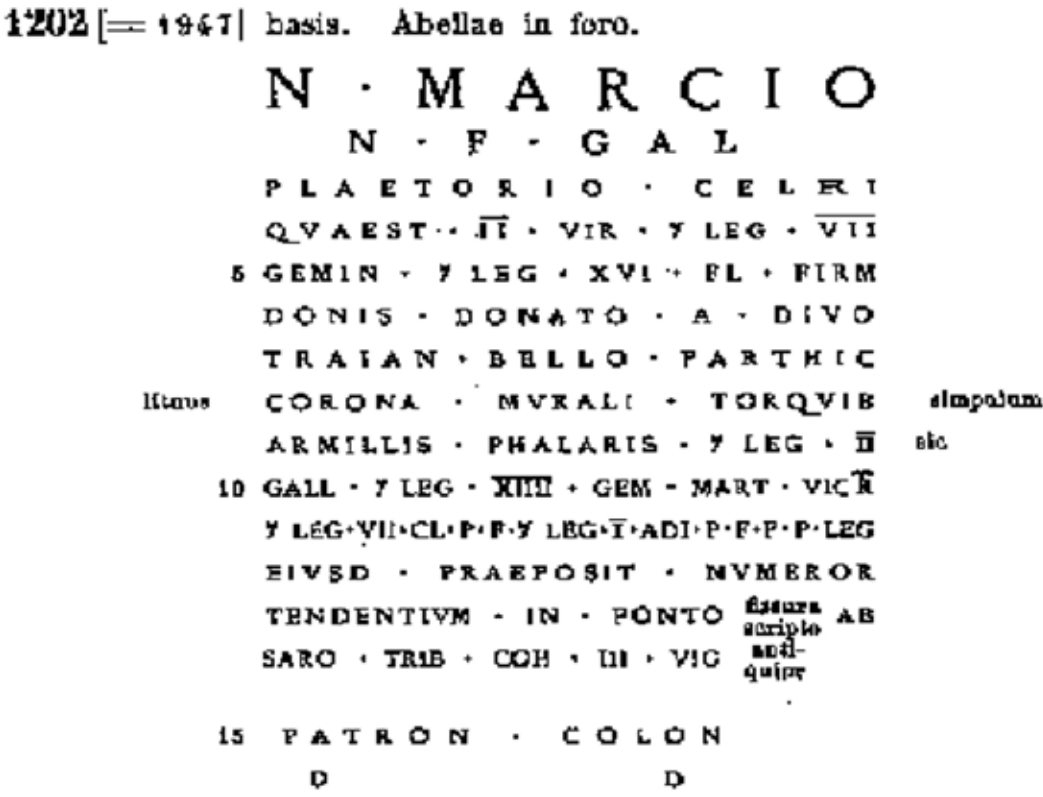
<sup>16</sup>Speidel 1986, 659–660; Campbell 1986, 126; Braund 1994, 181; თოდუა 2003, 2003, 6

<sup>17</sup>შპაიდელი 1985, 136

<sup>18</sup>მამულაძე, 2019, 16–17

<sup>19</sup>Тревер 1953, 251–260

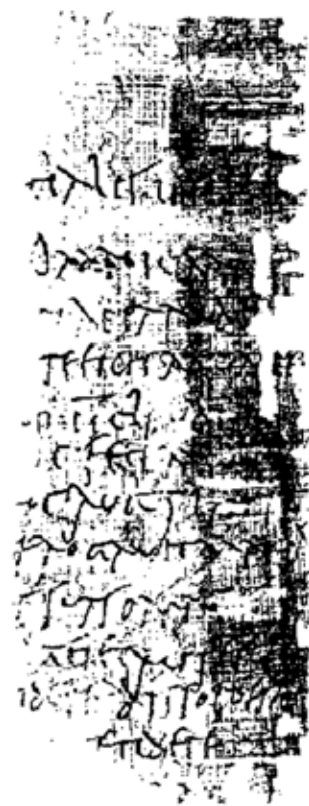
<sup>20</sup>Кигурадзе *et al.* 1987, 90



N (umerio) Marcio/N (umeri) f(ilio) Gal(eria) /Plaetorio Celeri/quaest (ori) Ilvir(o) |  
(centurioni) leg (ionis) VII/Gemin(ae) | (centurioni) leg(ionis) XVI Fl(aviae)  
Firm(ae)/donis donato a divo/Traian(o) bello Parthic(o)/corona murali  
torquib(us)/armillis phalaris (centurioni) leg(ionis) II/Gall(icae) (centurioni) leg(ionis)  
XIII Gem(inae) Mart(iae) Vectr(icis)/(centurioni) leg(ionis) VII Cl(audiae) P(iae) F(idelis)  
(centurioni) leg(ionis) I Adi(utricis) P(iae) F(idelis) p(rimo) p(ilo) leg(ionis)/eiusd(em)  
praeposit(o) numeror(um)/tendentium in ponto Ab/saro trib(un)o coh(ortis) III  
vig(ilum)/patron(o) colon(iae)/d(ecreto) d(ecurionum) (CIL. X. 1202; ILS. 2660

**2. Inscription from Abellae, Italy**

Fig. 2 - Inscription from Abellae, Italy (Marine Giorgadze, Batumi State University)



3. A fragment of papyrus found in Fayum, Egypt

Fig. 3 - A fragment of papyrus in Fayum, Egypt (Marine Giorgadze, Batumi State University)

### Garrisons stationed in southern adjacent of Lazica

A much larger Roman garrisons were located to the west of Apsarus: λογχοφόροι (spear-bearings) and *ala Rizena* from Rhizus/Aladaleariza (modern Rize), *Cohors Apuleia civium Romanorum* at Ysiporto (modern Arakli), *Cohors I Lepidiana* at Caene Parembolē (Canayer, close to Trabzon) and *Praefectus legionis I Ponticae* at Trapezunta. All garrisons stood there since 2<sup>nd</sup> century AD to the turn of the 5<sup>th</sup> century AD. Unfortunately, these points are not archaeologically studied out yet.

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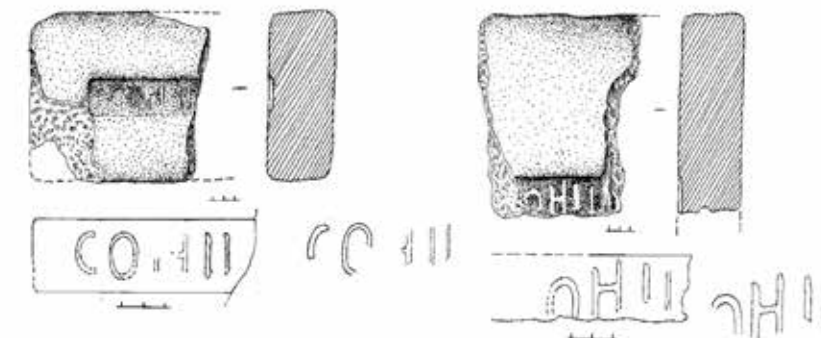
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### Summary

There is almost all evidence for present day on the garrisons stationed on the edge of *Imperium Romanum*, i.e. Colchis/Lazica, modern western Georgia. Most of them are connected with Apsarus and Petra, which played important role in the defense of the southern part of Caucasian frontier.



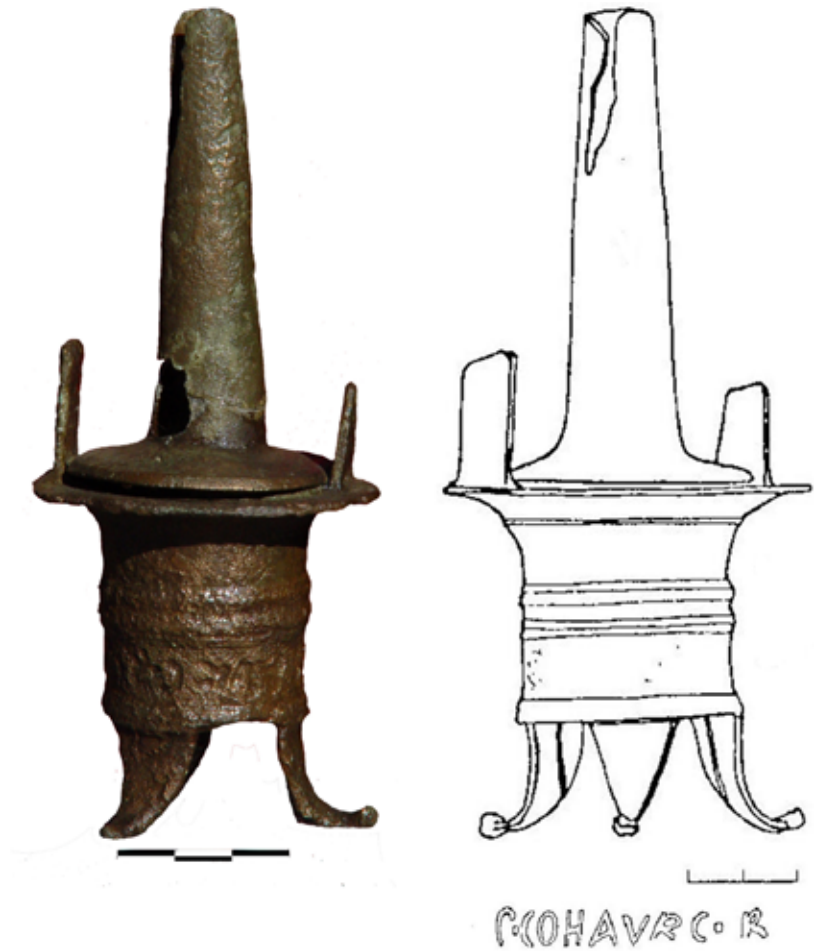
4 Fragments of stamped bricks with COH II and [C]OH II

Fig. 4 - Fragment of stamped bricks with COH II and [C]OH II (Anzor Javelidze, Batumi Archaeological Museum)



5. Fragments of stamped bricks with SAG I

Fig. 5 - Fragments of stamped bricks with SAG I (Anzor Javelidze, Batumi Archaeological Museum)



6. Bronze lamp with C·COH(ors) AVR(elius) C(ivium)·R(omanorum)

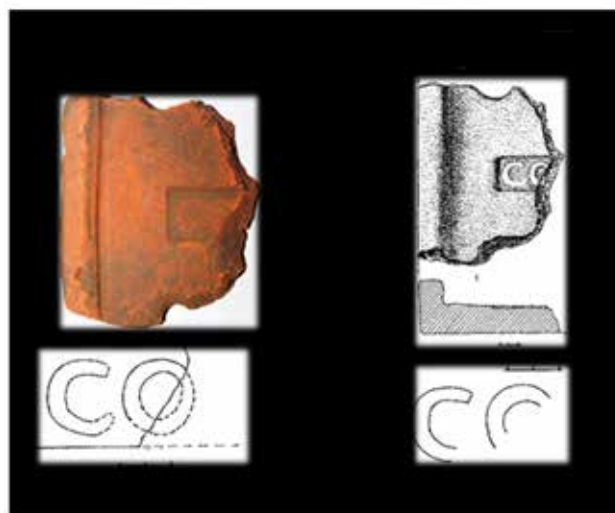
Fig. 6 - Bronze lamp with C·COH(ors) AVR(elius) C(ivium)·R(omanorum)  
(Anzor Javelidze, Batumi Archaeological Museum)





7. Tile with Coh(ortis)∞(milliariae)

Fig. 7 - Tile with Coh(ortis)∞(milliariae) (Anzor Javelidze, Batumi Archaeological Museum)



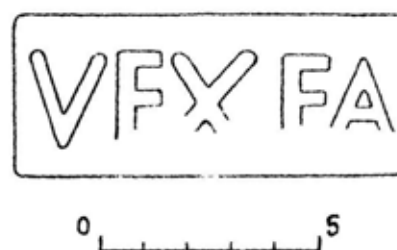
9. Stamped tiles with CO

Fig. 9 - Stamped tiles with CO (Anzor Javelidze, Batumi Archaeological Museum)



8. Tile and pipe with X

Fig. 8 - Tile and pipe with X (Giorgi Dumbadze, Gonio-Apsarus Museum and Sanctuary)



10. Inscription from Petra, Tsikhisdziri

Fig. 10 - Inscription from Petra, Tsikhisdziri (Nino Inaishvili, Niko Berdzenishvili Research Institute)

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# **Garrisons of Syria and Roman military strategy during the late second-early third centuries CE Parthian campaigns: the case of Dura-Europos**

## **ABSTRACT**

Dura became the Roman site on the Eastern frontier after the 2<sup>nd</sup> century Parthian wars of L. Verus. The garrison of Dura from the Severan age consisted of the vexillations of the legions that were regularly settled in the province of Syria Coelae. The main detachments in the city were cohorts XX Palmynerorum and the vexillations of the legions connected with the Parthian campaigns of Severan Age. The Antonine and Severan wars put the Middle Euphrates zone in the sphere of direct Roman control and besides Dura we see Roman military presence all over the area in the early 3<sup>rd</sup> century CE. Cities such as Dura-Europos and minor settlements were important points for the deployment of Roman military units. The debate over the possibilities of the functioning of the offices of praepositus and dux ripae that could be in military and administrative command of this area still remains very controversial and the need in some local district and military regulation may appear during the 230-s CE and as it is shown isn't connected with the Parthian wars.

**KEY WORDS: ROMAN NEAR EAST, SYRIA, PARTHIANS, SYRIA, DURA-EUROPOS, EUPHRATES FRONTIER.**

One of the main centers of Roman military presence in the Middle East was the city of Dura-Europos. Founded by the Seleucids on the right bank of the Euphrates River, from 165 to 256 CE it was under Roman control. At the same time Roman military units were stationed both in the city and its outskirts, along the middle course of the Euphrates, and Dura as many

believe becomes the key point of the roman military system in the area. An important role in the reconstruction of the history of the Roman garrison in the city is played by the corpus of papyri and parchments found during the archaeological excavations of F. Cumont and M. Rostovtzeff that were conducted during the interwar period<sup>1</sup>. Equally important is the information

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<sup>1</sup>Welles *et al.* 1959; James 2019, 3–10.



when the papyri mention the sites on Euphrates and Khabur, where Roman forces were settled<sup>2</sup>.

The last few decades were the period when the discussion about the nature of Roman frontier policy in the East has intensified<sup>3</sup>. What role did cities such as Dura-Europos play in events of Roman wars in the East, and what was their impact on the change the forms of Roman foreign policy against Parthia?

Over one and a half hundred parchments and papyri were found by Rostovtseff's expedition. The Greek and Latin-speaking documents of the corpora make up the vast majority of the found texts. The main array of texts related to the Roman army is the documentation of the Cohors Vicesima Palmyrenorum<sup>4</sup>. Mainly all parchments and papyri were found in the northern part of the city between the main gate and Tower №3<sup>5</sup>. The beginning of tradition of using papyrus as written material in Dura-Europos most likely has to be associated with Roman military presence<sup>6</sup>. As for the origin of the texts, we have an array of documents that were created both inside and outside of the city<sup>7</sup>. The military archive was probably located in a small room in the Azzanatkona temple, although one of the parchments found there is a non-military document. A number of documents were found in places that most likely did not relate to their main storage place<sup>8</sup>.

The Romans temporarily occupied the city in 115-117 CE, the second time it was occupied in 164 or 165 CE. Unfortunately, we do not know much about the first few decades of Rome's rule. The traditopnal approach, nowadays questioned by S. James<sup>9</sup>, suggested that the garrison was small and in the beginning at least part

of it consisted of archers from Palmyra<sup>10</sup>. When Septimius Severus divided Syria into two parts in 194 CE, Dura was included Syria Coelae, not in Syria Phoenicia as it happened with Palmyra. We can make such a conclusion analyzing the names of the governors of the provinces, which are found in the papyri and epigraphic sources and the names of the vexillationes that formed the basis of the city garrison in Roman times.

With the arrival of the Roman army in the city, it influences the city urban life. The Judicial power was performed by a military tribune<sup>11</sup>. By 180 CE there is evidence, that some of Hellenistic institutions of the city that lost their role with the arrival of the Parthians were restored by the Romans. Priests Zeus, Apollo, the ancestors and even Seleucus Nicator are called the eponyms in some surviving documents from this period<sup>12</sup>. The Roman army obviously had some influence on the ethnic situation in the city as well, and the increase in the number of native speakers of Aramaic and Latin names is clearly recorded in the papyri material<sup>13</sup>.

The most remarkable Roman officials of this time were Marius Maximus, who was the Legate of Coele-Syria and Minucius Martialis, who was the procurator (Marius Maximus tribb (unis) et praeff (ectis) et praepositis nn (umerorum) salutem / quid scripserim Minicio Martiali proc (uratori) Augg (ustorum) nn (ostrorum))<sup>14</sup>. Most sources mention precisely the legions that settled in Syria Coele, namely Legio IV Scythica<sup>15</sup> and Legio XVI Flavia Firma<sup>16</sup>. One exception is Legio III Cyrenaica whose main base was in Arabia. The soldiers of this legion participated in the reconstruction of the amphitheater at Dura in 216 CE.

(vexill (ationes) legion [u] m III Sc [yt (hicae) et] III [Cy] r (enaicae) [An] tonin [ian] arum.)<sup>17</sup> and could stay in the city for some time afterwards, as it is indirectly evidenced by one of the inscriptions (Leg (io) III Cyr (enaica) Antonin [iana] )<sup>18</sup>.

There are mentions of Cohors III Augusta Thracum<sup>19</sup> and Cohors XII Palaestinorum<sup>20</sup>. The Epigraphic material allows us to verify a variety of reports of the papyri. Thus, the Palmyra cohort is mentioned in a number of inscriptions<sup>21</sup>. By 192 or 193 CE can be dated the dedication of Aelius Titian, the decurio of the Second Ulpian equestrian cohort (Ael (ius) Tittia / nus dec (urio) coh (ortis) / II Ulp (iae) eq (uitatae) Com (modianae) )<sup>22</sup>. There are also references to other officers of this detachment (Tre [b] / ium Maximum trib (unum) coh (ortis) II Ulp (iae) eq (uitatae) )<sup>23</sup>. We also see the mention of Gaius Julius Rufinus, who was a centurion of the IV Scythian Legion ((centurioni) leg (ionis) III Scyt (hicae) )<sup>24</sup>. Some disciplinary problems that arose in the third century Roman army could be recorded in the papyri<sup>25</sup>. Perhaps, they had an effect on both the garrison and the civilian population.

The mere presence of the most mentioned legions and cohorts in the region of the Euphrates should probably be linked to the involvement of those military units in the Parthian Campaign of Caracalla but some of them, apparently stayed from the time of Septimius Severus. It is quite possible, that during this period of active policy of Rome in the East in Dura there were apparently also parts of Legio III Gallica ((vex (illatio) legg (ionum) III Cyr (enaicae) and III Scyth (icae) ) ) Anton (iniana) / [et III Gall (icae) ]]. AE 1934, 276 and especially Leg (io) III Gall (icae) )<sup>26</sup>.

The affiliation of the Dura and the Euphrates site to Syria Coele was quite justified, since the garrisons located here primarily were supposed to protect the existing roads to Northern Syria and Antioch<sup>27</sup>. However, the geographical location of the city when it came to a full-scale confrontation with the Parthians or latter Sasanians made its defense and overall coordination of military forces in the region extremely specific, since the Dura was distant from both the provincial governor's residence and the camps where the main Roman forces in Syria were located. The idea that Roman forces on Euphrates needed some local military command, let to the attempts to prove that there had to be some institute or office that could be connected with such a command<sup>28</sup>.

Frank Gilliam suggested, analyzing some of the Dura epigraphical and archaeological data, that the problem of coordination of Roman forces, as he strongly believed, led to the appearance of the post of military commander in the region – the so-called dux ripae<sup>29</sup>. The problems raised by the appearance of the term dux in the documents include the reasons for the creation of his office, the date of its creation and its functions. Despite the dipinto from the building that soon was identified as "Palace of the Dux"<sup>30</sup>, the dux appears in an entry on the verso of P. Dura 3<sup>31</sup>. This document is a list of equites of the cohorts XX Palmyrenorum. As P. Edwell noted, the main problem with this evidence is that we are not sure and currently there is no evidence for that the mentioned in the document duces and the dux ripae from the dipinto refer to the same office. Besides that, F. Gilliam dated the document by the period of 248 CE.

<sup>2</sup>Gawlikowski 1987, 77.

<sup>3</sup>Isaac 1992; Millar 1993; Wheeler 1993a; Wheeler 1993b; Sartre 2005, Sommer, 2005; Edwell 2007; Edwell 2013.

<sup>4</sup>Welles *et al.* 1959, 6–8.

<sup>5</sup>Welles *et al.* 1959, 3.

<sup>6</sup>Austin 2010, 31.

<sup>7</sup>Gregoratti 2016, 17–18.

<sup>8</sup>Pollard 2000, 64.

<sup>9</sup>James 2019, 249; 259–260.

<sup>10</sup>Kaizer 2015, 92–95.

<sup>11</sup>P. Dura 125–127.

<sup>12</sup>P. Dura 25; P. Dura 37.

<sup>13</sup>Pollard 2000, 111–122.

<sup>14</sup>AE 1933, 107.

<sup>15</sup>P. Dura 32.

<sup>16</sup>P. Dura 43.

<sup>17</sup>AE 1937, 239.

<sup>18</sup>AE 1934, 277.

<sup>19</sup>P. Dura 26.

<sup>20</sup>P. Dura 30.

<sup>21</sup>AE 1923, 23; AE 1940, 240.

<sup>22</sup>AE 1928, 86.

<sup>23</sup>AE 1934, 280.

<sup>24</sup>AE 1929, 181.

<sup>25</sup>P. Dura 46; 55; 63.

<sup>26</sup>AE 1934, 281.

<sup>27</sup>Isaac 1992, 93–149.

<sup>28</sup>Gilliam 1941, 170.

<sup>29</sup>Gilliam 1941.

<sup>30</sup>Rostovtzeff *et al.* 1952; Baird 2014, 14.

<sup>31</sup>Gilliam 1952, 229–230.

P. Dura 3 mentions two duces, and the third one is found in the inscription from the "Dolicheneum" which was dated by 250/251 CE. The most complicated is the text from the "Palace of the Dux" the building, the function of which is actually quite problematic<sup>32</sup>. Despite the fact, that F. Gilliam noted that the evidence wasn't to reliable ("The graffiti found in the building have not been read completely. Some of them seem to be accounts. I cannot discuss this and the other dipinti here"<sup>33</sup>), he proposed his reconstruction of the Dux institute. He concluded, that the office of the Dux seemed to be a regular post, that was held by a person of equestrian rank and the reconstruction mainly was based on the evidence from latter period, mainly after the reign of Diocletian.

One the most interesting points about the dux is his title. Gilliam believed that he found a prototype of the dux limitis or dux ripensis of the fourth century CE<sup>34</sup> and he was a subordinate of the legate of Syria Coele performing civil and military actions<sup>35</sup> having under his command a number of detachments stationed up and down the Euphrates<sup>36</sup>.

We know at least four persons who held this position – Domitius Pompeianus who received it in the days of Elagabalus or Alexander Severus, Licinius Pacatianus (August 245), Ulpius Tertius (248), and Julius Julianus (251-253) CE<sup>37</sup>. From the 1940-1950-s the main problem that still remains unsolved is the date of appearance of this position. M. Rostovtzeff and B. Wells, on the basis of a small dipinti from the residence of the commander, assumed the possibility of dating it to time of Elagabalus or Severus Alexander<sup>38</sup>. They thought, that the dipinti theoretically was written between 218 and 222 CE on the same layer where the inscription mentioning Elagabalus is found, that fact can allow

us to suggest, that the office of Dux could have been created soon after the Parthian campaigns of Caracalla and Macrinus.

However, another possible interpretation is that the attributes the existing of this institute should be placed to the period of Roman wars with the Sasanians. The papyri indirectly testify the second version, since dux is first mentioned in the quite late text of P. Dura 97<sup>39</sup>. Therefore, it is quite difficult to make any clear conclusions about the time when the position appeared and what functions did it have. Prior to this, it's hard to say was the garrison directly subordinate to the provincial administration or there was there some local military office<sup>40</sup>.

Among the inscriptions and the papyri from Dura, dux is represented also in P. Euphr. 3 and 4. These documents do not tell anything about the powers and functions of the dux. T. Gnoli proposed that the territory north to Dura was subjected to the civil administration of a procurator and another military commander was in charge of the units located in the region<sup>41</sup>. The difference in the titles in the region subjected to the command of the two officials, ripa and praetentura, as he thinks, can be attributed to the geographical configuration of the land<sup>42</sup>. He also suggests that that the border during the 230-250-s became "more and more fortified"<sup>43</sup>. That raises a question if we don't have enough evidence about the dux and is it a product of the frontier reorganization after the appearance of the Sasanian threat and was there any local command during the Severan wars with Parthians?

It is generally quite hard to reconstruct in detail the Roman military structure located at the confluence of the Euphrates in this period. Despite the hypothetical

character of the office of dux ripae, we have at least three papyri, two among which come from the Euphrates area that mention the praepositus praetenturae<sup>44</sup>. He is clearly found in P. Dura 66 which is dated by 216 CE. Aurelius Rufinus in two letters from P. Dura 64 is named as the praepositus praetenturae and he addresses the tribune of the Palmyrene cohort in 221 CE. What is important, the first letter includes instructions from the governor of Syria Antonius Seleucus. Gnoli proposed that from the time of Septimius Severus or Caracalla some territory between Dura and Khabur was given in charge to the procurator/praepositus and the land itself was organized in some military or administrative district<sup>45</sup>. However, an important point that must be mentioned – we do not know what town as the center of this district and the fact that the commander of the garrison of Dura received letters from the praepositus rises very serious questions about the status of the city garrison and the city itself in organization of the praetenture. Even more, Aurelius Rufinus refers to the cohort tribune located in Dura in order to perform the duties he was given by the governor and questions were mainly administrative, which questions the character of his functions.

P. Dura 64, that mentions the garrison located in Apadana and the praepositus, can indicate that he controlled the garrisons over the Euphrates. But as F. Gilliam and T. Gnoli noted, the existing data does not make it clear what were the relations between the praepositus, tribunus and the governor of the province<sup>46</sup>. We are not sure was the praepositus a military or the administrative position but until the Diocletian Roman provincial officials often had to perform both roles, so in my opinion it is quite possible that the office of praepositus was also military and he could be in charge of the Roman forces upon the Middle Euphrates. But what were the early military units in Dura and what function were they supposed to perform? Was there

even need to create a local military district with a special commander?

The first regular military Roman unit that we have information about is Cohors II Ulpia Equitata, which hypothetically appeared in the city at the time of Commodus<sup>47</sup>. It took part in the expedition of Lucius Verus against Parthia, but it had been deployed in Syria a little earlier – in 156 or 157 CE. In recent years, by the reign of Septimius Severus and Caracalla the size of the Roman military camp was increased by reinforcing the garrison stationed in the city. The camp itself was located in the northwestern part of the city and in the first half of its existence apparently occupied a rather modest area<sup>48</sup>. Between 209 and 216 CE it was increased<sup>49</sup> and by 208 CE we find the first mention of Cohors XX Palmyrenorum as the part of the garrison. The vexillations of two Syrian legions – the Fourth and Sixteenth built Mithreum in 209-211 CE. The amphitheater was constructed by the vexillations of the Fourth Legio Scythica and the Third Legion Cyrenaica. The soldiers of Legio XVI Flavia Firma at this time were most likely involved in military campaigns of Caracalla. There is also an assumption that the soldiers of Legio X Frentensis were also in the city at this time. After 217 CE the legionnaires were stationed in the city regularly, but the size of the garrison might have decreased<sup>50</sup>.

Cohors XX Palmyrenorum is the only auxiliary Roman military that is actually known to us by the papyrological and epigraphic material found in Dura-Europos. The cohort is first mentioned in P. Dura 56. The creation of the cohort is usually associated with the first Parthian campaign of Septimius Severus, but other options of its occurrence are possible, including in the Antonine Age on the eve of the Lucius Verus campaign, or in the 170s CE, when a detachment of archers from Palmyra was stationed at Dura. In addition to the Dura, we clearly know that some of the soldiers during

<sup>32</sup>Gilliam 1941, 168; Rostovtzeff *et al.* 1952; James 2019, 157–177.

<sup>33</sup>Gilliam 1941, 158.

<sup>34</sup>Gilliam 1941, 160.

<sup>35</sup>Gilliam 1941, 161.

<sup>36</sup>Gilliam 1941, 165.

<sup>37</sup>Welles *et al.* 1959, 24–26.

<sup>38</sup>Welles *et al.* 1959, 26–28.

<sup>39</sup>Gilliam 1941, 172.

<sup>40</sup>Isaac 1992, 110–128.

<sup>41</sup>Gnoli 2007, 54.

<sup>42</sup>Gnoli 2007, 54.

<sup>43</sup>Gnoli 2007, 54.

<sup>44</sup>Gnoli 2007, 51.

<sup>45</sup>Gnoli 2007, 51–53.

<sup>46</sup>Gilliam 1941, 165–172; Gnoli 2007, 51–52.

<sup>47</sup>About modern approaches of the chronology of Roman garrison in Dura see: James 2019, 248–249.

<sup>48</sup>Pollard 2000, 35–69.

<sup>49</sup>This point of view, which is traditional from the times of Rostovtzeff and even nowadays mostly accepted, is criticized by Simon James: James 2019, 248–249.

<sup>50</sup>Kaizer 2015, 93–100.



the 218-222 CE were located along the middle area of the Euphrates<sup>51</sup>.

Syria Coele bordered on the Parthian and latter Sasanian Empire only below the Chabur, but we have very little information about roman garrisons in this area. Soldiers from the detachments in Dura were stationed at these locations along the Euphrates and Khabur rivers and demonstrate that Dura-Europos, perhaps, could become a centre of some military organization on the middle Euphrates that, as P. Edwell supposed, was a result of the expansion of Roman power in Syria and Mesopotamia under the Severans<sup>52</sup>.

One of the earliest datable military papyri from Dura, P. Dura 60B of 208 CE, provides valuable information regarding fortifications along the Euphrates in the early third century. The papyrus was addressed by Marius Maximus, the legatus of Syria and imperial biographer, to tribuni, praefecti and praepositi of the numeri stationed at Gazica, Appadana, Dura, Eddana and Biblada<sup>53</sup>. Appadana is mentioned a number of times in the remains of four rosters of Cohors XX Palmyrenorum. The rosters show that soldiers from the cohort were stationed there in period of about 210-240-s CE. The earliest mention is the letter P. Dura 63B from the 211 CE. Several papyri mention the roman garrison in Appadana<sup>54</sup>. The roster of 219 CE shows that 63 soldiers of Cohors XX Palmyrenorum were stationed at Appadana<sup>55</sup>, and two years later we see 49 soldiers who were stationed there<sup>56</sup>.

Nevertheless, as M. Gawlikowski and P. Edwell noted, such places as Eddana and Biblada don't appear in any other Dura papyri besides the text of P. Dura 60B, that indicates us the name of several places of the local garrisons in 208 CE<sup>57</sup>. Troops from Dura were located at Kifrin, further down the Euphrates than Anatha, Anatha itself is not mentioned among the numerous fortifications referred to in the papyri, perhaps it was directly garrisoned by troops from Palmyra<sup>58</sup>. Antonio Invernizzi thought that the Romans appeared in Kifrin by the time of Septimius Severus<sup>59</sup>. M. Gawlikowski suggested that the Palmyrenes controlled the islands of Anatha, Telbis and Bijan even before Trajan's Parthian war<sup>60</sup>. Becchufayn of the Dura-Europos papyri had soldiers of Cohors XX Palmyrenorum between 219 and 233<sup>61</sup>.

Gamla, Kifrin, Telbis and Bijan Island were also controlled by the Roman army, but were their garrisons connected with Dura? P. Dura 100 and P. Dura 101 mention Magdala, where 11 soldiers were stationed. Six soldiers in served at Barbalissos<sup>62</sup>. 7 soldiers were stationed at Castellum Arabum in 219 and two in 222 CE<sup>63</sup>. In 222 CE there was one soldier in Alexandria and six soldiers in Barbalissos<sup>64</sup>. Among other villages rosters mention Chafer Avira and two soldiers in Bartha<sup>65</sup> and one soldier in Capera<sup>66</sup>. P. Dura 82 of 233 CE mentions two soldiers in Athna.

Cohors III Augusta Thracum and Cohors XII Pal-  
estinatorum were stationed in the lower Chabur area and we actually don't know if they had connections to the garrison of Dura. This once again raises the problem

was Dura the center of some military zone in the region in this period or did the scholars just try to create a military district reading the text mentioning the dux and other authorities? It is quite uncertain was the numbers of soldiers representing the total garrisons<sup>67</sup>.

When we return to Cohors XX Palmyrenorum, one can easily see that the papyri only indirectly give us some information about the military campaigns that the cohort was involved in. Among them we see the Parthian campaign of Caracalla in 216 CE<sup>68</sup>. The Cohors probably was involved in some military action in times Elagabalus<sup>69</sup>, in particular cohort was in the escort of the Emperor in the year 219<sup>70</sup>. Among the more recent campaigns against the Sasanians, the unit participated in the battles of the 233 CE<sup>71</sup>. The papyri make it possible to identify the cohort precisely as cohors miliaria.

The mentioned roster papyri<sup>72</sup> are our best source to reconstruct the quantitative composition of the cohort during the period of 210 – 220 CE. In comparison to the 230-s CE<sup>73</sup> the number of soldiers decreased from 914 to 781. The first documents probably show us the number of soldiers of the cohort following the Caracalla Parthian wars in 214-216 CE and perhaps after the military actions of Macrinus in 217 CE. The cohort was in command of the tribune. The documents give us a detailed list of the nomenclature of positions that existed in the cohort at this time.

The document P. Dura 66 probably recorded the preparation of the garrison for the active participation in the Parthian campaign of Caracalla, and P. Dura 83 - in the Persian expedition of Alexander Severus. Sources reflect the military loss of the cohort in the Macrinus 217 CE Parthian campaign<sup>74</sup>. In addition to the information on the composition and nomenclature of the cohort, official documents, such as daily reports, tribune orders,

official correspondence with the provincial administration, are all important for the reconstruction of the location of Roman garrison and the reconstruction of the specifics of logistics of Roman military campaigns in the East. But were these forces enough to control the Euphrates area and what was their function?

F. Gilliam made a very important observation, which he, however, didn't attempt to explain. He said that Dura garrison was not strong enough to prevent a large Persian force from passing by the city<sup>75</sup>. Late Antonine and Severan Age campaigns against Parthia were full-scale military expeditions with hostilities in Mesopotamia. They put the Middle Euphrates zone in the sphere of Roman control. Cities such as Dura-Europos were important points for the deployment of Roman military units. But the Romans as I think created the frontier that included not the typical system of forts and strongholds, but one of garrisons, that performed not only the defensive function but at the same time were an instrument of Roman civic, economical and administrative control<sup>76</sup>. The debate over the possibilities of the functioning of the offices of praepositus and dux, as I tried to demonstrate, still remains very controversial and the need for some local district and regulation may appear only during the 230-s CE. The garrisons of the Dura and Middle Euphrates area participated in the Parthian campaigns but still, all the attempts to combine them in a united organized military structure seem to fail because the Romans didn't see the need to improve the Euphrates frontier until the appearance of the Sasanian threat, and after Gordian the Third the Syrian frontier had to be transformed but unfortunately, it didn't help Dura, that was destroyed in 256 CE. Only with the appearance of Strata Diocletiana Roman frontier in Syria steps to a new period of its history.

<sup>51</sup>P. Dura 64, P. Dura 100–101.

<sup>52</sup>Edwell 2008, 65.

<sup>53</sup>Edwell 2008, 68–69.

<sup>54</sup>P. Edwell notes the mentions in the P.Dura 100 (CE 219), P.Dura 101 (CE 222), P. Dura 64A (CE 221), P.Dura 102 (CE 222–224) and P.Dura 116 (CE 236). See: Edwell 2008, 69.

<sup>55</sup>P.Dura 100.

<sup>56</sup>P.Dura 101.

<sup>57</sup>Edwell 2008, 70.

<sup>58</sup>Edwell 2008, 73.

<sup>59</sup>Invernizzi 1986, 357–381.

<sup>60</sup>Gawlikowski 1987, 77–80.

<sup>61</sup>P. Dura 46; Edwell 2008, 73–74.

<sup>62</sup>P. Dura 101.

<sup>63</sup>P. Dura 100–101.

<sup>64</sup>P. Dura 101.

<sup>65</sup>P. Dura 100.

<sup>66</sup>P. Dura 101.

<sup>67</sup>Edwell 2008, 85.

<sup>68</sup>P. Dura 66.

<sup>69</sup>P. Dura 55.

<sup>70</sup>P. Dura 100.

<sup>71</sup>P. Dura 83.

<sup>72</sup>P. Dura 100–101.

<sup>73</sup>P. Dura 82; 89.

<sup>74</sup>P. Dura 100.

<sup>75</sup>Gilliam 1941, 170.

<sup>76</sup>The discussion over the function of Roman army in the East was raised by B. Isaac: Isaac 1992. See also the critics of E. Wheeler over Isaac's views: Wheeler 1993a; 1993b.

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**Zusammenfassung**

Nach den parthischen Kriegen von L. Verus im 2. Jahrhundert bekommt Dura einer römischen Stadt an der Ostgrenze. Die Garnison von Dura aus der Zeit der Severer bestand aus den Plagen der Legionen, die regelmäßig in der Provinz Syrien Coelae besiedelt wurden. Die wichtigsten Abteilungen in der Stadt waren die Kohorte XX Palmynerorum. Die Kriege von Antonin und Severan haben die Zone des Mittleren Euphrats in die Sphäre der direkten römischen Kontrolle gebracht. Städte wie Dura-Europos und kleinere Siedlungen waren wichtige Punkte für den römischer Militäreinheiten. Die Debatte über die Möglichkeiten des Funktionierens der Büros von Praepositus und Dux Ripae, die in militärischer und administrativer Führung dieses Gebietes sein könnten, ist nach wie vor sehr umstritten, und diese Positionen könnte während der 230er Jahre auftreten und sind, wie sich zeigt, nicht mit den parthischen Kriegen verbunden.





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# **Has Septimius Severus ever been in North Africa fighting against the Garamantes? A reconsideration of the campaigns of the emperor**

## **ABSTRACT**

According to scholarship Septimius Severus has visited his hometown Leptis Magna in the years AD 202/03 and on this occasion, as some scholars assess, launched a campaign against the Garamantes. It was in particular the description given by Anthony Birley in the year 1971, which in consequence influenced further studies and where many details about this trip to North Africa can be found. If we analyse the sources, however, a trip to North Africa as well as a campaign against the Garamantes have to be doubted. The story about a return of the emperor and his family to Leptis Magna, where Septimius Severus was born, and a military expedition against the Garamantes rather seem to be a construct in modern literature.

**KEY WORDS: SEPTIMIUS SEVERUS, GRAMANTES, LIMES TRIPOLITANUS, LEPTIS MAGNA, NORTH AFRICA**

**M**odern scholars commonly agree that Septimius Severus visited his hometown Leptis Magna in the years AD 202/03.<sup>1</sup> On this occasion, as some of them inform us, the emperor also launched a campaign against the Garamantes in the region of the Fezzan in the central part of modern Libya (*cf.* Fig. 1).

After the departure for the second Parthian expedition in summer of AD 197 and the Parthian War Septimius Severus evidently spent some time in Syria and afterwards Egypt (March/April 199), where he stayed until 200/01. From there he went back to Syria and then – at the beginning of the year 202 started to return through the Balcan to Rome.<sup>2</sup> Finally, according to Halfmann,

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<sup>1</sup>For an overview *cf.* Lafer 2019. In particular there must be mentioned the accounts given by Birley 1999 (2010), 146–154 and Halfmann 1986, 217–222.

<sup>2</sup>Halfmann 1986, 217–222. See also Herodian. 3,10,1 who reports that Septimius Severus and his family passed through Moesia and Pannonia on his return to Rome, where he spent the next years: „When he had settled affairs in the East, Severus returned to Rome, bringing with him his sons, who were then about eighteen years of age. On the journey he handled provincial problems as each situation demanded, and paid a visit to the troops in Moesia and Pannonia.“ *Cf.* also Boteva 2013, 96–98.



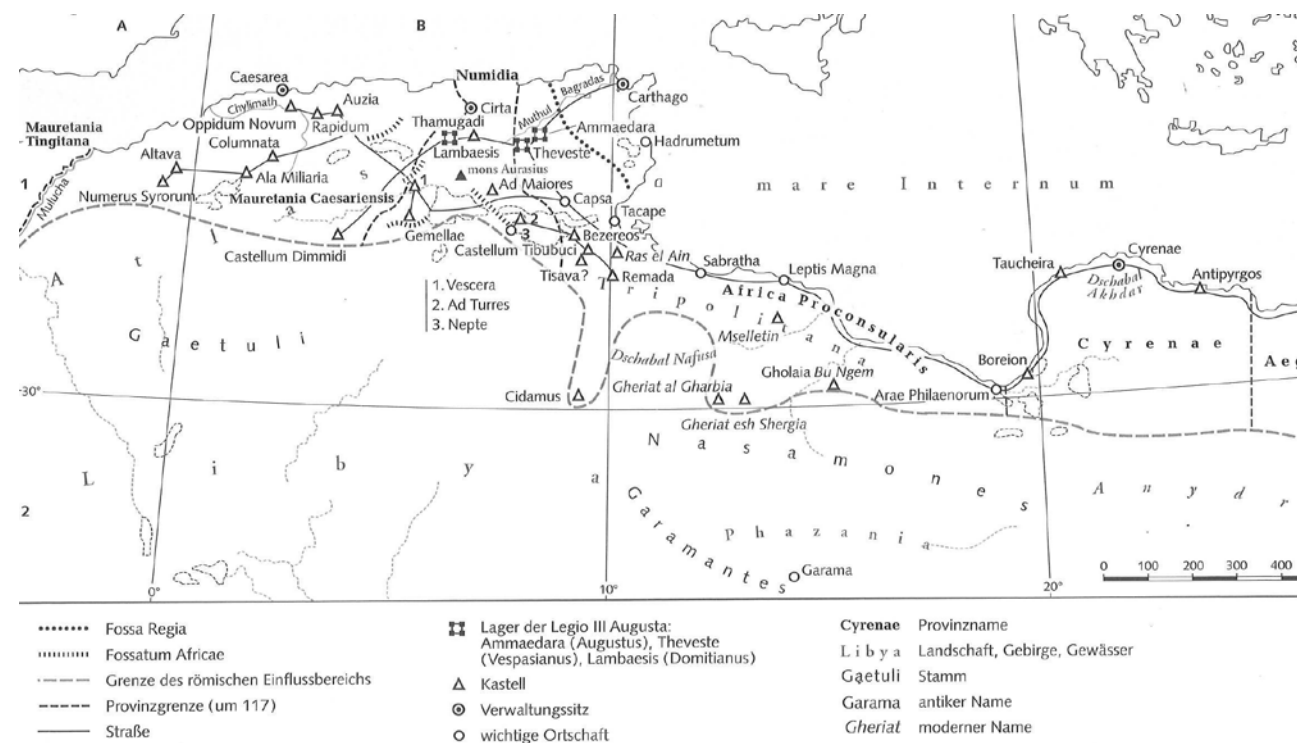


Fig. 1 - The limes in the southern part of Africa Proconsularis and Numidia

at the end of 202 or the beginning of 203 the emperor travelled to North Africa into his hometown, Leptis, from where, in his opinion, probably a small campaign against the Garamantes was let<sup>3</sup>. Halfmann, however, is not the only one who mentions a trip to North Africa respectively a campaign against the Garamantes. More details are given in the biography of Septimius Severus written by Anthony Birley, which was first published in the year 1971 and which evidently influenced many authors and their studies later on, apparently also the description given by Halfmann.

In the monography of Birley we can read<sup>4</sup> that in the year 202 the whole imperial family landed in Africa, most probably at Carthage; furthermore according to Birley, the imperial presence at Lambaesis is also recorded, with which the installation of the province of Numidia can be connected, as „it is reasonable that the decision was made during the imperial visit“<sup>5</sup>. Birley describes the journey with numerous details: Many

cities – among others Carthage, Utica as well as Leptis were granted the *ius Italicum*; as far as Leptis Magna itself is concerned, this town was embellished on a grand scale during his visit and also in the following years. Finally, as Birley tells us, the imperial family should also have spent the wintermonth there:

„In the winter or early spring Septimius launched a campaign. It is hard to believe that he himself went right down to the heartlands of the Garamantes...His restless energy may have impelled him to follow in the path of Balbus and Valerius Festus. At least it may be supposed that he went as far as Gheriat or Gholiaia, and then entrusted the new legate of the Third, Claudius Gallus, and Plautianus with the final stage. Elements of the legion must have been involved, and the Syrian auxiliaries, presumably some of the Guard, if the Prefect was there...“<sup>6</sup>

Anyway this description delivered by Birley has given a strong impulse in further consequence for similar stories told by scholars, who engaged themselves in the history of Roman North Africa or the biography of the emperor.<sup>7</sup> In the year 2006 a biography was published by Jörg Spielvogel in the series „Gestalten der Antike“, edited by Manfred Clauss<sup>8</sup>. Therin we can find a similar account about the journey of the emperor, indeed it is even a little bit extended to a real, beautiful story about the stay of the emperor in North Africa. Regarding a campaign Spielvogel at first tells us about the extension of the frontier in the southern part of Libya; afterwards he states, that these measurements were not exhaustive, as there were permanent riots of „seminomadic peoples“, that's why the emperor launched a campaign, in order to overrun these peoples with much violence. Nothing, however, is said about who these peoples were, nothing about the Garamantes.

Finally there must be mentioned the article on Wikipedia in English<sup>9</sup>, where a similar version of the story told by Birley can be found:

„In late 202 Severus launched a campaign in the province of Africa. The legate of Legio III Augusta Quintus Anicius Faustus had been fighting against the Garamantes along the Limes Tripolitanus for five years, capturing several settlements from the enemy such as Cydamus, Gholiaia, Garbia, and their capital Garama – over 600 km south of Leptis Magna. During this time the province of Numidia was also enlarged: the empire annexed the settlements of Vescera, Castellum Dimmidi, Gemellae, Thabudeos, Thubunae and Zabi. By 203 the entire southern frontier of Roman Africa had been dramatically expanded and re-fortified. Desert nomads

could no longer safely raid the region's interior and escape back into the Sahara“.

It becomes clear that Birley was the main source for the author of this „African part“ of the article, for which exclusively Birley is cited. In this article, however, the description for the campaign is given with more details, as the expedition should have lasted for five years launched by the legate of the legio III Augusta, Quintus Anicius Faustus.<sup>10</sup>

In almost all the publications as date for the visit of Septimius Severus in North Africa the years AD 202/03 are given, but also the year AD 201 in the pretty new publication of Francois Baratte<sup>11</sup> about the Romans in Tunisia and Libya published in the year 2012 can be found as in older studies e.g. by Mattingly because of the analysis of some coins the year AD 207<sup>12</sup>. These different dates for the visit of the emperor in North Africa already demonstrate the problem, with which we have to cope with.

It was Maria Squarciapino<sup>13</sup>, who was one of the first scholars to take a critical look at the sources for the visit of the emperor already in the year 1966. After analysing some of the literary, epigraphic, numismatic and archeological testimonies she came to the conclusion, that all suppositions are credible, but cannot be proofed by the inscriptions and coins, as different interpretations are possible. After discussing in particular two inscriptions in detail, which already Hirschfeld<sup>14</sup> in the year 1905 has interpreted as testimonies for a journey of the imperial family to North Africa, she said: Anyway, if we take a trip to Leptis because of them as secure, there remains the question about the dating of the visit of the emperor.<sup>15</sup>

<sup>3</sup>Halfmann 1986, 222: „... von hier aus (i.e. Leptis Magna) dürfte auch ein kleinerer Feldzug gegen die Garamanten unternommen worden sein, von dem Aurelius Victor ... zu berichten weiß“.

<sup>4</sup>Birley 1999 (2010), 146ff. In the short biography of Septimius Severus written by Birley two years earlier the Garamantes are not mentioned: Birley 1997, 183.

<sup>5</sup>Birley 1999 (2010), 147. The exact year of the installation of the province of Numidia is not sure; Bechert 1999, 85 mentions as years for this event already AD 198/99.

<sup>6</sup>Birley 1999 (2010), 153.

<sup>7</sup>Eg. Raven 1993, 133; Manton 1988, 71–75; Baratte 2012, 31–33, esp. 32; Spielvogel 2006, 140–150 (rev. Lambrecht 2006); in contrast to this Lepelly 2006, 98, who admittedly holds the opinion that the peak of the installation of *municipia* in Africa Proconsularis can be found in the reign of Septimius Severus, but doesn't mention any trip to North Africa.

<sup>8</sup>Spielvogel 2006, 140–150. Cf. also the review given by Lambrecht 2006.

<sup>9</sup>See [https://en.wikipedia.org/wiki/Septimius\\_Severus#Emperor](https://en.wikipedia.org/wiki/Septimius_Severus#Emperor) (last view: 06.09.2019). It is interesting that in the German-speaking article neither the trip to North Africa of the imperial family nor a campaign against the Garamantes are mentioned: [https://de.wikipedia.org/wiki/Septimius\\_Severus](https://de.wikipedia.org/wiki/Septimius_Severus) (last view: 06.09.2019).

<sup>10</sup>For the problem regarding Q. Anicius Faustus cf. below p.#

<sup>11</sup>Baratte 2012, 31–33.

<sup>12</sup>Cf. Halfmann 1986, 222; Squarciapino 1966, 20.

<sup>13</sup>Squarciapino 1966, 19–21.

<sup>14</sup>Hirschfeld 1905, 315–316.

<sup>15</sup>Squarciapino 1966, 21.

The story of the voyage therefore most probably already is based on the account of Hirschfeld who wanted to associate two inscriptions from Lambaesis dating in the year AD 203<sup>16</sup> and dedicated by the *familia rationis castrensis* to Septimius Severus with a visit of the emperor and his family. These inscriptions most probably have a military context, perhaps also a financial, but it's very questionable, if the imperial court and in consequence a visit of Septimius Severus can be interpreted.

In the year 2005 also Yann Le Bohec in his publication about the history of Roman North Africa doubted the presence of Septimius Severus in North Africa as well as a campaign against the Garamantes<sup>17</sup>. He clearly said that it's an error in some publications, that Septimius Severus because he was born in Africa, should have privileged the African Provinces. Furthermore in his opinion it's not even sure, if the emperor returned to Africa in the year 203. In his view the inhabitants of Leptis have built an arch in honour of the emperor because of appreciation, but not because they wanted to thank him for repulsing the enemies, as there are not known any fightings in this time in Africa.

Despite these critical arguments given by several authors, however, the opinion that the emperor visited North Africa predominates in almost all publications until nowadays, as I have tried to show, that's why it is necessary to take a look on the sources and reconsider their interpretations in scholarship.

## The Sources

There are several literary, epigraphic, numismatic as well as archaeological references, which have been interpreted by scholars in this context.

### 1. Literary sources

The most detailed account of the journeys of the emperor, which focusses on the political-military expeditions, is given by Herodian<sup>18</sup>. He tells us that Septimius Severus after the campaign against the Parthians visited the armies in Moesia and Pannonia and then went directly to Rome, where he spent some years in order to administrate the empire and train his sons in self-control.<sup>19</sup> He doesn't say anything about a trip to North Africa, but in his opinion the emperor evidently spent some time in Rome, where the *ludi saeculares* were celebrated in the year 204.

In the Epitome de Caesaribus<sup>20</sup> we only read about the commonly known military expeditions as the one against the Parthians, a visit to North Africa is not mentioned.

If we look at Cassius Dio<sup>21</sup>, his exact and critical description of the events must be stressed. As the books concerning the events of these years, however, are available only in excerpts, it cannot be said if the respective passages are lost or if Cassius Dio in fact did not say anything about the journey because it didn't take place.

It was in particular a passage in the description of the life of Apollonios written by Philostratos<sup>22</sup>, which many scholars have taken as proof for a journey of the emperor. Squarciapino<sup>23</sup> for example meant that from this passage it can be deduced with great security that the emperor has welcomed Apollonios in Africa. As Philostratos has had good relationship with the imperial court this should be, after Squarciapino, credible. If we consider the text given by Philostratos in detail the interpretation must be questioned. Philostratos tells us: „Als nun Herakleides das unwahre Gerücht (*lógon ouk alethe*) über Apollonios verbreitete, er werde nach Libyen (Africa) gehen, sobald der Kaiser dort sei,

scharte dieser die ausgezeichneten Männer aus allen Ländern um sich und sagte zu jenem...“ (Translation: Kai Brodersen). As can be seen Philostratos speaks of an untruthful rumour, that's why also this source is not adequate for proving that the emperor has travelled to North Africa.

The only literary sources, in which a campaign, which was let against *bellicosissimae gentes* apparently let from the region of Tripolis, is mentioned, are written by Aurelius Victor and the Historia Augusta<sup>24</sup>. Both accounts are very similar, which is no coincidence, as it is known, both – Aurelius Victor and the Historia Augusta – based upon the imperial biographies of Marius Maximus, now only available in fragments. It is also known, that Marius Maximus told many anecdotes and gossips, so that his stories must be treated with cautiousness. No details are given, nor are the names of the peoples, against whom the campaign was let, told. But evidently the sentence *Tripolim, unde oriundus erat, contusis bellicosissimis gentibus securissimam reddidit*<sup>25</sup> in the Historia Augusta inspired many modern scholars, among others also Birley, to interpret as well a journey to Africa as a campaign launched from Leptis Magna against the Garamantes.

Finally there is one passage given by Prokopios in the sixth book of his *de aedificiis*<sup>26</sup>, where he speaks about Leptis Magna telling us that Iustinian rebuilt a palace, which the emperor Septimius Severus had built in earlier times. These informations are neither very detailed nor is a stay of the emperor in North Africa explicitly mentioned.

### 2. Epigraphic documents

The epigraphy does not either give a clear picture of the events of these years. Two inscriptions from Lambaesis above-quoted<sup>27</sup>, which were dedicated by the *familia*

*rationis castrensis* to Septimius Severus and which can be dated in the year AD 203, in fact don't give any other information regarding a visit of the emperor.

One further inscription, which was also often considered as proof for a return of the emperor to North Africa is a fragmentary dedicatory inscription dedicated to Jupiter Dolichenus, which was found in Leptis Magna in front of the temple of Jupiter Dolichenus nearby the harbour<sup>28</sup>; the inscription is, as already said, very fragmentary, the interpretation therefore not secure. Some scholars wanted to interpret the words *redi|tu [I]mp(eratorum) in urbem [s]uam* in the sense of „return into his hometown Leptis“, whereas it must be taken in consideration that the term *urbs* usually is used as synonym for the capital Rome. Furthermore in this inscription in a very fragmentary part three Augusti are mentioned (the third G of Augustus for Geta was erased), Geta, however, was Augustus from AD 209 onwards<sup>29</sup>.

Already in the year 1977, only six years after the first publication of the biography of Septimius Severus by Birley, a study about the inscriptions of the emperor and the imperial family was published by Barton.<sup>30</sup> In his analysis of the inscriptions he came to the conclusion that the majority of the 54 inscriptions, in which the emperor and his family are mentioned, can be dated to the years AD 197-204. The method Barton used for dating these inscriptions, however, is a little bit problematic: many of the documents, which cannot be dated exactly as there are no hints in these documents themselves were associated because of the description given by Birley with a journey to North Africa and therefore dated into the years AD 201-203. On the other hand many of the inscriptions which can be dated and in which the emperor alone or with his family is mentioned belong almost exclusively to the time before 202/03. Almost all of them were found on

<sup>16</sup>CIL VIII 2702 u. CIL VIII 18250.

<sup>17</sup>Le Bohec 2005, 74–76.

<sup>18</sup>Herodian. 2,9,2 – 3,15,3. For the historiography of the Severan times cf. Sidebottom 2007, 52–82. In scholarship Herodians handling of the sources for a long time was considered very critically, as his historical work was meant to be rather some kind of romance than a historical description. In recent research Herodian is looked at in a more differentiated manner: cf. also Sidebottom 1998, 2775–2836, especially 2830: „Herodian is like a good modern historical novelist, and thus we should consider him, as the ancient did, a skilled exponent of a valid and enjoyable type of historical discourse“. See also De Blois 1998, 3415–3423.

<sup>19</sup>Herodian. 3,10,1 – 3,10,2.

<sup>20</sup>Epit. de Caes. 20.

<sup>21</sup>Cass. Dio, books 76–77.

<sup>22</sup>Philostrat. Bioi sophiston 2,20,2 (transl. K. Brodersen).

<sup>23</sup>Squarciapino 1966, 20.

<sup>24</sup>HA Sev. 18,3: *Tripolim, unde oriundus erat, contusis bellicosissimis gentibus securissimam reddidit*; Aur. Victor, Liber de Caesaribus 20,19: *Quin etiam Tripoli, cuius Lepti oppido oriebatur, bellicosae gentes submotae procul*.

<sup>25</sup>HA Sev. 18,3.

<sup>26</sup>Prokop. de aedif. 6,4,5.

<sup>27</sup>Cf. CIL VIII 2702 and CIL VIII 18250.

<sup>28</sup>IRT 292 (= AE 1951, 75 = AE 1951, 228 = AE 1952, 164 = AE 1953, 189): *I(ovi) O(ptimo) M(aximo) | Dolicheno | pro salute et victoria domi|norum nostrorum Aug(ustorum) et | [· ? ··] | | [· ? ··]e | redi|tu [I]mp(eratorum) in urbem [s]uam. | T(itus) F[aviu]s [·]arinus c(enturio) leg(ionis) | v(otum) l(ibens) p(osuit)*.

<sup>29</sup>Kienast 1996, 166.

<sup>30</sup>Barton 1977.



the old Forum and therefore cannot be associated with the new building complex of Severan times (see below the chapter about the archaeological remains). Some of the documents are honorary inscriptions dedicated by private persons. One of the few texts which in fact can be dated in the year AD 202 was found in the Baths of Hadrian in the Frigidarium *in situ* (IRT 393). The honorary inscription was dedicated by the *Lepcitani Septimiani*<sup>31</sup>, how the inhabitants of Leptis Magna evidently called themselves, to the emperor *publice ob eximiam ac divinam in se indulgentiam*. The reason for erecting this honorary inscription perhaps was only to appreciate the emperor.

### 3. Coins

Coins with the inscription *Indulgentia Augg(ustorum) in Carth(aginem)*<sup>32</sup> or with the image of the personification of Africa are also no proofs for a journey to North Africa. These coins cannot be dated exactly, the dating into the years AD 204 respectivley 207<sup>33</sup> is neither convincing nor does it fit with the discussed journey to North Africa. We don't have any coins with the legend *adventus*, which would be a clear sign for a personel presence.

### 4. The archaeological evidence

Many scholars take the fact, that Leptis Magna was embellished and enlargend in a grand scale in the reign of Septimius Severus as argument for his journey to North Africa. Because of this scholars have argued that the emperor would have favored his hometown in an extraordinary manner. „Die Machtübernahme des Septimius Severus 197 n.Chr., der mütterlicherseits aus Leptis Magna stammt, bedeutete für die Stadt ein außerordentliches Glück: Der Kaiser setzte beträcht-

liche Geldmittel ein, um der Stadt das Aussehen einer Metropole zu verleihen...“<sup>34</sup> Like in this passage told by Baratte almost in all relevant studies about Leptis Magna until now the opinion that during the visit of the emperor the area between the harbour and the bath of Hadrian was reorganized on a large scale, can be found.<sup>35</sup> Among the new buildings and reconstructions are mentioned the Harbour, the Porticus, the Basilica, the „Forum Novum Severianum“, the Nymphäum and the Arc of Septimius Severus.<sup>36</sup> In almost all of these studies it is supposed that the emperor has arranged the reorganisation on occasion of his assumed visit of Leptis Magna in the years AD 202/03.

In fact in the time of his reign many buildings in the area between the harbour and the bath of Hadrian were reorganized. If we look at the chronology of the buildings, however, it can be recognized that the whole building complex doesn't show a uniform building concept. Moreover it must be acknowledged that the chronological development is more complex and the association with a visit of the imperial family seems even more problematic, as the beginning of the building programm in Severan times already can be dated in the nineties of the second century.<sup>37</sup>

Furthermore the construction of the most splendid building, the Basilika, was begun not until the year AD 209/210 and was finished unter the reign of Caracalla.<sup>38</sup> The Via Colonnata, which let along the Forum Novum and the Severan Basilica to the harbour most probably can be dated around AD 210 and was finished also some years later under Caracalla.<sup>39</sup> According to archaeological reserch of the last decades there should be discerned two phases: the first belonging already to the reign of Mark Aurel and Commodus and a second one with the finishing of the greatest part of the project

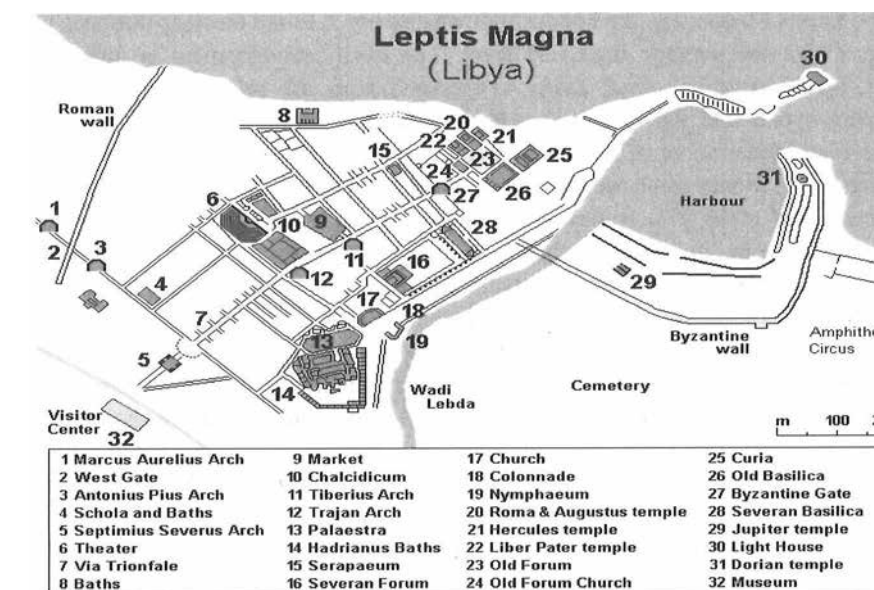


Fig. 2 - Map of Leptis Magna

at the time of the death of Septimius Severus respectively completing works under Caracalla.<sup>40</sup>

Regarding the Arc of Septimius Severus it must be acknowledged, that there cannot be given any dating at all as there are no inscriptions delivering exact informations; many scholars have dated the Arc in the years 202/03 because of the assumed visit of the emperor in modern scholarship. Art-historical aspects, however, suggest the assumption that the reliefs should better be dated in the years between 205 – 209.<sup>41</sup> As already mentioned the main function most probably must be seen in the propaganda of a political programm. Reliefs, which show the members of the imperial family in processions or scenes of sacrifices should be interpreted in this sense, although it must be admitted that the historical and topographical interpretation of some of the reliefs is difficult.

The Nymphäum<sup>42</sup>, finally, originally was erected by a private person named Q. Servilius Candidus (IRT 357) in the time of Hadrian. In Severan times it was only repaired and apparently renewed, when exactly cannot be

said; the same is true for the Harbour, which in Severan times was restructured to an impressive complex.

### Did the emperor launch a campaign against the Garamantes and who were the *bellicosissimi gentes* (HA 18,3)? – Conclusion

The interpretation of HA 18,3 (*Tripolim, unde oriundus erat, contusis bellicosissimis gentibus securissimam reddidit*)<sup>43</sup> that Septimius Severus was fighting against the Garamantes from the region of Tripolis most probably, as I have tried to show above, is based upon the description given by Birley.<sup>44</sup> Birley apparently has inspired also other authors in consequence like Halfmann or the author of the article on Wikipedia, who tell the same story. The author of the article on Wikipedia even gives more details telling us that the campaign was let by Q. Anicius Faustus for five years, who, however was already in the years AD 197-201 governor of Numidia and is not known a campaign against the Garamantes let by him.<sup>45</sup> As commonly known in the time of Septimius Severus the fortifications on the limes were fortified and even extended into the South, as also the

<sup>31</sup>Cf. for the *Septimiani* also IRT 415.

<sup>32</sup>Cohen, Sept. Sev. 222: Av: *Severus Pius Aug(ustus)*; Rv: *Indulgentia Augg(ustorum) in Carth(aginem)*. See also Halfmann 1986, 218.

<sup>33</sup>Squarciapino 1966, 20; Halfmann 1986, 218.

<sup>34</sup>Baratte 2012, 31.

<sup>35</sup>Di Vita 1996, 186: „Es waren auch nicht mehr wohlhabende Privatleute, welche die Stadt mit Bauwerken schmückten, um sich und ihre Freigebigkeit zu verewigen, sondern die Großzügigkeit desjenigen ‚Sohnes der Stadt‘, der bis zur Kaiserwürde aufgestiegen war, des Septimius Severus, der, dabei von seinem Sohn Caracalla gefolgt, keine Ausgaben scheute...“

<sup>36</sup>Eg. Di Vita 1996, 181–189, esp. 186. Di Vita u.a. 1999, 108–143; Manton 1988, 71–75.

<sup>37</sup>For the dating of the monuments cf. in particular Ward-Perkins 1993.

<sup>38</sup>See Di Vita 1996, 188; cf. also Ensoli Vittozzi 1992, 729–731.

<sup>39</sup>Göttler 2004, 272.

<sup>40</sup>Cf. Parisi Presicce 1992, 715.

<sup>41</sup>See Newby 2007, 206–207.

<sup>42</sup>Buscemi, Tomasello, Trapani 2006.

<sup>43</sup>Cf. Epit. De Caes. 20,19: *Quin etiam Tripoli, cuius Lepti oppido oriebatur, bellicosae gentes submotae procul.*

<sup>44</sup>Birley 1999 (2010), 146ff (see above #).

<sup>45</sup>E. Klebs, RE I,2, 1894, s.v. Anicius (10). For the Garamantes cf. esp. Ruprechtsberger 1997.

fortification of Gholaiia (Bu Njem) was built<sup>46</sup>. A military campaign against the Garamantes, however, with great probability can be excluded, as they seemed to be peaceful in this time, what apparently also the Ostraka of Bu Njem demonstrate<sup>47</sup>; as Joorde recently pointed out the *bellicosissimi gentes* rather must be associated with the *Gaetuli*, „da (*i.e.* in the passage in HA 18,3) einerseits die Mehrzahl (*gentes*), andererseits jedoch auch besonders die Kriegslüsterheit hervorgehoben wird“<sup>48</sup>; for both characteristics in this time especially the *Gaetuli* are known by the ancient historiographers.<sup>49</sup> So most probably, if the story of a military campaign is reliable at all, with *bellicosissimi gentes* the *Gaetuli* are meant.

To sum up it can be said, that the according to scholarship ascertained return of the emperor to North Africa into his hometown Leptis Magna respectively the campaign against the Garamantes most probable seem to be a construction made by modern scholars. There is a lack of informations in the sources between the years AD 201 and 207 – the time of the return from the Parthian expedition until the expedition to Britain – and it is a beautiful myth that the emperor returned into his hometown, where he was born. To support this story, scholars, inspired especially by the description given by Birley, have interpreted different sources (literary documents, inscriptions, coins, the archaeological evidence), according to this story. Furthermore the fact that the Garamantes had already sacked Tripolis in the first century AD perhaps now was combined with the not very reliable informations given by Aurelius Victor and the Historia Augusta. Perhaps in the reign of Septimius Severus there took place a small campaign against the *Gaetuli* or the Historia Augusta respectively Aurelius Victor have told a lie.

I think, we should believe Herodian, who is a very reliable source for the history of this time, who tells us, that the emperor after the return from the east for the next years stayed at home to administer the law and to direct the civil administration.

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<sup>46</sup>Cf. Joorde 2015, 121. See also Mackensen 2006, esp. 66. All these measurements to fortify the limes were undertaken in the time before AD 202/03.

<sup>47</sup>E.g. Marichal 1992, 242, Nr. 147: there seem to be good trading relations with the Garamantes in this time.

<sup>48</sup>So Joorde 2015, 122. See also e.g. Cordovana 2012, 480 or Stauner 2004, 47, who regard these fortifications as frontier posts built for repulsing the Garamantes.

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**Zusammenfassung**

Der in der Forschung kolportierte Besuch der kaiserlichen Familie von Nordafrika in den Jahren 202/03 n. Chr. sowie der im Zuge dessen von zahlreichen modernen Autoren anberaumte Feldzug gegen das Volk der Garamanten scheinen bei genauer Betrachtung der Quellen als sehr unwahrscheinlich. Wohl insbesondere auf dem bei Birley in den 70er Jahren des vorigen Jahrhunderts fußenden Konstrukt des Afrikabesuches aufbauend wurde diese Überlieferung in weiterer Folge von zahlreichen Wissenschaftlern übernommen, was letztendlich, wie ich zu zeigen versuchte, sogar zur Datierung von Inschriften und Bauwerken herangezogen wurde. Eine derartige Vorgehensweise war u.a. auch deshalb möglich, da für die Zeit nach der Rückkehr vom Partherfeldzug bis zum Aufbruch nach Britannien (ca. 201–207 n. Chr.) die Quellen so gut wie keine Informationen bieten, und somit, um diese Lücke zu füllen, dieser Mythos in Umlauf gesetzt wurde, indem die wenigen Informationen, die wir haben, in diesem Sinne interpretiert wurden. Der Kaiser scheint somit, wie es auch Herodian schilderte, wohl am ehesten vom Partherfeldzug im Orient direkt nach Rom zurückgekehrt zu sein, ohne einen Aufenthalt in Nordafrika eingeplant zu haben. Der in der Historia Augusta erwähnte Feldzug in der Zeit des Septimius Severus gegen *belicosissimi gentes* wurde, wenn überhaupt, wohl am ehesten gegen die Gätuler geführt, sofern diese Überlieferung nicht bereits von den Verfassern der Historia Augusta bzw. in leicht abgewandelter Form bei Aurelius Victor ein Konstrukt darstellt.

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# Ancient Elegeia – Battlefield or Roman outpost? From written sources to archaeological evidence

## ABSTRACT

The paper takes an in-depth look into the Roman defeat at Elegeia (Armenia) in 162 CE. An analysis of our surviving sources in combination with a geopolitical survey of the Cappadocian frontier and the assumed site of Elegeia would seem to suggest that the incident may have been something different than a regular field battle. Instead of a legion lost in battle as is presently often assumed, the evidence would seem to suggest that incident was much smaller in scale, possibly comprising a failed diplomatic encounter between a Roman legate and his Parthian counterpart, set on the border zone between the Roman province of Cappadocia and the kingdom of Armenia.

**KEY WORDS:** ELEGEIA; CAPPADOCIA; ARMENIA; LUCIUS VERUS; PARTHIAN WAR; DIPLOMACY; ROMAN FORT.

The eleventh century epitome of Cassius Dio written by Ioannes Xiphilinus contains a passing remark of a Roman defeat at Elegeia in Armenia, which occurred in 162 CE.<sup>1</sup> The incident is described with just a few words, but Xiphilinus' use of the term στρατόπεδον to define the Roman entity that was lost at Elegeia has raised speculations regarding the extent and quality of the Roman defeat. Since Cassius Dio used this term

in his *Roman History* to mean a legion (among other things), the interpretation that a Roman legion was lost at Elegeia has gained wide approval, especially since the English translation of the passage by Ernest Cary in 1927 for the LOEB Classical Library edition of Cassius Dio, which remains the most accessible translation of the text.<sup>2</sup> This interpretation has led to further speculation regarding the identity of the legion in question as

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<sup>1</sup>Xiph. S.297.14–21 (Dio 71.2.1): "ὁ γὰρ Οὐολόγαισος πολέμου ἤρξε, καὶ στρατόπεδόν τε ὅλον Ῥωμαϊκὸν τὸ ὑπὸ Σεβηριανῷ τεταγμένον ἐν τῇ Ἐλεγεΐᾳ, χωρίῳ τινὶ τῆς Ἀρμενίας, περισχὼν πάντοθεν αὐτοῖς ἡγεμόσι κατετόξευσε καὶ διέφθειρε, καὶ τῆς Συρίας ταῖς πόλεσι πολὺς ἐπῆει καὶ φοβερός."

<sup>2</sup>Cary's translation (1927): "Vologaesius, it seems, had begun the war by hemming in on all sides the **Roman legion** under Severianus that was **stationed at Elegeia**, a place in Armenia, and then shooting down and destroying the whole force, leaders and all; and he was now advancing, powerful and formidable, against the cities of Syria".



that time period witnessed the disappearance of only two legions, namely those of *legio IX Hispana* and *legio XXII Deiotariana*.<sup>3</sup>

But what does the passage actually state? A closer examination of Cassius Dio's and Ioannes Xiphilinus' terminological tendencies raises severe doubts that Xiphilinus meant such a specific entity as a legion by the term *στρατόπεδον*. Neither do the few contemporary accounts that refer to this incident suggest that the Roman defeat was something as specific as a loss of a legion or that it was of such magnitude in terms of loss of human life. A geopolitical survey of the Cappadocian frontier and the assumed site of Elegeia in combination with narrative analysis of our surviving sources would seem to suggest that an alternative interpretation of the passage would be more plausible. This in turn does bring the location of ancient Elegeia to the spotlight and raises questions about its relation to the border of the Cappadocian province.

### The written sources

The passage that describes the incident in Ioannes Xiphilinus is rather straightforward, although its interpretation depends solely on how we should understand the term *στρατόπεδον* in this context. The wording indicates that the *στρατόπεδον* was located/stationed (*τεταγμένον*) at Elegeia,<sup>4</sup> where it was destroyed (*διέφθειρε*) by means of surrounding it (*περισχὼν πάντοθεν*)<sup>5</sup> and during the process its men and leaders were shot down (*αὐτοῖς ἡγεμόσι κατετόξευσε*). Zonaras, who takes his description of the event from Xiphilinus, simplifies the description by stating that

"[Vologaesius] had shot down many Romans and destroyed a whole *στρατόπεδον*".<sup>6</sup> Zonaras' account seemingly making a clearer distinction between the acts of Roman soldiers dying and the *στρατόπεδον* being destroyed.

The passage tends to be referred to as originating from Cassius Dio, but in reality it originates from an alternative source used by Xiphilinus to cover a large lacuna in the manuscript(s) of Dio at his disposal.<sup>7</sup> But whether reflecting Cassius Dio's, Xiphilinus' own or his alternative source's terminological tendencies, the term *στρατόπεδον* does not seem to appear in the sense of a legion when used independently in singular cases. In fact, the phrasing used by Xiphilinus can be found to mean only a fortified position (either a fort or a camp, being equivalent to the Latin term *castra*), or an army in general in both Cassius Dio and Xiphilinus.<sup>8</sup> But if not a legion, then how should we interpret the phrasing used by Xiphilinus?

In addition to Xiphilinus, the incident is also mentioned by two sources that were contemporary to the incident, namely M. Cornelius Fronto and Lucian of Samosata. Neither one of these authors refer to the Roman force at Elegeia as being a legion, but instead both use terms which mean an army in general.<sup>9</sup> Although not describing the incident in detail, both authors do provide some valuable insights into the event and its importance, which can help us to understand what actually happened at Elegeia. Of the two, Fronto does not discuss directly about the incident beyond the fact that an army with a consular was lost at Armenia, a loss he equates with the deaths of two other consulars during the reign

of Trajan.<sup>10</sup> But at the same time he states that when the news of the defeat (at Elegeia) reached Rome, Lucius Verus had not yet even departed the city.

This statement of Fronto makes it clear that a decision that Verus should go to the East in person and take the overall command of the situation had been reached prior to the incident. But even with the grave news from the East, it took Verus several months to reach Antioch as he travelled in a leisurely fashion. While the account of Verus' journey to the East provided by *Historia Augusta* is undoubtedly highly coloured in an attempt to vilify the Roman emperor, it is still obvious that it took a long time for Verus to arrive first in Brundisium, and then in Antioch (after visiting Corinth, Athens, Ephesus and other localities *en route*) where his presence cannot be established until early 163 CE.<sup>11</sup> In Athens, the sacred rites of the Eleusinian mysteries had to be renewed so that Verus could be initiated into them, which shows that Verus passed Athens in early October 162 CE at the earliest, as the mysteries had just been celebrated in late September.<sup>12</sup> This would seem to suggest that the defeat at Elegeia had not been so severe in terms of loss of human life or prestige as an annihilation of a full legion would suggest.

The actual incident is covered in more detail by the other contemporary source, Lucian of Samosata, who approaches the event by providing criticism to the actions of the Roman legate M. Sedatius Severianus and the accuracy of the contemporary would-be historians. Lucian claims that one of the reasons why Severianus took action was a dubious prophecy given to him by the (false) prophet Alexander of Abonuteichos.<sup>13</sup> According to Lucian, the prophecy promised an easy victory

for the Roman general if he intervened in the situation in Armenia, but when "the silly Celt" (as Lucian calls Severianus) got himself and his army killed the prophecy was quickly changed to contain the opposite advice. Whether such prophecies were ever given is unknown, but the character of the Roman legate is portrayed as rash and easily impressionable.

A similar judgement can be seen from Lucian's description of the legate's death, which occurred when Severianus despaired of his situation and decided to take his own life.<sup>14</sup> In here the objects of Lucian's criticism are the contemporary (would-be) historians' elaborate descriptions of the legate's death, which included fasting himself to death or by using a shard of an exceptionally expensive vessel to do the deed. In addition to rightfully pointing out that there would have been much easier ways to commit suicide, Lucian does provide a few observations of the situation in general. First, that the incident lasted only three days, which is far too short a period of time to die by fasting. Second, that the Roman forces appear to have been surrounded and immobile as Lucian found it unlikely that the Parthians would have just waited while the Roman legate tried slowly to commit suicide, a situation that seems to confirm Xiphilinus' statement of the Roman force being surrounded. And third, that he did not seem to have any objections to the suggestion of such exquisite vessels being present on the occasion.

That the incident at Elegeia somehow involved expensive dishware and extravagant food courses is also suggested by Lucian's criticism of another historian for describing such elements in detail in the funerary oration devoted to Severianus.<sup>15</sup> Again, the object of

<sup>3</sup>The suggestion that the legion in question was the Ninth Hispana was first brought forward by Eric Birley (1971), and soon adopted and modified by Werner Eck (1972). For a detailed examination of this theory and the arguments against it, cf. Campbell 2018, 134f. For the disappearance of the *XXII Deiotariana*, cf. Keppie 1990, 58; Mor 1986, 269f.

<sup>4</sup>Although a similar structure in Plutarch (*Luc.* 41.2) indicates that *τεταγμένον* could also just refer to Severianus being in charge of the *στρατόπεδον*.

<sup>5</sup>Xiphilinus' manuscripts actually read *ἐπισχὼν πάντοθεν* (faced from all sides), which was amended to *περισχὼν πάντοθεν* by Friedrich Sylburg (1536–1596).

<sup>6</sup>Zonaras 12.2 (... πολλοὺς Ῥωμαίων κατατόξευσαντος καὶ ὅλον τὸ στρατόπεδον διαφθεῖραντος ...).

<sup>7</sup>For the loss of Cassius Dio's books by the Byzantine era and Xiphilinus' use of alternative sources, cf. Juntunen 2013a, 459–465, 482n.85.

<sup>8</sup>For Dio the term *στρατόπεδον* means primarily a camp when used in the singular case, and in the few cases when the term is used in the sense of a Roman legion, this alternative meaning is clarified by the use of additional terms of definition (i.e. name or numeral of the legion, citizen status definition, etc.). Xiphilinus follows this practice when copying Dio, and when diverting from Dio's terminology, he uses the term *τάγμα* for Roman legions. For a full terminological analysis, cf. Juntunen (2020).

<sup>9</sup>Fronto *Princ. Hist.* 16 (exercitus), Luc. *Alex.* 27 (στρατία).

<sup>10</sup>Fronto *De Bello Parth.* 2; *Princ. Hist.* 16. The consulars in question being Cn. Pompeius Longinus (*PIR*<sup>2</sup> P 623), who was captured during a diplomatic encounter with the Dacian king Decebalus and eventually committed suicide in Dacia (105 CE), and Appius Maximus Santra (*PIR*<sup>2</sup> A 950), who was killed in battle in Northern Mesopotamia (116 CE).

<sup>11</sup>HA *Vér.* 6.9–7.1. For Verus' journey, cf. Barnes 1967, 71; Birley 1987, 125–126; Champlin 1974, 147.

<sup>12</sup>The Eusebian chronicle tradition associates Verus' sojourn at Athens with the second year of the joint rule (Dec. 161 – Dec. 162 CE), during which a shooting star is said to have occurred (Eus. *Chron.* Ann. Abr. 2178; Jer. *Chron.* Ann. Abr. 2178; Cassiod. *Chron.* 826 (Hier. a. 2178); Sync. 664 (Bonn)). The mysteries were undoubtedly the greater mysteries held in September/October (15. to 23. Boedromion) and not the lesser mysteries held in February/March (20. to 26. Anthesterion) as some scholars have suggested, cf. Barnes 1967, 71; Champlin 1974, 147. The later date is also supported by the climatic conditions at the assumed location of Elegeia as the Erzurum plain can be covered by snow until late March, which makes it doubtful that any military operations could have occurred before April/May. This combined with the limitations of transportation in antiquity makes it highly unlikely that any news of the incident could have reached Rome before early summer.

<sup>13</sup>Luc. *Alex.* 27.

<sup>14</sup>Luc. *Hist. Conscr.* 21, 25.

<sup>15</sup>Luc. *Hist. Conscr.* 26.



ridicule is the style of the author for wasting space on such trivial details, while the details themselves do not seem to be objected to as falsehoods. On numerous other occasions Lucian does heavily criticize obvious factual mistakes, which would seem to suggest that such details were acceptable common knowledge for him. This in turn raises an interesting question, namely how such fine dining arrangements could be part of a field battle?

Another curious aspect is the role the Parthian commander Osroes seems to have played in the incident. In addition to mentioning him as the leader of the Parthian forces at Elegeia, Lucian informs us that Osroes also commanded the Parthian forces later in northern Mesopotamia.<sup>16</sup> The fact that the Romans had a personal grievance with Osroes is implied by another historian criticized by Lucian, who suggested that Osroes would be thrown to the lions if captured.<sup>17</sup> Such an act is hardly the usual Roman treatment of an enemy who had merely defeated them in battle, and instead seems to suggest that the Romans felt that Osroes had betrayed them in some fashion, as the mentioned punishment (*damnatio ad bestias*) was usually reserved for the worst of crimes (regicide sacrilege, use of magic or poison etc.) and originated from punishment for allies who had been found guilty of defection or desertion.<sup>18</sup> This is also suggested by the funeral oration mentioned by Lucian, as it contains a reminder of the (broken) pledges in addition to the extravagant dinners that had taken place at Elegeia.

These elements mentioned by Lucian are quite difficult to associate with customary warfare, but they do make perfect sense if we see the incident at Elegeia as part of a diplomatic encounter between the Roman legate and his Armenian/Parthian counterpart. Such diplomatic encounters would have included mutual pledges of armistice followed by the participants banqueting each other in turn, and on such occasions the

use of fine dishware and extravagant dinners would have played an essential role according to the diplomatic traditions.<sup>19</sup> Why the event escalated into open hostilities is unknown, but the Roman historiography maintains a topos of easterners deceiving Romans during diplomatic truces; such was the fate of Crassus, Gaius Caesar and nearly that of Corbulo also.<sup>20</sup> This possibility sets the physical location of Elegeia into an interesting light as such diplomatic encounters occurred at the frontier shared by the participants of such negotiations.<sup>21</sup>

### Geopolitical Survey

The precise location of ancient Elegeia is uncertain, but Mitford's suggestion of identifying it with the modern town of Ilıca is quite attractive even on the basis of phonetic similarity alone.<sup>22</sup> The few ancient sources that mention Elegeia place it east of Satala, along the Euphrates, and this is exactly where Ilıca is located, at the headwaters of the Euphrates at the western end of the Erzurum plain. What is of further importance is that Ilıca lies at an important crossroads of the two principal routes that lead from Armenia into the Roman province of Cappadocia (cf. image 1). The narrow northern valley, which runs in an east-west direction following the course of the Euphrates River, starts from the Erzurum plain and leads west, passing the legionary fortress of Satala a little to its south. This northern route is relatively well known and indicated even by the ancient road itineraries, and is followed rather closely by the modern road D100, thus demonstrating the tendency of modern roads following the ancient road networks in this rough terrain where only a few possible routes across the mountainous terrain exist.

This is not the case for the southern route, but the physical connection between heartlands of the kingdom of Armenia and the region of Sophene runs through the mountain passes that have their origin on the plain of

<sup>16</sup>Luc. *Alex.* 27; *Hist. Conscr.* 19, 21.

<sup>17</sup>Luc. *Hist. Conscr.* 31.

<sup>18</sup>Futrell 2000, 28–29.

<sup>19</sup>Such proceedings can be confirmed, for example, in the diplomatic meeting between Gaius Caesar and the Parthian king Phraates V in 2 CE (Vell. Pater. 2.101).

<sup>20</sup>Crassus: Dio 40.26.1–27.2; Gaius Caesar: Vell. Pater. 2.102.2; Corbulo: Tac. *Ann.* 13.37.

<sup>21</sup>Such as the parley between Gaius Caesar and Phraates V that took place on both banks of the Euphrates (Vell. Pater. 2.101).

<sup>22</sup>Mitford 1980, 1198; idem 2018, 333n.23. Since classical times the process of "iotacism" has changed the pronunciation of many vowels to iotas, which could easily explain the change of the spelling form from the Greek Ἐλέγεια (Ἠλεγεία) to Turkish Ilıca (i.e. hot springs).



Fig. 1 - Cappadocian frontier in the second century CE (Based on Hews, R. H. (2001), *Armenia: A Historical Atlas*, 14)

Erzurum, and is indicated roughly the principal modern roads (D950/300). A trade route from Elegeia could have followed first the Pülür Çayı, a tributary of the Euphrates (which connects with the main stream at Ilıca) towards south, and then followed either the route indicated by the modern road (D950/300), or the Peri Çayı River, which would have led directly to Arsamosata, the capital of Sophene. Then again, from Sophene the principal crossing of the Euphrates into Cappadocia would have been at Tomisa, which was guarded by

the nearby legionary fortress of Melitene. The strategic importance of Ilıca is further emphasized by the Byzantine era road network, when the principal road across the plain seems to have passed through Ilıca on the south bank of the Euphrates, while another route coming from Trapezus on the Pontic coast connected to the east-west running main road at Ilıca.<sup>23</sup>

The history of Elegeia as it is recorded by ancient sources is rather limited. Cassius Dio mentions it in

<sup>23</sup>Sinclair 1989, 217–220.





Fig. 2 - The rectangular enclosure on the North-East side of Ilca (Google Earth @ Maxar Technologies; Imagery date: 11/18/2005)

connection with Trajan's Armenian campaign in 114 CE.<sup>24</sup> Dio states that Parthamasiris, the Parthian nominee to the Armenian throne, was received in this place by Trajan, who was seated upon the tribunal of his camp, thus indicating his political dominance over the Arsacid prince. The fragment of Dio refers to the Roman camp with the term *τάφρευμα*, usually meaning a temporary camp such as the Roman expeditionary force would have made on the occasion. To compli-

cate things, the same fragment continues to explain that after Parthamasiris had been publicly deposed, the Arsacid prince fled the Roman camp, and this time the Roman camp (or an encamped army) is referred to by the term *στρατόπεδον*. Although using two different terms to define the Roman encampment, it would seem that Dio's narrative suggests that the Trajanic encampment was of a temporary nature, and that no larger permanent military establishments existed in the area.

That Trajan chose Elegeia as the place where he would deal with the Arsacid prince, suggests that the location had a special significance. The Roman emperor arranged a reception for his local (Pontic) client kings at the legionary fortress of Satala, but instead of waiting there for the arrival of Parthamasiris, he had marched forward to meet him at Elegeia. Since Trajan chose to stay precisely at Elegeia instead of marching all the way to the Armenian capital of Artaxata, or to stay at Satala (with more comfortable facilities than the temporary camp), it suggests that the location was seen to be "neutral territory" by both monarchs. Furthermore, Cassius Dio reports that when Parthamasiris arrived at the meeting he expected to receive his crown back from the Roman emperor. Would he have expected such a thing if the Romans had already invaded his territories? Or could his expectations have been prompted by the fact that the chosen location was at the border between the two states?

In addition to Dio/Xiphilinus, Elegeia appears only twice in classical literature, and on both occasions in a geographical context during the mid-second century. First, in a fragment from Arrian's *Parthica*, which most likely referred to the event described above, and then in the *Geographica* of Claudius Ptolemy, who names Elegeia (Ἠλεγία) among the settlements in Armenia located along the Euphrates.<sup>25</sup> Claudius Ptolemy's statement shows that around the 150's CE (i.e. at his approximate date of writing) Elegeia contained some sort of a sizeable settlement, but whether it was a civilian or a military one is not specified. Whatever this settlement may have been, it seems to have vanished from history, at least as a noticeable entity, with the incident of 162 CE. That Elegeia was the chosen ground for the encounter again in 162 CE signifies its importance in the Roman-Armenian interaction, regardless of the physical nature of the settlement.

That a complete legion could have been involved in the incident also seems unlikely for a number of reasons. First, neither of the two legions (*IX Hispana* and *XXII Deiotariana*) that are known to have disappeared from history during the second century can be demonstrated to have survived this long, and neither can be shown to

have ever been part of the garrison of either Cappadocia or Syria for that matter. Second, Cary's translation of Xiphilinus' statement (τεταγμένον ἐν τῇ Ἠλεγείᾳ) to mean that the lost legion was *stationed* in Elegeia itself does create some unprecedented difficulties. As already pointed out, Elegeia seems to have been located in the eastern end of a narrow valley that was already guarded by the legion stationed at Satala. Also, the southern passage that led through the client kingdom of Sophene to the river crossing at Tomisa was already guarded by the legion stationed at Melitene. It is highly unlikely that Elegeia could have hosted a legion when the other ends of the passageways were already guarded by other legions, as such strategic defence-in-depth deployment is not known from other sections of the Roman frontier.

That the conflict between the Romans and Parthians involved only a limited number of troops is also suggested by a number of other facts. First, the Romans had been seemingly killed by enemy archers, a statement that reminds the fate of the troops of Crassus at Carrhae, but unlike the open plains of northern Mesopotamia, the region of Ilca is surrounded by steep mountain slopes, which are all within 5–15 km distance. Still, for the duration of three days the Roman troops seem to have been unable to break through and make the march into the safety these slopes would have provided from the Parthian cavalry archers. Second, there is no indication that the Parthians would have tried to take advantage of their victory and invade the Cappadocian province, which would seem to suggest that the provincial garrison had survived relatively intact.

The strategic importance of Ilca at the crossroads of two major roadways is obvious, and as such the location would have been ideal for a Roman outpost.<sup>26</sup> At this point of time, the Romans had similar outposts along the Pontic coastline, extending their control even further to the east than Ilca. Among these outposts was the strategically located fort at Apsarus, which included a garrison of five cohorts. This fort provided a buffer zone between the Roman clients of Heniochi and Zydritae, while providing an enforced guard against the neighbouring Iberia.<sup>27</sup> It is possible that if an outpost

<sup>24</sup>Dio 68.19.1–20.4 (Exc. U<sup>6</sup> 51).

<sup>25</sup>Arr. *Parth.* fr. 5 (5M) (Steph. *Ethnica* s.v. Ἠλεγεία); Claudius Ptol. *Geogr.* 5.13.12 (Ἠλεγία).

<sup>26</sup>Suggested also by Mitford 1980, 1203.

<sup>27</sup>Juntunen 2013b, 156–157.



existed at Elegeia, it too might have contained a larger garrison than the usual single auxiliary unit due to the strategic importance of the location. Furthermore, a Roman garrison at this location would not have been unprecedented, as such existed further inland in Armenia at Gornea (Garni) and Kainepolis (Vagharshapat) before and after the incident of 162 CE.<sup>28</sup> Thus, the Roman army at Elegeia might have consisted of only the garrison of the outpost enforced by the legate's personal guard (*equites/pedites singulares*). Although the written sources would seem to suggest that Elegeia did have some sort of a settlement, the question remains whether any physical evidence exists for this hypothetical outpost?

Very few Roman auxiliary forts are known from the Cappadocian frontier in eastern Turkey.<sup>29</sup> Due to the rugged nature of the terrain and limited physical access to regions containing potential sites, preliminary observations can only be made on the basis of digital aerial imagery of limited resolution. Still, such tools can provide some surprising results as can be seen from the unique feature just outside of the modern town of Ilıca. On the north-eastern side of the town, a large rectangular enclosure (c. 600 x 750 metres) can be observed (cf. image 2), which also seem to contain some wall-lines of a buried complex on its south-east corner. What makes this feature so extraordinary is the lack of similar large rectangular entities elsewhere in the Erzurum plain. Although clearly too large to be a Roman fort, the size and form of the feature does remind one of the larger field camps known from elsewhere in the Roman Empire. Even though this feature cannot be confirmed to be 'Roman' without further exploration on the ground, the unique form and size, and its location on the embankment of the Euphrates suggest a possible site in the area, which raises an interesting possibility if this could be the Trajanic temporary camp (τάφρευμα) of 114 CE?

### Conclusions

The narrative analysis would seem to show that there is no direct evidence suggesting the involvement of a Roman legion in the incident that occurred at Elegeia.

Instead, our sources appear to hint that the Roman and Parthian commanders met at the border zone between Cappadocia and Armenia for a diplomatic encounter, and for some unknown reason the situation escalated into open conflict. The known history of Elegeia would seem to suggest that it was located inside the territory of the Roman province of Cappadocia, while the geopolitical location of the assumed site would make it an ideal location for a Roman outpost, guarding the principal routes leading from Armenia into Cappadocia. Preliminary remote prospection of the area indicates the existence of some possible physical remains in the assumed location of ancient Elegeia, but whether these originated in the Roman era cannot be concluded without a more in-depth exploration. In any case, the evidence would seem to suggest that the incident at Elegeia was much smaller in size than is usually assumed, and that the ancient Elegeia had an active role in the second century Roman Cappadocian frontier policy.

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<sup>28</sup>A Roman garrison occupied the fortress of Gornea at least in 51 CE (Tac. *Ann.* 12.45), while Kainepolis was occupied by Roman troops since the Parthian War of Lucius Verus (Suda s.v. Μάρτιος).

<sup>29</sup>The most recent surveys are still: Bennett 2002, 301–308; Mitford 1980, 1187–1192; idem 2018, 84f.

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### Zusammenfassung

Der Artikel nimmt die römische Niederlage in Elegeia (Armenien) 162 n. Chr. in den Blick. Eine Analyse der überlieferten Quellen in Kombination mit einer geopolitischen Untersuchung der kappadokischen Grenze und der vermuteten Stätte von Elegeia scheint darauf hinzudeuten, dass es sich bei dem Vorfall um etwas anderes handelt als eine normale Feldschlacht. Anstelle einer im Kampf verlorenen Legion, wie derzeit oft angenommen wird, gibt es Hinweise darauf, dass es sich wahrscheinlich um einen wesentlich kleineren Vorfall handelte, möglicherweise im Zusammenhang mit einer fehlgeschlagenen diplomatischen Begegnung zwischen dem römischen Legaten und dem parthischen Kommandeur an der Grenzzone zwischen den Römern, der Provinz Kappadokien und dem Königreich Armenien.





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# **The Frontier and the Mirror. Foreign policy and the Art of Command in Arrianus.**

## **ABSTRACT**

The way Romans conceptualized different peoples and communities was culturally defined and it was influenced by historical records, political narration and past experiences. In this respect, frontiers of the empire were at the same time “windows”, through which the Romans saw the world, and “mirrors” that reflected Roman ideas, stereotypes and prejudice. This filtered image of the world shaped and determined Roman foreign policy and war habits, ultimately determining the history of the empire as it is known today. However, a problem remains: contemporary categories cannot be applied to the different rationality of the Roman world, posing a peculiar challenge to modern historiography. In other words, it is dangerously easy to see ourselves in place of the Romans, influencing the analysis. Modern political and war analysts have recently developed many methodological and theoretical tools to deal with this kind of problem but, despite some of them are promising and apparently respectful of the needs of the field, no attempt has ever been made to apply these approaches to the field of ancient history. The present contribution proposes an application of these techniques to the study of the Pontic frontier sector described by the *Periplus* of Arrianus, with a focus to the military tension that interested the area during the governorship of Arrianus and the preparation for a possible military intervention in the Caucasian region.

**KEY WORDS:** STRATEGIC CULTURE, ARRIANUS, TACTICS, HADRIAN AGE, FRONTIERS

### **Ancient and modern rationality**

**T**he publication of Luttwak’s “The Grand Strategy of the Roman Empire” has marked a breaking point in many fields of historical analysis, from military to frontier studies, arising a huge debate about different theoretical and methodological aspects.

In his treatise, Luttwak attempts for the first time to find and adopt a unifying principle for the political and military history of the first three centuries of the Empire. His well-known scheme of consequential defensive system has so far attracted many criticisms, and possibly it has been appreciated more by scholars of military strategy and by foreign relation theorists



than by classicists<sup>1</sup>, but it has nevertheless stimulated the research along new lines<sup>2</sup>.

Luttwak's historical reconstruction is heavily influenced by his post clausewitzian view of warfare. A large part of Luttwak's technical vocabulary, including the very notion of grand strategy, derives from his experience as military consultant and strategic analyst but it does not fit perfectly the reality of the ancient world<sup>3</sup>.

In Luttwak's treatise, the imperial leadership planned centrally the whole defensive strategy: each system represents therefore a political decision, taken accordingly to the need of find the best possible balance between the costs and the benefits of the system itself. The choice of a border itself was decided in a "scientific" way: every border exploited some natural elements to improve defensive or logistic capabilities and tried to optimize the length of the border itself, aiming to use less troops as possible to hold the frontier<sup>4</sup>.

Besides some "technical" problems and inaccuracies<sup>5</sup>, the main problems of Luttwak's work resides in his

theoretical approach. Noteworthy, the idea of frontiers as militarized areas appears to be a modern reconstruction that does not find a perfect match in ancient sources<sup>6</sup>.

Many scholars have already highlighted the problem of reducing the frontier to a purely military area, ignoring completely its nature of a region of contact and exchange between different cultures and communities, a dynamic part of the ancient world and not only a peripheric border constantly exposed to war.

Furthermore, the concepts employed by Luttwak in his analysis do not have a perfect match in Latin nor in Greek vocabulary. The semantic analysis of Latin and Greek terms relating to warfare highlight the deep differences existing between the ancient way to understand warfare and the modern one. As far as we know, the notion of grand strategy itself was unknown to the ancients, nor, the concept of *limes* finds a perfect translation in modern military terms<sup>7</sup>.

<sup>1</sup>Kagan 2006 pp. 333–335.

<sup>2</sup>It could be useful, before introducing the theoretical aspects of the debate, to resume Luttwak hypothesis. The Rumanian scholar identified three "systems", or three political and military paradigms consciously adopted by the imperial leadership, until the III century AD. Each system aimed to maximise costs-benefits of the whole (Luttwak 1976 p. 18). In the first one, named after the Julio-Claudian dynasty, legion and auxiliary troops were deployed not only along the borders but also in the interior of the provinces. The army was mainly intended to secure the Roman control all over the empire, preventing any insurgency in the newly conquered regions. Allied and vassal kingdoms had a complementary role with the imperial armed forces: they acted as a buffer between Roman and other powers and they defended the provinces from any kind of low-intensity threats (raiders, nomadic tribes, rebels and brigands – Luttwak 1976 pp. 21–98). Only with the second system, adopted by the Flavian dynasty, the frontiers of the empire became highly militarised areas: legions and many auxiliary troops started to be moved to the borders to create what Luttwak defined as a preclusive system of defence. The purpose of the system was intended, theoretically, to prevent and block any attempt by external population to move or attack the imperial domains. The imperial army started to be more directly involved in defending the empire, and therefore the nature of vassal kingdom changed accordingly until their disappearing (Luttwak 1976 pp. 99–238). Rome was forced to change defensive paradigm during the III century AD, when the military pressure on the border became unbearable. The new system was defined by the extensive adoption of the "defence in depth": army was deployed along multiple subsequent lines, forcing an invading enemy to push through multiple defences and fight in an hostile environment. The system was therefore provided by strongholds, fortified depots and a road network to allow the imperial army to move faster than the enemy, having then the possibility to intercept, and with the full support of a complex system (Luttwak 1976 pp. 239–356).

<sup>3</sup>The concepts of "force" and "power", that functioned as theoretical bases for Luttwak's analysis, derive from contemporary studies on strategy (Luttwak 1976 pp. 362–373). The debt paid to Clausewitzian thesis is less explicit but the cultural background of Luttwak is evident in his book dedicated to strategy (Luttwak 1987).

<sup>4</sup>About the concept of strategic frontier, its application to the field of ancient history and related debate, see Wheeler 1993a pp. 26 and followings.

<sup>5</sup>Wells 1978 pp. 174–175 and Gruen 1978 pp. 563–566 have highlighted a preponderant use of modern studies at the expense of ancient sources.

<sup>6</sup>Many scholars have highlighted the problem of reducing the frontier to a purely military area, ignoring completely its nature of a region of contact and exchange between different cultures and communities, a dynamic part of the ancient world and not only a peripheric border constantly exposed to war. As far as I know, Mann was the first to point out the problem in his review (Mann 1979 pp. 175–183) but the topic has been subsequently reprised and developed by Whittaker (Whittaker 1989 and Whittaker 2004).

<sup>7</sup>See Isaac for a discussion about terms *limes* and *limitanei*; cf. Isaac 1988 *passim* for the adoption of a philologically proper sense of *limes* in the historical analysis of the imperial presence in the east.

As Campbell as noted, the lack of a military academy, an institution that became common in the states of modern Europe, probably prevented certain developments in war-studies<sup>8</sup>.

Luttwak apparently presumed that the ancient Romans thought and acted as a contemporary general staff would and therefore interpreted the evidences for a Roman strategy in an anachronistic way.

The problem can be reconducted to the Weberian idea of objective and subjective rationality or, more generally speaking, to different meaning of "rational": what appears to be rational for a contemporary analyst, as Luttwak is, could not have been perceived as rational by the ancients<sup>9</sup>.

The problem is indeed well known to modern analysts, who project the same difficulties in studying foreign relations, warfare and strategy among modern nations, and sometimes is presented under the definition of "mirroring the enemy".

The Cold War forced western countries to watch carefully the moves of the eastern bloc, trying to prevent and possibly deal with any kind of aggressions. As Balthus noted, the lack of any proper understanding of the Soviet ideology and war culture led western analysts to wrong conclusions about Russian strategy and plans: Nato and US analysts used their own category to interpret the situation and design counter-strikes and responses to plan conceived with their own strategic concepts and therefore unrealistic for the Soviet coun-

terpart<sup>10</sup>. As Luttwak projected a modern mentality into the ancient world, western analysts projected their own approach to warfare into the Russian world, mirroring the other instead of understanding it.

Western analysts started to recognise the problem since the late '70s and therefore developed different approaches for the analysis of different culture's strategy. The theoretical and methodological trend lost part of his élan after the end of the Cold War, but nevertheless studies on asymmetric warfare continue nowadays, exploiting and improving the theories proposed in the past decades.

Despite the similar problems existing in this respect among ancient historians and contemporary war analysts, few attempts have been tried to share a common methodology or borrow some theoretical principles that can be adapted to fit the peculiarities of the different fields of analysis.

The present contribution aims to introduce and test some of those approaches in order to evaluate their possible contribution to the field of ancient history.

### Flavius Arrianus: the new Xenophon as case of study

As already noted, Campbell stressed the importance of imperial élites culture as a crucial factor for the analysis of Roman warfare. High officers who served for the empire were no professionals in modern terms: with no dedicated formation, Roman commanders relied on

<sup>8</sup>The point is noteworthy interesting and deserves a further discussion. Campbell (Campbell 1987 pp. 13–29) argued that Roman generals were amateurs in comparison of contemporary officers, they were not formed in a modern sense and practical experiences played a central role in their education. Among *virii militares* were however professional officers, who passed through all the ranks of the army to the highest level of the hierarchy, and men renown for being practice in the art of war (Campbell 1975 pp. 11–31). Against the hypothesis of Campbell, Wheeler have argued instead that despite the absence of a military career, Roman officers were theoretically able to consciously plan in completely strategical way (Wheeler dedicated a very detailed paper, split in two parts, to the subject: Wheeler 1993a pp. 7–41 and 1993b pp. 215–240, in particular he concluded in favour of a proper strategic mentality in Roman culture in the second part of his work): they planned accordingly to cultural categories transmitted internally the army.

<sup>9</sup>The dichotomy between subjective and objective rationality derives from the works of Weber. Originally, the concepts have been utilised in a teleological sense: Weber detected a progressive rationalization in warfare, from a primitive, form in which duels among champions represented the very essence of a battle, to more rational ones, in which organised troops of anonymous soldiers clash in massive pitched battles. The dichotomy is perpetually restated in national armies: the most rational behaviour for the entire army does not correspond the most rational behaviour for the single soldiers. The Weberian idea can however be re-adapted to understand why ancient strategical ideas, hypothetically less rational, apparently do not share the same logic of more modern approaches to warfare. The teleological horizon, however, decades in favour of a wider concept of the dichotomy: what appeared to be rational to ancient armies does not appears rational in modern sense, but the differences in rationality do not exclude logic thinking in ancient decisional processes. See Weber 1978 pp. 1149 and followings. See also Levi Martin 2005 pp. 229–275 for an account of the problem.

<sup>10</sup>Bathurst 1993 *passim*.

their family tradition, their practical experience and, at their best, on a knowledge transmitted by technical treatises and historical *exempla*<sup>11</sup>.

Despite Campbell probably underestimated the importance and the value of what appears to be a true military class of commanders who shared tactics, knowledge and experience in the service of Rome, it cannot be denied that the mentality of the highest Roman military commanders escapes modern categories. The loss of many documents and memories of the ancient world makes difficult to have an insight point of view for the study of Roman strategy. The problem was indeed already known by the ancients: Dio complained that under the rule of the emperors, every decision was taken secretly at the court, leaving no traces and no documents about motivations or debates as it was during the Republic<sup>12</sup>.

Imperial propaganda probably offered some insight of the Roman politics, providing some reasons and explanations for the decisions taken by the imperial leadership. In some cases, authors provided new interpretation, searching more in the field of internal politics than in the strategy one<sup>13</sup>, and in some other cases even the official motivations appear to be far from the modern notions of warfare.

Furthermore, only in few cases we can exploit the personal record and memoirs of a *legatus*. Probably the best-known case, Pliny's correspondence with the emperor Trajan illustrates the peculiar relation between the emperor and one of his governors: *legati* received orders from the emperor, but nevertheless governors necessarily acted with a certain degree of autonomy to deal fast with any kind of problems<sup>14</sup>.

Pliny ruled over Pontus and Bythinia, a province relatively peaceful and far from any military threat and for this reason unfortunately useless for the purpose of the present contribution. Arrianus represents so the only case of a governor giving explanation for his military actions, providing modern historians with a unique source of immense value for the study of Roman warfare.

Flavius Arrianus' career is still largely unknown today<sup>15</sup>. The role played by Adrianus himself in pushing the young Arrianus through the political and military ranks is under debate, but the friendship existing between the emperor and his general cannot be denied<sup>16</sup>. It is highly possible that the young Flavius Arrianus started as a knight, albeit the details of his *militia equestris* did not survive until present days, and only subsequently adlected to the *ordo senatoris* for the will of the emperor himself<sup>17</sup>.

Before becoming governor of Cappadocia, Arrianus was proconsul in Baetica around the 125 AD<sup>18</sup>, then probably *consul suffectus* four years later<sup>19</sup>, *curator operum publicorum* for the 130 AD<sup>20</sup> and the year after, finally, *legatus augusti pro praetor* of the Cappadocia province.

The military importance of the Cappadocian *limes* is beyond any doubt: with a permanent garrison of two legions at the time, and numerous auxiliary troops, the province represented the cornerstone of the whole military system of the eastern part of the empire<sup>21</sup>.

Being entrusted of such a strategically vital province, Arrianus was therefore appointed to an office of crucial importance for the imperial establishment. The reason of this choice is, however, not easy to detect. In this regard, at least two different currents can be detected in modern historiography.

From some historians, Arrianus was a true *vir militaris*<sup>22</sup>, chosen by the emperor for his military background and possibly for a direct knowledge of the interested region: Johannes Lidus stated that Arrianus described the Caspian Gates in the eight book of his *Parthica* for having visited personally the region but the passage do not have any confirmation by other available sources<sup>23</sup>. The quote from Lydus has been sometimes read as an evidence that Arrianus fought alongside Trajan during

the Parthian War, acquiring in this way a specific knowledge of the region that the emperor tried to exploit<sup>24</sup>. It is also possible that Arrianus visited the Caspian Gate during his governorship in Cappadocia and not necessarily in connection with a military operation<sup>25</sup>. Despite it is still possible that Hadrian chose to send a military expert in such a vital province, it is clear that Arrianus were not assigned to Cappadocia because of his knowledge of the area.

However, it has been also argued that Arrianus was appointed as governor because of his literary production: in this case, the largest, and more important, part of his production has to be dated before his arrival in Cappadocia<sup>26</sup>.

*Militaire et homme de plume*, Arrianus has been mentioned by ancient sources in both his roles of commander and philosopher<sup>27</sup>. This double nature of military commander and intellectual lied at the core of the very self-representation of Arrianus who presented himself as the "new Xenophons<sup>28</sup>". This peculiar choice, only partially motivated by a word-play with Arrianus' real name<sup>29</sup>, is highly meaningful and present Arrianus as a man well embedded in the cultural context of his time, in which the classical culture still represented a constant reference and a perpetual epistemological horizon.

<sup>11</sup>Campbell 1975 pp. 11–31 and Campbell 1987 pp. 13–29 in regard of ancient technical literature. *Contra*, Wheeler 1988 (passim) argued that many "stratagems" presented in ancient collection demonstrated a real insight of both tactical and strategical concept, possibly meaning that the idea of warfare was much more developed and complex in the Graeco-Roman world.

<sup>12</sup>Dio LIII, 19.

<sup>13</sup>Dio LXXV, 3: Severus stressed the importance of a further expansion to east in order to create a defensive bulwark for Syria, however Dio regarded at this expansion as uselessly costly and motivated only by the imperial ideology of the perpetual expansion. Similarly, Trajan's Parthian War has been judged harshly by Dio (Dio LXVIII, 29,1 and 33,1). Isaac 1988 pp. 26 and followings seems to imply that imperial wars of conquest were not planned strategically in a proper sense, but any further expansions were decided on ideological way, looking to the prestige of the imperial establishment. Isaac concludes also that Dio expressed the criticisms of a part of the Roman society, but he echoed also official propaganda: Trajan's Dacian War has been therefore considered necessary because of the past actions of the Dacians (Dio LXVIII,6,1), but Dio in this case quoted the official motivations offered by Trajan as it appears also in Crito's *Getica*. As Wheeler pointed out, Dio's opinion does not deny the existence of proper strategical ideas: the very fact that Severus proposed to the public opinion to occupy Mesopotamia to defend Syria attests the diffusion of geo-political and geo-strategical competences among the imperial establishment.

<sup>14</sup>Many letters from Pliny attested that a provincial governor could and should ask the emperor regarding certain matters, for instances: Plin. *Ep.* X,33 (regarding the possible institution of a *collegium fabrum* in Nicomedia, proposal refused by the emperor) Plin. *Ep.* X, 96–97 (the famous letter and the imperial *rescriptum* concerning legal issues with Christians). Of course, in case of particularly pending problems, the governor was forced to take a decision without waiting the orders from Rome.

<sup>15</sup>Se Syme 1982 pp. 181–211 for a detailed reconstruction of Arrianus' career.

<sup>16</sup>They probably met the first time when Arrianus was serving in the entourage of Cassius Nigrinus. Furthermore, both Hadrian and Arrianus frequented the philosophical school of Epictetus: SHA. *Hadri.* 16,10.

<sup>17</sup>Bosworth 1983 p. 266.

<sup>18</sup>Arrianus' proconsulship in Baetica has been presumed on the base of an inscription found in 1971 by Tovar and dated to II century AD. However, Béltran has subsequently challenged the proposed date and argued in favour of a later dating to III century AD. See Béltran 1988 pp. 91–100 and Béltran 1993 pp. 176–191 for a discussion on this topic.

<sup>19</sup>CIL XV, 244 and 552 (brick-stamps Arrianus et Severus), PIR<sup>2</sup> F 219.

<sup>20</sup>CIL III 1132.

<sup>21</sup>The legionary fortress of Satala, that garrisoned the XV Apollinaris, held a particularly high importance and can be considered the true cornerstone of the whole eastern defensive system of the Empire: Mitford 1974 p. 165.

<sup>22</sup>Schwartz RE II col. 1230–1236, an hypothesis subsequently revived by Ross 1968 and in PIR<sup>3</sup> F 219.

<sup>23</sup>Lyd. *De mag. Imp.* 3,48.

<sup>24</sup>Wirth 1974 pp. 169–209; Stadter 1980 pp. 135–143.

<sup>25</sup>As recently argued by Bosworth 1983 pp. 265–276.

<sup>26</sup>Arrianus was known as a philosopher in late antiquity and in high middle age: Souda s.v. Ἀρριανός (Adler *alpha* 3868); Phot. Cod. 58 p. 17 b 11.20. Cf. Bosworth 1972 p. 180 argues that the most important part of Arrianus' literary production should be dated before his appointment as governor of Cappadocia, implying therefore that his cultural achievements boosted his political career. It has been proposed also that the disappearance of Arrianus from the political scene has to be linked with the conflict between the sophists and Antoninus Pius (Bowersock 1969 p. 52, *contra* Wheeler 1972 p.364 n. 49 who pointed out that Arrianus was not completely aligned with Second Sophistic). Arrianus seems however to have held the prestigious office of archons in Athens around 145/146 AD (ILS 8801 = IGR III 133).

<sup>27</sup>Themistius *Orat.* 34; Lucian. *Alex.* 2.

<sup>28</sup>Arrianus presents himself as Xenophon in the *Acies Contra Alanos* 10 and 22. See also Athenian herm with portraits of Xenophon and Arrianus: Oliver 1972 pp. 327–328. The choice was subsequently reprised by Photius cod. 58 p. 17b that coined the definition of "Ξενοφῶντα νέον" that had a large fortune in later centuries.

<sup>29</sup>Stadter 1967 p. 159 – 161.



In many respects, Arrianus seems to be a very good example of that class of commanders pictured by Campbell: a man formed in the humanities and devoted to service for the state, with practical experience on the field and a military career through the officer's ranks. Arrianus represents therefore a very good case study to test the application of some methodologies that, developed by modern strategic analysts to understand the contemporary warfare, can provide some useful insights for the study of the past.

The present contribution proposes to analyse the three texts that Arrianus wrote during his governorship as a meaningful tryptic or, in other words, at the light of their interrelation.

The obvious starting point of this inquiry is the *Periplus Ponti Euxini*. Defining the Periplus is not an easy task due to his complex genesis and atherogenic nature. The treatise presents himself in the classical form of a *periplus*, a geographical description that exploits a fictional or a real voyage. However, at least two parts can be detected in the book.

The first part, that can be considered the core around which the treatise has been assembled, seems to be the literary version of an official report that Arrianus wrote about a voyage he did by sea from Trapezus to Sebastopolis, along the north Pontic and Colchian shores<sup>30</sup>. After this autoptic part, a second one continues the description of the Black Sea from Sebastopolis to Byzantium, ideally following a sea-route along the northern coasts<sup>31</sup>, and then the regions between Byzantium and Trapezus<sup>32</sup>. Due to the peculiar, and ap-

parently incoherent, structure of the treatise, many scholars have argued in the past that the Periplus should be dated to the byzantine era and therefore considered as a later composition wrote with the style and fashion of an ancient author, possibly around an older nucleus that have been related to Arrianus<sup>33</sup>. More recently, however, stylistic analysis has proven the authenticity of the Periplus: the peculiar structure of the treatise should be related then to his author's classicist cultural background and to his desire to adopt a prestigious narrative structure, strongly linked with the past<sup>34</sup>.

At the start of the Periplus, Arrianus, in quality of *legatus augusti pro praetor*, took the command of the provincial fleet, garrisoned at the ancient Greek polis of Trapezus. Arrianus mentioned no garrison in Trapezus and apparently the city was defended only by a local militia until Marcus Aurelius' time, when a *vexillatio* from the two Cappadocian legions has been deployed in the city<sup>35</sup>. Arrianus however took care of mentioning in particular a statue of Hadrian, pointing at the sea with a "nice pose", probably built to commemorate the enlargement of harbour's facilities<sup>36</sup>.

From Trapezus, Arrianus moved to Hyssos Limen<sup>37</sup>, a stronghold defended by a cohorts, probably the *cohors Apuleia cives Romanorum Ysypono* mentioned as still in place by the *Notitia Dignitatum*<sup>38</sup>. Twenty knights were attached to the garrison, but their military role is still unclear: the *cohors* was not *equitata*, and in any case the number of mounted soldiers was too low for such a type of mixed auxiliary unit, and therefore it is

possible that knights served as messengers, runners or perhaps outriders.

The fleet reached Athenai the day after: the place lied in ruin and Arrianus mentioned an abandoned fortress. The legatus describes with more detail the local landing, that could provide a certain protection against winds from many directions but was insufficient to host larger vessels<sup>39</sup>. A storm blocked the fleet in Athenai for some days before reaching Apsaros<sup>40</sup>, where 5 cohorts were deployed in the local stronghold, and subsequently to Phasis, where 400 men were garrisoned in the fortress<sup>41</sup>. In both cases, Arrianus inspected the fortification and the overall condition of the garrisons<sup>42</sup>. From Phasis, the fleet sailed north to Sebastopolis. The new settlement was near the ancient Dioskurias, ruined and deserted at the time of Hadrian<sup>43</sup>, and was probably grew around a fortified camp that, when Arrianus inspected it, garrisoned an *ala* or, more probably, a *cohors equitata*<sup>44</sup>.

### The coast and the mirror

Arrianus' journey from Trapezus to Sebastopolis has to intended and analysed as a political act of government of a provincial governor. The Periplus himself clearly derives from an official document, a report of activity wrote and sent to the emperor and subsequently enlarged with the details concerning the Black Sea's shores that Arrianus did not visit. In two quotes Arrianus explicitly mentioned official letters and report, in particular regarding the status of the garrisons visited,

sent directly to Rome, leaving doubt about the original nature of the treatise<sup>45</sup>.

Arrianus clearly states in his treatise that, while he was sailing offshore Apsaros, the news of death of Cotys II, king of Bosporus, reached the fleet<sup>46</sup>. Cotys' coin series ended in 131 AD and this is essential to date the treatise<sup>47</sup>. Probably, Arrianus hold the office of Cappadocia's *legatus* from the very same year, and therefore the inspection of the coastal sector from Trapezus to Sebastopolis was one of his first commitments as governor. The timing of the inspection seems to indicate a certain urgency in regard of what appears to be a remote and relatively isolated coastal sector.

If the date of the treatise is relatively clear, the purpose and the occasion for its writing and publication are less obvious.

The forts between Trapezus and Sebastopolis can be considered not only as a part of the provincial system, but as a coherent complex for their own: Arrianus apparently visited a frontier sector that had, for a Roman point of view, a certain unity.

Despite the proximity with the sea-shores, this complex was probably not intended to be a coastal defence<sup>48</sup>.

At the II century AD, the Pontus Euxinus was firmly under the control of the Roman Empire and there was no naval power that could challenge the imperial power on the sea: the southern coasts were indeed part of the empire and controlled by the provinces of Thracia,

<sup>30</sup>Arr. Per. 1–11. See in particular the introduction to the work in which Arrianus points out the nature of the treatise.

<sup>31</sup>Arr. Per. 12–16.

<sup>32</sup>Arr. Per. 17–25.

<sup>33</sup>Brandis 1896 pp. 109–126 concluded against Arrianus' authorship of the Periplus, while Chapot 1912 pp. 152–154 thought that only the first eleven chapters were written by Arrianus, while he attributed the rest of the treatise to an anonymous Byzantine author.

<sup>34</sup>While Kiessling, developing the original hypothesis of Schwartz, saw in the Periplus a juvenile attempt. Silberman 1978 pp. 160–162 highlighted however the persistence of some stylistic signatures proper of Arrianus, while Bosworth 1993 p. 250, who saw in the Periplus a relatively late work in Arrianus' literary production, considers the references to Xenophon as elements of an elegant literary display. About the importance of Xenophon in making the Periplus see Rood 2011 pp. 136–140.

<sup>35</sup>"Hoplites" from Trapezus are enlisted in Arr. Alan. 7. Possibly, the militia was formed by what was originally king Polemo II's army, that, together with the fleet, was inherited by the Romans: Tac. Hist. III,47. A garrison formed by a vexillation from Cappadocia's legions is known only from the time of Marcus Aurelius: CIL III 6745 (soldiers from the XII Fulminata) and CIL III 6747 (from the XV Apollinaris).

<sup>36</sup>Arr. Per. 1, 3–4; Per. 16,6 in regard of the new harbour. See also Magie 1950 p. 1470 n. 6.

<sup>37</sup>Arr. Per. 3. The place is known also in Potl. V,6,5 and Ps. Scyl. 85. It was still known in late antiquity, when it is involved in the events described by Procop. Bell. Goth. 4,2.

<sup>38</sup>Not. Dig. Or. 38,34.

<sup>39</sup>Arr. Per. 4.

<sup>40</sup>Arr. Per. 6. Garrisons already known by Plin. NH VI,12, see also CIL X 1202= ILS 2660.

<sup>41</sup>Arr. Per. 8.

<sup>42</sup>Inspections at Apsaros: Arr. Per. 6,2; at Phasis: Arr. Per. 9.

<sup>43</sup>Dioskurias was still inhabited and flourishing at the time of Strabo (XI,2,16) but already ruined and deserted when the place has been described in Plin. NH VI, 2,16.

<sup>44</sup>Arr. Per. 10. Cf. Mitford 1982 p. 1220.

<sup>45</sup>Arr. Per. 6,2 (official report from Apsaros) and 10,1 (from Sebastopolis).

<sup>46</sup>Arr. Per. 17,3.

<sup>47</sup>PIR F<sup>2</sup> 219.

<sup>48</sup>Reddé had already raised the question « De quell coté est tourné le système : vers la terre, peuplée de tribus mal soumises [...] ou vers la mer, dominée par la flotte romaine, mais ouverte à des peuples non romains, parfois hostiles et capables de se livrer à des opérations de pillage ? », ultimately pointing out the deep difference existing between the system described by Arrianus and more proper coastal systems as the *limes saxonicum* or the coastal defences in Cumberland (Reddé 1986 p.442).

Bythinia et Pontus and Cappadocia, while in the north Sarmatians and Scythian population did not have, as far as we know, any experience of naval warfare<sup>49</sup>. Even the Bosporan Kingdom, the most complex and structured state in the norther part of the Black sea, was among the ally of Rome, and an imperial garrison was detached for its defence and control<sup>50</sup>.

Only during the III century AD the imperial control over the Black Sea was challenged: the devastating Goths' raid from the sea caught unprepared the Roman defences and, after having formed an improvised fleet, the Germanic tribes were able to cross the sea, sack Trapezus and move further south to pillage the whole province of Cappadocia.

Trapezus garrisoned indeed Cappadocia's provincial fleet, but the imperial marine in the area were evidently not intended to challenge a major naval power, a threat that the Romans did not expect in that area. The fleet available to Cappadocia's legatus was not particularly strong large: built and organised under the rule of the last king of the Pontus, Polemus II, the fleet, strong of 40 small vessels (*liburnae*) and a trireme, was inherited by the Romans when the area was reduced into province<sup>51</sup> and probably kept his original role in patrolling and securing the coasts against low intensity threat.

Piracy had a well-known history in the Black Sea area<sup>52</sup>, but apparently the phenomenon was far from his peak at Hadrian's time. There is comparably less information about piracy in the Black Sea for the II century AD and Arrianus himself never mentioned piracy in his report, and the few references that he made in the second part of his treatise were directly took from older authors<sup>53</sup>. Remained doubtful, however, that a pirate fleet could really pose a challenge for the Roman army, or even put under siege one of the strongholds along the coast.

Therefore, the fleet was not supposed to engaged and clash with a major naval force, and their patrolling duties could be perhaps considered as marginal in relation with the logistic support that the navy could assured for the land army<sup>54</sup>.

In many points of the Periplus, Arrianus showed a clear interest for anchorages and for secure landing points. The case of Athenai is particularly striking: the *legatus* inspected the area, observing the good quality of the natural harbour, that kept safe at least the smaller vessels, and he was perhaps interested in the defensive possibility offered by the ruined fortress, maybe aiming to improve the place and to make it suitable for a garrison<sup>55</sup>. At Athenai, the author pointed out the

insufficient protection against northern winds<sup>56</sup>, while at Phasis he extended the already existing ditches to defend the harbour near the fortress<sup>57</sup>. The stronghold itself was carefully located to control the coast and the overlooking sea-routes, but the danger seems to come once more from the hinterland: Arrianus even feared a siege and took care of checking and reinforcing the defence<sup>58</sup>.

Furthermore, it is noteworthy that all the fortress mentioned in the Periplus were in a direct connection with rivers of well-known importance. In a region where dense forests and stepped mountains dominated the landscape, land routes were rare and difficult and did not represent the easiest way to penetrate the hinterland for a large imperial army. Rivers, especially the largest and navigable ones, were exploited as paths to move to the mountainous region<sup>59</sup>.

Far from being a coastal defence, the sector grouped some bridgeheads in foreign lands, relatively far from the province and with a clear projection into the mountainous regions of Caucasus.

Arrianus is not clear about the reason of his voyage. He stated only that, when the news of Kotys dead reached him, he decided to enlarge his treatise and describe the routes and the shores from the imperial provinces up to the Bosporan kingdom, in case the emperor wanted to move north to set the situation<sup>60</sup>. The death of a vassal king partially explained why he chose to write a complete Periplus, but the original reason for the inspection remains unclear.

The concept of mirroring can be usefully exploited in the present analysis. The concept is relatively old and it is strictly tied with the birth of modern western war-analysis, being, as Girard pointed out, at the base

of Clausewitz's idea of violent escalation that bares a central place in his classic and influential analysis<sup>61</sup>.

Defining the concept of mirroring in regard of humans' and states' relation in all his semantic and theoretical implications is not an easy task. Clausewitz's escalation to extreme is a particularly exaggerated case of mirroring behaviour: "Even the most civilized of peoples, in short, can be fired with passionate hatred of each other (...) the thesis, then, must be repeated: war is an act of force, and *there is no logical limit to the application of that force*. Each side, therefore, compels its opponent to follow suit; a reciprocal action is started which must lead, in theory, to extremes. This is the *first case of interaction and the first "extreme"* we meet with<sup>62</sup>". As Clausewitz subsequently pointed out, the war escalation can be compared to an exchange of gifts as in the case of potlach: the constant necessity to overcome the other fuel a perpetual escalation.

However, in Girard the mirroring behaviour is partially based on the concept of mimesis: "*Reciprocal action is therefore always functioning, even when combat has not yet occurred: the two adversaries, the attacker and the defender, will become more and more similar as they observe each other, and their "hostile feeling" will grow. If they both withdraw, it will be only to attack each other more fiercely later; if one withdraws, that withdrawal could be a sign for the other to attack. One thing is thus sure: there will be a clash, and it will occur when the lack of differentiation between the two adversaries reaches a point of no return. Reciprocity and the loss of differences are one and the same thing. In Violence and the Sacred I suggest that only an exterior point of view that is both inside and outside the community can perceive this resemblance when each, from the inside, thinks there are increasing differences*"<sup>63</sup>".

<sup>49</sup>The conquest of Thracia definitely put under imperial control all the southern shores of the Black Sea. See also Minns 1913 p. 24; Rostovtzeff pp. 258–261. See also Barret 1977 pp. 1–9 and Barret 1978 pp. 437–448 about the policy of the Claudian dynasty in the eastern areas of Pontus, Cappadocia, Colchis and Armenia: even before the first two regions were reduced in provinces, the emperors controlled firmly the area through vassal kings and dynasts loyal to Rome (in this regard, see also Dio LX, 8).

<sup>50</sup>At the time of Arrianus, vessels and soldiers of the Ravenna's fleet were deployed permanently in the Bosporan kingdom (CIL III 14215) together with soldiers from Moesia Inferior (Sarnowski 2006 pp. 256–260; Sarnowski 2006b pp.85–87; Sarnowski-Savelja et alii 2007 pp. 57–67. It is possible that the original bulk of this detachment developed from Plautius Silvanus' engagement in the area (CIL XIV 3608 = ILS 986: the *legatus* of Moesia moved part of his army to help the Bosporan kingdom against some "Scythians").

<sup>51</sup>Tac. *Hist.* III, 47; Jos. *BJ* II, 16, 4. Trapezus' and Bithynian's fleet were complementary: Jos. *AJ* XVI,16; Dio LIV,24. In the Periplus, Cappadocia's fleet appears to be under the direct command of the *legatus*, who was the actual commander in chief of the provincial armed forces, but at the time of Marcus Aurelius was put under the authority of a *praefectus* CIL VI 41271 = 31856. The *praefectus* could have been the second in command, or the inscription can highlight a new arrangement under Marcus Aurelius: the deployment of legionary soldiers in Trapezus and the appointment of a *praefectus* for the fleet can mean a more substantial, albeit still not precisely known, military organisation for the sector.

<sup>52</sup>Strabo XI,2,12; Ovid. *Ex Ponto* IV, 10,25–30; Plin. *NH* VI,16. Plin. *Ep.* X,21, 86;

<sup>53</sup>Arrianus (*Per.* 25, 2–3) mentions only once a phenomenon that can be considered as piracy but, in this only case, he did it quoting Strabo (VII, 16,1): the Astae, a tribe who inhabited the regions surrounding Byzantium, used to attack and plunder wrecked ships. The *praefectura orae ponticae*, cited by Pliny in *Ep.* X,21, was intended to patrol the inland routes that ran along the shores: Pliny assigned some soldiers to the *praefectus*, but no vessels probably because their duty was not escorting or defending ships on high seas.

<sup>54</sup>Trapezus' fleet was involved in Corbulo's expedition, providing logistic support for the troops that secure the inland routes: Tac. *Hist.* III,69; cf. Tac. *Ann.* XIII,39 (Corbulo reinforced the region surrounding Trapezus with a chain of fortlets to protect the logistic network and support the campaign in Armenia).

<sup>55</sup>Arr. *Per.* 4,2. The largest trireme was, however, forced to anchor offshore (Arr. *Per.* 4,4). Repairing the stronghold and eventually improving the harbor facilities could be allowing the imperial army to use Athenai as a useful landing spot in the area. The Black Sea was known in antiquity for the frequent and violent storm that threatened the navigation (Diod XII,72,4; Just. XVI,3,10; in Arrianus *Per.* 3,3 and 5,3): having safe landing was therefore vital to assured communications in the region.

<sup>56</sup>Arr. *Per.* 4,2

<sup>57</sup>Phasis *Per.* 9,5. Arrianus noted also the importance of the local garrison in protecting the coastal shipping (Arr. *Per.* 9,6). See also the beneficiarii consulares at Sebastopolis who were charged of controlling and patrolling the inland routes: Mitford 1966 pp. 482 and followings.

<sup>58</sup>Arr. *Per.* 9,4.

<sup>59</sup>The wild nature of the Caucasian region was well known in antiquity: Hipp. *De aere aquis locis* 23. See also Braund 1989 p. 38 about the inland routes in the area. Arrianus carefully present the rivers of the visited area, highlighting the larger and more usable: Arr. *Per.* 7.

<sup>60</sup>Arr. *Per.* 17,3.

<sup>61</sup>Girard 2010 pp. 1–26 and 53–66 in particular.

<sup>62</sup>Clausewitz, 1.1.3, 76–77.

<sup>63</sup>Girard 2010 p.56.



When two countries start mirroring each other, the one watches the other's behave, starts interpreting the situation according to its cultural concepts and progressively learns by observing the enemy's actions.

The problem can be defined in the term of subjective rationality and cultural perception: the limited information available both to Romans and to any other counterpart in the area led to a series of moves and counter-moves not necessarily based on objective parameters.

The mirroring dynamic can be tentatively reconstructed on the base of available sources, starting from Arrianus' himself, and on the base of the historical context.

From a Roman point of view, Cappadocia's *legatus* had authority over the Caucasian passes and the kingdoms and tribes in the region<sup>64</sup>. Cappadocia's strategical value actually lied in his strong connection with Armenia: the province held a key role in controlling the region in anti-Parthian perspective<sup>65</sup>.

The importance that the two rivals saw in the area is a well-known historical fact: whoever controlled the Caucasus could strike his enemy from a strong position, closing the mountain passes and preventing any attempt of a countermovement.

The Caucasian regions, however, knew no political unity. Among the geographical information of different natures, the *Periplus* presents a list of tribes that inhabited the mountainous regions overlooking the sector visited by Arrianus<sup>66</sup>. The ethnographical description is unparalleled in the rest of the treatise, indicating a specific concern for the area. In particular, Arrianus carefully noted the political bonds that tied the tribes and the dynasts of the area to the empire<sup>67</sup> or to the kingdom at the Iberia, at that time ruled by Pharasmanes II<sup>68</sup>.

The small kingdom played actually a central role in that times.

The whole region was probably in turmoil in the aftermath of Trajan's Parthian War<sup>69</sup>: the frail equilibrium, based on the perpetual tension between the Empire and the Parthian kingdom, was shattered when the second one was defeated and temporally lost control and influence over the area. Temporarily, even the Armenia became a Roman province.

The abandonment of eastern conquest decided by Hadrian at the start of his reign probably complicated the situation. Suddenly, the small dynasts and kings of the Caucasian area found themselves exposed to Roman attacks, having lost a potential ally to counter balance the overwhelming force of Rome.

The new emperor engaged in a diplomatic effort of high profile, personally visiting the eastern limes up

to Trapezus and calling a conference with Caucasian kings and chiefs to strength the Roman influence on the area and, possibly, to reassure vassals and allies about the imperial policy. Noteworthy, Pharasmanes II refused to meet the emperor. Available sources do not offer any clue to understand the reason of this choice, possibly the Iberian king tried to exploit the situation to start a more independent policy<sup>70</sup>.

The history of relation between Rome and Iberia is long and complex. Traditionally, the kingdom was among the allies of the empire and during the centuries has proven to be more often near the Romans than the Parthians<sup>71</sup>. The strategic value of Iberia was so vital for the empire that Rome showed, in some cases, to be ready to occupy the region: Nero actually planned an invasion of the neighbouring kingdoms of Iberia and Albania to secure a bridgehead against the eastern rival power<sup>72</sup>.

An independent and strong minded king on the throne of Iberia was perhaps seen as potential threat in Rome, and the behaviour of Pharasmanes looked suspicious for the imperial establishment. The Iberians had no reason to have more confidence in the empire that, after the fall of Ctesiphons, remained the unchallenged power in that part of the ancient world.

I wonder if the visit of Hadrian in the region was seen as a preamble for an invasion by the local tribes.

The emperor never organized an offensive campaign in the area, therefore the conquest of the Iberian was not at the time in the plan of the imperial establishment, at least as far as we know, but as the kings and dynasts of the region observed the imperial foreign policy from the outside, so did the empire and Pharasmanes' behaviour was hard to predict for Rome.

Obviously, the peak of this mirroring interaction was the Alans' campaign and the imperial counter-action described in Arrianus' *Exfrasis*.

It is not easy to understand if when he visited the coastal sector, Arrianus was already expecting the great Sarmatian invasion of the 135 AD<sup>73</sup> but the fortress between Trapezus and Sebastopolis were probably involved in the action<sup>74</sup>.

Clearly, the sector analysed in the *Periplus* represent a sort of first line against the near Iberian kingdom and a good platform to launch an offensive against Pharasmanes and seize the control of the vital land routes of the area. Even if the Alans were not the most obvious threat, their engagement was not only possible but even not completely unexpected.

The first Roman encounter with the Alans dates to the I century BC, when the Strabo mentioned Aorsi and Siraces, Sarmatian people close to the Alans, among the mercenaries employed by Farnax, king of the Pontus, in the 48 BC<sup>75</sup>. They were later enlisted among the allies of Rome under the reign of Augustus<sup>76</sup> and the alliance resisted during the age of Tiberius, when the Alans fought alongside the Romans for the control of Armenia against Artabanus III<sup>77</sup>. Noteworthy, in this case the Sarmatian cavalry was summoned by the Iberians, aligned with the Empire.

Alans stroke the southern kingdoms one more time during Vespasian's reign, in the 72 AD, after being called by the revolting Hyrcanians against Parthia. The Alans moved south passing nearby the Aral lake, stormed the region of Media and subsequently the Armenia, where Tiridates, formally proclaimed king by Nero, dared to face the Sarmatian cavalry on the

<sup>64</sup>Stat. *Silv.* IV,4,63–64.

<sup>65</sup>Pompey already recognized the importance of the region, deploying in Cappadocia three legions: Plut. *Pomp.* 31,1; Plut. *Luc.* 35,7; Dio 36,16,3 and 46,1. See also Magie 1950 pp. 351–378. August's delicate diplomatic effort inaugurated a policy of equilibrium with Parthia, a policy in which Armenia worked as a sort of buffer zone between the two rivals (Aug. *Res Gestae* 27,2; Tac. *Ann.* II,43 and II,56; more problematic the relations under Tiberius, with a quick military escalation that forced the empire to engage in the area: Tac. *Hist.* VI, 31–37 and 43–44). Nero's attempt to occupy the region (Wheeler 1997 pp. 383–397) were abandoned by his successors, but the Flavian dynasty inaugurated a complex policy to firmly control the region through dynasts and kings loyal to Rome, helping them to secure their power: see the reinforcement of Harmozica's fortress (Boltunova 1971 pp. 213–222), an Iberia's stronghold well-known for its strategical value (Strabo XI,3,5; Plin. *NH* VI,29–30), and the occupation of Derbend pass with a detachment from the XII Fulminata legion (AE 1951, 263, under Domitian). Armenia was briefly occupied during Trajan's Parthian War as an obvious prelude to the conquest of Mesopotamia. An administrative reorganization of Cappadocia was a preparatory step for an involvement in the region: the province became a huge military base in the 72 AD (Bosworth 1976 pp. 64–65), when it was merged with Commagene and Little Armenia, and reduced by Trajan, who separated the Galatia from Cappadocia (Teja 1980 p. 1087; Sherk 1980 pp. 1024–1035).

<sup>66</sup>Arr. *Per.* 11.

<sup>67</sup>The Zaloi, ruled by Malassas appointed by Hadrian, the Apsilai ruled by Julianus, crowned by Trajan, the Abasci of Rhasmagas and the Sanigai, whose king was Spadagas, were apparently more tied to the Empire: Arr. *Per.* 11,2–3.

<sup>68</sup>Only the Zydrilai were presented as subjected to Pharasmanes the II: Arr. *Per.* 11,2. The Sannoi, a "warlike" people who inhabited the areas surrounding Trapezus (Arr. *Per.* 11,1) were formally under the control of Rome, but showed signs of restlessness, while no political loyalty is alleged for the Machelones and the Heniochoi, both ruled by Anchialos (Arr. *Per.* 11,2).

<sup>69</sup>Dio LXVIII,17. Possibly, Trajan started preparing already in 112 AD, when he sent Hadrian in Syria as *legatus augusti pro praetor*: Dio LXIX, 1,1. See also Bennet 1997 pp. 185 and followings; Eck 1982 pp. 353–357 (regarding Hadrian in Syria); Bosworth 1977 p. 228.

<sup>70</sup>SHA *Hadr.* 13,9. Magie 1950 I p. 621 proposed to date imperial visit to 131 AD, less sure is Syme 1988 p. 163, who propose a debate on the topic.

<sup>71</sup>Pharasmanes II's predecessor was Mithridates I, a loyal ally to the empire: his brother Amazaspus fought alongside Trajan during the Parthian War and was killed during the siege of Ninive: IGR I, 192= SEG XLIII, 1015.

<sup>72</sup>Tac. *Hist.* I, 6,4.

<sup>73</sup>Chronology of Alans' invasion according to Euseb. *Hist. Eccl.* IV,6,3 who dates the war against the Sarmatians in the eighteenth year of Hadrian's reign, right after the end of Bar Kochba's rebellion,

<sup>74</sup>Speidel has suggested that Arrianus intended to use Apsaros as a base to launch the operations: Speidel 1986 p. 658.

<sup>75</sup>Strabo XI, 5,8.

<sup>76</sup>Aug. *Res Gestae* 31,2.

<sup>77</sup>Tac. *Ann.* VI,32–36; Dio LVIII,26,1–4. Tacitus speaks more vaguely about Sarmatians, but Jos. *AJ.* 18,9 presents them as Alans.

field and barely escaped the death in battle. Vologaeses called Rome for help, but Vespasian declined<sup>78</sup>.

The Alans appeared more often allied with the Romans and never arrived to really threat the Empire. However, Arrianus' concern appears to be justified considering the peculiar role of the Iberian kingdom.

As demonstrated by the war of 35 AD, the Iberians were in control of the mountain passes and land routes that connected the Caucasian region with the plains inhabited by the Alans: only the ruler of Iberia could open and close the "gates" and therefore allow or prevent any Sarmatians' invasion<sup>79</sup>.

Rome had already make experience of that reality<sup>80</sup> and, in many occasions, acted to reinforce, exploiting the alliance with Iberia, its indirect control over the region: keeping firmly the kingdom under his influence, Rome assured to himself the possibility to call the Alans, and their powerful cavalry, against every eastern rival.

The renovated independence of Pharasmanes challenged this situation, and the imperial establishment tried to regain control over the area. Possibly, the Iberian kingdom did not intend to directly threat the empire, and Alans were directed against the rival kingdom of Alabania, historically more tied to Ctesiphon.

The mirroring scheme could be presented as following: Pharasmanes II, trying to exploit the political turmoil caused by the retreat of the Romans by the regions, started a more aggressive and independent politics;

the imperial establishment feared to lose the grip on Iberia and looked at Pharasmanes's foreign policy as a threat for the imperial dominion over the Caucasian world, starting therefore a series of preparation to contrast any hostile action; Pharasmanes, preoccupied by Romans' movements along the borders, called the Alans against Albania, possibly hurrying to strength his position securing his eastern flank<sup>81</sup>. When the Sarmatians passed nearby the Roman provinces on the way back, Arrianus, excited by an unclear situation and rightfully fearing an aggression, quickly moved to face the aggressor.

A direct confrontation was, in the end, avoid and the battle never happened<sup>82</sup>. The crisis was not however completely resolved, and Hadrian, via Arrianus, intervened in Iberia's political affairs, imposing counsellors, tying stronger relations with the king's court, settling territorial disputes and deploying a garrison to secure Pharasmanes' position and, at the same time, reinforcing the imperial presence in the area.

### Beyond the mirror

Despite his usefulness, the concept of mirroring as methodological tool has been developed in a field in which the analysis can profit of a vast and detailed documentation. Notably, the sources available for the study of ancient history are comparably more scarce and even the Empire, possibly the most well documented political reality of the ancient world, gave back a not relatively limited technical literature and very few official documents concerning the highest level of foreign policy. Smaller realities, such as the Caucasian kingdoms, can

<sup>78</sup>Jos. *BJ*. VII, 244–251 who dates the event immediately after the occupation of Commagene (*BJ* VII, 219); cf. also Suet. *Dom.* 2,2 and Dio LXVI, 15,3.

<sup>79</sup>Bosworth 1977 p. 226.

<sup>80</sup>The geography of the region was relatively well known to the Romans. Iberian role in controlling the mountain passes was recognized already by Tacitus in *Hist.* VI,33,2. Corbulo, who had also occupied Melitene (Tac. *Ann.* XIII,40) and Satala (Tac. *Ann.* XII,45 and XIII,39), recognizing the strategic value of the places subsequently occupied by the Cappadocia's legions (XII Fulminata at Melitene – Jos. *BJ* VII,18 – , in substitution of the XVI Flavia Firma moved to Samosata – Dio LV,24,3 and Ptol. 5,14,8 –; XV Apollinaris at Satala is attested until late antiquity – Dio LV,23,5; *Itiner. Anton.* 183,5; *Not. Dign. Or.* 38,13) knew also the role of Zigana pass, near Trapezous, for the inland communication network in the area (Tac. *Ann.* XIII,39: the pass was defended with some small *praesidia*; see also Bennet 2006 p. 84). As Arrianus sent a description of the Black Sea to Hadrian to support a possible action in the Cimmerian Bosphorus, so Corbulo did with Nero, sending in Rome a map of Armenia and Caucasus according to Plin. *NH* VI,40. The importance of Harmozica, possibly the most important Iberian fortress and the very stronghold reinforced by Vespasian to strength the relations with Iberia (see note 65), was known by Strabo XI,3,5 and Plin. *NH* VI, 29–30.

<sup>81</sup>Dio LXIX, 15,1.

<sup>82</sup>Themistius, celebrating the success of philosophers engaged in politics, attributed the success of Q. Iunius Rusticus to Arrianus also, presenting both as victorious against the Alans (Themist. *Orat.* 34). More probably, Arrianus never arrived to face the Sarmatians on the battlefield.

be study for the most part only through Graeco-Roman sources, in other words through an external point of view. In the present case, Arrianus' literary production offers an insight of Roman policy, but every inference has to be tentatively deduced from the historical context and from recognisable behavioural pattern: even if the reconstruction is based on the available evidences, a definitive proof cannot be found. The inhomogeneous distribution and value of available sources could prevent the application of techniques based on the ideas of mirroring and mimetic behaviours, however other approaches that exploit the diachronic distribution of documents, better fitting the necessities of ancient historiography, can be tested.

This second approach, once again borrowed by the field of study of foreign relations and modern warfare, is defined by the theoretical concept of "strategic culture".

In his main lines, the concept of "strategic culture" as be developed and defined during the Cold Warm starting from the late 1970s', by western analysts. The theoretical definition of the concept is, in this case, strongly linked to his application.

Analysts understood that the strategic behaviour of a nation is culturally determined: assets, targets and plans are not objective but influenced by culture, past experiences and social structures. Therefore, a proper and true understanding is possible only in a cultural sense<sup>83</sup>.

Three generations, or schools, of strategic cultures have been recognized since a paper from Johnston, who presented himself as scholar of the "third generation"<sup>84</sup>. The main differences underlined by every approach concerns the relation between the strategic culture (how a community understand and conceptualize warfare) and the strategic behaviour (how a community behave in case of war).

For the scholars of the first generation, the strategic behaviour is part of the strategic culture and the two aspects exist in a mutual relation: the behaviour is not only a product of the culture, but it contributes also to form and shape the strategic culture<sup>85</sup>. Analysts aligned with the thesis of the third generation argued that such holistic model could imply a deterministic approach: whatever a community does is part of its strategic culture<sup>86</sup>. To solve the problem, scholars of the third generation proposed a distinction with the culture, stylised as more theoretical than practical, and the behave, with the second element clearly subordinated and influenced by the first one but, in this way, the developed approached appears to be deterministic, with a practical behaviour mechanically derived by a pattern of assumptions and beliefs<sup>87</sup>.

First and third generation scholars, albeit it has been tempted to apply the same methodology to the study of an ancient reality, share the same goal of understand and predict the behaviour of a modern nation.

Much more promising for classical studies is the approach proposed by the second generation.

Scholars of the second generation are less interested in the possibility of predicting the behave of a strategical community and the focus instead on the analysis of the generative process of a strategic culture. The theoretical horizon remains holistic as in the first generation: the behaviour is not only fully integrated in the strategic culture, it plays also an important role in the formation of the strategic culture<sup>88</sup>.

The way a community can collect and preserve memories is essential to determine how a strategic culture is shaped during centuries. In the generative process, practical experiences are analysed and conceptualized in a theoretical frame of assumptions and models and preserved as tools to understand the reality of warfare.

<sup>83</sup>"Good strategy presumes good anthropology and sociology" Brodie 1973 p. 332.

<sup>84</sup>Johnston 1995 pp. 36–64.

<sup>85</sup>Gray 1981 pp. 21–47. Gray 1999b p. 131.

<sup>86</sup>Johnston 1995 pp. 7–10; Johnston 1995b pp. 36–39.

<sup>87</sup>Johnston 1995b pp. 41–43. Contra the reply of Gray 1999 pp. 49–69 and the following counter-reply of Johnston 1999 pp. 519–523 in which the positions of the first and third generation have been extensively debated.

<sup>88</sup>Lock 2010 pp. 685–708.



The generative process of a strategic culture is, therefore, a slow one and it is never-ending: this prolonged and perpetual genesis, as it has been argued by the scholars of the second generation, can be studied in using community's literary production as a whole without limiting the analysis only to technical treatises and documents, and for a longer period.

The approach, that aims to understand a conceptual development through recognizable steps, is further defined by a strong theoretical point of view of written sources. Openly accepting the constitutive theory of language<sup>89</sup>, second generation's scholars see in a community's literary production not only a way to describe a situation but also a tool to shape and create the reality.

The approach defined by the second generation appears to suit well the need of historians and classicists and can be usefully adapted to the field of ancient history. Once again, Arrianus' literary production offers a very good case study.

### An age of reforms

Particularly striking is the constant attention that Arrianus paid, during his visit along the Black Sea's coasts, to the training of troops and to their equipment. At Hyssou Limen<sup>90</sup>, the governor personally attended to drill exercises, while in Apsaros, one of the most important strongholds visited during the voyage, and Sebastopolis, where an impressive apparatus was put

in place, Arrianus personally checked both soldier's and fort's equipment<sup>91</sup>.

In this respect, Arrianus stylised himself as commander perfectly aligned with dogmas of Roman military leadership. Many famous generals of Republican Rome were praised for having well trained and carefully prepare soldiers for the war.

Rutilius Rufus was considered the first Roman general to have introduced drill exercises for the soldiers<sup>92</sup>, starting a tradition that continued under the rule of the *principes*, Scipio did the same during the siege of Carthago Nova<sup>93</sup> and also Marius, the renown reformer of the late Republican legion, was praised for having kept the soldiers under constant training<sup>94</sup>. The *topos* of the good general that restores the discipline among the soldiers held a central role in historical and military literature of the empire before and after Arrianus himself. For exemple, it has been said by ancient authors that Corbulo, having found the eastern armies in despicable conditions, spent almost a year training and preparing the troops for the imminent campaign<sup>95</sup>. In Tacitus' the *topos* is presented more the once: the good commanders, and Agricola among them, are implicitly compared with the bad ones, the former kept the discipline among the soldiers while the latter, *ignavi*, neglected the military habits, letting the soldiers idle and accustomed to useless luxuries<sup>96</sup>.

However, Arrianus did not simply kept alive this prestigious tradition, he participated the *zeitgeist* of Hadrian era.

<sup>89</sup>Lock 2010 pp. 704–705 for some examples of constructivism in social and political science. See also Milliken 1999 pp. 231–236 in particular for methods for the analysis of a textual network. Gray 1999 p. 50 openly adopts in place of constructivism the epistemological dichotomy between explaining (addressing rational links between cause and effects) and understanding (a comprehension of a social phenomenon using internal cultural categories) see in general Hollis and Smith 1991. Despite Lock 2010 p. 695 presents the two approaches as antithetical, I personally don't see the antithesis: the idea of a constitutive language, that constitute the reality by shaping the way of investigating it, seems to accord perfectly with the necessity of understand a behavior adopting a subjective rationality.

<sup>90</sup>Arr. *Per.* 3,1.

<sup>91</sup>Arr. *Per.* 6,2 and 10,3.

<sup>92</sup>Val. *Mass.* II,3,2; Front. *Strat.* IV,2,2.

<sup>93</sup>Polyb. X,20,3–4.

<sup>94</sup>Plut. *Mar.* 13,1; 14,1–2; 15,2–4.

<sup>95</sup>Dio LXII,19.

<sup>96</sup>Tac. *Agric.* 7,3: Agricola restores the discipline in the rebellious XX (*Valeria Victrix*) legion. Petronius Turpilianus, Trebellius Maximus and Vetius Bolanus, *legati under Nero*, did not attend to their military duties, leaving the army in disorder and without accomplishing any further conquest in Britain: Tac. *Agric.* 16,3–5. In comparison, good commanders shine for their constant care of soldier's discipline and their boldness, like Svetonius Paulinus, who crashed Boudicca's revolt, was much more active and pushed further the Roman power in the island (Tac. *Agric.* 14,3). Clearly, the good emperor Vespasianus appointed excellent governors (Petilius Cerialis and Iulius Frontinus: Tac. *Agric.* 17).

Hadrian was indeed presented by ancient sources as an emperor who restored *more militaribus* and reformed the habits of soldiers, introducing new tactics and offensive and defensive equipment<sup>97</sup>. Unfortunately, authors of the imperial age were unsurprisingly reluctant in giving technical details about imperial military policy, therefore the various steps of army's development to the high imperial age to late antiquity are not completely clear nowadays.

Apparently, Hadrian and his establishment consciously gave a high ideological value to drill exercise and war-games, consequently assuring to training and discipline a central role in the imperial propaganda. Lambaesis' famous inscription<sup>98</sup> is a clear evidence that supervising troop's training held a central place in the discourse of power during this period. Africa Proconsularis' provincial army gathered for the imperial visit and performed, in front of the *princeps*, a complex series of manoeuvre and exercises. Hadrian not only overlooked the war games but expressed his verdicts in favour of some particularly able troops, inspiring the soldiers and rewarding them for their skills.

Lambaesis did not represent an isolated case, even though is the better documented, and the practice has been linked to Hadrian's practice of visiting imperial provinces. Economic and military reasons have been proposed for explaining this unusual activity<sup>99</sup>, but this peculiar aspect of Hadrian's leadership had for sure an ideological value: the emperor was proposing a very specific image of the ruler, an image in which the *princeps* had to make personal experience of every part of his dominion and in which the emperor's will played

an active part even in the most remote Roman provinces<sup>100</sup>.

I wonder if such an intense activity of training was motivated by the more or less systematic adoption of new weaponry, but for the purpose of the present contribution it is noteworthy to highlight that Arrianus, as emperor's *legatus*, acted as his princeps used to.

Sources presented Hadrian intended to personally surveyed every garrisons and every troops deployed in the provinces, aiming to know even the smallest details regarding the provisions and soldiers' equipment<sup>101</sup>. Hadrian's behave was perfectly echoed by Arrianus: as *legatus*, the "New Xenophons" acted as an extension of emperor's will and, because of that, he observed the guidelines of imperial policy. The reports mentioned in the Periplus were official documents, not destined to the vast public, but Arrianus wanted to signal and highlight their presence to the vast public<sup>102</sup>. The technical details were probably considered worthy to be kept secret, but Arrianus wanted to let the reader know that, through that activity of the provincial governors and other officers, the emperor was informed of every details concerning even the most remote frontier, that the Augustus was carefully and seriously considering every threat, leading and commanding the army even while resting far from the front. The *Acies contra Alanos* and the *Taktikà*, the other two works that Arrianus wrote during his governorate over Cappadocia, reinforce the hypothesis that Arrianus was an active beacon of imperial propaganda<sup>103</sup>.

The *Taktikà* represents the most obvious comparison in this case. As for the Periplus, the seemingly bizar-

<sup>97</sup>SHA *Hadr.* X, 7. In the Historia Augusta it is stated that Hadrian was inspired not only by ancient examples of Scipio Aemilianus (Polyb. X, 20) and Metellus (Sall. *Jug.* 43–80), but also by Trajan, possibly implying the Hadrian revived a policy already inaugurated by his predecessor as it emerges also in the inscription of Lambaesis: *Contrari discursus non placent mihi nec [div]o Tra[iano qui mihi]* see Speidel 2006 field 26. Hadrian himself had a solid military formation, having be three times legionary tribune, officers of the imperial entourage during the first Dacian war and commander during the second Dacian war, *legatus* in Pannonia in 107–108 AD when he repelled an attack from the Iazyges, *legatus* in Syria and part of the imperial entourage during the Parthian War (CIL III,550 = ILS 308).

<sup>98</sup>CIL VIII, 2532 = CIL VIII, 18042 = ILS 2487 = ILS 9134 = ILS 9135. See Le Bohec 2003 and Speidel 2006.

<sup>99</sup>Le Bohec 2003 p. 10 for a brief discussion.

<sup>100</sup>Dio stated that Hadrian voyaged the empire not only to freely rule it without the imposing pression of the Roma's plebs, the senate and the praetorian guard, but also to inspect the army and maintain it at the highest standard: Dio, LXIX,5 and 9.

<sup>101</sup>Fronto *Princip. Histor.* 8–9; Dio LXIX, 9; SHA *Hadr.* XXVI, 2.

<sup>102</sup>Arr. *Per.* 6,2 and 10,1.

<sup>103</sup>A theoretical link between Hadrian's speech at Lambaesis, and Hadrian's ideology of power, and Arrianus' technical literature has been already pointed out by Le Bohec 2003 pp. 9–19.

re structure has immediately attracted the attention of modern scholarship. Once again, two nuclei can be clearly distinguished in the essay<sup>104</sup>. The first part of the essay, albeit relatively heterogeneous, deals with the different and various types of troops, of their equipment and of their role on the battlefield<sup>105</sup>, and finally presents manoeuvres for infantry troops organised as a Macedonian phalanx. The second part hosts the discussion about cavalry, that theoretically complete the ensemble of land forces<sup>106</sup>, takes in account drill exercises and spectacular war games in use among the Romans at the time of Arrianus<sup>107</sup>.

Arrianus' *Taktikà* and Aelian's work on tactics actually share a very similar structure<sup>108</sup> and those similarities have been variously explained, presuming that both essays were resumes of a same lost book or, as has been argued by Dain, Arrianus and Aelian both used a lost *technè* derived by the lost treaties of Posidonius<sup>109</sup>. Stadter proposed a more direct derivation: Posidonius work was read by Arrianus, by Aelian, and by Asclepiodotus too, without an anonymous' *technè* as intermediary<sup>110</sup>.

The purpose, or the nature itself, of the treaty has been variably debated by modern historians. Some scholars have argued in favour of a practical use<sup>111</sup>, while others have concluded that the exercises proposed by Arrianus were not practical nor intended to really prepare soldiers for war, and therefore the author described a sort of spectacular show of ability<sup>112</sup>.

Bosworth has considered this peculiar structure as the result of an erudite approach, a composition determined by the collection of materials from different sources<sup>113</sup>, while Schwartz detected a more technical and official intention at the origin of the essay, considering the part dedicated to Roman cavalry as an official report adjoined to a previous essay<sup>114</sup>. Davies presumed instead that the second part was added to Aelian's manual, that Arrianus presented in a shortened version, for the will of Hadrian himself<sup>115</sup>.

The abrupt juxtaposition that characterize *Taktikà*'s structures represents however a very interesting choice and it is probably possible to analyse it semantically and note solely aesthetically.

The Hellenic revival of Hadrian's age is well known<sup>116</sup>, and for sure the desire and taste for erudition is not entirely confined in the first part of the essay, but it can not be considered the only explanation for such a structure.

The Macedonian army gained a glorious reputation in antiquity for the stunning victories obtained at the time of Alexander the Great. Despite the direct confrontation against Roman legions saw the phalanx defeated, Hellenistic war-style still inspired imperial tacticians and it was generally respected by ancient authors. Arrianus, however, had previously dedicated to the emperor an essay on Roman infantry tactics, as he stated in the *Taktikà*, that is unfortunately lost nowadays<sup>117</sup>. The texts, dedicated to Roman infantry, Macedonian phalanx and Roman cavalry, clearly formed a sort of meaningful "tryptic". Since the first essay seems

to have been considered as a stand-alone book, only subsequently continued with a new work, the striking juxtaposition of a part devoted to the description old and renown Greek infantry tactics with a discussion on drill exercises performed by Roman cavalry was intended to implicitly institute a connection between an old and revered tradition and a military habit proposed and implemented by the emperor.<sup>118</sup>

Cavalry knew a development during Hadrian's reign indeed: first regiments of shock cavalry or heavy armoured knights started appearing at this age, possibly to find a solution to a new warfare's conditions, and were further developed by later emperors<sup>119</sup>.

Noteworthy, Arrianus stated in his introduction that he aimed in his treatise to introduce the art of war to a non-specialised public and, therefore, he tried to simplify the complex subject and to explain the more technical terms<sup>120</sup>. Arrianus' choice echoed Aelianus' one and could have been a relatively common *topos* in ancient literature dedicated to warfare<sup>121</sup>, but the peculiar structure of the treatise appears nevertheless very coherent: significantly, to explain the art of war to the vast public, Arrianus presented the illustrious Macedonia example and a practice that was probably associated to the ruling emperor. The juxtaposition implicitly stylised Hadrian as a re-founder of military practices, as an emperor whose reforms were already considered as fundamentals of the art.

It is not really a coincidence that such a strongly ideological and political message was written and published in occasion of the *vicennalia*, in 137<sup>122</sup>. Intended to please the emperor in his twentieth year of reign, the *Taktikà* is completely dominated by the cultural spirit of the time and celebrates the age of Hadrian with a style coherent with the imperial propaganda.

*Taktikà* war games had, however, perfect sense in the ideological and political horizon of Hadrian era: the comparison with Lambaesis' drill exercises is not only obvious, it has a sign that showing army's potential in official occasions was part of a planned policy<sup>123</sup> to strength and improve imperial image<sup>124</sup>.

There is, however, another noteworthy aspect that could be highlighted and that had a wide influence in later centuries. If the care for military discipline, generally with ethical implications, pertains to Roman military tradition, the attention paid to offensive and defensive weaponry appears to be more innovative.

In the conclusive chapter of *Taktikà*, Arrianus presented once again the image of Hadrian as an illuminated reformer inspired by the glorious past. In particular, the emperor is praised for having not only maintained Roman traditions in matter of cavalry exercises, but also for having encouraged the adoption of tactics successfully employed by the bravest enemies of Rome<sup>125</sup>.

<sup>104</sup>This peculiar partition was known to Arrianus himself and it was for sure intentional: Arr. *Tact.* 32,2–3

<sup>105</sup>Arr. *Tact.* 1–19; 20–32 about infantry manoeuvres.

<sup>106</sup>Arr. *Tact.* 2,1–3.

<sup>107</sup>Arr. *Tact.* 33–43.

<sup>108</sup>Köchly 1851.

<sup>109</sup>Dain 1946 pp.26–40.

<sup>110</sup>Stadter 1978 pp. 117–128.

<sup>111</sup>Bauer 1893 p. 297; Max Jahns, 1889 p. 99; Kromayer, Veith, 1928 p. 14; Kiechle pp. 108–09; Stadter 1978 p. 119.

<sup>112</sup>Wheeler pp. 357–359. Dixon, Southern 1992 p. 126.

<sup>113</sup>Bosworth 1972 p. 183 and. 1977 pp. 242–244.

<sup>114</sup>Scwhartz 1896 RE II col. 1233..

<sup>115</sup>Davies 1971 p. 754.

<sup>116</sup>The manuscript of Aelianus' *Taktikà* apparently addressed the work to Hadrian, despite in the preface Nerva is presented as the father of the emperor, but Köchly has already argued that the Aelianus originally dedicated the treaty to Trajan: Köchly 1851 pp. 21–22. Hadrian therefore presented himself in line with his predecessor tastes and cultural interests, highlighting and stressing the importance of continuity in the imperial establishment. In this regard, see König 2012 pp. 1–11.

<sup>117</sup>Arr. *Tact.* 32,3.

<sup>118</sup>Despite the fact that Arrianus actually wrote only two book, Byzantine scholars recognized three text, possibly presuming that the juxtaposition in the *Taktikà* was posthumous: Busetto 2013 p. 187 see also the reference to Andrist 2007 pp. 126–137.

<sup>119</sup>Arrian himself highlighted cavalry reforms introduced by Hadrian, who implemented traditional practices of various non-Roman peoples into the imperial army: Arr. *Tact.* 44,1–2. Probably, Hadrian introduced also heavy cavalry, in the Persian cataphract style, in the Roman Army: the *ala Gallorum et Pannoniorum* became *cataphractata* under his reign, becoming the very first unit of this epigraphically recorded (CIL XI, 5632 = ILS 2735). Arrianus started the organisation of the *numeri*, auxiliary units of infantry or cavalry that maintained traditional combat style of the various population that inhabited the Empire: see Ensslin 1938 pp. 565–570; Speidel 1975 pp. 202–231. This probably reflected an attempt to adapt faster to the new condition of warfare of the II century AD, a condition in which tactical flexibility was needed to face low intensity threat along different fronts and, in general, a warfare that was more dynamic than in the past. As Le Bohec already pointed out, the use of cavalry was situational and it never became systematic: imperial armies needed to adapt to various circumstances and various enemies, any systematic adoption of a standard strategic approach was destined to fail and should be therefore considered ahistorical. Le Bohec 2003 p. 16.

<sup>120</sup>Arr. *Tact.* 1,2.

<sup>121</sup>Vegetius, albeit addressing to the Emperor and praising him for his knowledge in military matters, adopts a very similar introduction, showing the intention to collect old practices and explaining them to the public: Veg. *De Re Mil. Praef.* I

<sup>122</sup>Arr. *Tact.* 44,3.

<sup>123</sup>The link with the Lambaesis' speech is particularly stunning, as already pointed out by Busetto p. 191.

<sup>124</sup>I share here the same conclusive hypothesis of Wheeler p. 364: the *Taktikà* celebrates the emperor highlighting his military reforms and military culture. See also Busetto p. 194.

<sup>125</sup>Arr. *Tact.* 44,1. The statement can be considered as a sort of *topos* in praising Roman military culture: Polyb. VI, 25.



Besides the more conservative approach, a new feeling or a new need for tactical innovations entered the cultural horizon of the imperial establishment.

In this respect, the *Acies contra Alanos* presents some interesting elements that deserve a further analysis. The essay has survived in a fragmentary state, with some important lacunas that complicate its reading<sup>126</sup>. As for the *Taktikà* and the *Periplus*, the erudite display of Hellenic culture<sup>127</sup> is perfectly harmonised with the cultural instances of Hadrian's era.

As already told, when the Alans, probably invited by Pharasmanes II of Iberia, moved south ravaging the kingdom of Albania, Arrianus marched to intercept them before the Sarmatians could enter the province. Arrianus' battle plan was heavily based on a massive use of artillery, bows and javelins: as he clearly explained, he intended to stop the disruptive charge of Alan's cavalry exploiting the superior "firepower" of his army<sup>128</sup>.

Even the heavy infantry, that hold the centre of the deployment, was arranged in an unusual way: legionaries of the first lines were supposed to use thrust spears to counter enemy's attack, while companions on rear ranks threw their javelin over their head<sup>129</sup>.

Light skirmishers, protected by hoplites of the allies, were deployed on the high ground to hurl their javelins and missiles from a favourable position<sup>130</sup>, while field-artillery, essential for Arrianus' plan, held the flanks to unleash a deadly barrage on the Sarmatian cavalry<sup>131</sup>.

Cavalry had only apparently a subsidiary role in Arrianus' tactics: deployed on the rear, imperial cavalry should have been ready to engage a fight against the light armoured Alan counterpart or, in case, pursue fleeing enemy units<sup>132</sup>.

It has been argued that Hadrian, fascinated by the Greek culture, tried to reinstate the phalangite battle order<sup>133</sup>, but it looks more likely that the *Acies contra Alanos* gave expression to a new sensibility instead of summoning again ancient tactical concepts.

Apparently, Arrianus suggested to exploit the imperial technological advantage to defeat the enemy without even engaging in a close quarter fight. Conceptually, Arrianus' plan show a great distance from the more traditional Roman mentality of pitched battle that stressed the ideological importance of a physical confrontation: stylising himself as the herald of a new sensibility, Arrianus proposed a completely different approach to tactics on the field<sup>134</sup>.

### Shaping the strategic culture: a conclusion

Warfare is discussed differently in the various levels of a society, with obviously more technical details and a deeper comprehension of the phenomenon among the specialists of war, but since a conflict involves every member of the society the image of warfare is culturally shaped by the whole community. However, this process is perpetual and diachronic because the community's past experiences are continuously re-interpreted in the light of more recent events. A strategic culture can be defined therefore as a dialogue between the past and the present in which every witness can be understood in its ties with previous and subsequent voices.

<sup>126</sup>The text was conserved in the *Codex Mediceo-Laurentianus* gr. 54,5 with other treatises on military tactics (Arrianus' *Tatkitkà* among them), the loss of a folio left the essay in a fragmentary state.

<sup>127</sup>Arrianus hid himself under the name "Xenophons" (Arr. *Alan.* 10 and 22) and alternated the standard Greek translations for Latin military terms with much lesser common choice. For instance, Arrianus defines the legion as a *φολαγγίς* (Arr. *Alan.* 4;5;6; 15; 19; 20; 21; 22; 23; 24; 26), and some technical terms (*σωματοφύλακες* for *pedites singulares* and *προτωστάτης* for the the first line soldiers – Arr. *Alan.* 16 and 22) are directly derived from Greek technical vocabulary. The Sarmatians are, furthermore, called "Σκύθαι" (Arr. *Alan.* 26; 31). In general, see Bosworth 1993 on Xenophons' influence over Arrianus.

<sup>128</sup>Arr. *Tact.* 25–26.

<sup>129</sup>Arr. *Tatk.* 15–18. In regards of the apparently unorthodox use of heavy legionary infantry see Colombo 2011 pp. 174–176 in particular.

<sup>130</sup>Arr. *Tact.* 14

<sup>131</sup>Arr. *Tact.* 19.

<sup>132</sup>Arr. *Tact.* 20–21 and 27–29.

<sup>133</sup>As proposed by Kiechle 1964 pp. 108–129 and more recently Goldsworthy 1996 pp. 146–147. *Contra* Le Bohec 2003 p. 16.

<sup>134</sup>Campbell 1987 pp. 26–27, with a particular attention for the offensive role of archers, slingers and field artillery.

Arrianus, among others many of them are probably unknown to modern historiography, gave his contribution to the generative process that shaped and defined Roman strategic culture.

As a true political and ideological manifesto, the tryptic formed by the text written during his governorship shows the emergence of a new sense to warfare, an approach in which only a constant training and a proper and up-to-date equipment could assure the victory on the field for the imperial army.

Arrianus is known as a philosopher by ancient authors, and we have no clue to presume that he was the mind behind military reforms of the II century AD. More realistically, the new Xenophons gave voice to that time of reforms in his literary production.

Hadrian himself was, however, not a reformer in a modern common sense: his attempt to re-shape the imperial army was deeply rooted in the glorious traditions of the past.

It is particularly noteworthy what appear to be a semantic redefinition of the concept of discipline. From a general and wider sense of proper behaviour during a war, such it appears to be described by Valerius Maximus in his collection of exempla, the idea appears to have been reformulated in order to comprehend training and skills. As already noted, the Romans knew the importance of a constant training since the age of the Republic, but Hadrian gave a more central role to this aspect.

Product of an evolution that lasted for centuries, Hadrian reforms merged in the literature of the late antiquity.

In the *Historia Augusta*, in which Hadrian himself is presented as a military reformer, the care for soldier's training and discipline is a distinctive trait for every competent general. Not only the "good" emperors are praised for having maintained the highest standard for the soldiers, achieving for this reason important victories, but also usurpers and pretenders particularly be-

loved by soldiers and renown for the military success shared this attitude<sup>135</sup>.

The case of Avidius Cassius is particularly striking. The usurper was indeed renown as a great military commander and the authors of the *Historia Augusta* mentioned that he used to inspect all the equipment once a week, and he organised also mass drill exercise each six days to maintain his troops always ready to war<sup>136</sup>.

Herodian can be considered the first author to have clearly recognised the necessity for Rome to maintain his technological superiority. The sudden, and relatively unexpected, difficulties suffered by the Empire on the eastern front were explained by Herodian pointing the presence among the Parthians of many Roman deserters: because of them, the Sasanids started developing and introducing Roman-style equipment, miming imperial organisation and tactics.

Beside drill exercises and discipline, later emperors and commanders are generally praised to have well equipped their army, pointing out that the worthy commander carefully organizes and controls the logistic chains up to weaponry production. In some cases, army were consciously organised to take advantage of enemies' flaws and therefore particular units were preferred in specific occasion: Herodian, for instance, argued that eastern archers and north African javelinmen posed a particularly threat for the lightly armoured German troops.

Even the idea of strengthening and developing part of the army, cavalry in particular, suddenly reappears in late antiquity in a surprising way. Costantius, who owned a particularly important victory to his corps of heavy cavalry, was praised for having be the first to have teach the Romans how to fight on horse and with the cataphract armour style<sup>137</sup>. Julian, who wrote the panegyric for Constantius, clearly exaggerated the merits of the emperor in an excessive way, since units of *cataphractarii* and *clibanarii* were already used by the Romans and cavalry in general, albeit without

<sup>135</sup>SHA *Alex. Sev.* 50: Alexander Severus' army is well equipped for the war against the Parthians; SHA *Gord. Tres.* 28 Timisitheus/Misitheus (*praefectus praetorii*) inspected soldiers' equipment; SHA *Aurel.* 7, 5–8 in regards of tribunes' duty; SHA *Prob.* 8.

<sup>136</sup>SHA *Avid. Cass.* 6.

<sup>137</sup>Julian *Orat.* I, 37 C.

being considered the most vital part of the army, was massively employed by the empire on the battlefield. It remains impressive, however, that a later emperor tried to address to himself the invention of a new way to fight on horseback: evidently, Constatius was following on a traditional discourse of the imperial power, a discourse in which a good emperor innovates and reform the army to triumph over his enemies. Particularly striking is also a quote from Kedrenos, a Byzantine historian of the XI century, who addressed to Gallienus the first introduction of cavalry troops in the imperial army<sup>138</sup>. Once again, the information is evidently absurd, but Kedrenos could have found a piece of Gallienus' propaganda: also in this case, a later emperor could have been inspired by Hadrian's style of command to take pride of military innovation, exaggerating of course his efforts to present himself to the public opinion.

Part of Arrianus' literary production can be therefore read diachronically as part of the formative process that shaped and characterised the Roman approach to warfare. Borrowed by contemporary social sciences and strategical analysis, the concepts of "mirroring" and "strategic culture" have proven to be useful methodological tools for the study of ancient history.

If in the case of mirroring the analysis is limited by the scarcity of available sources, albeit the theory remains valid to understand the interrelated behavioural pattern of many communities, the approach defined by the strategic culture appears to be much more promising.

Conceptualising the cultural approach of a community to warfare as the result of a long generative process allows a deeper and multi-disciplinary analysis of available sources, enriching our understanding of the past.

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<sup>138</sup>Cedrenus I, p. 454 ed. Bonn.



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# **A Roman heavy armoured cavalry (cataphracti and clibanarii) in the 4<sup>th</sup> century**

## **ABSTRACT**

Cavalry was an integral part of the Roman armed forces ever since the legendary beginnings of the city upon the Tiber River. The Romans created formations for the mounted troops, adapting them to their own needs and thus creating a distinctive and formidable force within their military.

During the Principate, cavalry units unarguably became an integral part of the Roman army, being primarily a component of the auxiliary forces. This period also saw a rise in the popularity of new cavalry units, resulting in the service as a horse back rider being prestigious and thus popular among citizens. The next step in the development of the cavalry was the creation of heavy armoured units during the second century, which, became more numerous only in the fourth century.

Written sources describe Roman heavy cavalry units as being mostly inefficient during actual battle. However, the participation of such units in military ceremonies aided in their depiction stirred by both ancient authors and contemporary specialists. This in turn results in different, often extremely opposing opinions concerning these riders.

**KEY WORDS: ROMAN ARMY, ROMAN CAVALRY, LATE ANTIQUITY**

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Warfare<sup>1</sup>, as almost every aspect of the social and political life of the Romans, was the result of many factors that occurred in their long history. In the case of the development of the armed forces, warfare was primarily a matter of expansion, first on the Apennine Peninsula, then across the entire Mediterranean basin, ending in a sphere of influence stretching north and east.

The Romans have been part of the Hellenic world since their beginnings. Although from the point of view of the Greeks and Macedonians, a small town founded on the Tiber River was located on its outskirts, its inhabitants profusely drew on the experience of other populations. In the case of the army, Romans applied the solutions known earlier, but adopted them to their own needs dictated not only by the military situation, but also by issues related to politics, economics or social life.

The centuries-long tradition of European historiography has seen the armed forces of the Romans primarily as an infantry. This image, mainly as a legacy of the Renaissance, has been preserved in the most famous book on the history of Rome, written by Edward Gibbon<sup>2</sup>.

However, the 20<sup>th</sup> century brought a change in the approach to the research on the warfare of the Romans. The necessity of research on the development of cavalry in parallel with investigations concerning infantry was postulated in the first decades of this century by Hans Delbrück<sup>3</sup>.

Research on the Roman horseback riders, mainly from the Principal period, took place at the end of the last century when monographs of Marcus Junkelman<sup>4</sup> as

well as Karen Dixon and Pat Southern<sup>5</sup> were published. Interest in this subject increased in the next century when more specialized studies on the Roman cavalry were made<sup>6</sup>. What all the works have in common is that they emphasize the significance of cavalry in the Roman army and its appreciation as a valuable element of armed forces.

The next step was taken in the 21<sup>st</sup> century with the growing popularity of late antiquity research. During this time, several monographs were written on mounted units in a narrower<sup>7</sup> or wider period<sup>8</sup> as well as a monumental attempt of a comprehensive study of Roman cavalry history<sup>9</sup>. Those books are representative of numerous articles, and continue the tendency of showing cavalry as a valuable element of the Roman army<sup>10</sup>.

Therefore, the issues of the mounted units of the Principate are quite well recognized, particularly in terms of tactics, armament or changes in structure and hierarchy. Studies undertaken by numerous specialists have undoubtedly shown that the Roman cavalry met the conditions and expectations of a battlefield. No less important in the development of these formations was the ever-increasing popularity of these units among the citizens, and thus their prestige and the benefits associated with them<sup>11</sup>.

There is much more unknown concerning heavy cavalry units. Their characteristic feature was a developed defensive weaponry, which was to enable them to withstand a frontal clash with the enemy and could cover both the rider and the horse. The beginnings of a new formation are linked with Moesia since it is where the units forming the first such a kind of unit were stationed<sup>12</sup>. In the first two centuries AD, there is only one unit

of the heavy cavalry - *ala I Gallorum et Pannoniorum catafractata* – undoubtedly confirmed in the sources.<sup>13</sup>. It was probably formed on the basis of two pre-existing units (*ala I Gallorum Flaviana* and *ala I Pannoniorum*).<sup>14</sup>. A diploma from the area around Domasnea dating from 159-160 suggests the existence of another heavy cavalry unit - *ala (II) Gallorum et Pannoniorum catafractaria*, but its damage in key fragments excludes certain identification<sup>15</sup>. Additionally, assuming that *ala nova firma catafractaria* is not identified with *ala I Gallorum et Pannoniorum catafractata*<sup>16</sup> then the number of this type of cavalry units increases to three<sup>17</sup>. However, this unit is epigraphically certified mainly in the 3<sup>rd</sup> century<sup>18</sup>, therefore in the second century can be confidently and indisputably confirmed the existence of only one detachment of this type.

In the first two centuries AD, the creation of a new unit of heavy riders cannot be considered as a significant element of the development of the cavalry in the structure of the Roman army, let alone its symbol. The unit itself as well as its combatants, due to the lack of sources, are shrouded in mystery. It is not known where the garrison *ala I Gallorum et Pannoniorum catafractata* was, nor how often it was used at war.

The next stage of development took place in the middle of the 3<sup>rd</sup> century and was with one of the myths of contemporary historiography. This century is very often described in the literature as a time of crisis. It did not touch all the aspects of Empire life, but it had a huge impact on internal politics and the military situation.

Response to this dangerous situation was to increase the number of cavalry units, which according to many researchers was Gallienus' merit. The Emperor was supposed to be an author of a reform, which resulted in the creation of new mounted troops. They were later included in his *comitatus* and were commanded by Aureolus. Together with other armies they were to be stationed mainly near Mediolanum. The first to describe this „reform” was E. Ritterling<sup>19</sup>. He based his considerations first of all on the account of the Byzantine author Georgius Cedrenus from the 10<sup>th</sup> century<sup>20</sup>. Many later researchers, often questioning the very word “reform” agree with this thesis. Its basic assumptions were summarized and presented by M.P. Speidel<sup>21</sup>.

According to him the main reason of the activities were numerous usurpations and wars and at the same time the need of quick dislocation of the army around the Empire<sup>22</sup>. In order to ensure that Gallienus was to form numerous mounted units and gather them under his command or under the command of his trusted men.

Grouping a large number of horsemen in one place would require a considerable amount of resources and powerful logistics, and would therefore generate enormous costs. Near modern Milan, there are no traces of the necessary infrastructure to maintain such a contingent. This city has been very expansive (and still is) over the centuries and perhaps all traces of the presence of a large number of riders from Gallienus' *comitatus* have already been destroyed. Archaeology, on the other hand, is a science in which the growth of sources is almost geometric and, with the intensification of re-

<sup>1</sup>The research was financed from the means of the National Science Center granted as part of the post-doc grant financing, decision number DEC-2015/16/S/HS3/00240.

<sup>2</sup>Gibbon 1776–1789.

<sup>3</sup>Delbrück 1920, 494.

<sup>4</sup>Junkelman 2008. First published in 1991-1993.

<sup>5</sup>Dixon, Southern 1992.

<sup>6</sup>Biancardi 2004.

<sup>7</sup>Letki 2014.

<sup>8</sup>Narloch 2014.

<sup>9</sup>Petitjean 2017.

<sup>10</sup>The former two publications can be characterised by a more careful approach than the latter ones

<sup>11</sup>On this subject e.g. Narloch 2018.

<sup>12</sup>W. Wagner 1938, 38; Kraft 1951, 27–32; Beneš 1970, 163; Roxan, Eck 1997, 193–203. It is also proved by inscriptions from 134 and 157/8: CIL, XVI, 78; AE, 1961, 128.

<sup>13</sup>CIL, XI 5632 = ILS, 2735 –inscription commemorating one of its commanders - Marcus Maenius Agrippa. Soldiers from this unit did not leave many epigraphic certificates. More about prosopography concerning the unit: Acrudoae 2014, 268–276.

<sup>14</sup>Mielczarek 1993, 74.

<sup>15</sup>CIL XVI, 110.

<sup>16</sup>As one and the same unit it was identified by e.g. Spaul 1994, 82–84.

<sup>17</sup>As two separate unit it was identified by Matei-Popescu 2010, 186.

18 E.g., CIL XIII, 7323; CIL III, 99

<sup>19</sup>On so-called Gallienus' Reform see: Ritterling 1903, 345–349; Alföldy 1927, 197–212; Hoffmann 1969, 247–265; de Blois 1976, 26–30; Simon 1980, 435–452; Carrié 1993, 102–103; Nicasie 1998, 35–38; Le Bohec 2009, 236–238.

<sup>20</sup>Cedr., 454, 6–8; In Roman sources nothing is mentioned about that.

<sup>21</sup>M. P. Speidel 2008, 673–684.

<sup>22</sup>This is a wrong assumption. During short marches cavalry could easily distance the infantry, but when the distance to be covered took more than 4 days the two formations could do the same way in a comparative time. If the march lasted more than a week the infantry could cover even longer distance, see: Junkelman 2008, 84; The difference was even better for the infantry when they had to walk in severe conditions. Cavalry advantage was the mobility at the battlefield. Army with a big cavalry contingent used much more resources and required complex logistical backup.



search, perhaps some remains of such infrastructure will be discovered, but so far they simply do not exist<sup>23</sup>.

It is not known either in which way the cavalry units were formed in the 3<sup>rd</sup> century. This process, however, is parallel to the disappearance of troops that were previously part of the auxiliary forces formed before the Severan epoch. In this regard the studies published in 1976 by Margaret Roxan<sup>24</sup> and often quoted by later researchers.

By comparing the names and the places of stationing of the second century auxiliary units<sup>25</sup> with the information written in the *Notitia Dignitatum*, she calculated that 17 to 23<sup>26</sup> percent of the auxiliaries had survived to the time of drafting this document. The next conclusion of this calculation is the greater "survival" of horse units, which can be explained by the greater importance of cavalry in late antiquity<sup>27</sup>. Such a situation may well have been caused by higher costs, effort and involvement in the creation of a mounted units, which was more difficult to replace or create than if necessary, to replenish the existing structures.

The statistics, however, are based on a number of uncertainties, including the two most important ones. The number of auxiliary units in the 2<sup>nd</sup> century and the reliability of *Notitia Dignitatum*. Therefore, they should be treated only as a guideline, as they show a certain tendency. A more interesting and potentially more significant result of these studies is the geographical distribution of the units, which have probably preserved their traditions, or rather their titles.

The vast majority of the units created during the Principate, which probably survived until late antiquity, were

stationed in territories far from great politics, particularly in terms of the internal affairs of the empire. Their garrisons according to *Notitia Dignitatum* were located mainly in the East, North Africa, Britain and Spain<sup>28</sup>.

Therefore, the creation of new cavalry units in the 3<sup>rd</sup> century, especially those included in the *comitatus* can be connected with changes in status and raising the rank of previously existing auxiliary forces. Which, in turn, avoid the interpretation of their extinction or destruction in a difficult period for the empire<sup>29</sup>.

This trend is also well illustrated by the issue of heavy armoured *cataphracti* troops, which were to be the determinant and symbol of the reorganization of the mounted riders. The last presence of the unit *ala* in the *comitatus*, confirmed by sources, refers to *ala nova firma catafractaria*. Later, without exception, they were replaced by troops with a different nomenclature<sup>30</sup>.

Nevertheless, heavy units were still present in the *comitatus* of rulers, which is confirmed, unfortunately, by quite a few inscriptions<sup>31</sup> and narrative sources<sup>32</sup>. A significant increase in this type of cavalry is documented by *Notitia Dignitatum*<sup>33</sup>. The nature of this source, which is only a list of offices of the empire, does not allow to pinpoint the period when and thus the initiator of the increase in their number in the Roman army. Still, some of the sources<sup>34</sup> suggest it. It could have been the result of Constance II's activity, which created many such units as a counterbalance to the Persian cavalry. However, the lack of precise information about the mechanisms of creation of these units does not allow to formulate too far-reaching hypotheses. The distinguishing feature of the Later Roman heavy armoured units is the appearance of a new term in

their names - *clibanarii*. Researchers disagree on the meaning of the two terms as well as their mutual relation. M.P. Speidel believes that the term "*catafractarii*"<sup>35</sup> meant every type of heavy armoured cavalry, including *clibanarii*. *Clibanarii*, on the other hand, was supposed to mean a more specialized, eastern type of mounted forces, in which horses were also covered with armour<sup>36</sup>. However, M. Mielczarek claims that these names were used interchangeably and depended on the weaponry and tasks to be performed by a given soldier<sup>37</sup>.

The opinions of these two researchers represent the two main directions of the debate regarding the meaning of these terms. M. Mielczarek's proposal, although attractive is extremely difficult to prove, therefore it should be assumed that these terms may have meant the origin of the patterns of cavalry units or their weapons rather than the tactics they used or the function they performed during the battle.

Contrary to the sources from the Principate, the later authors described the actions of the heavily armored units of the Roman cavalry in combat, eg. in the battle of August Taurinorum fought between Maxentius and Constantine<sup>38</sup> in 312, in the clash of Murse between Constantius II and Magnentius<sup>39</sup> in 351 or the final part of Julian's campaign against Alemanni, which was the battle at Argentoratum<sup>40</sup> in 357.

The accounts of late Roman authors, however, are not favorable to heavy armoured riders. In most cases, they are descriptions of their failures, wrong decisions or even insubordination. Ammianus Marcellinus described their unsuccessful charge and shameful chaotic retreat during the battle of Argentoratum, as a result of

which their commander was first wounded and then died<sup>41</sup>. The price for that glaring lack of ineffectiveness was their later humiliation by Julian<sup>42</sup>.

Heavy cavalymen ignited the imagination not only of antiquity authors but also of common citizens of the Empire. That is why they often took part in military ceremonies<sup>43</sup>. They were obviously attracted by their spectacular armament as well as proximity of the emperors' court in case of *Scholae Palatinae* units. The most famous description of such a ceremony was given by Ammianus Marcellinus describing the passage of Constance II through Rome in 357. He emphasized their shining armour covering the entire body, which made them look almost as statues made by Praxiteles<sup>44</sup>.

This kind of dissonance in accounts concerning warfare activities, which often ended up in failure, as well as participation in ceremonies in the presence of the highest placed individuals in the empire or the emperor himself was the cause of quite different opinions on the usefulness of this type of cavalry within the structures of the Roman army.

They oscillate from acknowledging these units as the elite of the Roman comprising the best soldiers<sup>45</sup>, through emphasizing their value<sup>46</sup> and ending at doubting their fighting skills<sup>47</sup>.

The privileged position of the cavalry in the Roman army and the whole Empire might not have resulted from their predominance on the battlefield. These kind of armed forces underwent a long way starting with formed *ad hoc* units based on political arrangements with individual tribes, which at the end of the campaign were being disbanded through a very important part of

<sup>23</sup>About cavalry units in the context of so-called Gallienus' reform see e.g. Narloch 2014, 40–52; Petitjean 2017, 42–44.

<sup>24</sup>Roxan 1976, 59–79.

<sup>25</sup>The basis for her calculation is the number of number of *alae* (100) and *cohortes* (310) suggested by Birley 1966. According to more recent research the proportions would be different e.g. Spaul 1994 identified 86 of such units, whereas in Spaul 2000, he found 302 *cohortes*.

<sup>26</sup>This discrepancy is due to the inclusion of less and less probable cases in the calculations.

<sup>27</sup>Roxan 1976, 61.

<sup>28</sup>Roxan 1976, tab. I-III. Geographical distribution is more or less the same for each of the three lists.

<sup>29</sup>This interpretation is quite popular In newer studies see: Rocco 2012, 183–184; Narloch 2014, 54–55; Petitjean 2017, 13–20.

<sup>30</sup>Scheuerbrandt 2006; Petitjean 2017, 26.

<sup>31</sup>*AE*, 1984, 825; *CIL*, V, 6784; *AE*, 1919, 18.

<sup>32</sup>*Lact., De mort. pers.*, 40, 5.

<sup>33</sup>*Not. Dig., Or.*, 5, 29; 5, 34; 5, 40; 6, 32; 6, 35; 6, 36; 6, 40; 7, 25; 7, 31; 7, 32; 7, 34; 11, 8; 31; 52; 39, 16; *Occ.*, 6, 67; 7, 185; 7, 200; 40, 21.

<sup>34</sup>*Iul., Or.*, I, 21C; 37C-D; *Lib., Or.*, XVIII, 206.

<sup>35</sup>Ethymology of this word is unarguably Greek. The word *cataphratus* comes from joining two words κατά (totally, in total), φρακτός (protected, closed from each side), see Nikonorov 1998.

<sup>36</sup>Speidel 1984.

<sup>37</sup>Mielczarek 1993, 41–50.

<sup>38</sup>*Pan. Lat.*, X (IV), 22, 4–24, 7.

<sup>39</sup>*Iul., Or.*, I, 36D; 37C–38A; *Or.*, II, 57C, 60A.

<sup>40</sup>*Amm. Marc.*, XVI, 12, 22.

<sup>41</sup>Not much more is known about the man, see: Letki 2015.

<sup>42</sup>*Lib., Or.*, XVIII, 66.

<sup>43</sup>*HA, Aur.*, 24, 4; *Claud., In Ruf.*, 2, 352–359; *Claud., VI cos.*, 570–571.

<sup>44</sup>*Amm. Marc.*, XVI, 10, 8.

<sup>45</sup>Speidel 1984; Mielczarek 1993, 74.

<sup>46</sup>Petitjean 2017, 13–20.

<sup>47</sup>Vigneron 1968, 312; Harl 1996; Richardot 1998, 284–286.

auxiliary forces created by Octavian August to a privileged position in the forces of Constantine the Great, confirmed by the imperial constitutions or the list of units in the *Notitia Dignitatum*. The social background of the changes, which elevated the mounted units to the tops of the military hierarchy, was extremely important. Already in the first two centuries of our era, this type of service was increasingly chosen by citizens. It was connected not only with higher wages than in case of infantry, but it also had better career prospects. In the 3<sup>rd</sup> century, riders or people connected with cavalry, enjoyed the highest positions in the army and administration, which would lead to the increase of significance and prestige of this type of service in the 4<sup>th</sup> century<sup>48</sup>. It was also seen in the used armament. In case of all the riders those could be late Roman ridge helmets, based on the ones worn by the emperors in the 4<sup>th</sup> century<sup>49</sup>.

The often-mentioned weakness of the Roman heavy armoured cavalry did not have to result from only poor training or low morale of the soldiers. Despite the constant development of cavalry forces within the structures of the Roman army dating back to the republic, *cataphracti* and *clibanarii* were relatively new components within. According to *Notitia Dignitatum*, the number of such troops increased significantly only in the fourth century. The nature of this document and the lack of other sources does not allow to indicate any stages of this process.

Heavy cavalry units, particularly *cataphracti* and *clibanarii* were used mostly as tools served to break enemy's formation and make them retreat, but also to break their spirit. However, attack on the prepared and positioned enemy could end up in failure<sup>50</sup>. This was why Vegetius recommended using heavy riders against dispersed infantry or against the main enemy lines, but in cooperation with their own footmen<sup>51</sup>. The construction of the Roman saddle, despite the lack of stirrups, made it possible to charge effectively without fear of being thrown off the horse<sup>52</sup>. Additionally, their offen-

sive and protective armament allowed them to carry it out effectively. Roman riders therefore had all the necessary tools needed to conduct an effective fight.

The reason for many failures of the charge of the heavy-armed Roman cavalry could have been the schematic nature of tactical solutions applied by Roman commanders and thus facilitating the enemies' preparation of appropriate defense and leading the counterattack. It is perfectly illustrated by the Argentoratum battle, where Barbarian warriors had set up an ambush hiding infantry among their cavalry.

Following the usual patterns was what should be avoided, which was expressed in the 6<sup>th</sup> century *Strategikon*, where the commander was recommended, or even expected to show some improvisation<sup>53</sup> in order to mislead the enemy and at the same time to create for their own soldiers the conditions that might increase the chances of success.

The *Strategikon* also contains instructions for commanders regarding the use of cavalry in the battle. Above all, caution was recommended in the involvement of a large number of riders and the efficiency of compact formation of infantry in the fight against cavalry was emphasized. The success of the frontal charge depended primarily on the preparation and experience of both formations. This type of clash was very brutal and did not last too long. If the cavalry managed to break the enemy's orders at once, then there was usually a pursuit and, consequently, his annihilation. And if the infantry managed to withstand the first attack and forced the riders to slow down or stop, in close combat, for a short distance, gained a huge advantage. Therefore, most of this type of maneuver should be carried out when the enemy units were no longer able to keep the formation or were attacked from the flank or behind<sup>54</sup>.

To sum up, although the cavalry had a long tradition in Roman army structure, the heavy cavalry units *cata-*

*phracti* and *clibanarii* were created relatively late. The first sources confirming the existence of such a unit date back to the beginning of the 2<sup>nd</sup> century. During the next century, despite creating many new cavalry troops, probably formed during the Principate, heavy cavalry riders did not make a significant percentage of the whole Roman mounted forces. Therefore, it is very difficult to recognize them as a sign or symbol of changes in Roman military. More units of this type were created in the 4<sup>th</sup> century, however, it is extremely difficult to indicate the stages and the course of this process on the basis of the surviving sources.

Soldiers serving in these units due to their high rank of service and impressive armament often took part in military ceremonies. Antic authors often presented them as an extremely effective and fearsome tool of war, which especially in panegyrics can only be a certain rhetorical figure<sup>55</sup>. Such an image interferes with the description of their unsuccessful maneuvers in real battles, which very often were based mainly on a charge against the enemy.

The failures of these riders could have possibly resulted from low morale, inappropriate training, or the use of weaponry. The reason for this in the 4<sup>th</sup> century may have been the military doctrine applied by the Romans, which did not favor the use of all the advantages of this relatively new kind of cavalry in the structures of the Roman army. This was also a conservative tactic applied by the commanders, which made it easier for the enemy to predict the maneuvers used.

Still, Roman heavy cavalry riders enjoyed their glory in the later centuries and became the foundations of this type of legions used by the Byzantines. In the 5<sup>th</sup> and 6 century as a result of using suitable tactical solutions and cooperation with horse archers they became incredibly dangerous opponents. This cooperation contributed to victory in the battle of Mursa in 351<sup>56</sup>, which only proves that in the right hands they could have been a remarkably efficient military tool.

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<sup>48</sup>See more, Narloch 2019.

<sup>49</sup>Narloch 2020.

<sup>50</sup>On unsuccessful charges of *cataphracti*, see Pan. Lat., IV, 10, 24; Amm. Marc., XVI, 12, 37–9, XXV, 1, 7–9; Procop., *Bell. Goth.*, I, 18, 37–48; V, 29, 35–40; Vegetius warned against traps set for unreasonable riders by the infantry, III, 23.

<sup>51</sup>Veg., III, 23

<sup>52</sup>Hyland 1990, 131–134; Junkelmann 2008, 24–74; Mielczarek 1993, 82.

<sup>53</sup>Strat., III, 15, IX, 4

<sup>54</sup>Veg., III, 23.

<sup>55</sup>Np. Pan. Lat., X (IV), 22, 4

<sup>56</sup>Jul., *Or.*, I, 35D-38A; *Or.*, II, 57B-58A; 59C-60B; Zos., II, 45-53; Zon., XIII, 8.



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## **Legionary Arsenal from the Period of the Principate in the Light of the Studies of Novae (Moesia Inferior)\***

### **ABSTRACT**

The subject matter of arsenals (Lat. “armamentaria”) is still among the least investigated aspects of Roman military camps and cities. In most cases, their locations have been established based on the available few written and epigraphic sources as well as on the occurrence of weapons and military gear.

The past Polish-Bulgarian archaeological and interdisciplinary studies at the site of the legionary camp and the Roman and Early Byzantine town of Novae have made it possible to identify and analyze a number of elements constituting its urban and architectural uniqueness. Polish and Bulgarian missions have exposed a significant section of the *latera praetorii*. The *via quintana* and the *via principalis* divided the camp into three districts: the *latera praetorii*, the *praetentura* and the *retentura*. In the *latera* were the *arae*, the *auguratorium*, the *tribunal*, *horrea* or *carnarea*, as well as the *armamentarium*.

Studies carried out in the course of previous science and research projects related to uncovering the large legionary baths and the bishopric complex in Novae led to the discovery of a monumental complex, the only one of its kind in this part of the Roman Empire, which represents several architectural and construction stages. The team found remains of five monumental pillars, 5.20 × 1.40 m each. Their uniqueness stems from the fact that they were built from rectangular rusticated limestone blocks — a method previously found in Novae only in defensive walls, towers and gateways. Passageways between the pillars are 5.50–5.70 m wide. During the successive stages of the structure’s use, it underwent substantial modifications, which improved its functioning and characteristics. Thus, the passageways between the pillars were neatly replaced with walls and at least eight new pillars were built of stone and brick, of the size of 1.80 × 1.60 m, laid out in two rows of four. The research team has proposed the hypothesis that in the second local stage, the arsenal operated in conjunction with the *fabricae* which produced and repaired artillery for the *Legio I Italica*.

Previous results of long-lasting Polish-Bulgarian archaeological studies in Novae clearly indicate that the main representative structures of the legionary camp were located within the *latera praetorii* to the west of the *principia* in the direction of the *porta principalis*. The fact that an arsenal used to be located in this place, which in the second phase of its operation was connected with the *fabricae*, shows how unique this complex was, situated

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\*The paper was based on the results of archaeological research in Novae conducted up to and including 2018.

beside three other crucial complexes: the legionary bath to the east, the alleged praetorium to the south and the complex of the barracks, conceivably occupied by a Roman ala, to the west.

**KEYWORDS: ARSENAL, ARMAMENTARIUM, ARCHITECTURE, ROMAN CAMP, NOVAE, LEGIO I ITALICA, PRINCIPATE, MOESIA INFERIOR**

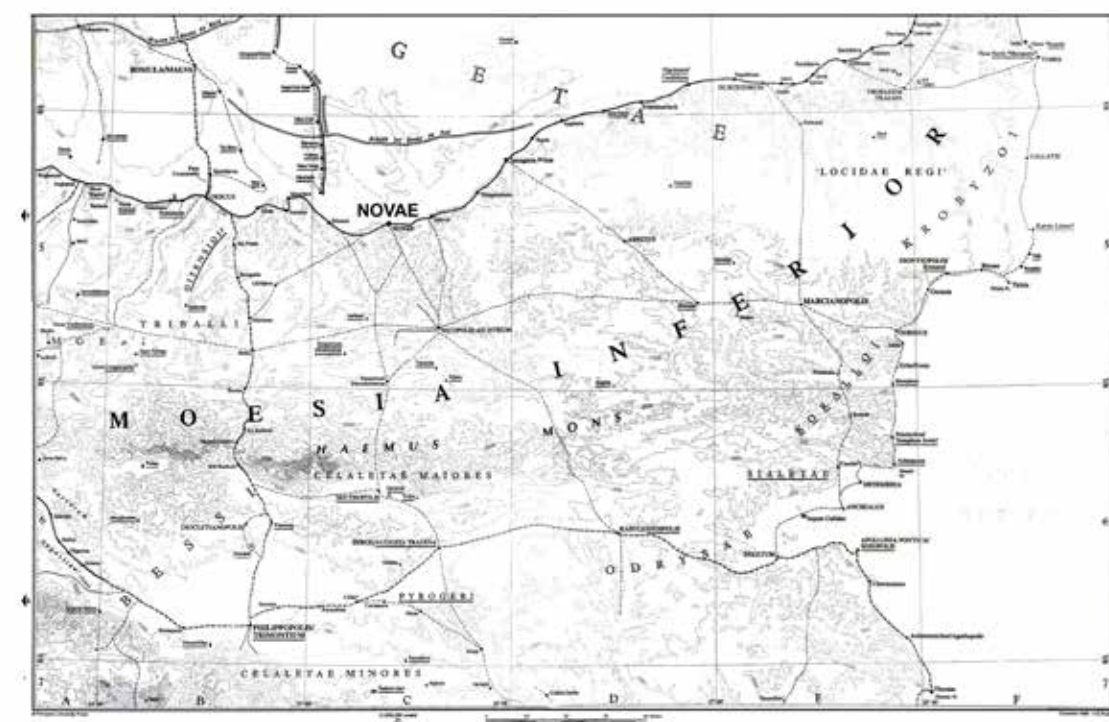
Arsenals (Lat. “*armamentaria*”) are still among the least investigated aspects of Roman military camps and cities. In most cases, their locations have been established based on the available few written<sup>1</sup> and epigraphic (Klenina 2022, 41–42)<sup>2</sup> sources as well as on the occurrence of weapons and military gear, and very seldom have the properties of specific structures been studied. The epigraphic sources merely suggest that arsenals were located directly at the *principia*.<sup>3</sup> At the legionary fortress of Lambaesis (North Africa) the military stores were uncovered in the rooms adjoining the courtyard of the *principia*.<sup>4</sup> Alters dedicated by an armourer (*custos armorum*) and the man in charge of the armoury (*curator operis armamentarii*) were found in one of the rooms in *principia* of Lambaesis.<sup>5</sup> Finds of weapons and military equipment from several legionary headquarters buildings add weight to the conclusion that the armouries were generally housed there.

Not every *principia* possessed an arsenal. Often the arms have been housed in a separate building. An inscription mentioning an architect in relation to an arsenal confirms this.<sup>6</sup> Inscription from Leiden-Roomburg in Lower Germany commemorates the rebuilding solely of an *armamentarium*, which implies that it was an independent structure.<sup>7</sup> So far, it has not been possible to find any descriptions of the appearance of a building where the Roman heavy weapons and artillery were kept. A. Johnson considers that separate

*armamentaria* were long unpartitioned halls or range of small rooms often flanked the courtyard on its two longer sides.<sup>8</sup>

The Roman legionary camp Novae, one of the most important strongholds on the border of the Empire has been among the most well studied objects of this type in the area of the Lower Danube (Fig. 1). During the long-time Polish-Bulgarian archaeological and interdisciplinary studies beginning in 1960 at the site of the legionary camp and the Roman and Early Byzantine town of Novae have made it possible to identify and analyze a number of elements constituting its urban and architectural uniqueness. A significant section of the *latera praetorii* in Novae have been exposed. The monumental complexes, such as the *principia*, the main western gateway or the large legionary *thermae* were identified and already analyzed.<sup>9</sup> Previous results of long-lasting Polish-Bulgarian archaeological studies in Novae clearly indicate that the main representative structures of the legionary camp were located within the *latera praetorii* to the west of the *principia* in the direction of the *porta principalis sinistra*. The legionary barracks had been uncovered to the east of the *principia*, towards the *porta principalis destra*.<sup>10</sup>

The question on the presence of a legionary arsenal and its location remains open. The only evidence indicating the presence of *custos armorum* in the camp is the altar



1



2

Fig. 1 - 1 – map of the Moesia Inferior (after Talbert 2000), 2 – map of the Novae (created by E. Klenina on the base of the image©2019Digital Globe, photo 3.29.2018)

<sup>1</sup>Tacit. Hist. I.38.80; Plut. Brut. 25; Liv. XXXI. 23, 7. XLII. 12, 10

<sup>2</sup>CIL VI 2725, CIL VI 999, CIL VII 446, CIL VIII 16 533, CIL XIII 8824

<sup>3</sup>CIL VII 446

<sup>4</sup>Domaszewski 1902; Rakob, Storz 1974, 253–280

<sup>5</sup>Johnson 1983, 108

<sup>6</sup>CIL VI 2725

<sup>7</sup>CIL XIII 8824

<sup>8</sup>Johnson 1983, 108

<sup>9</sup>Parnicki-Pudółko 1990, 18–36; Sarnowski 1991, 303–307; Biernacki 2016

<sup>10</sup>Dyczek 2016, 536



with a dedicatory inscription found in the south-eastern part of the camp (hectare XXXIX, square 50):

Marti[et]  
Genio a[r]  
mamen[t(arii)]  
[V]al(erius?) Cresc(ens)  
c(ustos) a(rmorum).<sup>11</sup>

The altar was found in the masonry of the southern wall of a late antique building, on *via sagularis*. This circumstance makes it difficult to determine the place of its initial location. In the Roman army, the *custos armorum* was a specialist matter expert who was responsible for keeping, guarding, and repairing the military equipment and weapons of the legionnaires of his unit so that it was always ready for battle.<sup>12</sup> He could make an altar in the immediate vicinity of the location of his unit, also near an arsenal or a staff building. No epigraphic data on the operation of *curator operis armamentarii* at the Novae legion camp have been available yet.

In order to fully comprehend and analyze the building structure of the camp and the town of Novae, there is still one key area that needs to be studied. It is located in the south-western part of the town, between the defensive walls to the west, the legionary baths to the east, the *via principalis* to the north and the *via quintana* to the south, covering the area of a single insula, 45 × 110 m (about 5000 m<sup>2</sup>), and constituting a part of the *latera praetorii*. According to Pseudo-Hyginus, in the *latera* were the *arae*, the *auguratorium*, the tribunal, *horrea* or *carnarea*, as well as the *armamentarium*. Studies carried out in the course of previous science and research projects related to uncovering the large legionary baths and the bishopric complex in Novae led to the discovery of a monumental complex, the only one of its kind in this part of the Roman Empire, which represents several architectural and construction stages. (Fig. 2) The work to be intended to capture the layout of the baths eventually led to uncovering several elements of the alleged arsenal in 1997-2000.<sup>13</sup> The discovered elements were originally interpreted as part of the aqueduct. (Fig. 5/1-2) However, after the

discovery of a parallel wall consisting of similar pillars, this suggestion had to be abandoned. The subsequent studies showed that water for the baths was supplied mainly through clay and lead water pipelines.

The arsenal located 35 m from *via principalis* consisted of two rectangular buildings, 8.45 m wide and 42.6 m long each, arranged along the long sides of the rectangular courtyard (20 m × 42.6 m). (Figs. 2-4) The building was about 45 × 45 m, thus covering an area of over 2000 m<sup>2</sup>. Their uniqueness stems from the fact that they were built from rectangular rusticated limestone blocks — a method previously found in Novae only in defensive walls, towers and gateways. It was possible to enter the warehouses through wide passages arranged between the pillars on the side of vast courtyard.<sup>14</sup> The distances between the pillars and half-pillars are similar, amounting to between 5.87 m and 5.91 m.

The recent studies have been concentrated in the northern part of the arsenal. The southern wall of the building formed by three rectangular pillars and two half-pillars finished off this arrangement at the eastern and western ends of the building has been uncovered almost in full. The eastern half-pillar is 2.08 m long and 1.46 m wide; it has been preserved up to the height of 0.64-1.56 m. (Fig. 5/4) It is made of classically rusticated stone blocks, laid in irregular stripes. The dimensions of the blocks are 0.62 x 0.50-0.95 x 0.46 x 0.75 m, and they have been carefully fitted to one another. The first rectangular pillar, 5.35 m long (along the west-east axis) and 1.46 m wide, was discovered in 1997, and the second one, 5.33 m long and 1.47 m wide, in 1998. (Fig. 5/1-2) The third pillar was exposed in 2016. (Fig. 5/7) It was uncovered for 3.38 m in length and 1.5 m in width. The western half-pillars were discovered in the same time. It is 0.80 m long and 1.46 m wide; it has been preserved up to the height of 0.20 m. All pillars have profiled foundation offsets on their longer sides. Their ends at the shorter sides had also the function of fender beams, guarding the pillars from the traffic of vehicles near and among them.

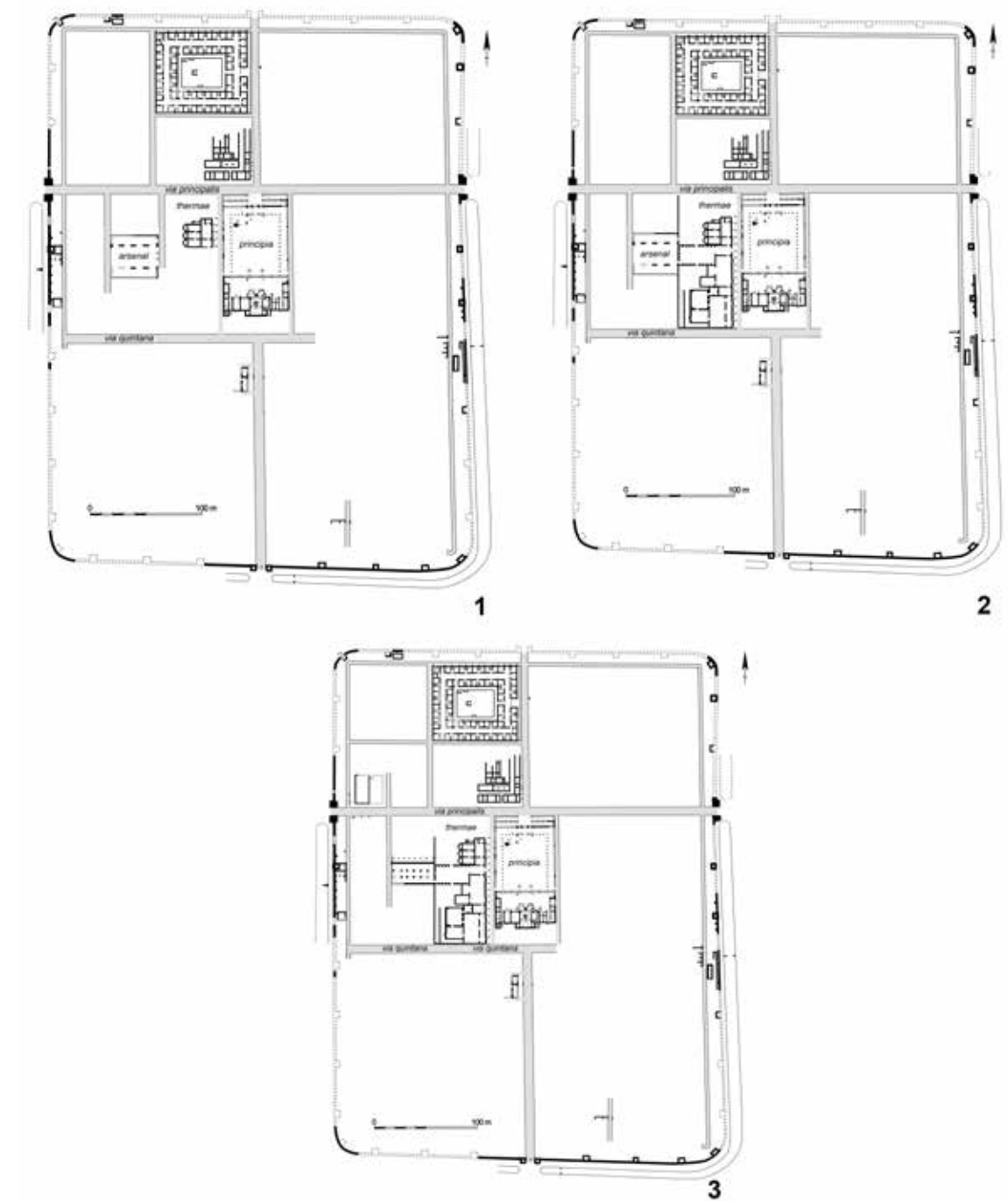


Fig. 2 - Plan of the legionary fortress Novae: 1 – Phase I, the first half of the 2<sup>nd</sup> century AD; 2 – Phase II, the second half of the 2<sup>nd</sup> – 3<sup>rd</sup> century AD; Phase III, 4<sup>th</sup> century AD (created by E. Klenina based on outline plan by J. Kaniszewski)

The southern wall of the north part of the arsenal had a fairly solid foundation uncovered for as deep as 2.60 m (for safety reasons, the studies have been completed at this level). (Fig. 5/3) The foundation was buried in the continental pure layer to a maximum depth of 0.59 m. Its main part was constructed of crushed rocks laid in a trench prepared for this and filled with yellow limestone mortar. The two upper rows of the basement

were made of processed rectangular blocks laid course by course on a yellow limestone mortar, which made it possible to level the foundation for laying rusticated pillars blocks.

From the north, the building was bounded by a stone wall that was dismantled in the Late Antique period as a result of reconfiguration to the level of 0.98–1.00 m

<sup>11</sup>Božilova, Kolendo, Mrozwicz 1992, 40 no. 17

<sup>12</sup>CIL VIII 2094; X 3400

<sup>13</sup>Biernacki 2002, 649–662

<sup>14</sup>Biernacki 2002, 650, 657 Figs. 10–11).



Fig. 3 - Novae (Moesia Inferior), Section Xz. Aerial view from the top (photo by M. Atanasov)

wide foundation. Obviously, the northern wall was also constructed from rusticated blocks. It was dismantled in the course of reconstruction, and the blocks were later used for the erection of late antique and early Byzantine buildings.

On the east side, the wall has been better preserved. It was built from large rusticated blocks on a white lime mortar, as well as the southern wall pillars. Its width is 0.98–1.0 m, and the height of the preserved part above the basement is 0.82 m. In the central part of the wall, at a distance of about 3.5 m from each southeastern corner, there was a doorway about 2.4 m wide. The western wall of the building has not been uncovered. However, it can be assumed to be similar to the eastern one.

On the basis of archaeological research, it can be assumed that on the east, during the first construction period, a passage to the courtyard was made through wide openings with an arched ceiling supported by half-pillars and two pillars on the north-south line. The archaeological research of 2001 enabled to discover two small pillars (about 0.91 x 0.80 m each), the exact dimensions of which are hard estimable because of later reconstructions. During the reign of Antoninus Pius (138-161), the entrance was blocked as a result of the expansion of the legionary baths.<sup>15</sup> The wide arched openings were carefully walled up, due to which the western wall of the Palestra baths with pilasters appeared. Transition between these adjacent buildings was realized through a small 1.60 m wide passage at the southeast corner of the arsenal courtyard.

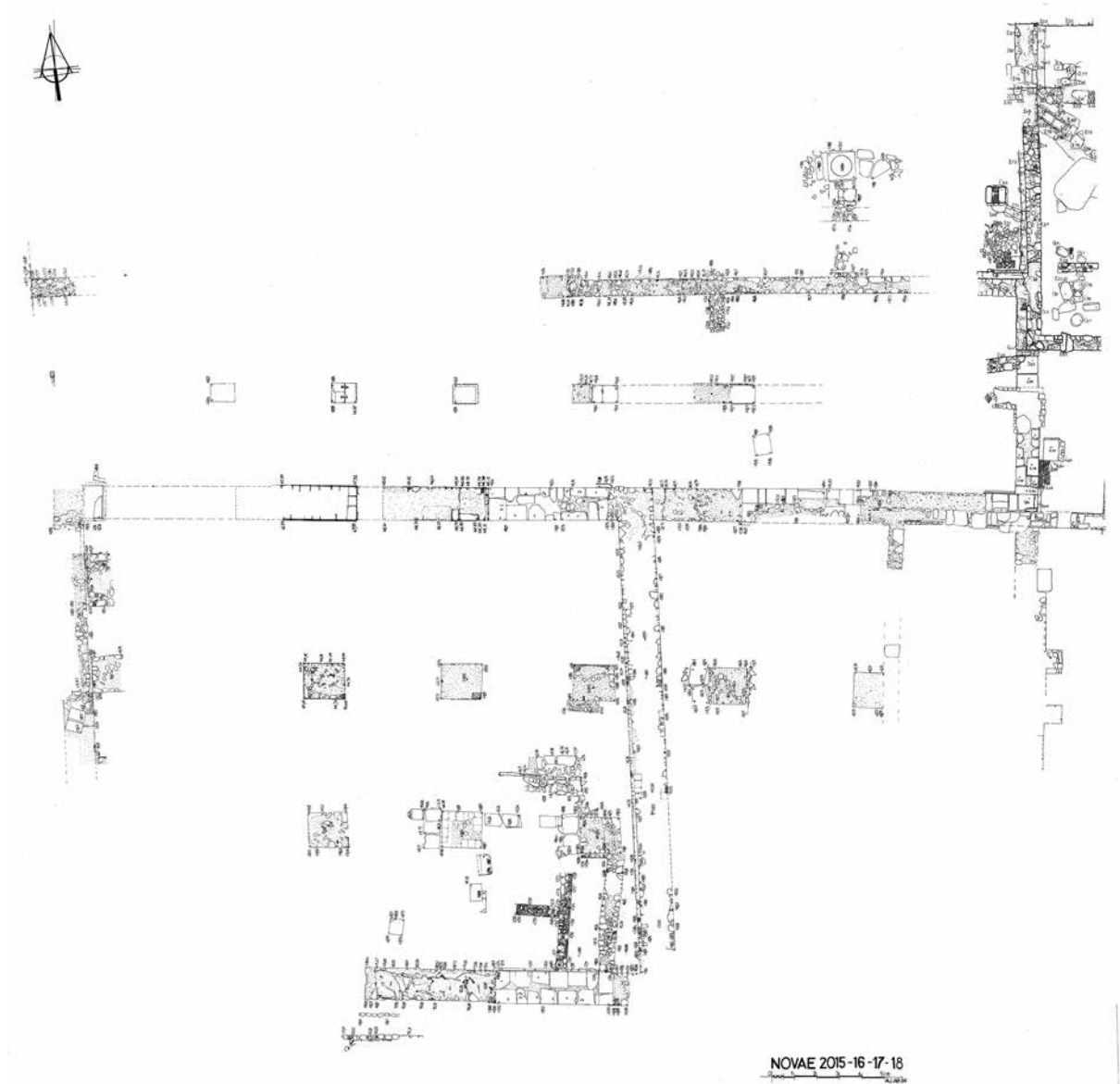


Fig. 4 - Novae (Moesia Inferior), Section Xz. Outline plan of the building complex to the west of the large legionary bath (by E. Klenina, A. B. Biernacki)

With regard to the discussion on the purpose of the studied building, a relief-decorated limestone block unearthed in 2016 is of special interest.<sup>16</sup> It resided in a secondary deposit in a cultural level at an elevation of 47.69-47.52 m ASL. (Fig. 6/1) The block was a part of an unidentified stone structure, built roughly without using lime mortar. This structure, laid on an East-West axis, was placed between two *opus mixtum* stone-and-brick pillars which were constructed earlier than the block. The relief-decorated block has the following

dimensions: height 460 mm, width 400–422 mm, and the largest thickness of 310 mm.<sup>17</sup> The rectangular block of stone is decorated on one side. (Fig. 6/2) The front side is adorned with stonework decoration and there are visible signs of a stonemason's work on the sides, none are preserved on the rear side. The block was most likely made through stone splitting, with the use of wedges. By examining the surface, it can be assumed that the block was carved out in a quarry and that it was meant to be used in an ancient wall structure.

<sup>15</sup>Biernacki 2016, 31 Fig. 4

<sup>16</sup>Biernacki, Klenina 2017, 271 Fig. 3

<sup>17</sup>Biernacki, Klenina, Zambrzycki 2018, 73 Fig. 2



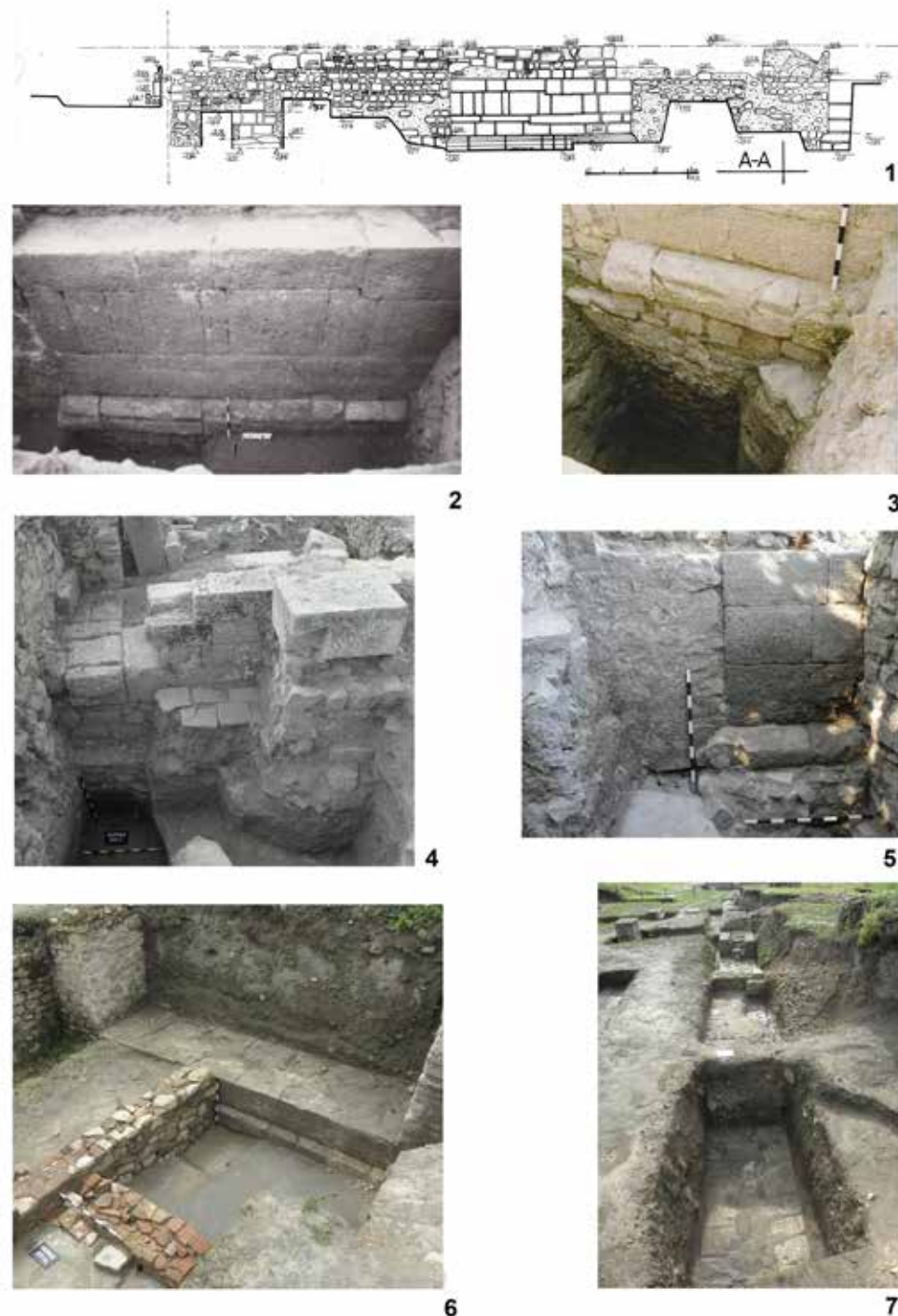


Fig. 5 - Novae (Moesia Inferior), Section Xz: 1 – section of the southern wall of the northern building of the arsenal (drawing by A. B. Biernacki); 2 – the first pillar in the northern building of the arsenal, view from the north; 3 – foundation of the first pillar of the southern wall, view from the north-west; 4 – the north-east half-pillar in the northern building of the arsenal, view from the east; 5 – the south-east half-pillar in the southern building of the arsenal, view from the south; 6 – the first pillar in the southern building of the arsenal; 7 – the southern wall of the northern building of the arsenal, view from the west (photos by A. B. Biernacki)

The bas-relief depicts a typical armour of a centurion, which consisted of a set of leather belts, tied into nine knots and placed into three rows of three. It is well worth noting that the cuirass in the Novae basrelief has the typical nine *phalerae*, placed at the leather joints of the armour. The way this composition is arranged suggests that the depiction was only meant to function as a sign, a symbol or an informative indicator. The motif of a leather cuirass with *pteruges* and *phalerae* can be often found among sepulchral statues of Roman centurions.<sup>18</sup> Bas-reliefs representing shields or armour can be also found on walls. In the ancient city of Dion (Greece), to the east of the market square and opposite the temple, stood a Roman basilica decorated with the frieze of armour and shields, which is now west of the main road.<sup>19</sup> Shields and corselets sculpted in bas-relief at Dion were dedicated by Alexander the Great on his victory over the Persians on the Granicus. The method of construction is very similar: upper halves of shields and corselets are sculpted on separate blocks.<sup>20</sup> According to Minor M. Markle and based on information from D. Pandermalis, the frieze wall in Dion was built later than the year 200 BC.<sup>21</sup>

The doubtless fact that the limestone block from Novae was reused in a structure dated at the earliest to the turn of the 3<sup>rd</sup> and 4<sup>th</sup> century, its technological, stylistic and artistic characteristics, as well as the results of comparative studies, all suggest that the bas-relief was made in the 2<sup>nd</sup> century. During this period, the wall-mounted relief depicting the leather cuirass of a centurion performed its original function by marking the unique armamentarium of the camp of the *Legio I Italica* in Novae. This relief is a kind of sign indicating the purpose of the building.

The southern wing of the arsenal has been less studied. It has been possible to uncover two rectangular pillars and the eastern half-pillar of the northern wall built using the same construction method as the southern wall of the northern arsenal building. The eastern half-pillar and the first pillar are partially under the apse and

southern wall of an early Byzantine baptistery. In 2015, the second pillar having a length of 5.33 m and a width of 1.47 m was uncovered.

The structure was most likely erected in the first third of the 2<sup>nd</sup> century AD. The amphorae of the types 1 of the 1<sup>st</sup> century BC – early-2<sup>nd</sup> century AD, 25a of the 1<sup>st</sup> – 4<sup>th</sup> century, 28B of the 2<sup>nd</sup> century, 30 of the second half of the 2<sup>nd</sup> – 4<sup>th</sup> centuries, type 34 of the late-1<sup>st</sup> – 4<sup>th</sup> century.<sup>22</sup> were found in the filling of the foundation trench (47.00 – 44.65 m ASL) of the first pillar of the northern arsenal building. This archaeometry has been adjusted by radiocarbon analysis<sup>23</sup> of charcoal found at the level of the surface of the inner courtyard of the arsenal (Xz/XVI/233/47.05 m ASL).

#### Novae 7/15 R\_Date(1910,35)

68.2% probability  
57AD (68.2%) 129AD  
95.4% probability  
18AD (95.4%) 214AD

#### Novae 8/15 R\_Date(1935,35)

8.2% probability  
5AD (54.5%) 89AD  
102AD (13.7%) 122AD  
95.4% probability  
36BC ( 0.8%) 30BC  
22BC ( 1.8%) 10BC  
2BC (92.8%) 133AD

Proceeding from the comparative analysis of the data, the most likely time to build the arsenal is the period between 122 and 129 AD, when Emperor Hadrian reigned over the Roman Empire (117-138). His policy was very different from Trajan's policy of conquest. The new emperor focused efforts on strengthening the borders instead of expansion. At this time, he paid special attention to the Rhine and Danube borders.<sup>24</sup> He built additional fortifications and developed the road network for moving augmentations in the event of barbarian invasion. The legions reinforced their positions in

<sup>18</sup>Ward 2012: 275; Maxfield 1981, 91–95 Figs. 11-12

<sup>19</sup>Pandermalis 1997, 49

<sup>20</sup>Markle 1999, 236

<sup>21</sup>Markle 1999, 241–242

<sup>22</sup>According to Dyczek 2001, 62–63, 193, 220

<sup>23</sup>The studies have been performed by the Poznań Radiocarbon Laboratory headed by Prof. dr hab. Tomasz Goslar

<sup>24</sup>Birley 2002, 133–244





Fig. 6 - Novae (Moesia Inferior), Section Xz: 1 – an unidentified stone structure with the relief-decorated limestone block, view from the east; 2 – the limestone block with relief of the Roman centurion leather armor; 3–4 – the rusticated pillars of the portico in *horreum* (photos by A. B. Biernacki)

the places of permanent deployment at the border and arranged permanent camps.<sup>25</sup> The main task of the legions was to defend the frontiers of the Roman Empire instead of conquering new territories. It was more convenient to exercise control from fortresses protected by solid fortifications, where the necessary means of defense were concentrated. One of such important points on the Lower Danube was the camp of the 1<sup>st</sup> Italian Legion of Novae with arsenal as one of its important elements. There were stored not only the weapons of the legionaries but also artillery pieces such as *ona-*

*gers*, *carroballistae* and *catapults*. Probably, Emperor Hadrian decided to strengthen the Lower Danube in 118 settling relations with the Roxolans.<sup>26</sup> Likely, the construction of the arsenal in Novae was initiated by Emperor Hadrian. During the successive stages of the structure's use, it underwent substantial modifications, which improved its functioning and characteristics.

Changes in the organization of military troops under Diocletian entailed significant construction works that were continued under Constantine the Great.<sup>27</sup> In the

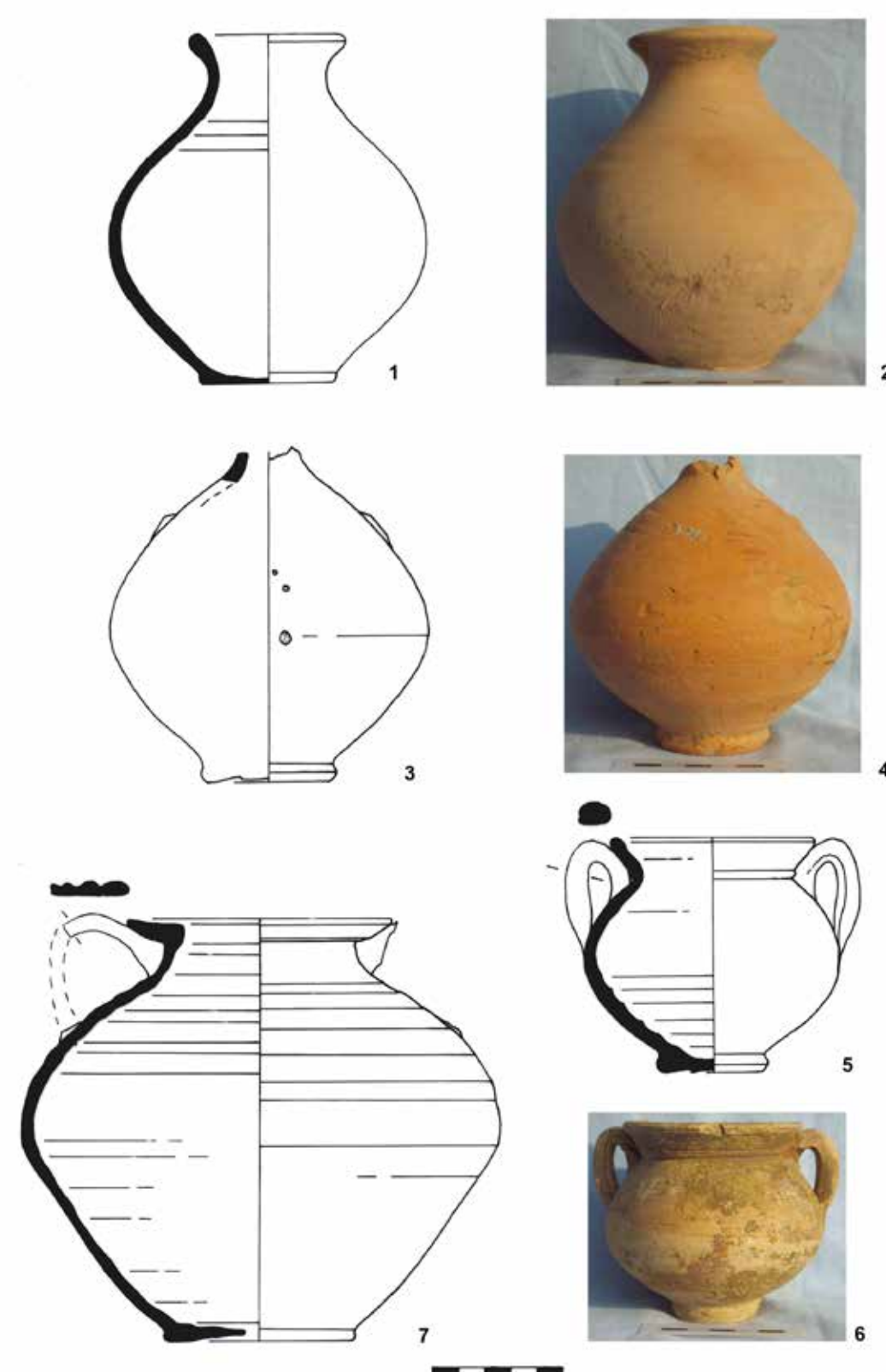


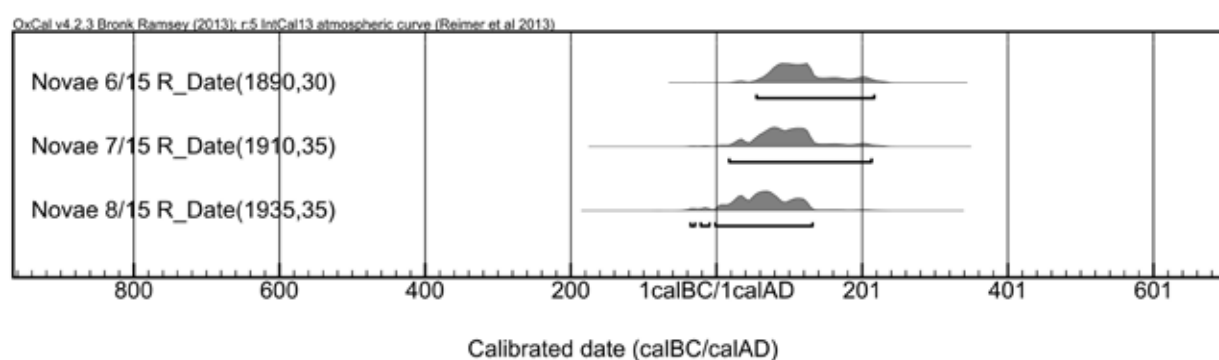
Fig. 7 - The tableware from the level of the mid-3<sup>rd</sup> century uncovered in the arsenal (drawing and photos by E. Klenina)

<sup>25</sup>Breeze 2011, 104

<sup>26</sup>Birley 2002, 133–134

<sup>27</sup>Sarnowski 1988, 126





Tab. 1 - The radiocarbon analysis of the samples from the arsenal in Novae

270s and 280s AD, in Novae, the fortifications were reconstructed.<sup>28</sup> Likely, in this period, the passages between rectangular armamentarium pillars were carefully walled up. They were blocked by stone masonry made of medium-sized rocks processed on the front side and laid on a white lime mortar with admixtures of large and small fragments of crushed ceramics and river sand. Courses of stones were laid out of order. The width of the walls blocking the passages corresponded to the width of the pillars and reached 1.47–1.50 m. The passages were blocked both in the northern and in the southern wing of the arsenal. In this case, the space of the courtyard was completely isolated on both sides. From the side of the legionary baths, one could pass through a 1.6 m wide doorway, on the southeast corner. A 2.4 m wide doorway in the eastern wall of the north wing of the arsenal has been established to continue its operation. Likely, the arsenal was used as depot for storing legionaries' munition.

In the northern wing of the arsenal, at the level of the floor, fragments of amphorae of the following types: 25a type dated the 2<sup>nd</sup> and 3<sup>rd</sup> centuries AD, 28-29 types dated the late 2<sup>nd</sup> – the mid-3<sup>rd</sup> AD, 30 type dated the mid-2<sup>nd</sup> – the early 4<sup>th</sup> centuries AD (according to typology by Dyczek 2001) as well as tableware and kitchen vessels (Fig. 7) were found in the layer of destruction under a pile of tiles.<sup>29</sup> The layer was formed in the second half of the 3<sup>rd</sup> century AD. Below this level, the filling of trenches (a dense brown layer with a small number of fragments of building and pottery,

as discussed above) under the pillar foundation was studied.

The vast space of the courtyard was used to build additional barracks for legionaries. Likely, they were intended for military units withdrawn from Dacia in the early 70s of the 3<sup>rd</sup> century AD. This has been indirectly indicated by a long-handled billhook dated the 2<sup>nd</sup> century AD<sup>30</sup> typical for that province and discovered in the filling of one of the buildings. Coins dated 217 – 276 AD have been found on the floor of the building. This discovery does not contradict the data obtained as a result of radiocarbon analysis of charcoal and burnt grains found in a pot from the filling of the same building (see Tab. 1).

#### Novae 6/15 R\_Date(1890,30)

68.2% probability  
67AD (68.2%) 136AD  
95.4% probability  
56AD (95.4%) 217AD

Probably, the barracks were built as early as in 275–276 AD. This dating is based on the coins found on the floors, which were minted during the reign of Emperor Tacitus (275–276 AD). The correlation of archaeological materials from the filling of the barracks gives reason to suggest that they were liquidated in 335–340 AD. This is evidenced by the numerous coins from the layer of destruction of the barracks and the leveling layer associated with the next reconstruction. At the next stage, the arsenal was rebuilt into *horreum*. (Fig.

2/3) After the liquidation of the barracks, within the territory of former arsenal courtyard, at least, ten new pillars were built of stone and brick (*opus mixtum*). They had a size of 1.80 × 1.60 m and laid out in two courses.

The pillar foundations were buried in the layer of filling dated 335–340 AD, which covered the remains of the barracks. The existence of five pillars in the same row has been archaeologically confirm. On the northern side of the *horreum*, there was a portico of six small pillars, the dimensions of which along the east-west line were as follows: 1.14 x 0.75 m (No. 1), 1.13 x 0.77 m (No. 2), 1.15 x 0.78 m (No. 3), 1.13 x 0.53 m (No. 4), 1.145 x 0.845 m (No. 5), 1.10 x 0.785 m (No. 6). They were made of stone rusticated blocks, used for the second time, and mounted on a strong 1.15 m wide stylobate. (Fig. 6/3-4)

The intensification of construction activities in this region was likely associated with the rise to power of Emperor Constantius II (337–361), in Constantinople. Similar types of *horrea* appeared in the first half of the 4<sup>th</sup> century in Capidava (Fig. 8/3), Histria (Scythia) (Fig. 8/1), Serdica (Dacia Mediterranea),<sup>31</sup> (Fig. 8/2) Kovachevo Kale (Moesia Secunda) (Fig. 8/4).<sup>32</sup> The *horreum* in Novae, in terms of its architecture and size, is similar to the building uncovered in Capidava (Scythia) (dimensions 16.0 × 32 × 18.75 m) with two rows of seven pillars standing in its central part.<sup>33</sup> The walls were 1.50 m wide, like those in Novae. The other *horrea* mentioned above were much smaller. The design features of these structures indicated that they were intended for storing goods transported in amphoras rather than grain. The emergence of structures of this type in the Roman military fortresses was caused by their new functions, for example, the commercial one.

The studies in Novae have given reason to consider that this is the only stand-alone building of the arsenal whose significant part has been well preserved till nowadays.

No architecturally similar arsenals have been found in the Roman limes. While the *latera praetorii* of the camp in Inchtuthill (Scotland) feature stores for equipment and ballistae directly at the *principia*, the location of this facility has been established solely based on movable finds rather than on structures. The fact that the arsenal was located directly south of an important section of the *via principalis*, a few dozen meters away from the main western gateway of the camp and west of the bath and the *principia*, clearly points to its representative function. The enormous scale of the explored facility has no parallels among other legionary camps in the limes and may be compared only with the arsenals of the city of Rome or of Hellenistic cities (Athens, Piraeus, and Pergamun).

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<sup>28</sup>Parnicki-Pudelko 1990, 55; Klenina 2006, 129

<sup>29</sup>Klenina 2006, 35

<sup>30</sup>Bărbu, Borangic 2016, 187

<sup>31</sup>Dinchev 2005, 280–282

<sup>32</sup>Alexandrov 2017, 11–78

<sup>33</sup>Opriș, Rațiu 2017: 20

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#### **Резюме**

Арсеналы продолжают оставаться наименее изученными объектами в структурах римских военных лагерей. В большинстве случаев об их расположении свидетельствует скопление римского вооружения, обнаруженного на территории легионного лагеря. В редких случаях удавалось открыть и исследовать здание арсенала. Важнейший опорный пункт на северной границе империи римский легионный лагерь Нова является одним из прекрасно изученных объектов этого типа в регионе. В ходе многолетних польско-болгарских археологических исследований удалось выявить и проанализировать ряд уникальных элементов застройки легионного лагеря. Однако вопрос о наличии арсенала и его местонахождении оставался открытым. Исследования последних лет привели к открытию монументального комплекса, единственного в своем роде в этой части Римской империи, занимающего площадь 45 × 45 м. Сооружение представляет собой два прямоугольных здания, площадью 8,45 м × 42,6 м каждое, расположенных вдоль длинных сторон прямоугольного двора (20 м × 42,6 м). Наиболее вероятным временем возведения этого сооружения является период между 122 и 129 г. н.э., а прекращение функционирования – 275–335 гг. н.э.



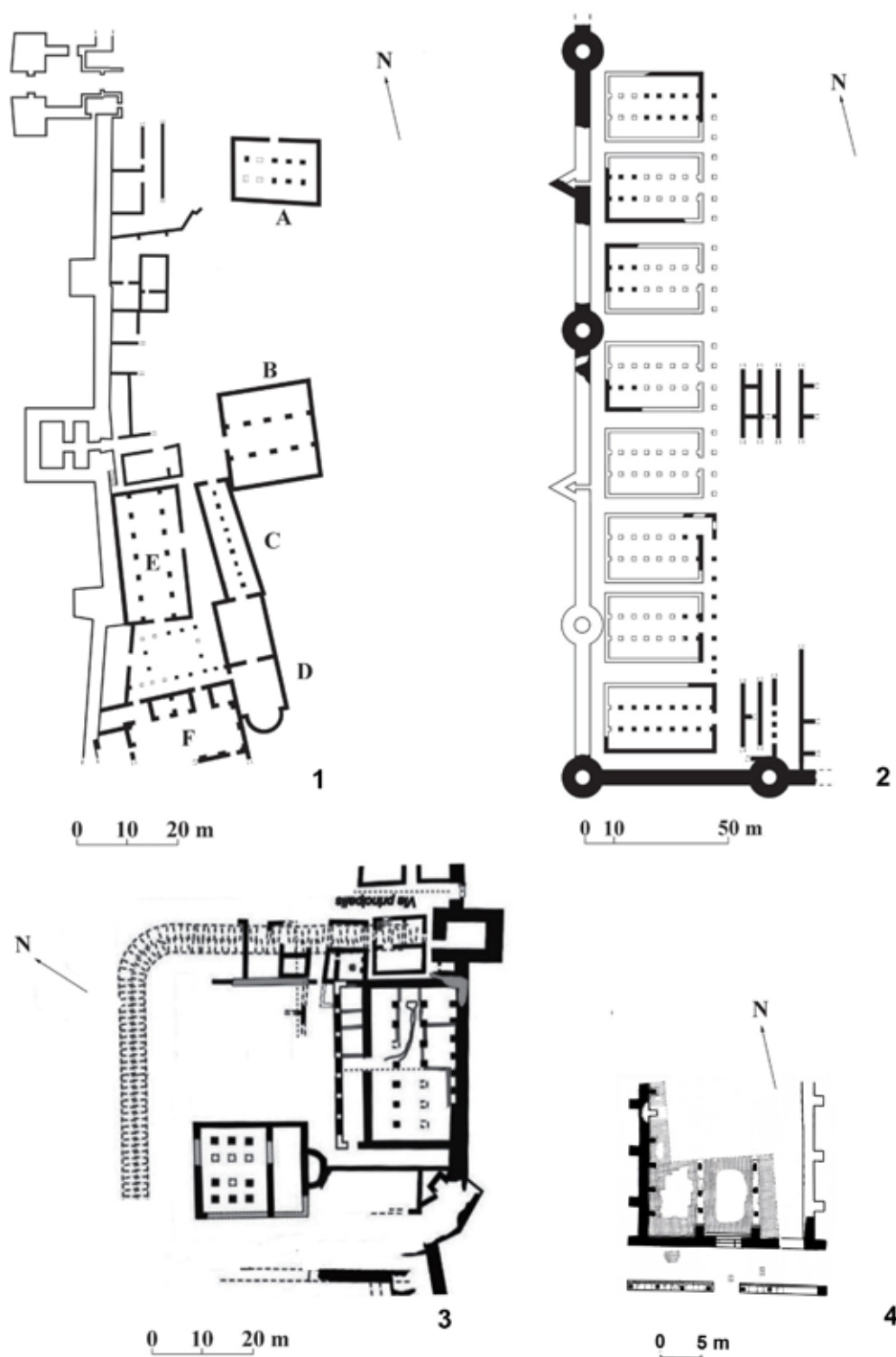


Fig. 8 - 1 – the western section of Histria, 4th century, 2 – the southern-western section of Serdica, 4th century (based on plans by Dinchev 2005, 292 fig. 2-3), 3 – Southern quarter of Capidava, 6th– early 7th century (based on plan by Opriş – Raţiu 2017, 19 fig. 6), 4 – horreum in Kovachevo Kale (Aleksandrov 2017, 58 fig. 4)

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## **New archaeological data for the study of the conquest and occupation of NW Iberia in Early Imperial times<sup>1</sup>**

### **ABSTRACT**

This paper synthesizes the research developed by the Romanarmy.eu collective from the previous International Congress of Roman Frontier Studies in 2015 to 2019. During this three-year period, the methodology for identifying and documenting Roman military sites using remote sensing has been consolidated. Significant progress was made in studying some of these sites on the ground: Cueiru and El Xuegu la Bola (Asturias) and A Penaparda and Penedo dos Lobos (Galicia). This step forward allowed us to propose new narratives about the extension of the Roman state in NW Iberia and the role played by the Roman army in this process.

**KEY WORDS: ROMAN ARMY, CAMPS, NW IBERIA, REMOTE SENSING, CANTABRIAN-ASTURIAN WARS, ROMANARMY.EU**

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## 1. Introduction

In the last two decades, the increasing availability of geospatial datasets has boosted Roman Military Archaeology outputs in NW Iberia. As a result, not only several new sites have been discovered, but also their distribution is now more homogeneous across the region, including areas such as Galicia and Northern Portugal, formerly misrepresented<sup>2</sup>. This situation reveals the existence of Roman military activity outside the areas where the traditional narratives, mainly based on the classical sources, believed it to be concentrated. Also, the study of the location and the morphological characterization of these sites have depicted a more complex overview of the ways deployed by the Roman army across these territories, making it urgent to consider new chronological and functional explanations for the presence of the Roman army in NW Iberia further than the conquest of these lands during the Cantabrian-Asturian Wars (29-19 BCE).

However, identifying the actual geographical scope of the military operations carried out by the Roman army here in Early Imperial times is still a difficult goal. The surviving classical sources focus on very specific war episodes, and even those best-described events -such as Augustus' campaigns against the Cantabrians and Asturians- are characterised by the lack of reliable geographical references and details about the military actions<sup>3</sup>.

Luckily, the potential of Roman Military Archaeology for answering many questions related to the conquest and occupation of these territories between late 1<sup>st</sup> c. BCE and early 1<sup>st</sup> c. CE is far from exhausted. On the one hand, archaeological methods have exhaustively explored only a limited number of the already discovered sites<sup>4</sup>. Therefore, an important amount of useful data about its function and chronology can still be recovered by using appropriate strategies –as long as il-

legal detectorists or agrarian and forestry activities do not erase them before!–. On the other hand, studying every site from a Landscape Archaeology perspective can show the rationale behind their construction and the mobility of the Roman army across NW Iberia<sup>5</sup>. Furthermore, these approaches could help us build predictive models for discovering new sites. Moreover, the integration of the interpretative narratives produced by Roman Military Archaeology with the considerations about the indigenous communities' agencies regarding the extension of the Roman state is still a pending task both for Late Iron Age and Roman archaeologists.

Since the previous Limes Conference, our research collective RomanArmy.eu<sup>6</sup> has been investigating in relation to several case studies comprising different geographical areas within NW Iberia. New Roman military sites were primarily discovered in modern-day Galician and Northern Portuguese regions. At the same time, our team and collaborators have conducted surveys and excavations in the Roman camps of Cueiru, El Xuegu la Bola, A Penaparda and Penedo dos Lobos. Altogether, these collective efforts constitute a qualitative advance in our understanding of the Roman military presence in NW Iberia, in addition to a better understanding of the expansion of the Roman state in this region.

## 2. A modular methodology

Our research collective has developed a bespoke research methodology specifically adapted towards identifying and analysing Roman military sites in NW Iberia<sup>7</sup>, combining several digital tools and resources with more conventional archaeological survey methods. Similar methodological approaches have become increasingly frequent in both the Iberian Peninsula<sup>8</sup> and the rest of Europe<sup>9</sup> when investigating the Roman military presence. However, this method with a modular design allows for the constant revision of

the procedures used and the incorporation of new techniques and resources. The constant improvement and optimisation of resources and techniques leads to maximising the potential results.

The integration of airborne laser scanning data with aerial and satellite imagery has been vital for the identification of new Roman military sites and for the reassessment of other previously known sites. After their detection through the systematic use of these remote sensing techniques, all the possible features have been duly validated through ground observations, allowing us to confirm their archaeological relevance. In this sense, we may stress that this remote sensing approach is part of a research process that is integrated into a broader methodology. These techniques make it possible to identify and analyse archaeological sites that would otherwise be very difficult to detect, given the temporary and practically invisible nature of the structures that compose them<sup>10</sup>. Therefore, we will be able to achieve a more holistic and balanced historical perspective only through the integration of different research methods.

GIS-derived spatial analyses, focusing on mobility and visibility modelling, were also implemented to better understand site location and wider connectivity trends between the sites and the surrounding landscape, allowing us to predict, in some cases, the location of other new Roman military sites<sup>11</sup>. In addition, we have also paid attention to oral tradition and place names in order to detect potential archaeological elements that are not quite perceptible or even that disappeared by recent landscape transformations<sup>12</sup>.

These initial studies allowed us to set general patterns regarding the identified sites –morpho-typological, locational, etc.–. These actions were complemented by a more intensive field survey of selected sites as detailed below, namely to obtain archaeological evidence for their historical contextualization. Unmanned Aerial Vehicle (UAV) derived structure-from-motion photogrammetry was used to perform a detailed morpholo-

gical study of site defences. In some cases, exploratory trenches were excavated to explore its construction, use and abandonment sequence. Lastly, intra-site, metal-detecting surveys for the recovery of relevant material remains were also carried out.

In general, this phased research methodology has allowed us to move forward in the study of the Roman military presence in NW Iberia: new sites, new morphologies and locations, but, above all, new research questions to tackle the established interpretations. Nevertheless, this research methodology has its own limitations, considering, for instance, the heterogeneous landscape of NW Iberia, its current administrative fragmentation and the unequal availability of digital and geographical datasets for the whole region, which hinders the potential identification of new Roman military sites in some areas.

## 3. Mapping uncharted territory

In the previous Limes Congress proceedings we announced the discovery of 22 new Roman military sites in NW Iberia during the period 2014-2016 thanks to the use of the above-mentioned methodology<sup>13</sup>. At the time this paper is written, 10 more could be securely added to the list, while 4 are also promising<sup>14</sup> (Fig. 1). Quite significantly, this evidence is mainly located in an area where the Roman military presence had been marginal to date: Galicia and Northern Portugal, where some of us have been focusing our research in the last three-year period. Interestingly, these areas still lack solid narratives regarding their conquest and occupation by the Roman state.

A complete account summarizing the morphological properties of these enclosures can be found in figures 2 and 3, so we will skip a detailed description here. However, certain observations regarding their distribution throughout the territory are worth noting.

The morphological and locational consistency of four small camps (1.5-2.3 ha) documented across the Gali-

<sup>2</sup>Camino Mayor *et al.* 2015; Costa-García *et al.* 2018

<sup>3</sup>Costa García 2015; Ramírez Sádaba 1999

<sup>4</sup>The most recent and comprehensive summary can be found in Camino Mayor *et al.* 2015, although important discoveries have taken place since 2015 (Costa-García 2018a).

<sup>5</sup>Costa-García 2017

<sup>6</sup>Blanco-Rotea *et al.* 2016b

<sup>7</sup>Costa-García, Fonte 2017; Costa-García *et al.* 2016; Menéndez-Blanco *et al.* 2013; Menéndez-Blanco *et al.* 2017

<sup>8</sup>Bellón Ruiz *et al.* 2017; Berrocal-Rangel *et al.* 2017; Cordero Ruiz *et al.* 2017

<sup>9</sup>Bernardini *et al.* 2015; Groh, Seldmayer 2015; Jones 2012; Oltean, Hanson 2017

<sup>10</sup>Peralta Labrador 2002

<sup>11</sup>Costa-García 2018b; Costa-García *et al.* 2017

<sup>12</sup>Menéndez-Blanco *et al.* 2015a

<sup>13</sup>Costa-García *et al.* 2018

<sup>14</sup>Some of them had been already made public (Costa-García 2018a; Costa-García *et al.* 2017), but others remained unpublished.



cian-Portuguese territory (Coto do Rañadoiro, Cova do Mexadoiro<sup>15</sup>, Penedo dos Lobos and Alto da Pedrada) is very striking: all of them focus on controlling natural passages through elevated terrain. The enclosure of Santa Baia (Fig. 4) shows a similar pattern, but it raises the question of why it was necessary to dislocate a large number of troops in the Galician pre-coastal valleys<sup>16</sup>. The fact that the site was constructed encircling an Early Iron Age hillfort whose defences were probably reused by the Romans is also interesting.

The recent discovery of two huge enclosures (19-23 ha) in the mountainous borderlands dividing Galicia and Portugal was also surprising. To date, sites as large as Lomba do Mouro (Fig. 5) and Chaira da Maza had only been identified in the Iberian Northern Plateau or the eastern Cantabrian Mountains<sup>17</sup>. Future research should ask what could have motivated such a deployment of troops in a remote area that, on the other hand, was supposed to have been integrated under Roman control before the Augustan era<sup>18</sup>.

To the east, O Monte de Ventín can be perhaps connected with other camps documented in the westernmost areas of the Cantabrian Mountains due to its morphological similarities<sup>19</sup>. As for La Chanica d'Arriba (Fig. 6), it is located in an area where Roman military presence was not a stranger<sup>20</sup>. Likewise, the site seems to have suffered the effects of the early development of gold-mining activities in the area<sup>21</sup>. Although there is no direct connection with the above-mentioned sites yet, Cabeza do Pau is exactly placed on the other side of the mountainous massif dominated by the Sierra de Cabrera, an area assigned to the "Astures" by classical authors.

The detection of small *castellum* or *praesidium*-type enclaves remains a major challenge for Archaeology outside mountainous areas. The morphological similarities with some Iron Age or Early Medieval fortifications have made it difficult to identify them. For now, we can suggest the oval, double enclosure of O Castrillón (Galicia). Its settlement pattern fits the Roman behaviour and it forms an interesting archaeological landscape with O Couto de San Sebastián hillfort. The possibility of a Roman detachment garrisoning the pentagonal fortification of Outeiro de Arnás (Galicia) is also suggestive but has not been undeniably proven.

In this work, we have already pointed out the close locational connection between some camps and indigenous hillforts, but we face a completely different paradigm in O Castelo. A defensive, V-shaped structure has been detected here. This defensive solution is not typical of Iron Age hillforts and reminds of a *brac(c)hium* as it has been documented in some Iberian sites<sup>22</sup>. An identical solution recorded in El Picu Viyao (Asturias) has been taken as proof of the military reoccupation of this hillfort<sup>23</sup>. As regards Alto da Cerca (Portugal), it has traditionally been considered a pre-Roman site, but we have discussed elsewhere the idea of a permanent or stationary military presence here, perhaps linked with gold mining activities in the area<sup>24</sup>.

#### 4. Going deeper

As mentioned above, a more intensive field survey approach was carried out in some selected sites to advance into its chrono-functional characterization.

The camps of El Xuegu la Bola and Cueiru are related to an important transit route through the mountains of León and Asturias: the Camín Real de la Mesa<sup>25</sup>. The

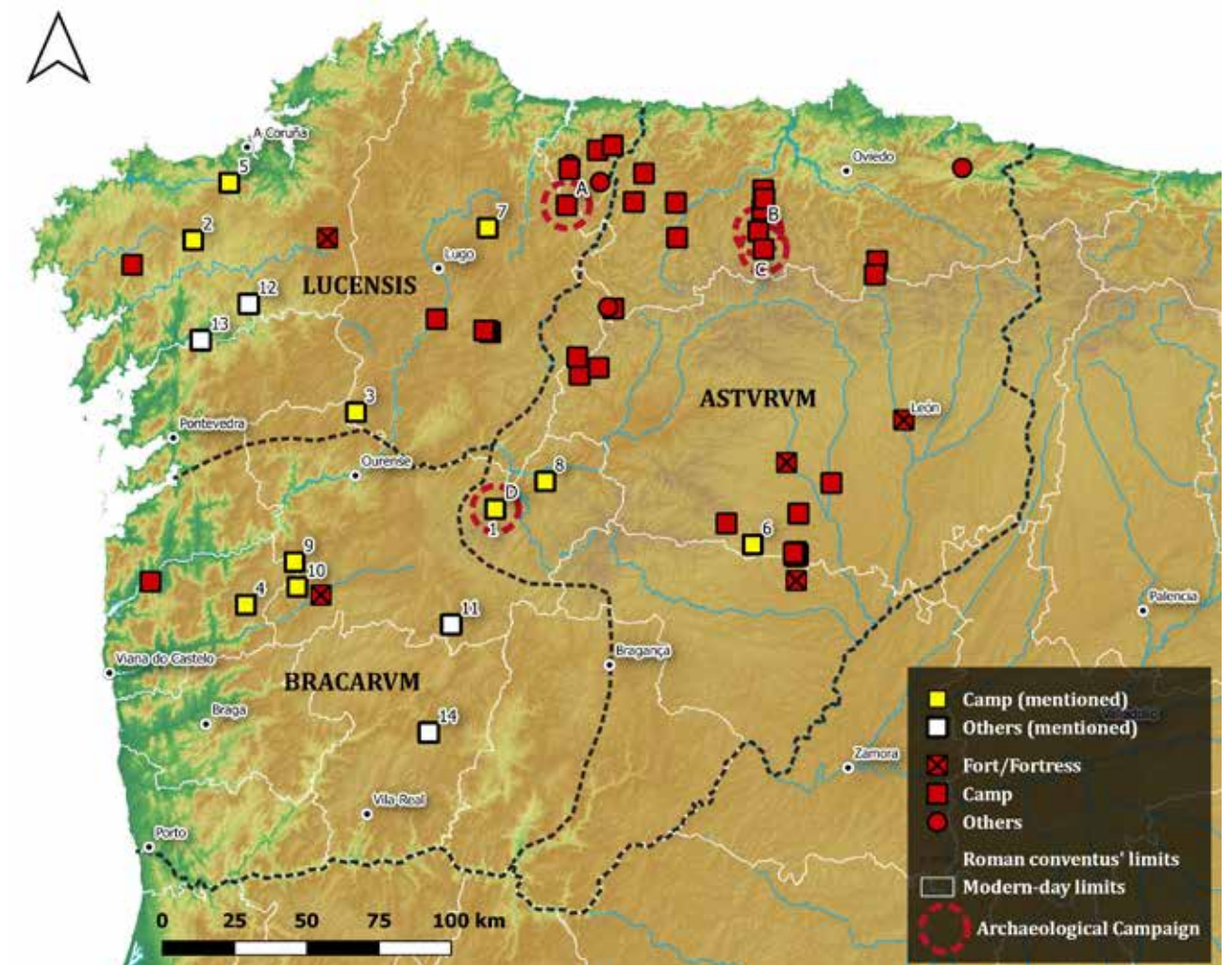


Fig. 1 - Roman military sites in NW Iberia: Penedo dos Lobos (1), Cova do Mexadoiro (2), Coto do Rañadoiro (3), Alto da Pedrada (4), Santa Baia (5), La Chanica d'Arriba (6), Monte de Ventín (7), Cabeza do Pau (8), Lomba do Mouro (9), Chaira da Maza (10), Outeiro de Arnás (11), O Castrillón (12), O Castelo (13), Alto da Cerca (14). © Authors

first phase of their archaeological study was planned as a non-invasive approach and carried out in 2016<sup>26</sup>. The defensive perimeters of the sites were precisely documented through conventional archaeological surveys and oblique aerial photography<sup>27</sup>. The intensive survey of some sectors with the support of metal detectors allowed us to map material culture densities and recover a representative sample for its study. Quantitatively speaking, only a small percentage of those objects can be linked with the Roman military presence (among them, tent pegs, a spearhead and other possible pro-

jectiles) (Fig. 7), but none of them serves as a dating indicator.

Encouraged by these results, we planned the study of A Penaparda (Galicia/Asturias) (Fig. 8) -a site presumably related to another mountainous route used by the Roman army- in 2017<sup>28</sup>. In this case, it was possible to obtain high-resolution photogrammetric models that confirmed the archaeological nature of the structures previously identified by LiDAR<sup>29</sup>. However, the field survey showed that they had been dramatically eroded in several sectors. The excavation of an exploratory

<sup>15</sup>We thank its discoverer, J. Canosa Betés, for allowing us to include it in this paper.

<sup>16</sup>Where other large sites were detected in the past (Blanco-Rotea *et al.* 2016a; Gago Mariño, Fernández Malde 2015).

<sup>17</sup>Del Olmo Martín 1995; Peralta Labrador 2011

<sup>18</sup>Morillo Cerdán 2016

<sup>19</sup>Costa García *et al.* 2017; Menéndez-Blanco *et al.* 2015b

<sup>20</sup>Sánchez-Palencia 1986

<sup>21</sup>Fernández-Lozano *et al.* 2019; Sánchez-Palencia, Currás 2015

<sup>22</sup>Camino Mayor, Martín Hernández 2015

<sup>23</sup>González-Álvarez *et al.* 2011

<sup>24</sup>Fonte, Costa-García 2016

<sup>25</sup>Up to six enclosures have been detected following this route, the largest concentration of Roman military sites in present-day Asturias González-Álvarez *et al.* 2011-2012; Martín Hernández 2015.

<sup>26</sup>Menéndez-Blanco *et al.* 2018

<sup>27</sup>The adverse atmospheric conditions did not allow a complete mapping of the archaeological structures for photogrammetric purposes.

<sup>28</sup>Menéndez-Blanco *et al.* 2015b

<sup>29</sup>Costa-García *et al.* 2017



	SITE	LAYOUT	NET AREA (ha)	DEFENCES			EST. GARRISON
				Rampart	Ditches	Entrances	
Camps	Alto da Pedrada	Rectangular	1,54	Stone / Earth	N/D	3 (Clav.)	750-1000
	Cabeza do Pau	Triangular / Irregular	Min. 7,2	Stone	N/D	N/D	Min. 3500-4600
	Chaira da Maza	Trapezoidal	19,64	Stone / Earth	N/D	N/D	9600-12500
	La Chanica d'Arriba	Rectangular?	Min. 7	Earth	N/D	N/D	Min. 3400-4400
	Coto do Rañadoiro	Rectangular	2,5	Earth	N/D	1 (Clav.?)	1200-1600
	Cova do Mexadoiro	Rectangular	2,15	Earth	N/D	1 (Clav.?)	1050-1350
	Lomba do Mouro	Square / Irregular	Max. 24,35	Stone / Earth	N/D	N/D	10350-13500
	O Monte de Ventín	Rectangular / Irregular	13,35	Earth	N/D	2?	6500-8500
	O Penedo dos Lobos	Rectangular	2,3	Yes	N/D	3 (Clav.) + 1 (Chicane)	1100-1450
Other sites	Santa Baia	Rectangular / Irregular	Min. 5,11	Earth	N/D	N/D	Min. 2500-3250
	Alto da Cerca	Poligonal	2,15	Earth	U-shaped	1	Min. 650
	O Castelo	Triangular / Irregular	Max. 2,39	Stone / Earth	V-shaped	N/D	N/A
	O Castrillón	Ovoid	Máx. 0,83	Earth	N/D	N/D	410-530
	Outeiro de Arnás	Pentagonal	0,44	Earth	V-Shaped	1	215-280

Fig. 2 - Sites described in this paper. Morphological aspects. © Authors

trench in the southern walls revealed a stone and earth rampart, as well as a shallow ditch excavated in the bedrock. Unfortunately, radiocarbon dating only allowed us to determine that the structures were built in Roman times without further precision<sup>30</sup>. It was not possible to recover material remains related to the Roman military presence, since the acidity of the soils rapidly corrodes metal objects. Undoubtedly, this is one of the greatest challenges archaeological research faces in several regions of our area of study.

Luckily, this is not the case with Penedo dos Lobos (Galicia) (Fig. 9), where a survey campaign in 2018 provided us with a crucial piece of evidence regarding its precise dating: two well-preserved asses of *Publius Carisius* minted in *Augusta Emerita* between 25-22 BCE<sup>31</sup> to pay the military who were involved in the Cantabrian-Asturian Wars (Fig. 10). This means that, at least for the moment, this is the oldest Roman military presence archaeologically documented so far in modern day Galician region. This open up new re-

<sup>30</sup>However, the nearby camp of El Pico el Outeiro has been dated between the mid-1<sup>st</sup> c. BCE and mid-1<sup>st</sup> c. CE (Menéndez Granda, Sánchez Hidalgo 2018).  
<sup>31</sup>RIC 20 and RIC 15b, 16 or 17

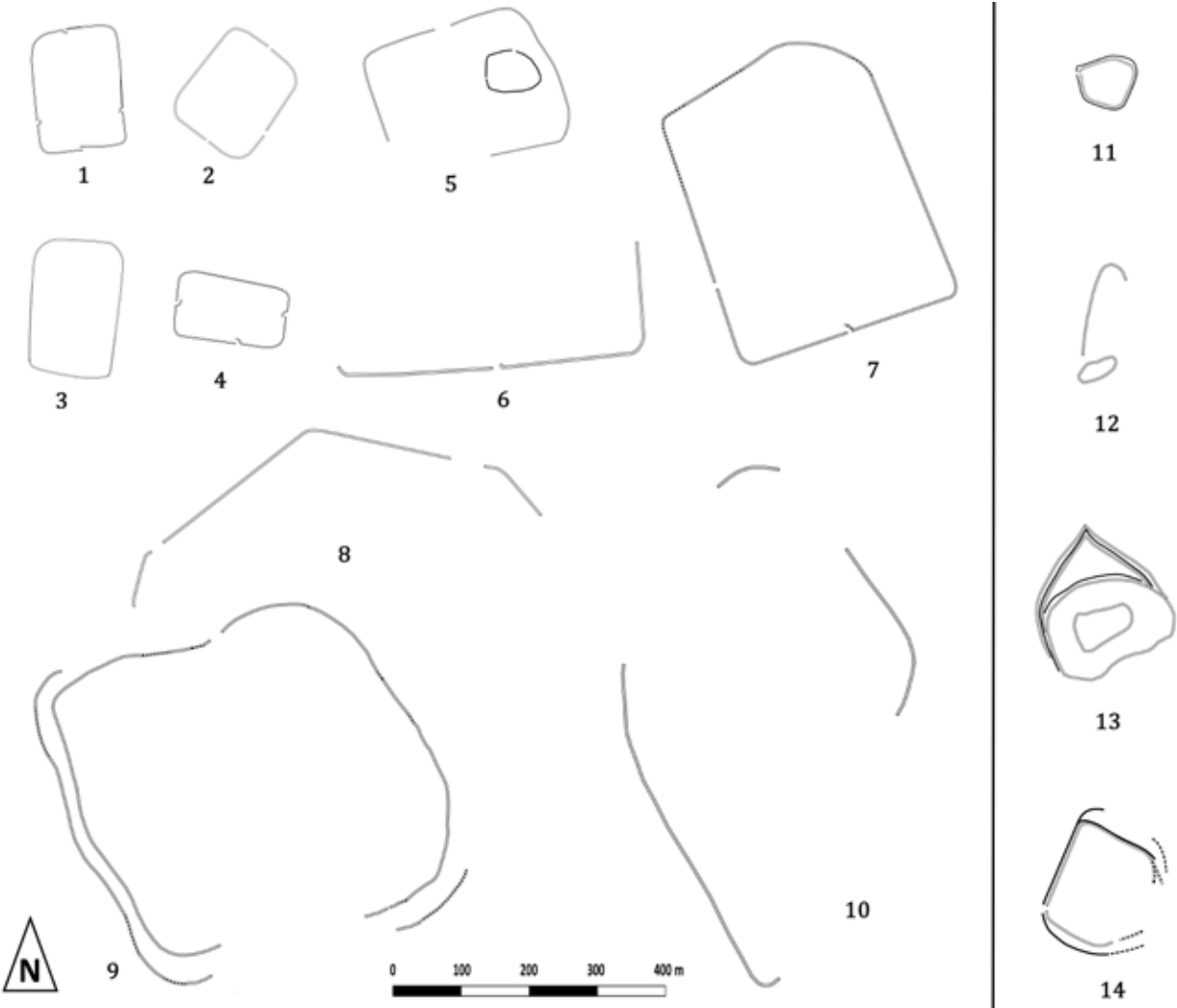


Fig. 3 - Sites described in this paper. Layouts. Same numbering as in fig. 1. © Authors

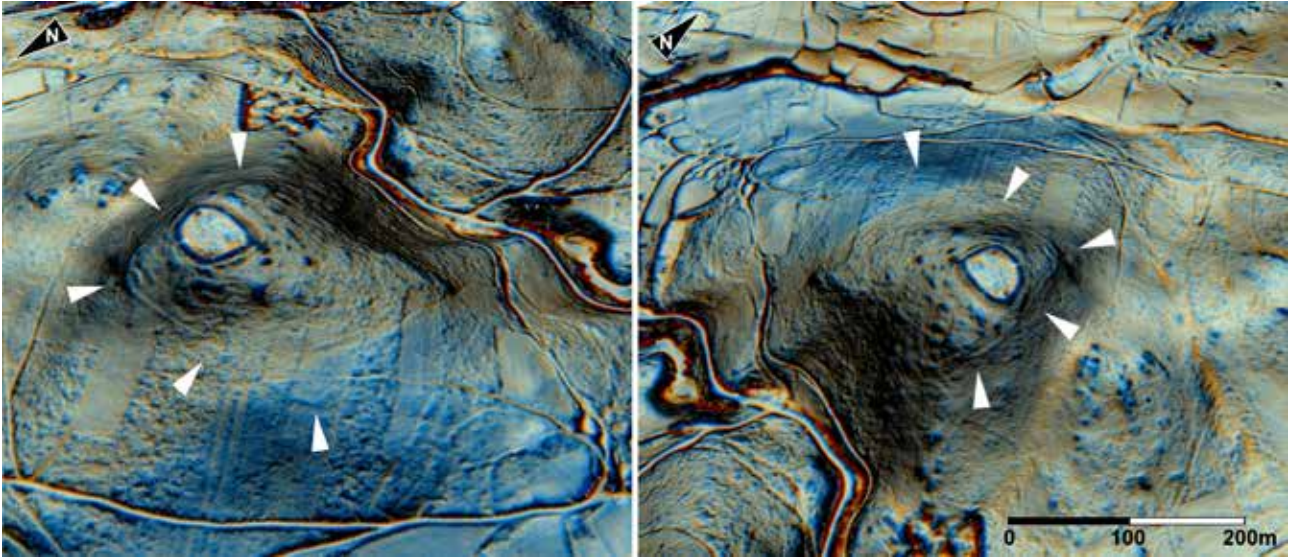


Fig. 4 - Roman camp of Santa Baia. 2.5D LiDAR-derived visualization (2009). Note the presence of an Iron Age hillfort on the top of the elevation. © Authors



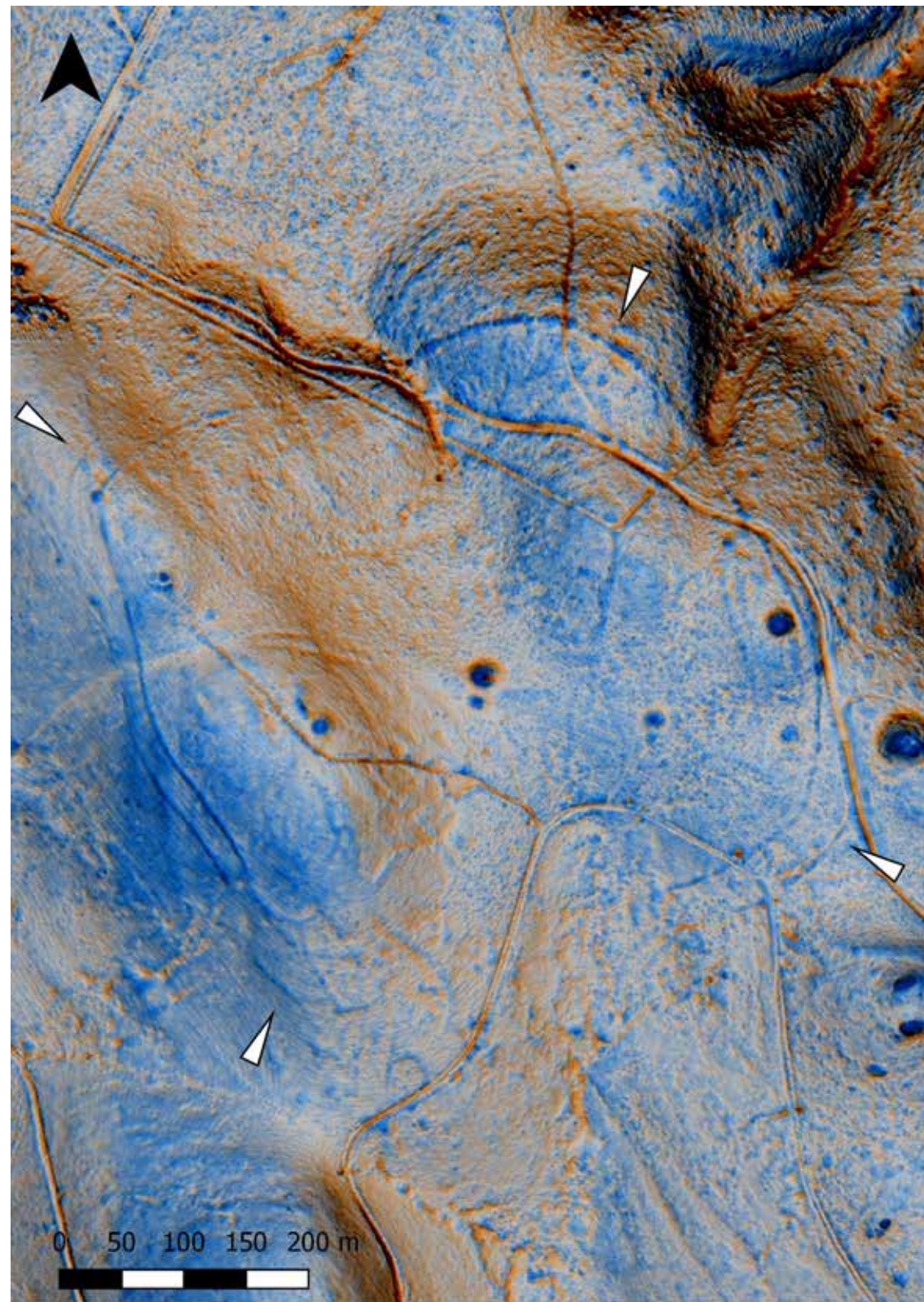


Fig. 5 - Lomba do Mouro. The precise dating of these recently discovered enclaves and their better morphotypological and locational characterisation could help us to define the strategies adopted by the Roman army in NW Iberia. The rounded features belong to a Prehistoric necropolis. © Authors

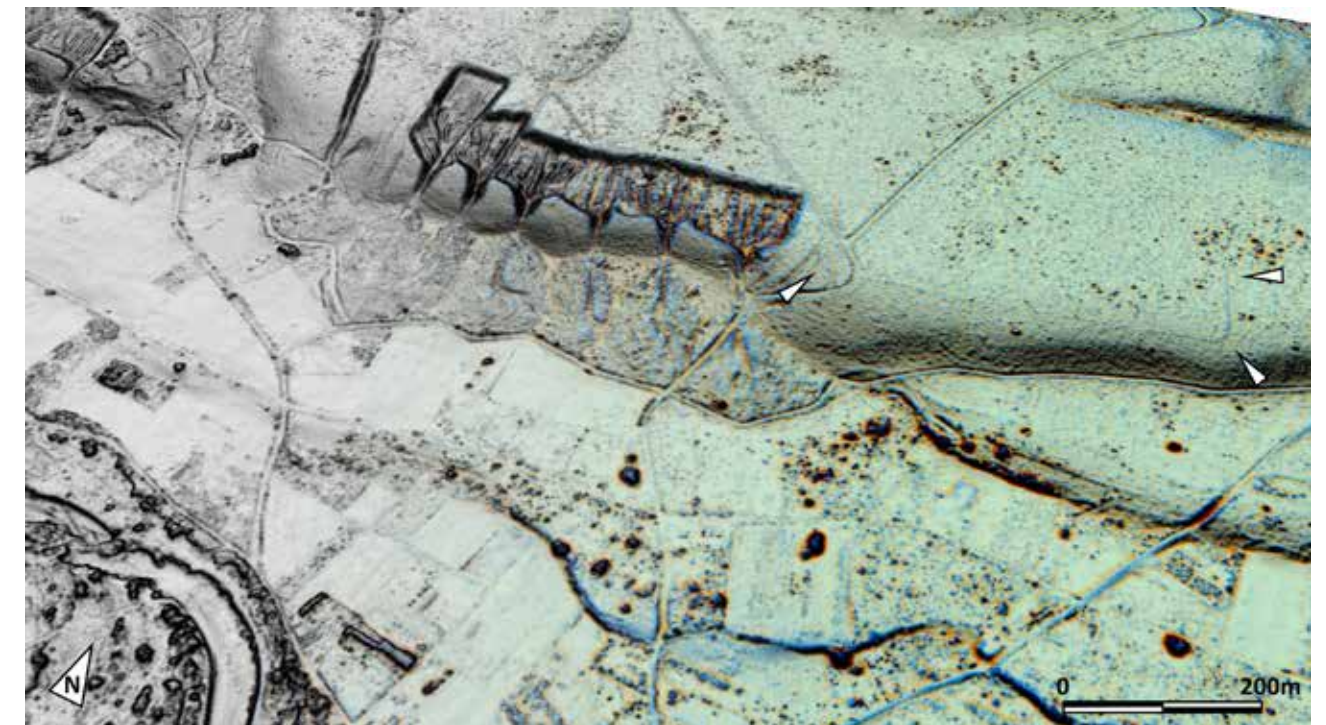


Fig. 6 - Roman camp of La Chanica d'Arriba. 2.5D LiDAR-derived visualization (2010). Note the nearby presence of gold-mining exploitations. © Authors

search perspectives into the study of the early Roman military presence in the Galicia and northern Portugal regions. Other pieces of Roman military equipment were also recovered, namely several *clavi caligarii*. Penedo dos Lobos was occupied during the late 1st century BC, possibly coetaneous with the Cantabrian-Asturian Wars, the last military conflict that ended the Roman conquest of Hispania. Although we know this was a seasonal site occupied for a certain period by a small military contingent, it is not yet possible to determine its specific mission.

### 5. Final remarks

The study of most Roman military sites recently discovered in NW Iberia is in its initial phase. In fact, very few sites have been properly dated, hence limiting the articulation of diachronic perspectives. Quite remarkably, aspects such as the different soil composition or diverse anthropogenic alterations affecting these sites reveal that the traditional dating strategy based on the systematic recovery of the material culture may not be viable in several cases. Implementing strategies that encourage using physical-chemical dating techniques

and establishing protocols for developing paleoenvironmental analyses is genuinely needed to contextualize these fortifications better. A more detailed account of the chronological contextualisation of different sites –and the diversity among them in morphotypological and location sense– will inform us about the strategies and historical happening related to the recently discovered Roman military sites in NW Iberia.

Although we have a better archaeological knowledge of the Roman military presence in the study area, we still need to go further in the shaping of interpretative narratives that would depict historical accounts about the expansion of the Roman state in NW Iberia. In this regard, we cannot forget the integration of Roman military Archaeology with the archaeological research related to the local indigenous communities. Otherwise, we would deny the agency of local populations in shaping the new colonial context launched by the Roman conquest of NW Iberia territories<sup>32</sup>. Naturally, the articulation of in-depth discussions around this historical process relies on gathering new, trustful archaeological data.

<sup>32</sup>Marín Suárez, González-Álvarez 2011; Sastre Prats 2001





Fig. 7 - Some metallic objects recovered in the Roman camp of El Xuegu la Bola. A spearhead (upper) and a tent peg (lower). © Authors

Results from our three-year research invite us to be moderately optimistic about the future. However, we cannot forget that we are truly working against the clock concerning discovering and studying the fragile traces of Roman military sites. Several anthropogenic and natural agents are yearly compromising the preservation of these sites. Remote sensing techniques show the dramatic effects of mechanised agrarian activities in the last decades, such as intensive agriculture or forestry. Therefore, we need to establish informed policies in land management that may allow the compilation and study of archaeological information in these fragile sites.

Undoubtedly, accumulating new data has allowed us to glimpse archaeological realities previously unknown to us. This information helps us enunciate novel research questions aimed to be answered by future investigations and also serve as stimuli in elaborating more detailed hypotheses and interpretations. Mapping previously marginal regions allows us to acquire a more comprehensive view of the Roman military presence

in NW Iberia. It is also a reminder of the potential of Archaeology to assess the reasons behind the current voids in our knowledge about the military activities of the Roman state. We presume archaeological debates around the role played by the Roman army in NW Iberia during Late Republican and Early Imperial times will be a recurrent topic at the Limes conferences to come.

#### Post-scriptum

The authors originally submitted this manuscript on June 2019. In only four years, archaeological research on the Roman expansion in NW Iberia has changed substantially, with relevant discoveries, new methods being applied, and a more complex debate on the subject. For this reason, we would like to invite the readership to complement the understanding of our research shown in this chapter with the consideration of some other manuscripts (Costa-García *et al.* 2019, 2021; Menéndez-Blanco *et al.* 2020) published after our attendance to the Limes XXIII held in Serbia.



Fig. 8 - Roman camp of A Penaparda. 2.5D visualization using the orthophoto and the DSM obtained thanks to the photogrammetric processing of aerial photographs (2017). Note how eroded the ramparts are at the present time due to agricultural activities. © Authors

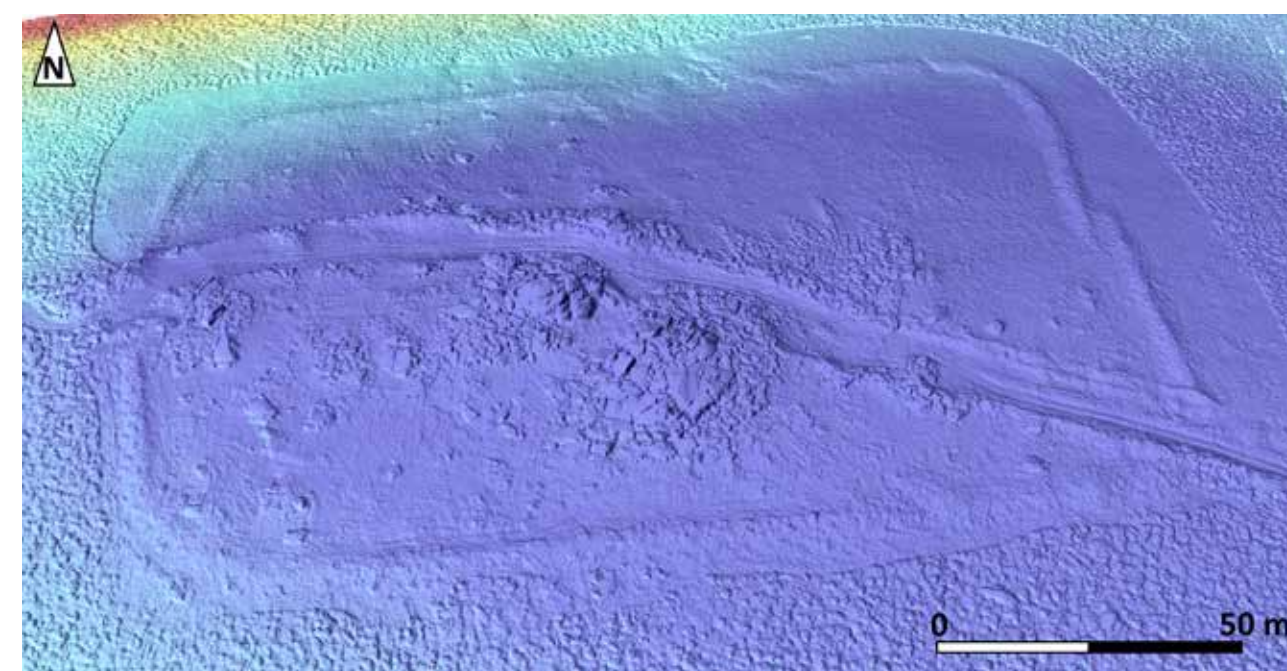


Fig. 9 - Roman camp of Penedo dos Lobos. 2.5D visualization using the photogrammetric DSM obtained in the 2018 campaign. Despite some important alterations, the defensive perimeter preserves its structural integrity. © Authors

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Fig. 10 - Minted ca. 25-22 BCE by Publius Carisius, this coinage (RIC 20, upper; RIC 15b, 16 or 17, lower) allow us to link the Roman camp of Penedo dos Lobos with the Augustan campaigns against the Astures. © Authors

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#### Resumen

Este trabajo sintetiza la investigación desarrollada por el colectivo Romanarmy.eu desde la celebración del anterior Congreso Internacional de Estudios sobre la Frontera Romana en 2015. Durante este periodo de tres años, se ha consolidado la metodología para la documentación y estudio de asentamientos militares romanos con recurso a la teledetección, pero hemos avanzado de manera significativa en el estudio de alguno de estos yacimientos sobre el terreno: Cueiru y El Xuegu la Bola en Asturias, y A Penaparda y Penedo dos Lobos en Galicia. Este paso hacia adelante nos ha permitido plantear narrativas novedosas acerca de la extensión del estado romano en el noroeste peninsular y el papel desempeñado por el ejército romano en este proceso.





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# **Recent research activities along the Pannonian Limes in Hungary**

## **ABSTRACT**

In the last few years the archaeological research on the Roman limes in Hungary was strongly influenced by its World Heritage nomination process. There have been executed aerial archaeological and geophysical prospections connected with field research, but also some small scale excavations to verify and to extend knowledge on limes sites. Investigations have been made in the auxiliary forts of Crumerum, Intercisa and Altinum, in more watchtowers between Intercisa and Annamatia, and in more temporary camps round Brigetio. In the legionary fort of Brigetio a late Roman apsidal building could be unearthed. However, apart from this research activity focused on the WH nomination there have been made excavations in Brigetio, Aquincum, Tokod and other sites partly continuing former research according to the long-time research plan, and also as preventive or rescue excavations. The most important archaeological research could be made in the canabae of Brigetio, where a big building with hypocaust could be unearthed. In the late Roman fortified storage base at Tokod and in the late Roman hillfort at Pilismarót new buildings and other structures could be found and partly excavated. In Visegrád-Szentgyörgypuszta new parts of the watchtower Solva-28 have been excavated, and a new pottery kiln has been unearthed south of Dunaszekcső. A sorrowful situation has been evolved in the fort Lugio in Dunaszekcső, because new, more than 20 m wide stripe of the hill has fallen in the Danube. As rescue investigations or observations were forbidden, only a few new data could be gained in the site.

The work on the international academic project CLIR (Corpus limitum imperii Romani) could be continued first of all through the preparing its international database. It is suitable to maintain both scientific and site managing data, therefor it can be used also to prepare the limes World Heritage nomination file. As it is now ready to use, the uploading of the material can be started. From the numerous scientific papers, evaluating limes sites and finds, let me mention the research on the epigraphic material of Pannonia. A new program was started by Géza Alföldy, to edit all inscriptions of Pannonia in the framework of CIL. The latest volume contains the stone inscriptions of Intercisa, and the volume on the inscription of the southern Hungarian territory is under preparation. At present the volumes have been published with Hungarian commentary, but later they will be published in Latin

**KEY WORDS: ROMAN LIMES, PANNONIA, FORTIFICATIONS, HISTORY,**

The research of the Pannonian frontier of the Roman Empire in Hungary has been intensified in the last couple of years. Several different reasons can be mentioned for it (Fig. 1). The accelerated motorway program in the country caused series of preventive excavations along the limes in and around Budapest and in the south part of Hungary, but also in other regions. Another program arose from the decision to prepare the World Heritage nomination of the Pannonian limes in Hungary. It has been successfully performed during the previous years, and united with the similar nominations dossiers of Bavaria, Austria and Slovakia it was submitted to UNESCO at the beginning of 2018 under the name “The Frontiers of the Roman Empire. The Danube Limes”. The nomination program took use of the CLIR database, which could be finished as a scientific limes database of the 80<sup>th</sup> international research program of the *Union Académique Internationale* on the one side, and a database, suitable for the management requirements of the WH nomination on the other side. Several scientific archaeological programs have been running in the meantime, first of all those of the universities in Budapest, Pécs and Piliscsaba-Budapest. At the time being some preliminary reports have been published, involving also the results of the non-disturbing researches of aerial reconnaissance, geophysical prospection and field walking. I am very grateful that all colleagues provided me manuscripts or oral information, and so I am able to give a short overview about the newest researches, too. Let me thank all of them for it!

The evaluation of earlier excavations and archaeological material has been running in the previous years, and the results are imposing. More monographies have been published, also comprehensive works on the history of the province. The anniversary conferences on Augustus and Tiberius have brought new results on the early history of Pannonia. Last but not least I mention some organisational issues that can be firmly influence the limes research in Hungary in the future.

### I. Field work

The Department of Archaeology of the ELTE University in Budapest has been working in the civil town

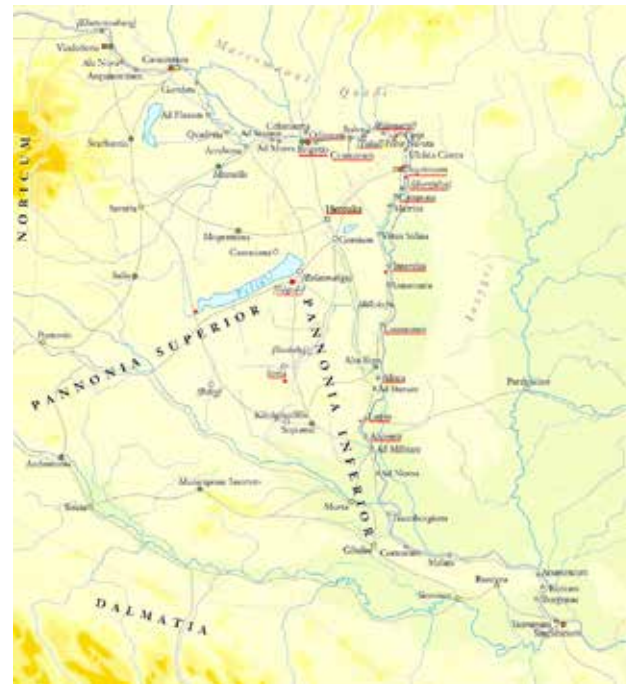


Fig. 1 - Map of Pannonia with the localities mentioned in the paper – Z. Visy

of Brigetio (Komárom) under the leading of László Borhy for many years. In 2014, however, as a new dam was being built in the territory of the *canabae legionis*, the team had to work also here, and since then the ELTE team under the leadership of David Bartus has succeeded to excavate a large section of the *canabae* (*municipium* in the 3<sup>rd</sup> century) between the dam and the railway. Imposing structures of an official building with hypocaust and frescoes came to light on the north side of the main road of the town, the limes road. The remains of the 3<sup>rd</sup> century settlement are planned for future conservation and presentation<sup>1</sup>. The *praetentura* of the legionary fortress of Brigetio is an unbuilt area, where an apsidal building could be identified on an aerial photo (Fig. 2). Its excavation was started in 2017, and it turned out that it is a late Roman building on the north side of the *via principalis*<sup>2</sup>.

There are more than 36 marching camps round Brigetio. As many of them have been incorporated in the WH nomination, it was inevitable to open some trenches in some of them in order to gain some information about them, identified through aerial photographs. In 2016 Máté Szabó and the author of this report excavated in



Fig. 2 - The apsidal late Roman building in the *praetentura* of the legionary fort of Brigetio – D. Bartus

the camps V, VI-VII, X-XI (Fig. 3), XIII-XIV, XIX, XXII-XXIII, XXX-XXXI and XXXII. The excavation proved in all cases the presence of the ditches as shown on aerial photographs, and the few finds from their territory proved their existence in the 2<sup>nd</sup> century<sup>3</sup>.

Regarding the WH nomination geophysical prospection was carried out in the fort of Crumerum (Nyerjesújfalú). The fort has been known from an old aerial photograph, and the only excavated part of it is the *porta praetoria*, but this unpublished excavation was made in the thirties of the 20<sup>th</sup> century by the amateur archaeologist Albin Balogh. The geophysical research of Gábor Bertók and Róbert Lóki revealed the walls of the fort, running to the now missing north corner of the fort.

In the late Roman fortified storage base Tokod József Beszédes carried out an excavation in a through geophysical research of Gábor Bertók newly identified building, and he excavated a building also in the late Roman hillfort Pilismarót, both in the frame of the research project of the Catholic University at Piliscsaba.

In the Danube bend, there are many late Roman watchtowers. One of them, Solva 28 (Fig. 4) at the foot of the Sibrik hill in Visegrád could be unearthed by Péter Gróf in 2017. The entrance of the 10 by 10 m big stone tower is on the eastern side. It was built in the seventies of the 4<sup>th</sup> century, under Valentinianus<sup>4</sup>.

In connection with a research near to the 2<sup>nd</sup> century watchtower VLC-5 in Budapest a new survey was carried out in the watchtowers between Ulcisia (Szenten-

<sup>1</sup>Bartus *et al.*, 2015, 189–196; Bartus *et al.*, 2016, 113–192; Bartus, Borhy, Sey, Számadó, 2018, 63–82.

<sup>2</sup>Bartus, Borhy, Johácz, Számadó, (2018) 541–548.

<sup>3</sup>Fábián, Fodor, Szabó, 2020, 75–109.

<sup>4</sup>Gróf, 2020, 199–208.





Fig. 3 - The crossing of the ditches of the marching camps Brigetio X-XI. – Zs. Visy



Fig. 4 - The watchtower Solva 28 during the excavation – P. Gróf

dre) and Aquincum<sup>5</sup>, and a new late Roman watchtower with four inner pillars could be partly excavated in the Nánási út<sup>6</sup>.

Many preventive and rescue excavations have been carried out in Budapest by the archaeologists of the Aquincum Museum. A barrack building with a short section of a stone paved road and a canal could be unearthed in the south-eastern part of the legionary fortress<sup>7</sup>, and through a systematic field investigation the area and extension of the native settlement of

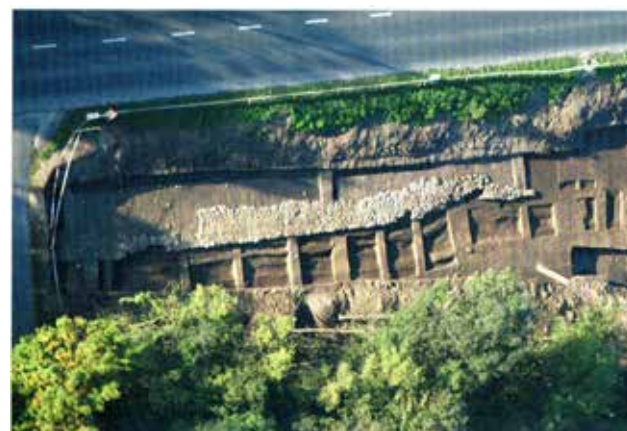


Fig. 5 - The limes-road at Budatétény as excavated by J. Beszédes



Fig. 6 - The *porta principalis sinistra* of the auxiliary fort at Albertfalva as excavated by J. Beszédes

Aquincum on the late first century could be revealed<sup>8</sup>. During the preventive excavations in connection with the reconstruction of the Budapest - Esztergom railway line, new data could be gained about the structure of the civil town of Budapest<sup>9</sup>.

In connection with the restoration of the parish church of Pest new investigations were carried out in the church, but similar works could be done also outside in the Március 15 square, in the late Roman fort Contra Aquincum. Two important conclusions could be drawn. First: the building west from the fort was

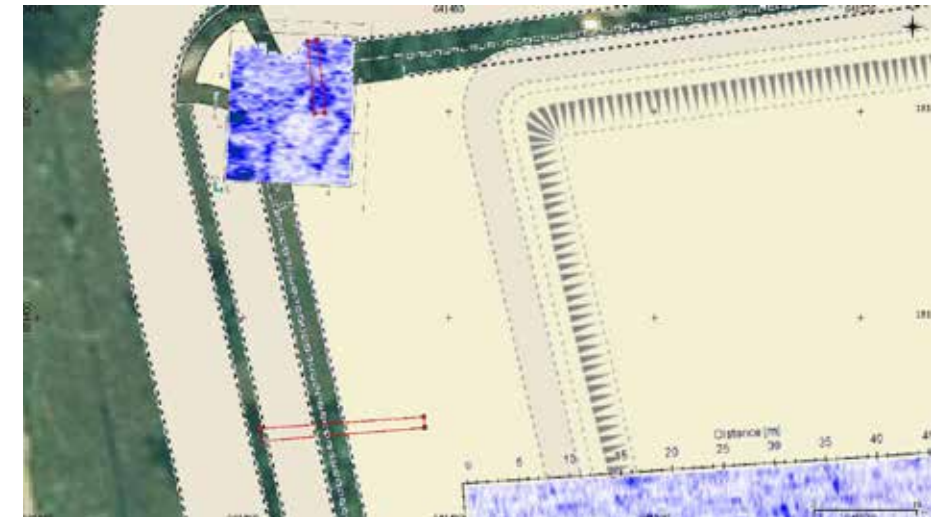


Fig. 7 - The northwestern part of the fort Intercisa as represented by the earth radar imagery and the excavation. - G. Bertók – Zs. Visy

a Turkish, not a Roman bath, and second: as in the ditch of the former, but probably also 4<sup>th</sup> century fort a bronze coin was found from 348-350, which means that the quadrangular fort of Contra Aquincum with fane shaped corner towers and U-shaped side towers only later, in 350 AD could be built at the earliest<sup>10</sup>.

Short sections of paved Roman roads were found in Budapest-Vízi város and south of the Gellért hill<sup>11</sup>, and a long sections of the limes road came to light in Budatétény (Fig. 5) and in Budapest-Kelenföld<sup>12</sup>. Extended archaeological investigations could be executed in the vicus of the Albertfalva auxiliary fort in the last decades, and after a long time excavations could be carried out also in the fort. It could be realized that the orientation of the early structures in the vicus follow the orientation of the Flavian fort<sup>13</sup>. The gate towers were built above the filled ditch of the earth and timber fort as in many other cases in Pannonia<sup>14</sup> (Fig. 6).

The fort Campona (Nagytétény) lays in the southwestern corner of Budapest. In connection with a building program parts of the vicus could be investigated in 2015. The finds and archaeological features proved

that, similarly to other military vici, the 2<sup>nd</sup>-3<sup>rd</sup> century vicus ceased to exist in the middle of the 4<sup>th</sup> century. A cemetery was opened in the territory of the former settlement<sup>15</sup>.

The limes road was the subject of the study of Gábor Varga who contributed new data, gained from old maps for a better clarification of its line south of Erd<sup>16</sup>.

In 2016 new investigations were made in the auxiliary fort of Intercisa. They aimed to specify the *decumana* front exactly. The geophysical prospection of Gábor Bertók successfully proved the existence and location of the late Roman tower, which closed the *porta decumana*, and also the existence of the inner tower in the north-western corner of the fort (Fig. 7). It proved then that inner towers had been built in all the four corners, not only in the praetorian front as supposed earlier. A small-scale excavation could be made in the same year on the western and northern front of the fort that proved that the earlier mapping of the fort, used many different measurement of different excavations through more decades, is precise and doesn't need any bigger modification<sup>17</sup>.

<sup>5</sup>Nagy, Szilas, Biller, 2017, 69–73.

<sup>6</sup>Budai Balogh, 2017, 34.

<sup>7</sup>Kirchhof *et al* 2017, 80.

<sup>8</sup>Lassányi, Zsidi, 2015, 32–50; Lassányi, Láng, Zsidi, 2017, 71–75.

<sup>9</sup>Láng, Lassányi, 2014, 16–37; Lassányi, Láng, 2015, 19–31.

<sup>10</sup>Beszédes, 2015, 108–118; Beszédes, 2017b, 204; Zádor, 2017, 207.

<sup>11</sup>Nagy, Beszédes, 2017, 148; 227.

<sup>12</sup>Beszédes, 2017a, 260; 264.

<sup>13</sup>Beszédes, 2017c, 239–242; 243.

<sup>14</sup>Visy, 2003, 112.

<sup>15</sup>Beszédes, 2016, 83–89.

<sup>16</sup>Varga 2016, 123–144.

<sup>17</sup>Visy, 2020, 209–236.; Visy, 1977, Fig. III.





Fig. 8 - The limes road Ördögvetetés near Szekszárd – A. Czövek

A small investigation could be made in the late Roman watchtower Intercisa-5 in Kisapostag. Its double ditches were cut through on the western side, and the 4 m deep, V-shaped ditches could be documented. The remains of the wooden tower were outside of the research area<sup>18</sup>.

The investigation of Lussonium has been continued, in the latest years in the cemetery. There are more than hundred late Roman graves excavated; a ditch runs along the western end of the cemetery. It's a pity that most of the graves have been plundered<sup>19</sup>. Some of the new finds got place in the new exhibition of the Town Museum of Paks<sup>20</sup>.

In the county Tolna the investigation of Attila Czövek brought new results on the limes. In an excavation made in 2010 he found that the *agger* of the road is arched, has more layers, and there was no stone and pebble in it. A 3 m deep ditch ran on its southern side (Fig. 8). He could later found that the limes road Ördögvetetés, having left the auxiliary fort Alisca (Őcsény) runs further to the south<sup>21</sup>.

A catastrophe took place in Dunaszekcső in 2015, as a more than 20 wide section of the castle hill with rem-



Fig. 9 - The pottery kiln in Dunaszekcső Halina – O. Gábor

nants of the fort Lugio slid in the Danube<sup>22</sup>. This case sorrowfully impeded the WH nomination of the site. However, aerial photographs provided a new Roman site in the southern part of the village<sup>23</sup>. The excavation of Olivér Gábor brought to light a pottery kiln (Fig. 9). The quadrangular kiln with rounded corners could have a diameter of 7-8 m and produced tiles for the *cohors VII Breucorum*, garrison of the fort Lugio in the 3<sup>rd</sup> century<sup>24</sup>.

Several investigations have been made in the fort Altinum (Kölked) in order to better base the WH nomination of the site. The geophysical prospection on different parts of the *vallum* provided a clear picture of the unique form of the fort on its south-western side. This wall had a curved line with a gate with double towers in the middle, and fane shaped towers at the corners. On the southeaster side, also an U-shaped tower could be documented. All these structures belong to the late Roman period of the fort in the 4<sup>th</sup>-5<sup>th</sup> centuries. In accordance with the WH nomination the southern fane

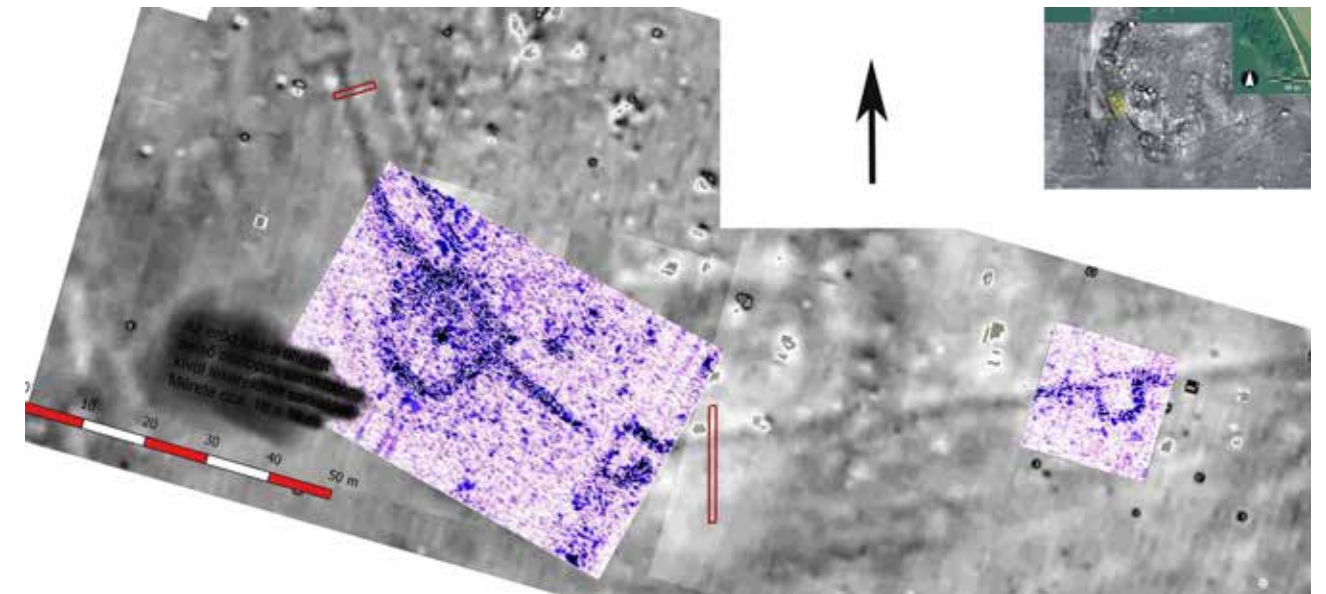


Fig. 10 - The geophysical representation of the fort of Altinum, combined with the results of the excavation – M. Szabó

shaped tower could be unearthed. Although the local people in a great extent have extracted its wall and its fundament, the form and plan of it could be perfectly documented<sup>25</sup> (Fig. 10).

The different types of non-destructive investigation have been regularly applied before and during archaeological programs by the research team of the Budavár Ltd. A comprehensive work on the aerial archaeological research was made by Máté Szabó who has published lots of limes sites from the Aerial Archaeological Archive of the Pécs University<sup>26</sup>.

## II. Evaluation of excavations, finds

Significant achievements characterize the last years also in the evaluation of the excavations and the finds. The research team of the ELTE University evaluates the excavations and the finds of the Brigetio research regularly, and those of the investigations of the Aquin-

cum Museum get place in the Aquincumi Füzetek in every year. Orsolya Láng revised the late Roman finds of the civil town of Aquincum, and found that it was abandoned in the fourth century<sup>27</sup>. More reports and papers are waiting for publication, and some manuscripts are ready as well. Katalin Ottományi published her excavations in the Roman villas in Érd together with the finds<sup>28</sup>, and Mónika Merczi the broches found there<sup>29</sup>. Zsolt Mráv joined them with the evaluation of the military equipment from the Roman settlements in Érd<sup>30</sup>. Kata Dévai gathered and published the late Roman glass vessels<sup>31</sup>, Dénes Gabler the Rheinzabern sigillatas from Pannonia<sup>32</sup>. He sacrificed a paper to the archaeological problems of the Marcomannic-Sarmatian Wars in the 2<sup>nd</sup> century AD<sup>33</sup>. There are two papers of Friderika Horváth under press, written on military finds of a rural settlement and on Samian ware found in the Castle Hill of Esztergom<sup>34</sup>. Endre Tóth sacrificed two papers to the questions of the late Roman brooches with onion shaped knobs<sup>35</sup>.

<sup>18</sup>Visy, 2020, 209–236.; Visy, 2003a, 78.

<sup>19</sup>I am grateful to Ferenc Fazekas for the information.

<sup>20</sup>Fazekas, Szabó, Péterfi, Várady Z., 2016.

<sup>21</sup>Czövek, Veszprém, forthcoming.

<sup>22</sup>See the paper of Farkas I. G.

<sup>23</sup>Visy, 2003b, 113.

<sup>24</sup>Gábor 2020, forthcoming.

<sup>25</sup>Szabó, Kovaliczky, Lóki, 2018, 86–90.

<sup>26</sup>Szabó, 2016.

<sup>27</sup>Láng, 2018, 143–168.

<sup>28</sup>Ottományi, 2016, 13–68.

<sup>29</sup>Merczi, 2016, 69–100.

<sup>30</sup>Mráv, 2016a, 101–112.

<sup>31</sup>Dévai, 2016, 255–286.

<sup>32</sup>Gabler, 2016, 115–127.

<sup>33</sup>Gabler, 2017, 21–40.

<sup>34</sup>Horváth, 2018, 177–211; Horváth, 2019, 385–408.

<sup>35</sup>Tóth, 2015a, 365–381; Tóth, 2015b, 329–361.



The research on the population of Pannonia was always in the centre of the scientific interest in Hungary. The Romanization of the Pannonian tribes<sup>36</sup>, the amalgamation of them with the soldiers and civilians of different provinces, and the transplanted barbarian groups changed from time to time the composition of the population of the province during centuries. A new paper was published by Péter Kovács on the changes of the Pannonian population due pest and war during and after the Marcomannic wars, and also he added some notes to the questions of the Pannonian *foederati*<sup>37</sup>. Szilvia Bíró wrote and published a comprehensive work about the civil *vici* in Pannonia<sup>38</sup>.

Dorottya Gáspár evaluated the Pannonian grave monuments in Hungary in three volumes<sup>39</sup>. Regarding the historical and archaeological problems of the first half of the 5<sup>th</sup> century AD Ferenc Fazekas has made important achievements in the research of late Roman transformation in his PhD dissertation<sup>40</sup>.

Let me mention a newly published casket mount from Intercisa, too<sup>41</sup>. As new erotic finds came to light in the last couple of years in Aquincum, to papers have been dedicated to them, to the Priapic representations and their evaluation<sup>42</sup>.

Balázs Nagy and Gábor Olivér published the coins of the excavations in the vicus of Lugio (Dunaszekcső) of 1999-2000. They stated that the coin circulation had started under Claudius, which means that we have to recon with a Claudian period of the fort in Lugio<sup>43</sup>.

In connection with the preparation of the WH nomination more studies have been sacrificed to the special features of the river line frontiers and the Roman road network of the Roman Empire<sup>44</sup>, the topography and structure of the Roman limes in Hungary<sup>45</sup>. This work is reflected and summarized in the FRE Danube Limes WH nomination dossier, prepared by Bavaria, Austria, Slovakia and Hungary<sup>46</sup>. Prior to the nomination dossier a Thematic Study of the proposed world heritage nomination strategy with contributions of the author were written<sup>47</sup>. The CLIR-research (*Corpus limitum imperii Romani*) has started, too, and beside its international database some papers have been published<sup>48</sup>.

New evidences could be brought to the right evaluation and the more precise chronology of the inner fortifications of Pannonia, and this research proved that their role was to be a fortified storage base for food and equipment, and as they could not be manned permanently, their perimeter walls had to be built extremely high<sup>49</sup>. Their proper name is then late Roman fortified storage bases. Endre Tóth investigated the main buildings in the fortified storage bases of Ságvár and Alsóhetény<sup>50</sup>.

Rich epigraphical ensemble became known in the last years in Pannonia, among them military diplomas. A Hadrianic diploma has been published from Gerulata<sup>51</sup>, another one from the last year of Commodus<sup>52</sup>. Werner Eck und Andreas Pangerl described two other fragmentary military diplomas from Pannonia<sup>53</sup>. Three other military diplomas from the County Baranya in south Transdanuvia will be published soon from a private

collection from the time of Domitianus, Hadrianus and Antoninus Pius<sup>54</sup>. The relatively great number of military diplomas from Pannonia inspired D. Dana to write a paper about the recruitment of the auxiliary soldiers<sup>55</sup>. In 2015, Brigetio provided a bronze tablet with the law of Philippus Arabs. The fragments related to military privileges were found in the territory of the *principia* of the legionary fortress by a metal detector, not far from the site where the first bronze tablet with the law of Constantinus and Licinius came to light more than 70 years ago<sup>56</sup>.

Based on a new tombstone from Dunaszekcső it could be stated that the auxiliary fort of Lugio (Dunaszekcső) existed already in the middle of the first century AD, and that the *cohortes Alpinorum* had been organized around 17 AD, at the latest<sup>57</sup>. It coincides with the above-mentioned results concluded from the numismatic research made in the vicus. Two milestones could be published in the previous years, both of Maximinus Thrax, from Pomáz and Almásfüzitő<sup>58</sup>. The number of the Pannonian statue bases has increased with a new one from Ulcisia (Szentendre). It was dedicated to Severus Alexander<sup>59</sup>.

The late inscriptions from Intercisa proved that the two phases can be detected in the 2<sup>nd</sup> half of the 3<sup>rd</sup> and in the beginning of the 4<sup>th</sup> century in this military settlement. At first, only the forms became more simple and irregular, and in the second one older architectural slabs and gravestones were used secondarily<sup>60</sup>. To the late Roman inscriptions of Intercisa joined a new one, which was found in the Danube. The fragmentary gravestone was dedicated to an *exarchus* of the *numerus equitum Syrorum sagittariorum*, the remnant unit from the *cohors I milliaria Hemesenorum* in the 2<sup>nd</sup> half of the 3<sup>rd</sup> century<sup>61</sup>. In the new series of the CIL for Pan-

nonia the ensemble of the inscriptions of Intercisa has been published<sup>62</sup>. Péter Kovács has summarized the epigraphical research in Hungary of the years 2012-2017 in 2018. In this period, 41 new stone inscriptions and 58 *instrumenta* inscriptions have been published<sup>63</sup>.

### III. The history of Pannonia

Significant researches have been made on the history of the province. László Borhy and Péter Kovács published two monographs<sup>64</sup> on it. The third volume of the monograph of Kovács is in preparation, but some results have been published in different papers also from the timeframe of this volume.

The occupation and the organization of the province have been in the centre of the scientific discussion for a long time. It is not fully clear how this process was running, which territory belonged to the extended territory of Illyricum under Augustus. The scholarly views differ in these questions. According to some scholars the provincial territory was extended by Augustus only to the river Drava, and the territory north of it up to the Danube was occupied only under Claudius, with the official establishment of the province Pannonia. Other scholars—making a difference between military and organizational occupation—state that the entire territory of Pannonia was occupied between 11-9 BC, but the region north of the Drava was in a federate status for some decades. László Borhy follows the previous, Péter Kovács and me the second view. The memorial conferences to Augustus and Tiberius in the last years provided new platforms for discussing these problems, and I believe that now this complicated issue could be solved. The author of this summary repeatedly emphasised that the *Eravisci* and other tribes had been subjugated under Augustus rule, but these tribes and the

<sup>36</sup>Kovács, 2014b, 65–75; Ferjančić, Pelcer-Vujačić, 2017, 55–66.

<sup>37</sup>Kovács, 2016d, 70–79; Kovács, 2016e, 577–601.

<sup>38</sup>Bíró, 2017.

<sup>39</sup>Gáspár, 2016.

<sup>40</sup>Fazekas, 2015, manuscript.

<sup>41</sup>Kovács, 2016b, 25–32.

<sup>42</sup>Vass, 2016, 63–77; Facsády, Visy, *BudRég*, LI 2018, 85–90.

<sup>43</sup>Nagy, Gábor, 2017, 255–265.

<sup>44</sup>Visy, 2015c, 27–36; Visy, 2015b, 71–80; Visy, 2017b, 69–78.

<sup>45</sup>Visy, 2017c, 539–547.

<sup>46</sup>FRE Danube Limes, 2018.

<sup>47</sup>Visy, 2017a, 23–24.

<sup>48</sup>Visy, 2015a, 923–928.

<sup>49</sup>Visy, 2016a, 161–170; Visy, 2018, 447–453.

<sup>50</sup>Tóth, 2022, 37–54.

<sup>51</sup>Barta, Kovács, Schmidtová, 2018, 204–206.

<sup>52</sup>Eck, Pangerl, 2015, 281–286.

<sup>53</sup>Eck, Pangerl, 2016, 239–244; Eck, 2016, 217–226.

<sup>54</sup>Visy, ZPE 295–300.; Visy, SEP 277–288.

<sup>55</sup>Dana, 2017, 115–142.

<sup>56</sup>Borhy, Bartus, Számadó, 2015, 27–45.

<sup>57</sup>Kovács, Pánya, 2017, 169–176.

<sup>58</sup>Kovács, 2016f, 80–89; László, Szabó, 2016, 7–12.

<sup>59</sup>Mráv, 2016b, 204–209.

<sup>60</sup>Visy, 2016b, 105–124.

<sup>61</sup>Búza, Kovács, Tóth, 2017, 302–308.

<sup>62</sup>Visy, 2016c.

<sup>63</sup>Kovács, 2018a, 97–106.

<sup>64</sup>Borhy 2014; Kovács 2014a; Kovács 2016a.

*Boii*<sup>65</sup> between the Drava and the Danube had become federal kingdoms similarly to some tribes during the Pannonian revolt in 6–9 AD. Moreover, the campaign of Vinicius on the left side of the Danube from Carnuntum eastwards against *Cotini*, *Osi*, *Anartii* and *Teurisci* probably in 10–9 BC proves that the border of the Roman interest area was the Danube. Furthermore, the fact that Eraviscan coins were made also under Caligula proves their relative independence<sup>66</sup>. Péter Kovács has similar views, but through an exhaustive evaluation of the sources—first of all passages of Strabon, Velleius Paterculus and Plinius—he succeeded to state that the federal status of the northern Pannonian tribes—*deserta Boiorum* and the land of the *Eravisci*—went to an end at the beginning of the rule of Tiberius<sup>67</sup>.

After publishing an exhaustive monography on the Marcomannic Wars Péter Kovács returned to the question of the miracles in the land of *Quadi*. He concluded that there were two different miracles, a lightning one in the presence of Marcus Aurelius and a rain miracle. They probably could happen in 172 AD (or 171)<sup>68</sup>.

The late Roman period in the 4<sup>th</sup> and 5<sup>th</sup> centuries was discussed in several papers. To the history, Péter Kovács contributed to the administrative changes in Pannonia under Diocletian and Constantine<sup>69</sup>, to the activities of Constans in Pannonia<sup>70</sup>, to the civil wars in Pannonia against Vetrano and Magnentius in 350–351<sup>71</sup> and to the sources of the Sarmatian wars of Constantius II<sup>72</sup>. These papers are also topics of his monography written about the late Roman history of Pannonia<sup>73</sup>.

The late Roman fortified storage bases have been discussed many times, but the date and the chronology of the two main building phases could not be determi-

ned exactly. However, according to the new approach, these big fortifications with many towers that afforded immense investment and huge work in both periods must have followed barbarian attacks with plundering and devastation. As the dates of the bigger barbarian attacks are known in Pannonia, the chronology of the late Roman fortified storage bases could have been revised. They were probably built after the barbarian invasions of AD 322 or 332 by the provincial army under Constantinus. Some decades later a similar reason in AD 356 or 365 caused their rebuilding in a much bigger form under Constantius II or Valentinian I<sup>74</sup>.

#### IV. Research framework

The research of the Roman limes in Pannonia can and will be accelerated in the future. The main reason for it is the WH nomination that could be submitted along with three other countries to the UNESCO WH Centre in 2018. The Hungarian government took this decision and at the same time provided significant financial sources to make additional research activities and to enhance monument preservation, parallel with touristic installations. These works are in preparation in many sites, and the 65 selected WH sites along the 415 km long Hungarian sector of the Danube, together with the relevant site information create a limes route that can be linked to the similar limes routes in other countries along the Danube.

To enhance the further research activities a new research centre will be soon established, the *Corpus limitum imperii Romani* (CLIR) Academic Research Centre that continues, accelerates and supports the limes research in Hungary and contributes to the in-

ternational limes research in the territory of the former Danube provinces<sup>75</sup>.

In order to fulfil the national and international requirements a new committee has been created in 2017, the Hungarian Limes Committee<sup>76</sup>. Its main task is to enhance and coordinate the limes-research and enhance activity on the Danube Limes WH sites in Hungary, and to represent Hungary in the international management bodies of the Frontiers of the Roman Empire WH cluster and in the coming Danube Limes WH property.

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<sup>66</sup>Visy, 1971, 73–79; Visy, 1993, 5–12; Visy, 2004, 958–959; Visy, 2013, 177–219; Visy, 2015d, 155–166; Visy, 2016a, 161–170; Visy, 2017d, 157–166.

<sup>67</sup>Kovács, 2014a, 54–55; Kovács, 2017b, 103–120; Kovács, 2018b, 163–174; but see the similar conclusion earlier: Visy, 1999, 143; Visy, 2013, 177–219.

<sup>68</sup>Kovács, 2017b, 101–111.

<sup>69</sup>Kovács, 2015a, 287–298.

<sup>70</sup>Kovács, 2016c, 93–106.

<sup>71</sup>Kovács, 2017a, 351–370.

<sup>72</sup>Kovács, 2015b, 44–69.

<sup>73</sup>Kovács, 2016a.

<sup>74</sup>Visy, 2018, 447–453.

<sup>75</sup>It has been established in 2019 at the University of Pécs by the Prime Minister's Office, the Pécs Committee of the Hungarian Academy of Sciences and the Pécs University.

<sup>76</sup>Established on 01.02.2017. The members are: Zsolt Visy (chairperson), László Borhy, Dénes Gabler, I. Gergő Farkas, Friderika Horváth, Péter Kovács, Zsolt Mráv, Levente Nagy, Zsuzsanna Újlaki Pongrácz, Paula Zsidi.



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#### Zusammenfassung

Intensive Forschungsarbeiten wurden in den letzten Jahren am pannonischen Limes in Ungarn durchgeführt. Die Anlässe waren die beschleunigte Bautätigkeit in dem Straßennetz und andere Bauaktivitäten, ferner die Entscheidung, die ungarische Strecke des pannonischen Limes als potentielle Weltkulturerbe Stelle zu nominieren. An mehreren ausgewählten Stellen, aber auch an manchen anderen Fundstellen, insbesondere in und rund um Budapest wurden luftbildarchäologische, geophysikalische Messungen, und sogar Ausgrabungen durchgeführt (Abb. 1), um gesicherte Kenntnisse und gründlichere Forschungsergebnisse zu gewinnen. In dem zweiten Abschnitt ist über die Fundbearbeitungen und die neueren epigraphischen Forschungen zu lesen, dem die neuesten Ergebnisse der historischen Forschungen der Provinz Pannonien folgen. Der dritte Abschnitt wurde der organisatorischen Fragen der Limesforschung gewidmet, darunter dem CLIR Program und dem CLIR akademischen Forschungszentrum.

# LIMES XXIII

## Session 5

## A Farewell to Arms







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# The swords in Roman Dacia

## ABSTRACT

In this paper I shall deal with the sword blades and handle assemblages but not with their scabbard fittings since these are very numerous and deserve a typological approach on their own. As all the 10 swords accessible for research were discovered in the burning or destruction layers of the legionary fortresses or auxiliary forts I could deal not only with their typological classification but also with the date and circumstances of their deposition and the type of military units in which their owners were enlisted. Two swords were deposited in 117-119: the gladius from Bersobis and spatha from Rucăr. Towards the end of the province c. 250-260 were deposited the spathae from Bologa and Cășeu, the short swords from Potaissa and Tibiscum and the fragments from Micia. The examples from Hoghiz and Copăceni whose deposition time could not be specified are dated between c. 170- 250/260. Among all the swords stand out the Rucăr example, the earliest pattern-welded Roman spatha so far, and the narrow one from Cășeu of probably Oriental prototypes. Between c. 170/180 and 260/270 the wooden hilts provided with bronze guard plates used with spathae by all types of military units were the most popular sword grips in Dacia and probably all over the Roman Empire as well.

**KEY WORDS: ROMAN DACIA, SWORDS, *GLADIUS*, *SPATHA*, PATTERN-WELDING, HANDLES, HANDGRIP, RING-POMMEL, HANDGUARD PLATE.**

## Introduction

**T**he Dacian frontier provinces of the Roman Empire were heavily garrisoned and accordingly it was expected that they produced a large amount of military equipment. However, in a recent authoritative monograph of the Roman swords were included only three Dacian examples:

one sword, a handgrip and one handguard plate<sup>1</sup>. So it seems of some interest to make an up to date study of the swords from Roman Dacia, as much as among them there are also uncommon items.

In this context I shall deal with the sword blades and handles assemblages but not with the isolated scabbard fittings since these are very numerous,

<sup>1</sup>Miks 2007, 628 A330 pls 47. 165.; 845 B 190. 1 pl. 169; 888 B305.1,pl. 154.

over 150, and deserve a typological approach on their own, which is out of place in the proceedings of a congress. In the sword analysis I shall not use Miks' typology as by stating a lot of types divided in many variants and even tendencies, instead of accepting that the Romans had a loose standardisation of the blades similar to this of the spearheads, he commits an excess of classification.

### Swords

From the ten swords originating in Roman Dacia which were accessible to me, two date during Trajan's period.

No. 1 was discovered in the Trajanic fortress of *legio IIII Favia Felix* at Bersobis, near the *principia*, between the road and the next barrack. It has a rhomboidal cross sectioned blade with square shoulders, parallel edges and triangular short point. By all these characteristics and blade dimensions of 485x42 mm, it should be assigned to the *gladii* of Pompeii type<sup>2</sup>. At a distance of c. 1m was found the hemispherical pommel of the sword, made of a thick sheet of copper alloy. This is decorated with two concentric circular incisions, one immediately above the edge and the other at mid distance between the edge and the top of it and a small recess mark the fixing point of the compass which made the incisions. Inside the hollow of the pommel was still adhering the upper part of the broken iron tang. The rest of the handle assemblage which is missing - the handguard, handgrip and the interior of the pommel- must have been made of wood. Anyway the short tang is indicating of a low handguard which matches the short pommel.

As far as I know there is only another *gladius*, the one from Rheingönheim, with a metal plated pommel<sup>3</sup>. However this *gladius* of Mainz type has a lenticular pommel and the whole handle encased in a thin silver

foil and not only the pommel plated with a thick cast sheet of copper alloy as no.1. So, with a single distant earlier parallel the handle of Bersobis example mirrors the diversity of military equipment decoration.

The duration of Bersobis *castra* was between c. 102/106 and 117/19<sup>4</sup>. As the sword was recovered from the layer containing the debris of the buildings of the fortification, this means that the date of its deposition, the same as for a helmet found in a room of the *principia* probably an *armamentarium*<sup>5</sup>, is AD 117-119. The loss by the Roman soldiers of such large and significant items of military equipment suggests that the abandonment of Bersobis legionary fortress was just the result of a Sarmatian Jaziges attack and not a planned strategic retreat as it has been presented in the modern historiography so far.

No. 2 was unearthed in the north-western corner of the small fort at Rucăr of 60x40 m, garrisoned by one or two *centuriae* from *cohors II Flavia Bessorum*<sup>6</sup>. The fort was located on the road linking Novae with southern Transylvania through a territory included in Moesia Inferior between c. 102-117/118 but afterwards abandoned due to the Sarmatian Roxolani attacks and conquered again by the Romans after almost a century when it became part of Dacia Malvensis. The deposition of the intact *spatha* in the Rucăr small fort must occur during the abandonment of the fortification caused by the Roxolani attacks at the end of the Trajanic reign.

The sword was recovered heavily corroded and without the lower part of the flat parallel-edged blade, making impossible to state its original length. However as the end of the existing part of the blade tapers, it means that only the tip is missing. So with a blade of 565+c. 20 x 54 mm, it is a relatively narrow *spatha* of an average length, having an intermediate position between the Straubing-Nydam and Lauriacum-Hromowka later types<sup>7</sup>. The tang of 175 mm is indicative

of a long handle provided with a high handguard and a spherical or lenticular pommel<sup>8</sup>.

In the central part of the blade there are two slightly waved vertical bands, each of 8 mm wide, made of alternate hard and soft metal strips representing the simplest method of pattern-welding (straight pattern, Streifendamast)<sup>9</sup>. As the other published examples of pattern-welded swords are not older than the end of the 2<sup>nd</sup> and the 3<sup>rd</sup> centuries<sup>10</sup>, it means that Rucăr *spatha* is the earliest known Roman sword manufactured through this technical method. If this is the case, it represent the link between the straight pattern of some 1<sup>st</sup> century AD daggers<sup>11</sup> and the twist pattern-welded swords.

No. 3 was recovered from the auxiliary fort at Hoghiz<sup>12</sup>. It has a lenticular cross-sectioned blade of 650x40 mm, with square shoulders and parallel edges curving at the lower end to form an ogival short point. As the upper part of the tang is missing one cannot estimate the length of the handle. Considering its characteristics one could range no.3 among the relatively long and narrow *spathae* representing a variant of the Straubing-Nydam type.

The fort of 220x165m, dated c. AD 106 to the end of Roman Dacia<sup>13</sup>, was quartered by two military units: *ala I Asturum* which built and garrisoned it at least until the second half of the 2<sup>nd</sup> century AD and at latest from AD 177-180 also by *cohors III Gallorum*<sup>14</sup>. Consequently, in the absence of stratigraphic data on the sword discovery one cannot refine its chronology and specify if it was included in the cavalry or infantry equipment.

No.4 was unearthed in the auxiliary fort at Bologa of 213x122m, dated from c. AD 106 until c. 260/270<sup>15</sup>.

From the sword was preserved only the beginning of the rectangular cross-sectioned tang and the upper part of the flat blade 55 mm in width. At 75 mm from the beginning of the parallel edged blade there is a vertical central band of twisted alternate hard and soft iron strips making the motif of fish-spine, representing a variant of a more elaborated method of pattern-welding (Torsiondamast). The surviving fragment of no.4 belong to a relatively narrow *spatha* which has a virtually identical width with no. 2. So Bologa example, irrespective of different construction technique of the blade, has also an intermediate position between the Straubing-Nydam and Lauriacum-Hromowka types.

The sword was found in trench 24 at only 0.20 m of depth<sup>16</sup> meaning that it was used during the post-marcomannic period of the fort. Besides, considering that such a big item could hardly have been lost unnoticed or stored as scrap metal for recycling a long period of time, one can suppose that it was deposited toward the end of the existence of the fort c. AD 250/260. During the 3<sup>rd</sup> century the garrison of the fort was made by *cohors II Hispanorum scutata Cyrenaica* which was certainly *equitata* and *cohors I Aelia Gesatorum miliaria*, both attested with the epithet *Gordiana*<sup>17</sup>. Consequently one can specify only that it was included in the equipment of the auxiliaries but not if it was used by an infantry- or cavalryman.

No. 5 was discovered in the auxiliary fort Cășeu of 165x165 m<sup>18</sup>. It has a long tang of rectangular cross-section splaying toward the blade. The missing handle assemblage including a spherical or lenticular pommel must have been made of wood. The blade of lenticular cross-section has parallel edges curving at the lower end to form a short ogival point. With a blade width of only 30 mm it is 4 mm narrower than the slimmer

<sup>2</sup>Ulbert 1969, 97-128.

<sup>3</sup>Ulbert 1969a, 44

<sup>4</sup>Protase 1967, 49-51.

<sup>5</sup>Protase, Petculescu 1975, 85-89.

<sup>6</sup>Bogdan-Cătănciu 1997, 45-47.

<sup>7</sup>Ulbert 1974, 197-216.

<sup>8</sup>Engelhardt 1865, 64 the relation between the length of the sword handles and the shape of their handguards and pommels.

<sup>9</sup>Ypey 1982, 381-385.

<sup>10</sup>Ypey 1982, 381.

<sup>11</sup>Ypey 1982, 391 no. 3 Fig. 2.

<sup>12</sup>A. Georgescu, pers. comm.

<sup>13</sup>Horedt 1953, 785-795

<sup>14</sup>Protase 1977, 307-309; Horedt 1977, 333.

<sup>15</sup>Gudea 1997, 39-41.

<sup>16</sup>Pers. comm. by the late N. Gudea.

<sup>17</sup>Petolescu 2002, 103-104. 113-114.

<sup>18</sup>Gudea 1997, 51-51; Isac 2006, 443-446, Fig. 5.1.



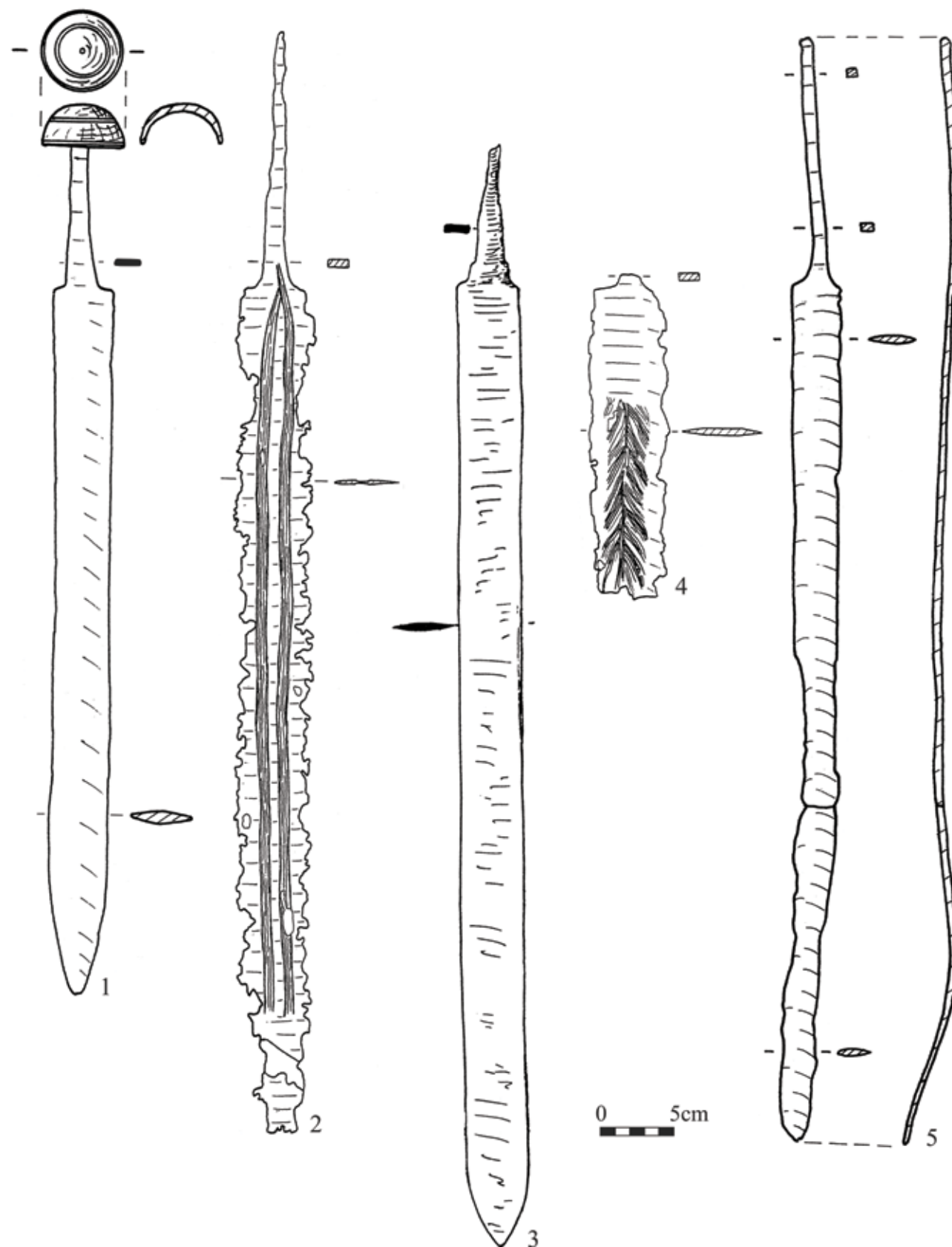


Fig. 1 - 1 Bersobis; 2 Rucăr; 3 Hoghiz; 4 Bologa; 5 Cășeu (after Isac 2006). 1 Iron and copper alloy; 2-5 Iron. Scale 1:4.

examples of Straubing-Nydam type<sup>19</sup>. So it seems that the extreme narrow *spathae* represent in fact a distinct category of swords having probably Parthian or Sassanian prototypes.

The item was unearthed at only 0.35 m of depth in the *retentura dextra*, inside the barrack 2 identified with a *stabulum*, in a layer dated from the middle of the 3<sup>rd</sup> century AD to the end of the fort<sup>20</sup>. As in this period of time the garrison of the fort was made of *cohors I Britannica milliaria equitata*<sup>21</sup> it is quite certain that no.5 belonged to a cavalryman of this military unit. Besides it is obvious that the deposition of the entire sword must be linked to the hasty abandonment of the fort following the barbarian attacks in the 260's.

The fragmentary swords nos. 6 and 9 were found by chance in the southern and respectively northern section of the large auxiliary fort at Micia. No. 6 has a tang of rectangular cross-section with its lower end gently curved toward the blade. The virtually parallel-edged blade of lenticular cross-section splayed slightly toward the flared level shoulders. The lack of the lower part of the blade make impossible to estimate the length of the sword. However, with a narrow but heavy blade, no. 6 seems to have been a long *spatha* of Straubing-Nydam type. From no. 9 was preserved only the lower part of the flat blade of parallel-edged or slightly tapering shape ending in an elongated ogival point which does not permit typological considerations.

Both Micia sword fragments originate in the fort sections near the *via sagularis* occupied by the barracks. As they were found on the surface of the soil it means that were used during the building period of the fort of 7.2 ha dated c. AD 170-270, when it was garrisoned by three military units: *cohors II Flavia Commagenorum equitata sagittariorum*, *ala I Hispanorum Campagorum* and *Mauri Micienses= numerus Maurorum Miciensium*<sup>22</sup>. So one cannot state if their owners were

cavalry- or infantrymen or in which units they were enlisted. Anyway it is obvious that the fragmentary weapons were deposited for recycling in the fort c. AD 250/260 or even lost during its final abandonment.

No. 7 originate in the fortress of *legio V Macedonica* at Potaissa, dated c. AD 170-270<sup>23</sup>. Considering that the end of the rectangular cross-sectioned tang is probably missing, it means that it had a long handle. The parallel-edged blade of rounded shoulders lacks its lower part but one can assert that only the end of the sword was lost during the unearthing process.

The sword without its handle assemblage and scabbard was found wrapped in a vegetal cover, probably raffia, in a room situated in the lateral wing of the *principia*, identified with an *armamentarium*<sup>24</sup>. So it results that when stored it was either a short sword still usable or a broken larger blade in waiting to be cut down to make a shorter sword the same as the examples from Künzing fort dated also during the 3<sup>rd</sup> century crisis<sup>25</sup>. Consequently, it seems that unexpectedly for a legionary sword, no.7 has a relatively narrow and short blade. It is however likely that toward the end of the fortress, some detachments from the auxiliary units as for example *ala I Batavorum* were gathered there<sup>26</sup>. In these circumstances it is reasonable to refrain from any conclusion on the presence of such kind of weapon in the legionary fortress save that no.7 was left when *legio V* abandoned Potaissa.

No. 8 was found in the large auxiliary fort at Tibiscum of 195x310 m<sup>27</sup>. It has a short tang of rectangular section splaying to the blade to make rounded shoulders. The thin, virtually flat blade narrows imperceptibly towards the lower end where it curves to form a short ogival point. From the handle assemblage survived the bone handguard and the pommel but not the handgrip which must have been made of wood or leather (8 a-b). The semicircular handgrip of rectangular section has a

<sup>19</sup>Miks 2007, 81. 83; Radoslavova *et al* 2011, 44 no.40 Fig.

<sup>20</sup>Isac 2006, 443-446 Fig 5/1.

<sup>21</sup>Isac 2006, 442.

<sup>22</sup>Petculescu 1977, 369-371; Petculescu 1981, 110-113 Fig. 1; Petculescu, Barbu 2016, 178, pl. 1.

<sup>23</sup>Bărbulescu 1987.

<sup>24</sup>M. Bărbulescu pers. comm.

<sup>25</sup>Herrmann 1972, 10-11, Figs. 10 and 11.

<sup>26</sup>Bărbulescu 2012, 186-212.

<sup>27</sup>Gudea 1997, 82-83, the dimensions of the fort.

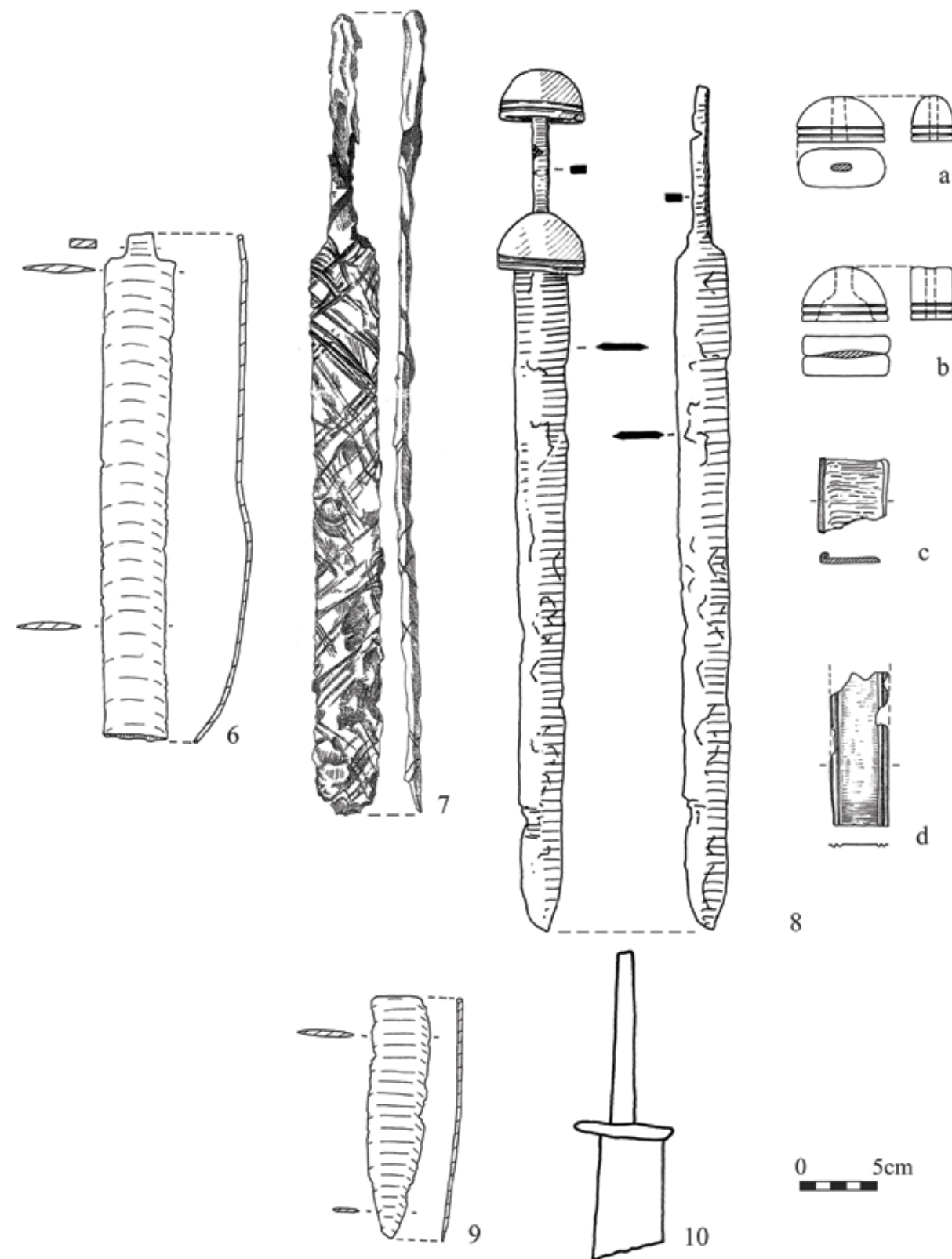


Fig. 2 - 6 Micia; 7 Potaissa (after unpublished drawing by M. Bărbulescu); 8 Tibiscum (after Bona *et al.* 1983 and Petculescu); 9 Micia; 10 Copăceni (after Vlădescu 1983). 6-7, 9 Iron; 8 Iron and bone; 8a-b Bone; 8c Iron; 8d Copper alloy; 10 Iron and copper alloy. Scale 1:4

deep hole to receive the shoulders of the blade and the tang. Its front side and edges are decorated with two grooves parallel with each other and the bottom of the piece. The distance between them and to the bottom is of 3 mm. The semicircular pommel has virtually the same width, thickness and decoration with the hand-guard.

The fragmentary undecorated locket plate of iron has inside small scraps of wood from the laths making the scabbard lining (8 c). The thin sheet of copper alloy is decorated with four vertical ribs placed in pair along the edges of the piece (8 d). These two fragments of metal mounts don't permit to reconstruct the scabbard save that it was made of wood covered with an iron plain locket and an ornamented thin plate of copper alloy.

With a blade of 445x35 mm, no.8 is a short narrow sword which cannot be included in Ulbert's typology. And also its classification by Miks among "Gladii vom *Spatha* typ, Tendenz/Variante ähnlich Straubing" is far from being satisfactory as he gathered under this awkward and contradictory heading very different examples dating from the 1<sup>st</sup> to the middle of the 3<sup>rd</sup> centuries, found all over the Roman Empire and in Barbaricum<sup>28</sup>.

As far as I know there are few distant parallels of Tibiscum example. So at Capidava (Moesia Inferior), in a cremation burial of *bustum* type dated by a coin post 128/132 was found a heavily burnt sword. It has a short handle with semicircular bone pommel and handguard of nearly identical size as no. 8 and a blade of 376x30 mm, slightly narrowing towards the lower end. The only significant difference with Tibiscum piece is that it has a seemingly triangular point. A second parallel originate in an inhumation from the same cemetery, including in his funeral assemblage a coin struck in

155/156. The similarly shaped blade to no. 8, the only part of the sword which survived, was recovered without the upper end and has the actual size of 425x 28 mm<sup>29</sup>. As the auxiliary fort at Capidava was garrisoned at least from AD 121 until the 3<sup>rd</sup> century by *cohors I Germanorum c. R*<sup>30</sup> it results that both swords which were deposited after 128/132 and 155/156 respectively but probably not later than the end of the 2<sup>nd</sup> century, were part of this auxiliary unit equipment. A similar blade but with a long tang was dredged out the river Saône at Montbellet<sup>31</sup>. And another distant parallel is represented by a pattern-welded blade with an exceptional long tang from the famous Künzing hoard deposited c. 259/260<sup>32</sup>. Undecorated semicircular pommels and handguards are met at Colonia Ulpia Traiana (Xanten), Brigetio (2 ex.), and Vimose<sup>33</sup>. The pieces from Xanten and Brigetio are undated and the one from Vimose date around the middle of the 3<sup>rd</sup> century. Besides, similar bone handle assemblages were found at Stuttgart- Bad Cannstatt and Vimose (2 ex.), but all of them differ from no.8 by their bone handgrips and also the decoration of the pommels and handgrips consisting of two circular bosses<sup>34</sup>.

No. 8 was discovered in the *praetentura sinistra* of the large fort, at 1.5 m from the building A (later labelled II) constructed during the 3<sup>rd</sup> century, in a destruction layer linked to the abandonment of the fortification<sup>35</sup>. C. 70 arrowheads, 3 bone nocks and 3 bow laths were recovered from the same destruction layer inside the building tentatively identified with a storehouse for the archery equipment<sup>36</sup>. Consequently it is a reasonable assumption that the short sword was also part of the same equipment. And as in the 3<sup>rd</sup> century the garrison of the fort was made of *cohors I Vindellicorum milliaria equitata*, *numerus Palmyrenorum Tibiscensium* and *numerus Maurorum Tibiscensium*<sup>37</sup> it means that the sword probably belonged to a Palmyrene soldier.

<sup>28</sup>Miks 2007, 72–74, tab. 12A.

<sup>29</sup>Unpublished, pers. comm. by the late Cheluță-Georgescu. The publication of the swords is in preparation by Liviu Petculescu.

<sup>30</sup>Matei-Popescu 2010, 213–215.

<sup>31</sup>Miks 2007, A 509.

<sup>32</sup>Miks 2007, A 398.5.

<sup>33</sup>Miks 2007, B 335. 2 Xanten; B 148. 3–4 Brigetio; B 308.5 Vimose.

<sup>34</sup>Miks 2007, A 704 Stuttgart Bad Cannstatt; A 762. 11–12 Vimose.

<sup>35</sup>Bona *et al.* 1982, 318–319; Benea 2018, 105–108.

<sup>36</sup>Bona *et al.* 1982, 318.

<sup>37</sup>Benea-Bona 1994, 54–58.



No. 10 was unearthed in 1894 by Gr. G. Tocilescu in the small auxiliary fort at Copăceni of c. 64x64 m. The fragmentary sword was subsequently lost and from it survived only a careless sketch in the excavation diary<sup>38</sup>. From this sketch one can state that no. 10 is a fragment of a *spatha* with a copper alloy handguard plate and a blade of an average width.

Inside the fort built in AD 138 and garrisoned by *numerus burgariorum et veredariorum* until its end in c. 250/260, were identified two undated burning layers, meaning that one cannot date the deposition of the sword more precisely inside the period of time from c. 170/180 to 260 when the *spathae* handguard plates were fashionable<sup>39</sup>.

Besides the swords dealt with above, I know other examples which are not included in this paper. The first one is a heavily corroded blade broken in more fragments discovered in 1976-1979 excavations in the auxiliary fort at Tibiscum and mentioned in the published report without illustration or any other specification<sup>40</sup>. Other unpublished Roman swords, were found in the forts at Buciumi (2 ex.) and Porolissum<sup>41</sup>. Another sword, now lost, was unearthed during the 1858-1863 excavations in the *principia* of the cavalry fort at Ilișua (Bistrița-Năsăud county) and was published with a good scaled illustration allowing to estimate its size<sup>42</sup>. However, with a tang of c. 228 mm and a blade of c. 700x80 mm, it seems too large for a Roman sword of the 2<sup>nd</sup>-3<sup>rd</sup> centuries and better fitted to a later German weapon.

### Handles

Apart from the partially preserved hilts of the Bersobis *gladius* and Tibiscum short sword a lot of separated handle components were found in Dacia.

### Handgrip

No. 11 was found by chance in the 19th century at Micia and there is no recorded information on its discovery. It is a slightly conical bone ribbed handgrip of square section. Its shape reminiscent of the 1st century *gladius* handgrips differ from these prototypes only by the slight relief of the ribs and the flat finger grips.

During the 2<sup>nd</sup> -3<sup>rd</sup> centuries handgrips of this type are very rare and the few parallels are still more stylized<sup>43</sup>. So one can tentatively date the Micia piece in the first half of the 2<sup>nd</sup> century but one cannot specify if it was part of a cavalry or infantry weapon and even less in which military unit was enlisted the owner of it.

### Ring-Pommel handles

The fragmentary iron handles nos. 12 and 13 were discovered at Porolissum in the structure of *via principalis* coming through the *porta principalis dextra* of the large auxiliary fort and one barrack inside the fortlet identified with the customs building respectively.

From no. 12 survived the circular ring-pommel of rhomboidal section and the flat tang and from no. 13 the elongated ring-pommel thickening outwards which result in its asymmetrical rhomboid section and the flat tang. According to Miks ring-pommel classification no. 12 belongs to type A and no. 13 to type C<sup>44</sup>.

If there isn't any stratigraphic data on the discovery in 1949 of no.12, no. 13 was unearthed at a depth of 0.40 m, meaning that it could be dated after the middle of the 2<sup>nd</sup> century, in accordance with Miks' chronology of type C<sup>45</sup>. Anyway, the presence at Porolissum of ring pommels belonging to two distinct types means either that they were manufactured in two different workshops or, more probable, that they have a different chronology.

At Porolissum were quartered a lot of military units: *cohors V Lingonum*, *cohors VI Thracum*, *cohors I Ulpia Brittonum milliaria equitata*, *numerus Palmyrenorum Porolissensium*<sup>46</sup>. So one cannot attribute the swords provided with ring-pommel to a certain category of troops.

That these handles were not rare in Dacia is attested at Micia by a sculptural representation on a funerary pilaster of a cavalryman wearing a ring-pommel sword<sup>47</sup>.

### Handguard plates

Already in the 1<sup>st</sup> century AD some of the wooden handles have the lower end of the guards protected by a thin sheet of copper alloy<sup>48</sup>. Later, in the 2<sup>nd</sup>-3<sup>rd</sup> centuries, the wooden hilts of the *spathae* were provided with another type of copper alloy guard mounts. This new type of fitting is made of oval thick plates with an upward splaying rim to enclose the lower part of the guard. On their lower external face are two grooves going out of the large rectangular tang aperture to tightly fit the shoulders of the blade and on the front face of the rim there are decorative piercings usually disposed in two rows. Handguard plates of this type were discovered on a very large area, from Pannonia Superior (Carnuntum)<sup>49</sup> and Dacia to Syria (Dura Europos), Gallia Lugdunensis (Lugdunum), Upper German-Raetian limes (Saalburg, Zugmantel), Britannia (Cramond, Colchester), Mauretania Tingitana (Thamusida, Banasa, Volubilis)<sup>50</sup>. The only differences between these remarkable similarly shaped fittings consist in their size and the details of their decoration.

I know in Dacia 9 such plates among which 5 were accessible to me. Nos 14 and 15 were discovered in the legionary fortress at Potaissa, in the *porticus* of the *via praetoria*, near the *thermae* from *praetentura dextra* and *praetentura sinistra* near the *via principalis*

respectively. No. 14 is decorated with two rows of ivy leaf shaped piercings. The orientation of the ivy leaf piercings from the upper row is opposed to those from the lower row in order to fill all the available space of the front face of the rim. As only the lower face of no. 15 was illustrated and the piece is currently unavailable for further research one cannot state how its decoration looks like.

No. 16 discovered in a pit from the barrack 3 of the fort of *ala I Hispanorum* at Slăveni<sup>51</sup> has the front face of the rim largely destroyed. However, a small triangular piercing at the end of the lower row, the only ornamental motif left, very similar in shape and position to the one of no.14, permit to reconstruct its entire decoration as being also made of two rows of ivy leaf piercings.

No. 17 was found by chance in the strip of land making the north-eastern limit of the civilian settlement at Micia. The central pierced part of the rim is lost but towards its sides are placed three small circular nail holes for the additional attachment of the plate to the lower part of the wooden handguard.

No. 18 originate in Wessélyenyi-Teleki Collection made of objects from Porolissum and in smaller number Tihău. As only a fragment of it survived, but not from the pierced part of the rim, it is impossible to make any statement on its decoration.

Besides, I know other unpublished pieces in the forts of *numerus singulariorum peditum Britannicianorum* at Cigmău (Hunedoara county)<sup>52</sup> and of the *ala I Tungrorum Frontoniana* at Ilișua (Bistrița-Năsăud county) (3 ex.)<sup>53</sup>.

The ivy leaf motifs are attested only in the ornamentation of nos. 14 and 16 from Potaissa and Slăveni. However it is probable that they were present on some other

<sup>38</sup>Tudor 1978, 287 the fort; Vlădescu 1983, 182, Fig. 20 the sword.

<sup>39</sup>Petculescu, Barbu 2016, 178–179.

<sup>40</sup>Bona *et al.* 1983, 413 no. 22.

<sup>41</sup>D. Deac pers. comm.

<sup>42</sup>Torma 1864/65, 58 4d, pl. 12/1.

<sup>43</sup>Miks 2007, 847 B 200.1 Niederbieber; 845 B 275 Strasbourg; 904 B 321.1 Weissenburg; 917 B 335.5 Xanten- Colonia Ulpia Traiana.

<sup>44</sup>Miks 2007, 178, pls. 177, 180–181.

<sup>45</sup>Miks 2007, 183–184.

<sup>46</sup>Gudea 1997, 49.

<sup>47</sup>Diaconescu 2005, pl. 63/3 and Ciongradi 2007, 213, Pf/M3, pl. 69/3a-b the cursorily publication of the monument. Petculescu-Barbu 2016, 179, note 17, the identification of the ring-pommel sword.

<sup>48</sup>Miks 2007, 158–161.

<sup>49</sup>Beutler *et al.* 2017, 279 no. 216.

<sup>50</sup>Miks 2007 164–165, pl. 169.

<sup>51</sup>Gudea 1997, 83–85 the fort.

<sup>52</sup>C. Mitar pers. comm.; Gudea 1997, 103 the fort.

<sup>53</sup>R. Zăgreanu, Weaponry and military equipment from the auxiliary fort of Arcobadara, unpublished lecture at 24. International Limes Congress, Viminacium 2018; Protase *et al.* 1997 the fort.

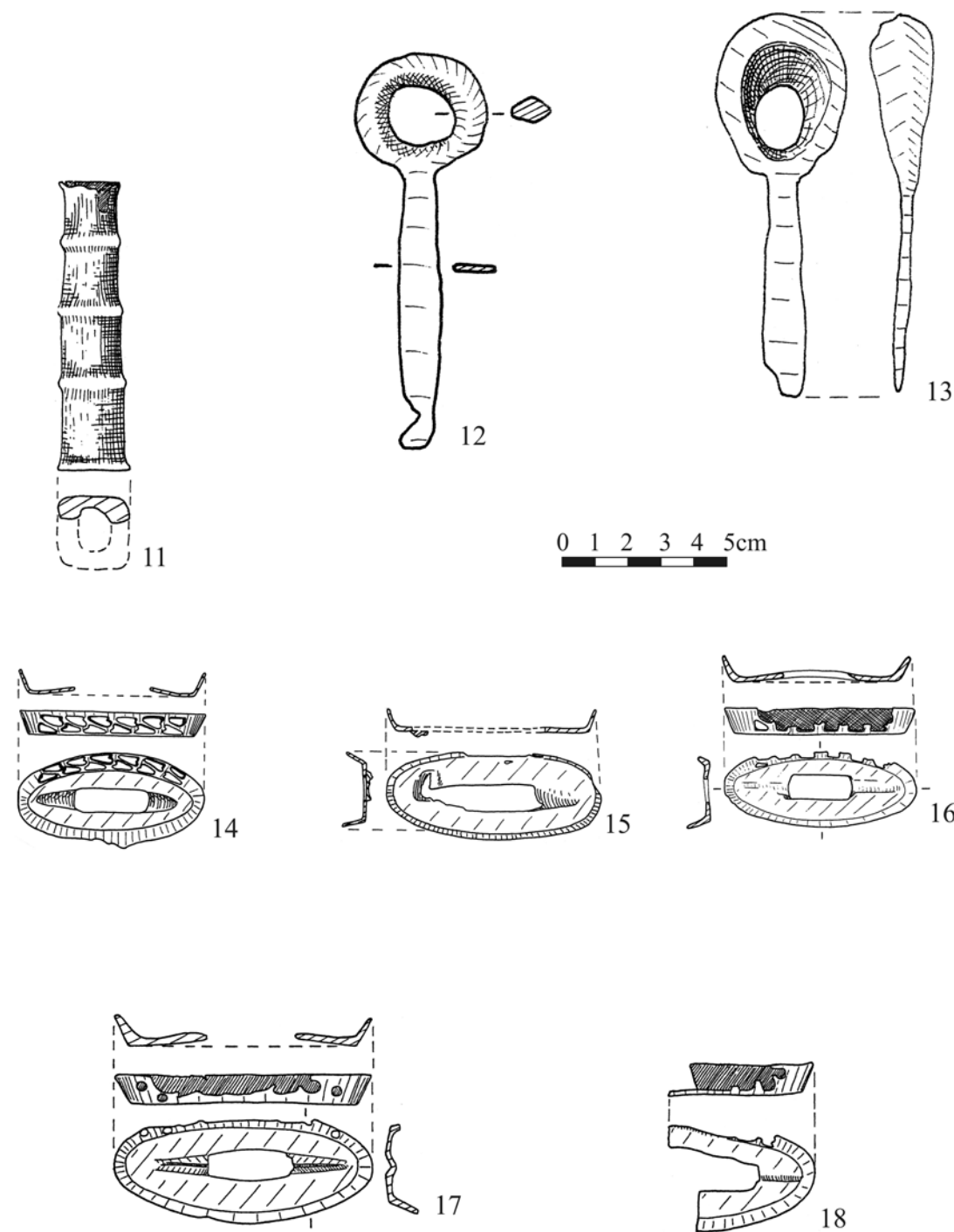


Fig. 3 - 11 Micia (after Cociș-Alicu 1993); 12 Porolissum (after Gudea 1989); 13 Porolissum (after Gudea 1996); 14 Potaissa; 15 Potaissa (after Fodorean 2017); 16 Slăveni; 17 Micia; 18 Porolissum or Tihău (after Gudea 1989). 11 Bone; 12-13 Iron; 14-18 Copper alloy. Scale 1:2.

Dacian pieces with damaged decoration (nos. 17-18), unsatisfactory illustration (no. 15) or those still unpublished. Anyway these motifs are also met at Carnuntum

disposed in one row<sup>54</sup> and in two rows but more stylized at Dura Europos (3 ex.)<sup>55</sup> and Colchester<sup>56</sup>. And, once again letting aside the pieces with the decoration

badly damaged, it seems that in the ornamentation of other handguard plates as for example some pieces from Thamusida, Volubilis, Banasa in Mauretania Tingitana<sup>57</sup>, the ivy leaf motifs represented the prototypes carelessly reproduced without understanding their original significance. In case this supposition is correct it means that this type of fittings originate in the Danubian provinces and was later spread by the soldiers from this region throughout the Roman Empire.

Among the Dacian examples only those from Potaissa had a shorter chronology, c. 170-260/70, the life span of the fortress of *legio V Macedonica*<sup>58</sup>. Also out of all the published examples from the entire Roman Empire those from Lugdunum, Dura Europos, Thamusida and Cramond can be dated more precisely within the 2<sup>nd</sup>-3<sup>rd</sup> centuries. So at Lugdunum (Lyon) was found a military burial including a *spatha* with the handguard plate and its scabbard, the fittings of the baldric and “felix utere” mounts, a booch and 13 coins<sup>59</sup>. As among the coins the most recent was a denarius struck by Septimius Severus in 194 in an Eastern mint, probably Antiochia, it was concluded that the dead was a soldier from the Severan army killed in the battle at Lugdunum in 197. In Dura Europos four pieces were discovered, among which two near the defensive wall. They were probably deposited during the last years preceding the destroying of the town in 255/256, but anyway from 163/165 to 255/256, the period of time when Dura was annexed and hold by the Romans as a military base<sup>60</sup>. As the fort at Thamusida was used between c. 166-280 it is probable that both plates found in the civilian settlement had the same chronology with the military presence on this site<sup>61</sup>. A fragmentary lead plate probably representing a test casting from a local military workshop discovered in the *frigidarium* of the bath-house near Cramond, dates together with the adjoining fort from 142/155 to 211<sup>62</sup>. Consequently, it results that this type of handguard plates was certainly used from c. 180 until c. 260/280.

As the guard plates from Roman Dacia originate in the legionary fortress at Potaissa, the *ala* forts at Slăveni and Ilișua, the fort of an infantry *numerus* at Cigmău and Micia and probably Porolissum where many auxiliary units were quartered, it results that these sword fittings were part of the equipment of all type of military units.

The difference in size between nos. 14 and 15 attests the use of *spathae* of different width at Potaissa, among which the first one must have been attached to a narrow example similar to the sword no. 7. Unexpectedly the best parallel in size and decoration of no. 14 is the short plate from Slăveni *ala* fort suggesting the similar chronology and the standardization of these pieces. On the contrary, the largest plate no. 17 from Micia seems evidence on the presence of wider blades in Dacia. Anyway, with 9 examples known so far, the wooden handles including handguards provided with copper alloy plates were by far the most fashionable sword grips in Dacia between c. 170/180 and 260/270.

### Conclusions

So far the numbers of swords from Roman Dacia available for research is still small but since all of them were discovered in forts they could be studied in their original military contexts. Consequently, besides their typological classification I also dealt with the date and circumstances of their deposition and the type of military units in which their owners were enlisted.

As the swords were found in the burning or destruction layers linked with the abandonment of the forts, one can specify that they were deposited in two different periods of time: 117-119 (nos. 1-2) and toward the end of the Roman province c. 250-260 (nos. 4-9). The other *spathae* from the forts at Hoghiz and Copăceni (nos. 3, 10) with unknown deposition time are anyway dated between c. 170-250/260. If during Trajan reign one state the well known difference between the swords used by the legionaries and auxiliaries – *gladius* (no. 1)

<sup>54</sup>See above note 49.

<sup>55</sup>James 2004, 149–150, nos. 524, 526–527.

<sup>56</sup>Crummy 1983, 138, no. 4244, Fig. 159.

<sup>57</sup>Boube-Piccot 1994, 143–144, nos. 237, 239, 241.

<sup>58</sup>Bărbulescu 1987, 24, 52.

<sup>59</sup>Wuilleumier 1950; Feugere 1993, 149; Drost-Planet 2014, 186–190.

<sup>60</sup>James 2004, 11 the chronology of the Roman town; 149 nos. 524–527 the pieces.

<sup>61</sup>Boube-Piccot 1994, 143–144, nos. 257–258; Lenoir 2011, 269–270 the chronology of the fort.

<sup>62</sup>Holmes 2003, 106, no. 20 the piece; 155–156 the chronology of the fort.



and *spatha* (no.2) – later the *spathae* were part of the equipment of all kinds of military units. However, some specialized auxiliaries as the archers were provided with short swords as the one from Tibiscum fort (no. 8).

Among all the 10 swords stand out the Rucăr example up to now the earliest pattern-welded *spatha* from the Empire and the one from Cășeu of only 3 cm in width seeming to have Parthian or Sassanian prototypes. Anyway all swords but the two pattern-welded *spathae* are rather narrow, up to 4.5 cm in width.

As for the handle assemblages, all the 2<sup>nd</sup>-3<sup>rd</sup> century types of these artefacts are attested. Between c. 170/180 and 260/270, the wooden hilts of *spathae* provided with metal guard plates used by all categories of military units were the most popular sword grips not only in Dacia but probably all over the Roman Empire as well.

The swords from the Dacian provinces represent a significant sample of this kind of weapons but among them were also some outstanding examples and when there is enough evidence, as for the handguard plates, one can grasp the general trend of their evolution. Besides, the contexts of the blades recovery usually witness the characteristics of the abandonment process of the fortifications where they originated.

### Acknowledgements

I am deeply indebted to Prof. Dr. M. Bărbulescu and to the late N. Gudea for the permission to publish the pieces nos. 7 and 14 from Potaissa and no. 4 from Bologa respectively.

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### Catalogue

The catalogue numbers correspond to the illustrations of the items. All the measurements are made in mm and grams respectively. Abbreviations: L = Length; W = Width; H = Height; Th = Thickness; Wt = Weight.

1. Sword. Bersobis (Berzovia, Caraș-Severin county). Blade of iron, pommel of copper alloy. The sword was badly damaged during its unearthing: part of the tang and of the width of the blade and its entire tip were lost. During the restoration process the tang was shortened with c. 20 mm and the tip was something rounded. So the measurements of the restored sword are not entirely accurate. Blade L: c. 485; W under the shoulders: 42; W at the lower part: 38. Tang L: 120 + c. 10; Th: 7. Pommel D: 56; H: 30; Th: 3.5.
  - Banat Museum – Timișoara, inv. no. 30205.
  - Flutur 2006, 144, no. 114; Petculescu 2006, 442-3, fig. 1; Flutur 2007, 69 – 73, pls I – III.
2. Sword. Rucăr (Argeș county). Incomplete, the tip is missing and the edges are breached. L (overall): 750. Blade L: 565; W: 54; Th: 2.5. Tang L: 175; Th: 6.
  - Archaeological and Art History Institute from Cluj-Napoca, without inv. no
  - s Bogdan-Cătănicu 2006, 148, no. 113. ; Petculescu 2006, 443, fig. 2.
3. Sword. Hoghiz (Brașov county). Complete with the exception of a small part of the end of the tang which is missing. L (overall): 750; Wt 541. Blade L: 650; W: 40; Th: 6. Tang L: 100.
  - Brukenthal National Museum, inv. no. A 6233. In 1970 it was transferred to National History Museum of Romania – București, inv. no. 39240.
  - Marinescu 1969, 119, C 40; Petculescu 2006, 143, no 112.

4. Sword. Bologa (Poieni, Cluj county). Incomplete, only the upper part of the blade and the beginning of the tang are preserved.
  - L (overall): 218. Blade L: 211; W 55; Th: 4. Tang Th: 5.
  - Archaeological and Art History Institute from Cluj-Napoca, without inv. no.
  - Petculescu 1998, 33-34, no. 3, pl. 5/3.
5. Cășeu (Cluj county). Almost complete, only the tip of the blade is missing and the edges of the bent blade are breached.
  - L (overall) 750. Blade L 585; W 30. Tang L 165; Th 3.
  - National Museum of Transylvania from Cluj-Napoca, inv. no. V 58141.
  - Isac 2006.
6. Sword. Micia (Vețel, Hunedoara county). Incomplete, only the lower part of the tang and the upper part of the bent blade survive.
  - L (overall): 360; Wt: 470. Blade L: 340; W under the shoulders: 47.5; W at the lower end 44; Th: 6.5. Tang L: 20; Th: 6.
  - Museum of the Dacian and Roman Civilisation – Deva, inv. no. 52787.
  - Petculescu, Barbu 2016, 177–180, no. 1, pls. 1; 2/1.
7. Sword. Potaissa (Turda, Cluj county). Incomplete; the lower part of the blade is missing. It was wrapped in a vegetal cover, probably raffia.
  - L (overall): 520. Blade L: 375; W: 45. Tang L: 145.
  - History Museum – Turda, inv. no. 24573.
  - Unpublished.
8. Sword. Tibiscum (Jupa, Caraș-Severin county). Complete, including the handle assemblage but without the handgrip. Bone pommel and handguard and iron and copper alloy scabbard plates. During the restoration process the broken tang was shortened. So there will be given the original dimensions.
  - L (overall): 565. Blade L: 445; W: 44.5; Th: 3. Tang L: 103; W: 10; Th: 5. Handguard W: 55; H: 37; Th: 26. Pommel W: 55; H 30; Th: 27. Copper alloy plate L: 10; W: 37. Iron plate L: 47; W 45; Th: 3.
  - Ethnography and Border Regiment Museum-Caransebeș, inv. no. 11062.
  - Bona *et al.* 1983, 413, no.21, pl. 12/1a-e; Miks 2007, 628, A 330, pls. 47,165.
9. Sword. Micia (Vețel, Hunedoara county). Incomplete, only a small fragment of the lower part of the blade including the point survive.
  - L: 158; W: 40; Th of the tip: 3; Wt: 105.
  - Museum of the Dacian and Roman Civilisation-Deva, inv. no. 52788.
  - Petculescu, Barbu 2016, 178–180, no. 2, pls. 1, 2/2.
10. Sword. Copăceni (Racovița, Vâlcea county). When discovered only the tang, the upper part of the blade and the copper alloy handguard plate survived. Now lost.
  - L of the tang: c. 110; L of the blade: c. 90.
  - Vlădescu 1983, 182, fig. 120.
11. Handgrip. Micia (Vețel, Hunedoara county). Bone. Breaches at both ends of the piece.
  - L: 87.
  - National History Museum of Transylvania from Cluj-Napoca.
  - Cociș, Alicu 1993, 122, no. 159, pl. 19/2; Miks 2007, 888 B 305.1, pl. 154.
12. Handle. Porolissum (Moigrad, Sălaj county). Iron. Incomplete, only the ring-pommel and the tang survived.
  - L 120; D: 40.
  - County Museum of History and Art-Zalău, inv. no. 981.
  - Gudea 1989, 578 type no. 6, pl. 170/6; Petculescu, Barbu 2016, 179, note 16.
13. Handle. Porolissum (Moigrad, Sălaj County). Iron. Incomplete, only the ring-pommel and part of the tang survived.
  - L: 115; D: 40.
  - County Museum of History and Art-Zalău, inv. no. cc 453/1988.

- Gudea 1996, 246, no.9, pl. 65/9; Petculescu, Barbu 2016, 179, note 16.
- 14. Handguard plate. Potaissa (Turda, Cluj county). Copper alloy. Complete with the exception of a small breach of the rim.
  - L: 56; W: 26.5; H: 7.4; Wt: 7.96.
  - History Museum Turda, inv. no. 16859
  - Unpublished.
- 15. Handguard plate. Potaissa (Turda, Cluj county). Copper alloy. Complete, breaches of the rim and around the rectangular aperture.
  - L: 65; W: 26.
  - National History Museum of Transilvania from Cluj-Napoca, inv. no. V 64302.
  - Fodorean 2017, 78, no. 41, pl. 38/1.
- 16. Handguard plate. Slăveni ( Olt county). Copper alloy. Almost intact plate, missing most part of the pierced front side of the rim.
  - L: 58; W: 23; H: 8; Th: 1.
  - Museum of Oltenia- Craiova, inv. no. I 51596.s
  - Tudor *et al* 2011, 211, no.423, pl. 79/423 „iron handguard of a dagger”, photograph of the item largely damaged probably during the restoration process; Petculescu, Barbu 2016, 179, note 9.
- 17. Handguard plate. Micia (Vețel, Hunedoara county). Copper alloy. Almost intact, missing most part of the pierced decorated front side of the rim.
  - L: 78; W: 31; H: 9; Th: 2; Wt: 32.6.
  - National History Museum of Romania- București, without inv. no.
  - Petculescu, Barbu 2016, 178–180, no. 3, pls. I, II/3.
- 18. Handguard plate. Porolissum (Moigrad, Sălaj county) or less probably Tihău (Sălaj county). Copper alloy. Incomplete, less than half of the plate survived.
  - L: 45; W:23; H:9.
- Former Wesselényi-Teleki Collection; County Museum of History and Art- Zalău, inv. no. cc 122/1958.
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**Zusammenfassung****Die schwerer im römischen Dakien**

In der ansehnlichen Monographie von Miks über die römischen Schwerter wurden überraschend wenige Fundstücke aus dem römischen Dakien eingearbeitet (3 Ex.), daher empfiehlt sich ein aktualisiertes Studium dieser Waffenkategorie. Im vorliegenden Beitrag werden die Schwertklingen und die Schwertgriffe, nicht aber die Scheidenbeschläge präsentiert, weil die letzten zahlreich sind - ungefähr 150 - und einer typologischen Sonderbearbeitung unterzogen werden müssen. Dies überschreitet den Umfang eines Kongressbeitrages.

Alle zehn Schwerter die mir zugänglich waren, wurden in den Zerstörungsschichten, bzw. in den Schichten, die aufs Verlassen der Lager hinweisen, entdeckt. Dies erlaubte ihre Besprechung in ihrem militärischen Originalzusammenhang, sowie die Datierung ihrer Niederlegung. Zwei von diesen Schwertern wurden in den Jahren 118-119 deponiert: ein *gladius* des Typs Pompeji im Legionslager von Bersobis und eine in der Streifendamas-Technik gearbeitete *spatha* in Kleinkastell von Rucăr; das letzte Stück ist bislang der früheste römische Schwert, der anhand dieses technischen Verfahrens hergestellt worden ist. Gegen 250-260 wurden die *spathae* aus den Kastellen Bologa und Căței, sowie Kurzs Schwerter aus dem Legionslager Potaissa und aus Kastell von Tibiscum - erhalten mit Griff- und Scheidenteilen -, sowie die Fragmente aus dem Kastell von Micia deponiert. In die Zeitspanne von ca. 170 bis 250/260 sollen auch die *spathae* aus den Kastellen von Hoghiz und Copăceni festgesetzt werden. Von diesen Stücken hebt sich die *spatha* von Bologa wegen eines Mittelbandes mit tordierten Lamellen (Torsiondamas)

hervor; ebenso ist die sehr schmale *spatha* von Căței zu nennen, die der Kavallerieausrüstung zugeschrieben wurde und welche vermutlich parthische oder sassanidische Schwerter als Prototyp hatte.

Was die Griffteile anbelangt, wurden mir außer dem beinernen Knauf und dem Parierstück des Schwertes von Tibiscum noch die beinerne Handhabe von Micia, zwei Ringknaufgriffe aus dem Kastell und Kleinkastell aus Porolissum und fünf bronzene Stichblätter aus dem Legionslager von Potaissa (2 Ex.), vom Kastell zu Slăveni, von Micia und Porolissum oder Tihău zugänglich. Ich habe noch Auskunft über vier unveröffentlichte Stichblätter, die in den Kastellen von Cigmău und Ilișua (3 Ex.) entdeckt wurden. Die zwei eisernen Ringknaufgriffe zusammen mit einer Skulpturdarstellung von Micia bestätigen die Tatsache, daß die Ringknaufschwerter ebenfalls in Dakien, wahrscheinlich in der Zeit nach den markomanischen Kriegen verwendet wurden. Die Entdeckung von Stichblättern in einem Legionslager und in Kastellen mit Kavallerie- und mit Infanterieeinheiten entdeckt wurden, bestätigt die Annahme, daß sie von allen Kategorien römischer Militäreinheiten benutzt worden waren. Auf jeden Fall, die neun bislang bekannten Exemplare von Holzgriffen mit solchen Bronzebeschlägen lassen annehmen, daß dieser Typ einer der meist verwendeten Schwertgriffe in Dakien und wahrscheinlich im ganzen Römischen Reich in der Zeit von ca. 170/180 bis 260/270 war.





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# **Roman and germanic weapons in Weißenburg. Considerations about distribution, types and usage of militaria in the 3<sup>rd</sup> century destruction layer in fort and vicus of Weißenburg**

## **ABSTRACT**

With the research concerning the big scale excavations of the Bavarian office for heritage conservation in the 1980s in the area of the western vicus recently completed, Weißenburg offers three different areas of already undertaken archaeological research. These are the areas of 57 the inner fort published in the ORL, the excavations at the northern Gate of the fort, published by Grönke and Weinlich (1991), and the areas of the western Vicus, researched by the Author (2017). Though different in size, number of documented archaeological features, scientific possibilities of research and last but not least time of excavation, all areas offer a range of offensive and defensive weapons. As these are in most cases linked to the 3<sup>rd</sup> century and an often documented destruction layer, it is most likely to attribute them to the final destruction event of vicus and fort. Therefore it should be possible to draw a more or less detailed picture of the martial equipment of the roman troops during this event. Although not revolutionizing existing general observations concerning the roman army in the 3<sup>rd</sup> century, it might offer further hard data of weapon sizes and uses, in a very limited area and timeframe and therefore serving as basis for further studies. Additionally, several finds of most likely Germanic provenance in the afore mentioned destruction layer are attributed to the opponents of the stationed roman troops, who likely caused the fall of fort and vicus. A comparison between weapons and by that, possibly types of usage and tactics of these foes, might offer a way to learn more about the material and martial aspects of the downfall of the roman troops in the area of the raetian transdanubian limes.

**KEY WORDS:** WEISSENBURG, WEAPONS, SPEARS, JAVELINS, CATAPULT BOLTS, 3RD CENTURY, DESTRUCTION LAYER, WEAPON-USAGE, PRZEWORSK;

## Introduction

The Roman Kastell and Kastellvicus of Weißenburg in Bayern are situated in the eastern part of the Raetian, transdanubian Limeszone. The Kastellvicus of the ring type<sup>1</sup> showed dense housing-structures of strip-houses with common outer walls, that are with lengths of over 40 m the longest in Raetia (Fig. 3).<sup>2</sup> The settlement seems to have flourished during the first half of the second century. Soon after the middle of the second century the Ala Auriana, the troop associated with the Weißenburg garrison, disappears from the military diplomas and is thought to have been withdrawn to fight in the eastern regions of the empire and after that in the Marcomannic wars in the Danube provinces. The civil settlement did not compensate the loss of the biggest source of its income very well. After 180 A.D. the Ala returns to Weißenburg. A destruction layer that can be dated in the very late 2nd century might be associated with the demolition of already ruined structures. A second destruction layer can be observed in all vicus areas as well as in the fort itself. Weapons, and burned *horrea* filled with grain, destroyed Jupiter columns and dead horses in the wells of the vicus together with thick layers of burned debris etc. serve as indicators of these destructions. According to M. Reuter these destructions are most likely to be regarded as results of the 254 A.D.-event, that destroyed many of the Raetian Limesforts and settlements.<sup>3</sup> In-between the Roman weapon findings is also a much smaller amount of weapons of Germanic provenance. Besides the large areas of the vicus that have already been excavated and have in parts been researched in the presenters Ph.D. thesis, there are also the areas of the inner fort and its southern, western and eastern gates, published by the Reichslimeskommission<sup>4</sup>, as well as the area of the northern gate, published by Grönke and Weinlich in 1991<sup>5</sup>, that provide additional excavation- and possible fighting zones, that offer different contexts of this final destruction layer and different amounts of arms etc. The following paper will discuss the different types of weapons and their usage to give an insight to

the hard data Weißenburg is able to offer in martial context and to discuss the most likely fighting styles of the Romans and their Germanic opponents if possible. In that sense it is important, that in the context of weaponry that has a primary practical role, in contrast to “ritual or parade weaponry” in its purest sense, form always follows function. That means different shapes of weapons serve distinct purposes and are never the result of random design choices of the weaponsmith, but products to serve the needs of customers whose life depended on them and who demanded the mentioned distinct features.

As the Vicus offered the most intense study, the different findings will be discussed mainly by the vicus-material, and then complete it with the other excavation points. All three excavated areas show different features concerning the martial outset of the fights in 254 A.D. While the vicus, with its very broad main road and a probably quite widely spaced building structure was a difficult fighting terrain, but in no way comparable to fighting within a city, it might have provided enough space for cavalry action, although probably somewhat restricted compared to open country. The southern and eastern gate each open to a relatively flat plateau and were most easy to attack on foot and on horseback, but also to be defended, if there had not been the vicus in the way. The northern gate was probably the best position to defend, as the steep slopes right in front of the gate and the northern walls provided additional protection and are in no way suitable for a cavalry attack and not very desirable for an attack on foot. While the Vicus and the northern gate were excavated in quite modern campaigns in the late 1980s, the systematic and intensity of the Reichslimes-excavations stay unclear, so that the data of the small finds is not that easy to interpret in terms of collection of all artifacts.<sup>6</sup>

## Roman weaponry

A general typology of Roman spearheads is still missing and hardly missed. But the completion of such a

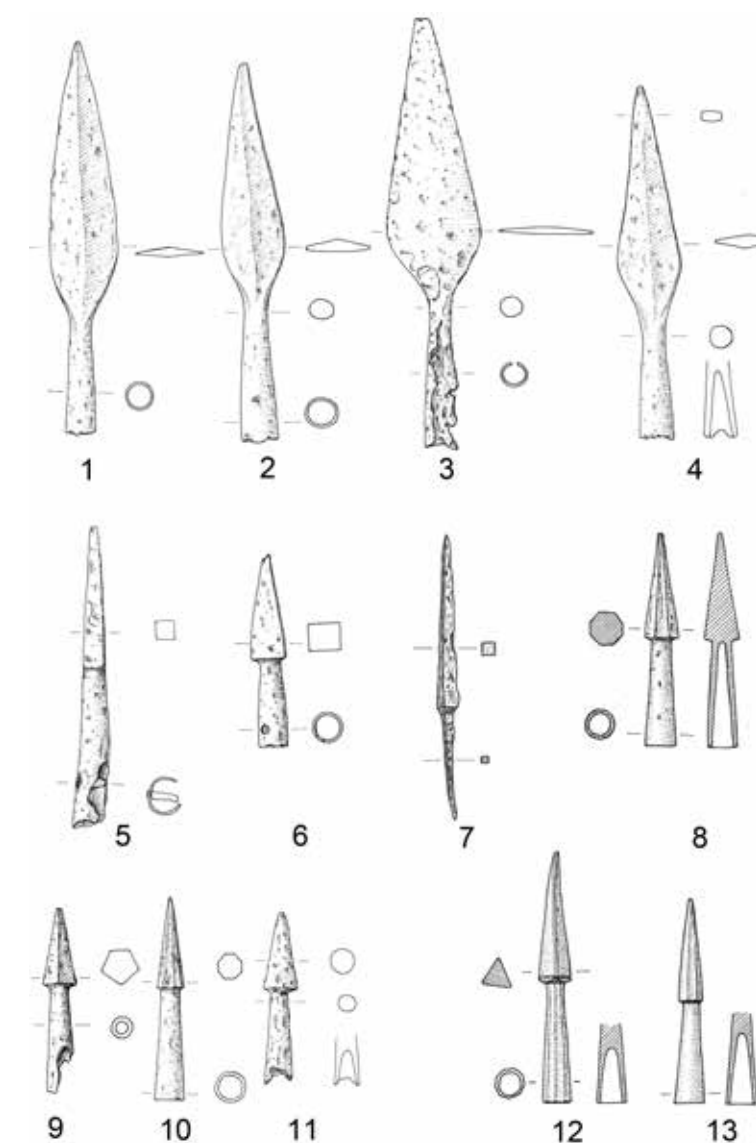


Fig. 1 - 1-7, 9-11 Iron; 8.12.13 Bronze; Scale 1:3

typology seems at the moment - taking the vast number of individual spearheads of all the different sites in account – as a ambitious project of future researchers.<sup>7</sup> Right now most sites, or if possible makroregions, provide at least a local typology, which possibly offers better opportunities of comparison on an interprovincial level. In Weißenburg there can be distinguished at least 4 types of spearheads if the cross section is taken as the separating feature:

Type S (spear) 1 has a rhombic cross section from the shaft up to the point (Fig. 1.1)

Type S 2 has a flat, triangular cross section from shaft to point (Fig. 1.2)

Type S 3 has an elliptic cross section (Fig. 1.3)

Type S 4 shows a flat to very flat-rhombic cross section where the cross section gets more massive to a rectangular or square point (Fig. 1.4)

The Type 1-3 is quite common and is found in most forts along the Raetian limes.<sup>8</sup> Type 4 on the other hand is scarcer in the material although found from the we-

<sup>1</sup>Frank 2003, 67ff.

<sup>2</sup>The following short conclusion of the settlements development is based on the authors PhD-thesis on the Kastellvicus of Weißenburg, currently in preparation for publication.

<sup>3</sup>Reuter 2007, 136f.

<sup>4</sup>ORL B 72.

<sup>5</sup>Grönke, Weinlich 1991.

<sup>6</sup>It is for example not possible to locate the exact findspots of the projectiles in the fort.

<sup>7</sup>Radman-Livaja 2004, 27.

<sup>8</sup>For example ORL B 73, Tab. XV, 1–6, 50–55.



stern borders of the province to the eastern end.<sup>9</sup> The acute and reinforced point can clearly be interpreted as a feature for penetrating armored opponents.<sup>10</sup> In case of unarmored opponents this feature seems to offer neither advantage nor hindrance, but might be suboptimal in comparison to the other types as stated below.

While these four types are easily separated by crosssection, it seems more difficult to separate them by shape. All cross sections are combined with leaflike heads or more rhombic ones with a accentuated and strengthened part near the shaft. The function therefore seems to be defined by cross-section alone and seems to be less dependent from the silhouette of the spearhead.

The dimensions of the spearheads range from 13-17 cm length with the majority between 13 and 15 cm and a width of 2 to 4 cm. In comparison to other weapon-types from different eras, it seems likely to attribute the styles of cross sections to different opponents or - at least and more generally speaking - different tasks. While flat, elliptic and half rhombic crosssections seem optimized for fleshwounds of non-armored opponents, rhombic cross sections are most likely attributed as martial tools against armored opponents with a higher potential of penetration.<sup>11</sup> A different factor, the width of the spearheads, seems also to be of secondary rank. While normally wide projectiles are preferred in context like hunting to open wide canals<sup>12</sup> for the fast loss of blood pressure, or to rip wider openings in lung tissue<sup>13</sup> etc. to reduce the fleeing-range of wounded animals to a minimum, narrow projectile heads have a better chance of penetrating barriers regardless their cross section.<sup>14</sup> But as all the spearheads of Weißenburg do not exceed excessive width and are all quite narrow, this point seems to be of lesser importance.

What seems remarkable however is that in all variations the socket is never wider than 1,8 cm in diameter. This seems to forbid the usage of the thicker hafts in hard pressing close combat usage because of the danger of breaking or more likely being cut off. Therefore all Weißenburg spearheads are most likely to be situated in the sector of javelins, the most common distance weapon of mounted units. What may be worth discussing is the idea of a whole set of different spearheads in each riders quiver to be able to react to different opponent formations and combatant-equipment, throwing distances, terrain etc. and if that might be the case if these were for example differently marked to ease identification while riding and fighting in the heat of combat.

The northern Gate excavation showed up two specimens of the same types, the material of the inner fort and the walls add only other dimensions, but no other types, though it is hard to say exactly in the case of the fort material for the finds are partly missing. The flatter heads seem to be the most common, followed by the rhombic specimens while the heads with strengthened points seem to be the least common.<sup>15</sup>

The second most common form of projectile weapons is found in a large variety of iron heads with different forms of points. There are three types separable:

Type P (projectile) 1 with very narrow points that are just slightly contoured apart from the socket, similar to different variants of so called “bodkin” arrowheads (Fig. 1.5).

Type P 2 with strongly contoured points that are usually rectangular but can also take round, triangular, pentagonal or octagonal crosssections (Figs. 1.6-9-11).

Type P 3 with extremely long and narrow points, but that is hafted via a long tang, not with a socket. This type occurred only in the area of the northern gate (Fig. 1.7).

In the area of the Northgate excavations, all three types are more or less evenly distributed. In the material of the Limeskommission-excavations type 1 seems to be widely and in mass distributed, but following Reuter as discussed below a large portion of these “simple” projectile-heads might be of barbaric origin. Type 2 occurs in 6 specimens, Type 3 is missing. In the vicus area Type 1 is found only in two examples, Type 3 in 8(9?) and Type 3 is also missing.<sup>16</sup>

While some authors discuss the possible usage as catapult bolts or javelin heads, with a tendency towards the latter<sup>17</sup>, B. Steidl interprets the pyramidal heads in accordance to the bolts of Dura-Europos as most likely projectiles of siege engines.<sup>18</sup> The distribution of lighter throwing spears and the pyramidal heads in Harzhorn at different areas suggest complete separated usage and therefore possibly the confirmation of B. Steidl's view.<sup>19</sup> But different units with different areas of combat might also produce these distribution patterns. In Weißenburg it is not possible to separate the aforementioned javelin heads and the polygonal heads in terms of space. The often recognized standardized sizes of the projectiles were seen as based on the need for uniform ammunition of catapults, where the standardized shooting-channels of the catapults call for accordingly narrow munitions.<sup>20</sup> And indeed the projectiles of Weißenburg of the second type show only 1.2 or 1 cm in Diameter at all three areas with no exemption. Apart from the question of how the weapons came into the ground in the vicus area, the numbers in relation to the “obvious” javelin spearheads would suggest the massive use of

catapults which seems for a mounted unit in the 3rd century of Raetia rather unlikely. Also the shooting-ratio and therefore the “production” of archaeological artifacts between a mounted unit throwing spears and even a few siege engines with a trained and fast loading crew, would always tend to the first. A use as javelin heads is therefore still worth discussing and cannot be answered by the Weißenburg material alone.<sup>21</sup>

If one had to attribute different usages or targets for these three types, one would think of piercing mail armor with the extremely narrow ones and a more general use for the second type. The specimens with strongly contoured points add the bonus of being hard to pull out of pierced shields etc. This will, on the other hand, also play only a role as the head of a javelin and not of a bolt with a short haft where the latter is, stuck in a shield, only a lesser hindrance.

Several cast heads of copper alloys could be retrieved from the vicus material. These show often some kind of decoration in form of lines etc., and a variety of cross-sections from triangular to octagonal, parallel to the iron-ones (Fig. 1.8). They are interpreted accordingly as arrowheads, catapult bolts or javelin heads. The examples from the vicus have a well-defined weight between 18 and 40 gram. Their use as arrowheads seems with these weights rather unlikely, the more so as there are other bronze heads that show much narrower forms and weigh only up to 7 gram. The thicker bronze heads have just as their iron cousins additionally a uniform width that seems to indicate the use as standardized siege engine ammunition. It is on the other hand quite remarkable that these cast bronze heads seem to be associated in several cases with cavalry units, or cohortes equitatae in the Danubian provinces, as the find-spots of Weißenburg, Rainau-Buch, Pförring, Pfünz,

<sup>9</sup>Greiner 2009a, 107.; Fischer 1990, Taf. 26,18.

<sup>10</sup>Geschwinde, Lönne 2013, 274, Abb. 2.

<sup>11</sup>Oakshot 1960, 301.

<sup>12</sup>Sudhues couldn't examine any projectile wound that was bigger than the projectile itself: Sudhues 2004, 98.

<sup>13</sup>Compare the results of Sudhues's forensic analysis: Sudhues 2004, 103–113.

<sup>14</sup>The experiments of Sudhues with pig-carcasses showed that in boneless target-regions, like the abdominal area projectiles with narrow needle-shaped heads, triangular heads or leaflike heads show no differences in penetration depth, although the triangular heads, probably through a cutting effect penetrated the deepest. In Regions with large bonestructures, only the needleshaped heads were able to penetrate for example the intersections of the ribcage: Sudhues 2004, 90ff., 94.

<sup>15</sup>The quantities of the Spearhead-types might also have chronological reasons, but dated layers with similar quantities of weapons to compare the quantities are rare in Raetia. For now, the author prefers a functional reason with the least necessity for the Spears with reinforced points etc.

<sup>16</sup>Following the above stated form and function premise, one might ask if the area of the northern gates with its slopes and probably no civil settlement in front of the gates called for or allowed the usage of an additional sort of ammunition or perhaps weaponsystem. At the moment, without further data of additional areas and finds, definite attributions of the narrow, tang-shafted projectile heads towards the latter (so to speak catapults etc.) seems to farfetched.

<sup>17</sup>For example Junkelmann 1992, 135f., 141f.

<sup>18</sup>Steidl 2006, 285f.

<sup>19</sup>Geschwinde, Lönne 2013, 275f.

<sup>20</sup>Geschwinde, Lönne 2013, 275.

<sup>21</sup>The socketsize should not be taken as an javelin-excluding criteria, as the difference between the socket sizes of the undoubted spearheads and the contoured projectile heads is only marginal.

Eining and Straubing in Raetia and other findspots in the lower Danube provinces indicate.<sup>22</sup> Therefore it is quite plausible to see them with their sort of golden appearance maybe as a form of decorated arms through their material, fitting the higher prestige of mounted units, without being purely decorative.<sup>23</sup> Cast bronze has in this case no disadvantage to soft iron as most projectile-heads of pyramidal or polygonal form (Figs. 1.12-13) were not hardened, so to say the copper-alloy heads are not only for display but fully functional. The polygonal iron heads that are measurably more labour intensive than the triangular or pyramidal heads may be imitations of the bronze specimens (or vice versa).<sup>24</sup> These projectiles were found in both fort and vicus, but not in the area of the northern gate.

Arrowheads with triangular cross sections are found only in one individuum out of the vicus area. The fort did not provide any find nor did the northern gate excavation. It seems probable, despite the smaller size and greater possibility of loss through corrosion etc. not to count them to the typical arms of Weißenburger auxiliary riders. Hunting weapons of the civil settlers can also be the reason for the deposition of such arrowheads.<sup>25</sup>

The most common type of body armour is scale armour, though only fragments could be excavated. Only the type with sideways fixed scales through wires seem to have been in use.

Mail armour is relatively rare and most times only fragments can be excavated. While the vicus provides a fragment, that shows a combination of iron rings with those out of copper alloy, a whole mail armour shirt could be saved out of the fort. A prognosis which type of armor was the dominant in case of the Weißenburg soldiers is not possible. No *Lorica segmentata* was found in neither lames nor buckles, etc.

Shield buckles of Roman provenance are known in two examples. Both show semiglobular domes and downward facing rims. The shields have therefore been convex, one with a quite substantial curvature, the other just slightly curved. In both cases, the curvature provides additional protection against projectile weapons in decreasing the angle of impact.

### Germanic weapons

In addition to the Roman weapons, there are – though in much smaller quantities – some weapons of probable Germanic origin in the material of Weißenburg. As fort and vicus seem to end in a violent catastrophe, it is likely to associate these with the attackers of the Roman settlement.

Defensive weapons survived only in form of a heavily damaged fragment of a shield boss. The iron boss with hollow rod has a parallel in an iron shield boss with hollow rod with a Przeworsk context, published by Zielsing.<sup>26</sup> The rim is not preserved enough to get any hints about the form of the shield itself.

Offensive weapons are found in the form of projectile heads that show a prominent barbed hook (Figs. 2.1-3). The vicus offers just one find. But this type is also found at the northern gate, and in several specimens within the fort material. This type of spear head is formed of a short or middle-lengthed socket and a square, long and narrow point, from which the barb is separated in a 30-45° angle, sometimes forming a curve back to a parallel to the point itself. From a weapon-technological perspective the form of the point and the length and angle of the barb form a reasonable combination of as much as possible penetration-potential through the narrow point and steep angle of the barb while being most efficient against unarmored targets with an enormous effect concerning the impossibility to retrieve the projectile from living flesh. According to the roman

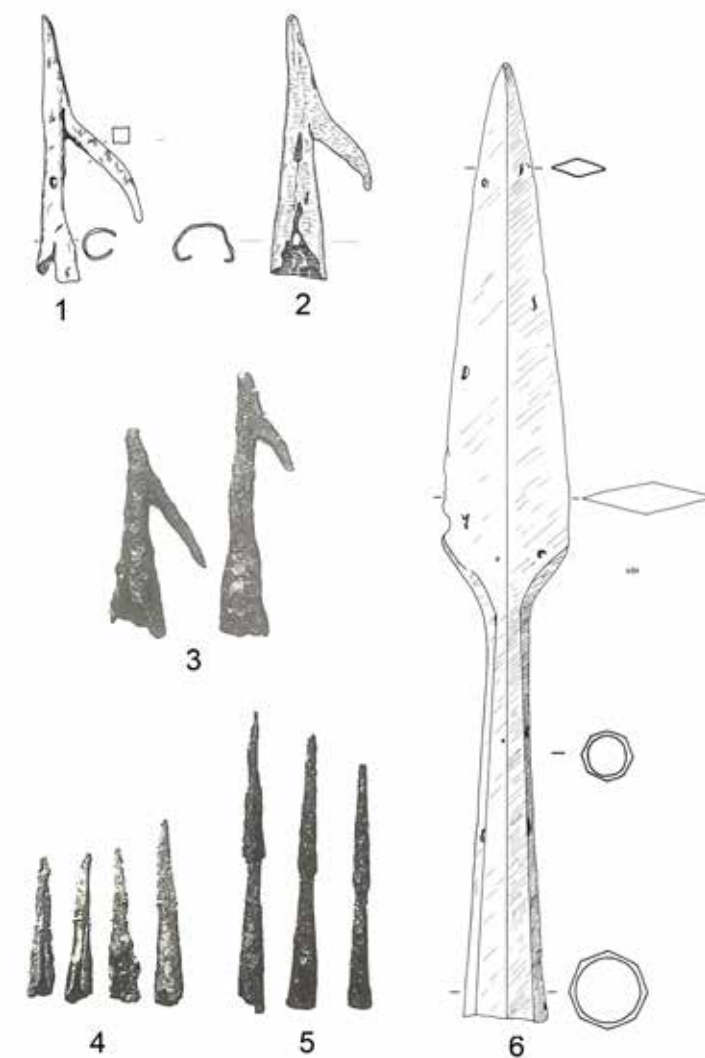


Fig. 2 - 1-6 Iron; 1.2 Scale 1:3, 6 1:4, 3-5 without Scale 1,6 Vicus; 2 Northgate; 3-5 Fort

spearheads, the thickness of the shaft is not enough to recommend a close-combat use. These are spearheads in the true sense of throwing weapons. They are found also in other places in the area of the limes-curve like Theilenhofen<sup>27</sup> or Rainau-Buch<sup>28</sup>, where also other Przeworsk findings have been excavated, though these were seen as trading goods, not signs of the attackers of the vicus.<sup>29</sup> So there is an - at-the-moment - determinable concentration at Weißenburg, but some individuals are also found in more distant areas of Raetia. It will be exciting to see if these weapons are found widespread

along the danubian border, or in a more or less concentrated sector.

Other projectiles might be of Germanic origin that are an extremely simple form of projectile head formed more or less out of a pointed socket, that already the Reichslimesexcavators and later Reuter identified as possibly Germanic due to their “careless” and simple form (Fig. 2.4).<sup>30</sup> These are not found in the vicus area but in small quantities at the northern gate and in significant more examples in the material of the Reichslime-

<sup>22</sup>Deschler-Erb, Schwarz 1993, 178; Greiner 2009b, 10, verfüllt in Brunnen 10 [56] nach Phase 2; ORL B 72, Tab. XIV, 31–35; ORL B 75, 15f., Fig. 6; Gschwind 2004, 365, Taf. 83 D157–163; Walke 1965, Taf. 108, 23; Crnobrnja 1997, 273 (seen as arrowheads); Ployer 2005, 933; Radman-Livaja 2005, 941; Varsik 1999, 631.

<sup>23</sup>Junkelmann 1992, 130, 133.

<sup>24</sup>Radman-Livaja 2004, 60.

<sup>25</sup>The triangular wounds created by these heads produce a fast blood-loss, as the wound doesn’t close easily, which is a welcomed effect while hunting. In contrast to modern triangular hunting arrowheads, excessive bonebreaking capabilities are not plausibly attributed to the much smaller Roman triangular heads. Cf. Sudhues 2004, 85ff.

<sup>26</sup>Vgl. Zielsing 1989, 70ff., 74.

<sup>27</sup>Reuter 2007, 94, Fig. 2.10.

<sup>28</sup>ORL B 67, Tab. III, 22.

<sup>29</sup>Greiner 2009a, 119.

<sup>30</sup>ORL B 72, 39f., Tab. VIII, 35–42, 54–64; Reuter 2007, 95 with Ann. 134 sees Tab. VIII, 35–38 also as possibly Germanic.



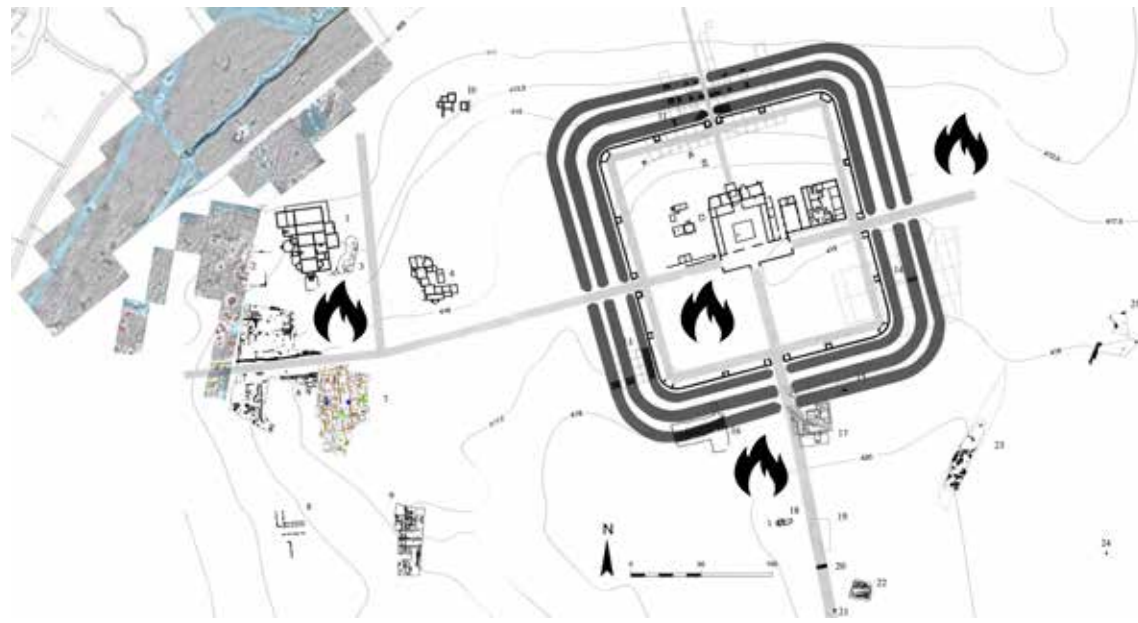


Fig. 3 - Fort and Vicus of Weißenburg (modified after Sommer 2008 and Mischka/Obmann/Faßbinder 2015) with hotspots of fighting activity

skommission. As these are relatively small and suffer easily in terms of preservation, it seems reasonable that these occur in the archaeological material were the fighting was the thickest and the chance of loss the highest.<sup>31</sup>

A third type of Germanic projectile heads is found only in the material of the fort. These were identified by Reuter as Germanic (Fig. 2.5).<sup>32</sup> These spearheads feature a long socket with accordingly long points. Although not found in the vicus material, these were found in other places in Raetia were also barbed spearheads occur.<sup>33</sup>

The most prominent specimen of Germanic weapons is found in the vicus area and has no parallels in Weißenburg or the greater makroregion. It is a lancehead with a length of over 50 cm, a thick, rhombic crosssection and a faceted socket towards the shaft (Fig. 2.6). The head weighs all in all 1300 gramm, the blade is around 7 cm at its widest point. Typological connected to the Przeworsk culture the head can be dated in to the very late 2nd to the first half of the 3<sup>rd</sup> century.<sup>34</sup> Heads of

these unusual dimensions are often interpreted by different authors as standards or something similar with no combat value or on the other side in most cases associated with social elites in any form. The quite rigid edge - preserved through fire patina - the lack of unusual decoration, cutouts etc. and the qualities of the lance-head itself seem to tend in another direction. The lance head shows through the thick, rhombic cross section an extreme stiffness, combined with the prominently designed point it would act formidably in piercing armor and deliver tremendous impacts. The length of blade and socket, guard the shaft well against attempts to cut the latter of, although with a thickness of around 3,5 to 4 cm that is already challenging. While the heavy head might make a use as infantry weapon in at least the most basic forms of fencing quite difficult, this is in no case enough reason to deny a practical function at all. The most plausible field of work seems to be the use as a heavy lance for mounted units in single or even double handed use.<sup>35</sup>

It is remarkable that the weapons of Weißenburg show no significant similarity with for example the finds

of Illerup-Adal, that showed many similarities with the Germanic arrows of Osterburken.<sup>36</sup> The attackers might have another cultural background, but although it seems to indicate a connection to the Przeworsk-culture, it is too early to attribute the attackers to its core regions, as the Germanic social mechanisms, and cultural interchanges in the 3<sup>rd</sup> century seem to change to fast and over to great distances<sup>37</sup>, to conclude something definitive at the moment, though it might add another mosaic stone to the bigger picture.

## Conclusion

The considerations of what were certain weapons capable of, based on their design and physical data and through that their most probable usage, may verify or falsify some handed down interpretations. The auxiliary units around the middle of the third century in Weißenburg seem not to have had a logistical problem in the production of weapons. There are no specimens that look worked and formed "in a hurry".<sup>38</sup> The army could still provide and control standards of form, dimension and weight to its weaponsmiths or civil craftsmen. The range of weapons on roman side indicate a tactical orientation on cavalry units, a further mosaic stone concerning the discussion about what unit was garrisoned in Weißenburg. The fragments of body armor show well-armored riders, the convex form of the shields are an optimization against projectile threats. Sadly, the material could not provide any hints about limb-armour.

The diversity of weapons with different purposes shows that the Roman army of this time was well aware of the heterogenic threats they had to counter eventually. Spearheads with excellent stopping capabilities through large wounds, to allround-projectiles, to specialized armour piercing spearheads provided the right choice of arms for the auxiliary soldier in every possible situation.<sup>39</sup>

The Germanic findings seem to indicate maybe two sorts of armed forces. Infantry, or less plausible ca-

valry, that uses projectile distance weapons with barbs or the simplest throwing spears with only the minimum of iron reinforcements of the points. Concerning the number of finds this might have made the biggest part of the corps of the attackers. As a second body of units we may have to concern lance riders that use a highly specialized weapon that works well against unarmored as well as highly armored opponents, but these riders formed probably just a small part of the body of attackers. The pure quantities of the Germanic weapons seem to reflect the hierarchic society of the Barbaricum, though the limited material and spacial limitations of the here discussed Weißenburg area forbid definite conclusions for the whole of the transdanubian limeszone. The observed quantities of the Roman types seem to reflect this observation, as most heads aim at non or lightly armored opponents and just a small portion at well-armored opponents.

The quantities of weapons in the fort and at its gates and walls, as well as in the vicus indicate active combat situations in all areas. Deformations on projectile heads indicate active usage of the projectiles, although these deformations may occur through missed hits, as well as direct hits of bone-structures.<sup>40</sup> The fighting in the vicus area suggests not just a siege situation but active combat in the field between the Weißenburg garrison and its attackers, although the final stages took probably place in the fort itself.

The mounted corps of troops of the attackers could provide the speed that was surely one of the many factors that brought down the area of the transdanubian Raetian limes down so quickly. In these riders, using the heavy lance we might already see the cousins of the forces at Abrittus and distant predecessors of the mounted troops of the Goths at Adrianople and in the Roman adaptations a glimpse into the future weapon developments of the developed 3<sup>rd</sup> and later 4<sup>th</sup> and 5<sup>th</sup> century.

<sup>31</sup>The interpretation of these is yet problematic, as these might actually also be roman weapons forged during a siege situation and some of the better „simple“ heads, might also be roman projectile-heads of Type P1 of lesser quality.

<sup>32</sup>Reuter 2007, 95.

<sup>33</sup>For example Buch: ORL B 67, Tab. III, 18.

<sup>34</sup>Kaczanowski 1995, 62, Taf. 8,2; 70, Taf. 20.

<sup>35</sup>A technique that is still in use in mounted boar hunting in the Camarque region or Spain for example.

<sup>36</sup>Rothacher/Scheuerbrandt 2016, 23.

<sup>37</sup>Vgl. Steidl 2016, 60f.

<sup>38</sup>Steidl 2006, 286f.

<sup>39</sup>It still has to be emphasized that all types discussed here, are for example potentially capable of penetrating armor, yet some of the types feature certain advantages.

<sup>40</sup>Sudhues 2004, 117.

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**Zusammenfassung**

In den verschiedenen Grabungsarealen Weißenburgs, dem Kastell, dem Nordtor sowie dem Vicus wurde in einer Zerstörungsschicht des dritten Jahrhunderts eine größere Anzahl römischer und in geringerer Quantität germanischer Waffen gefunden. Diese können im Kontext der gewaltsamen Zerstörung von Kastell und Vicus 254 n. Chr. gesehen werden. Die einzelnen Waffentypen werden im Folgenden nach Form-Funktion geordnet, sowie ihre Handhabung, Wirkweise vermutliches Einsatzgebiet und mögliche Rückschlüsse auf Kampftaktik und Zusammensetzung der beteiligten Kombattanten diskutiert. Die römischen Waffen zeigen wie zu erwarten einen höheren Standartisierungsfaktor und sind auf ein heterogenes Opponentenfeld ausgerichtet, die germanischen Waffen sind deutlich weniger auf unterschiedliche Gegnertypen ausgerichtet, auch wenn sich bei diesen dennoch eine Varianz an optimalen Einsatzgebieten feststellen lässt. Die germanischen Funde sind in ihrer Qualität deutlich heterogener und spiegeln möglicherweise die ursprünglichen sozialen Verhältnisse der Angreifer des transdanubischen Limesbogens im 3. Jh. wider.



# LIMES XXIII

## Session 6

Production, Industry and Trade







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# **Supplying Novae. The logistic network for provisioning the legio I Italica**

## **ABSTRACT**

Understanding army logistics is important for understanding the Roman army and the Roman limes as such, and in the case of Novae especially regarding the fundamental and dual role of the Danube as a border and a transport route. Novae, like other forts and smaller garrisons had been built for specific reasons and the geographical conditions and their influence on supplying the legio I Italica there had been taken in consideration. The development of Novae and the whole province Moesia Inferior is testimony of planning which included a thorough analysis of what was and was not available in the province and whether stable coordination of army supplies by trained personnel was possible. Different types of products and raw material required for building and maintaining Novae and its garrison are discussed by provenance: things produced or acquired on the spot, those available somewhere within the province and such that had to be imported from far away. A welcome addition are the epigraphic finds related to provisioning the first Italic legion.

**KEY WORDS: NOVAE, ROMAN ARMY, LOGISTICS, SUPPLY LINES, DANUBE LIMES, MOESIA, MOESIA INFERIOR**

## **Introduction - Roman military logistics**

Roman army logistics have become a really hot topic in Limes archaeology – entire sessions at the Congresses of Roman Frontier Studies were dedicated to various aspects of legionary supply in recent years.<sup>1</sup> Some time ago, I attempted to summarize the available knowledge for the province of Moesia inferior, with an effort to present the relevant literature – without

any claims of completeness<sup>2</sup>. In the present contribution I narrowed down the research area to a single site, Novae in Moesia inferior, with the intent to explore, how much can be said about the way a single army camp organized its supply. The term “network” implies not only the various aspects of supply and trade routes, but also other procedures and infrastructure that affected the safety of provisioning at Novae, such as aqueducts or the strategic reliance on the contribution of contract-

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<sup>1</sup>Such as sessions 4, 5, 13, 14 and 22 at Limes 23 or sessions 6 and 30 at Limes 24.

<sup>2</sup>Lemke 2016.

ed privateers. As a disclaimer it should be added that the idea of this text is to highlight the complexity of the topic in question even when speaking about a single site and to emphasize several particularly interesting aspects, but certainly not to give a complete account.

Logistics are also very much a Limes-issue, because the Roman army underwent significant changes in this area: from the early days of the Empire, the initial tendency to keep a permanent border led to a reorganization of the troops in order to provision the units now stationed on the frontiers. Being no less than the biggest organization in the Empire, engaged in tasks beyond warfare and border security<sup>3</sup> the legions still had to find the time and personnel to maintain a complex logistical system, because military success was heavily dependent on a continuous provision of supplies. In fact, the Roman army likely set a trend that resulted in a situation nowadays, where for every soldier actually fighting on the battlefield there are several comrades supporting him with intelligence and logistics. Novae, once the headquarters for the 1<sup>st</sup> Italic legion (*Legio I Italica*) in the province of Moesia inferior, lies in northern Bulgaria, not far from modern Svištov, on the right bank of the Danube. Excavations have been in progress for more than 50 years now.<sup>4</sup>

### Approach

The *NATO Allied Administrative Publication* offers a contemporary definition of logistics: “The science of planning and carrying out the movement and maintenance of forces. In its most comprehensive sense, the aspects of military operations which deal with: a) design and development, acquisition, storage, movement, distribution, maintenance, evacuation, and disposal of materiel; b) transport of personnel; c) acquisition or construction, maintenance, operation, and disposition of facilities; d) acquisition or furnishing of services; and e) medical and health service support”.<sup>5</sup>

Obviously, the scope of army logistics may vary between the different descriptions and definitions in place, but what they usually have in common is pro-

visioning and transport, and the administration of the two. It appears rather futile to use the NATO definition as a roadmap for archaeological investigations. But as an impulse, especially to explain the scope of army logistics, it may serve us quite well. Upon looking to give the topic some structure, I came up with the following possible research categories concerning the logistics of a single camp:

- Army intelligence (analyzing terrain shape, choosing a camp site)
- Provisioning & supply lines (local, provincial, long-distance)
- The role played by civilians, closely related to towns, villages and production centres
- Provincial administration and how it influenced a single limes camp
- Trade & resources
- Specialists (like the *frumentarii*)
- Infrastructure (Roads, bridges, harbors)
- Water supply
- *Horrea*

Naturally, I am unable to dedicate an equal amount of attention to the various aspects, since the available data varies considerably. The pottery found at Novae has been published numerous times, while information on aspects of administration is rather scarce (save the knowledge we have on *pastus militum* – below) and other criteria, such as the presence of *frumentarii* or cooperation with civilians in the *canabae* or *vicus* of Novae can be assumed but not really proven.

### Novae and its geographic setting in Moesia

Upon considering the position of Novae within the province it seems reasonable to investigate a possible relationship between the army camp and the few known economic centres of the province, such as: Montana, Marcianopolis, Nicopolis and the Pontic cities (Fig. 1). Although it is certainly conceivable that supplies

for the legio Italica in Novae came from the mining district of Montana or the arms factory at Marcianopolis<sup>6</sup>, there is little direct evidence supporting this idea, except maybe for some pieces of marble identified as coming from Montana.<sup>7</sup>

However, Nicopolis, a city founded by Trajan only about 50 km south of Novae and its satellite production centres Hotnica, Pavlikeni and Butovo<sup>8</sup> which developed quickly after the Dacian wars had a visible impact on the supply logistics of the legio I Italica. The city stimulated the economy within the province and at the same time centralized a variety of specialized production centres which delivered most of all tableware ceramics from Butovo and Pavlikeni and building stone from the quarries of Hotnica<sup>9</sup> to Novae.

The rather densely populated Pontic cities<sup>10</sup> possessed extensive territories with fertile soils suitable for both land cultivation and livestock farming, and had a strong political, economic and cultural impact on the surrounding population, playing a significant role in supplying the garrisons of Moesia inferior.<sup>11</sup> Facilitating maritime trade between the Black Sea regions and the Eastern Mediterranean was also important. Wine, olive oil and fish were the main commodities. The impact of these cities and the entire Black Sea region for that matter can be observed by the abundance of Pontic amphorae at Novae.<sup>12</sup>

### Army intelligence (choosing a fort site)

The most important factor for the Roman army when choosing a spot for a garrison seems to have been the proximity of an existing settlement, which had both logistic and strategic reasons. The existence of such a settlement was proof there was water available in the area, and a hint that neither the Danube nor another river flooded the area. Food could be foraged from the local inhabitants.<sup>13</sup>

There is also a number of other factors related to logistics, which can be observed when looking at the location of Novae (Fig. 2). The area selected for the construction was sufficiently wide to accommodate the invariably emerging *canabae* around the camp. This and a convenience of supply transportation clearly had preference over possible defensive attributes of the terrain.

Logistic convenience was also the reason for the positioning of Novae right on the Danube bank, where the transport ships arrived. A further consideration were communication routes, the Danube, its right and left tributaries, but also the various promontories among the marshland of the Danube banks, that is the weak spots of the river frontier. Even in areas without major tributaries to the Danube, the Roman army sought places close to the mouths of smaller streams, such as the streamlet called Dermen-Dere at Novae. In the upper run of these rivers there were usually springs of fresh water and constructing an aqueduct along a river valley was easier for the engineers, and secondly naturally defensive peninsulas would be formed where the stream met the Danube. The overall grid of aqueducts on the premises of the camp likely were also thought through at an early stage (see below), although there are numerous examples of modification at a time when all major buildings were already in place. The location of Novae is also justified by the local topographical conditions, which give the whole area its defensive character - the hills surrounding Novae from the west and south and the deep ravines on both longer sides of the fortress. The natural ravine stretching along the western wall was at the same time a convenient connection with the Danube bank. A deep erosion ditch is also located behind the eastern wall, at the northern corner.

<sup>3</sup>Sarnowski 1988, 69; Duch 2015 *passim*; Lemke 2016: 10–12

<sup>4</sup>Derda *et al.* 2008 includes a complete bibliography for the years 1726–2008. Annual reports are published in “Archeologia” (Warsaw). For an introduction see also: Sarnowski 2009; 2012.

<sup>5</sup>*NATO Glossary*, p. 2-L-5.

<sup>6</sup>Sarnowski 1988, 128.

<sup>7</sup>Lemke 2016, 21.

<sup>8</sup>Sultov 1983.

<sup>9</sup>Skoczylas 1999.

<sup>10</sup>Matthews 2018, 132–134 for a discussion on the quantification of inhabitants

<sup>11</sup>Lemke *et al.* 2019; Matei-Popescu 2014

<sup>12</sup>Dyczek 1997; Dyczek 2001; Dyczek 2005; Biernacki Klenina 2015

<sup>13</sup>Lemke 2015



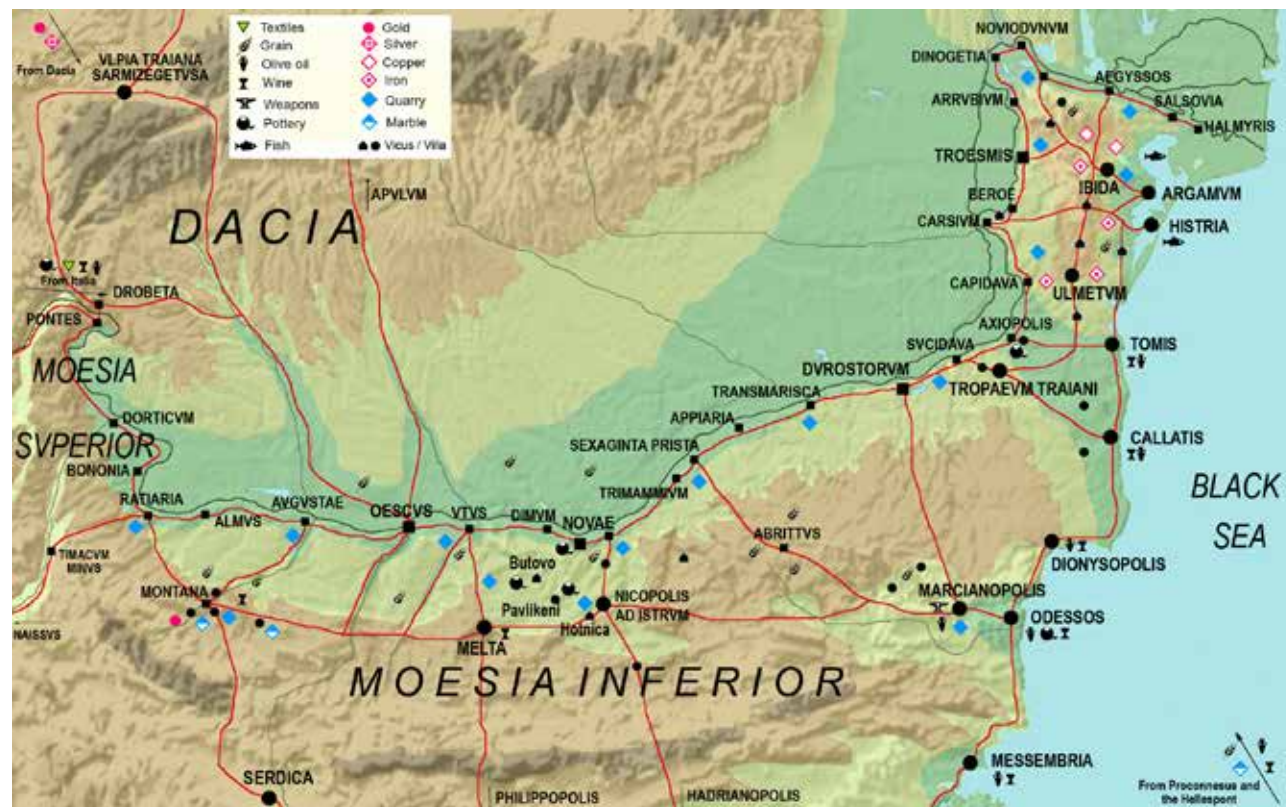


Fig. 1 - Natural resources and provincial production centres in Moesia inferior (M. Lemke).

### Infrastructure: Roads, ports, water supply

At Novae, overland roads of Moesia inferior met the Danube. The overall network of roads seems to have been rather complex<sup>14</sup>, the modern roads of Bulgaria mirroring in many instances the course of Roman roads – owing to the features of geography. The development of the province was accompanied by an expanding of this network (obviously built by the army), which played a fundamental role in extending and maintaining supply lines. The overall layout of the road network is known from itineraria, milestones and other epigraphic evidence, which also provide data on the location of the various towns and settlements. Thus we have the limes road along the Danube with roads branching off at right angles and leading into the interior of the province, often parallel to the bigger Danube tributaries and towards the mountain passes of the Haemus mountain range, and finally connected with a route

parallel to the Danube road running through Montana and Nicopolis ad Istrum.

There also seems to have been some kind of small harbour at Novae<sup>15</sup>, although this was no precondition for loading and unloading goods from ships in Roman times.<sup>16</sup>

More can be said about the aqueducts of Novae. The Roman army went to great lengths to ensure a stable water supply in their army camps. Providing several thousand soldiers with water was an immediate necessity, since facilities like *thermae* or latrines, but also workshops and drinking water for men and animals required huge amounts of this natural resource. Moreover, a network of channels was built along with the *castra* themselves, because it was easier to do so at that point: the denser the architecture, the more difficult it was to add subterranean water conduits afterwards.<sup>17</sup>

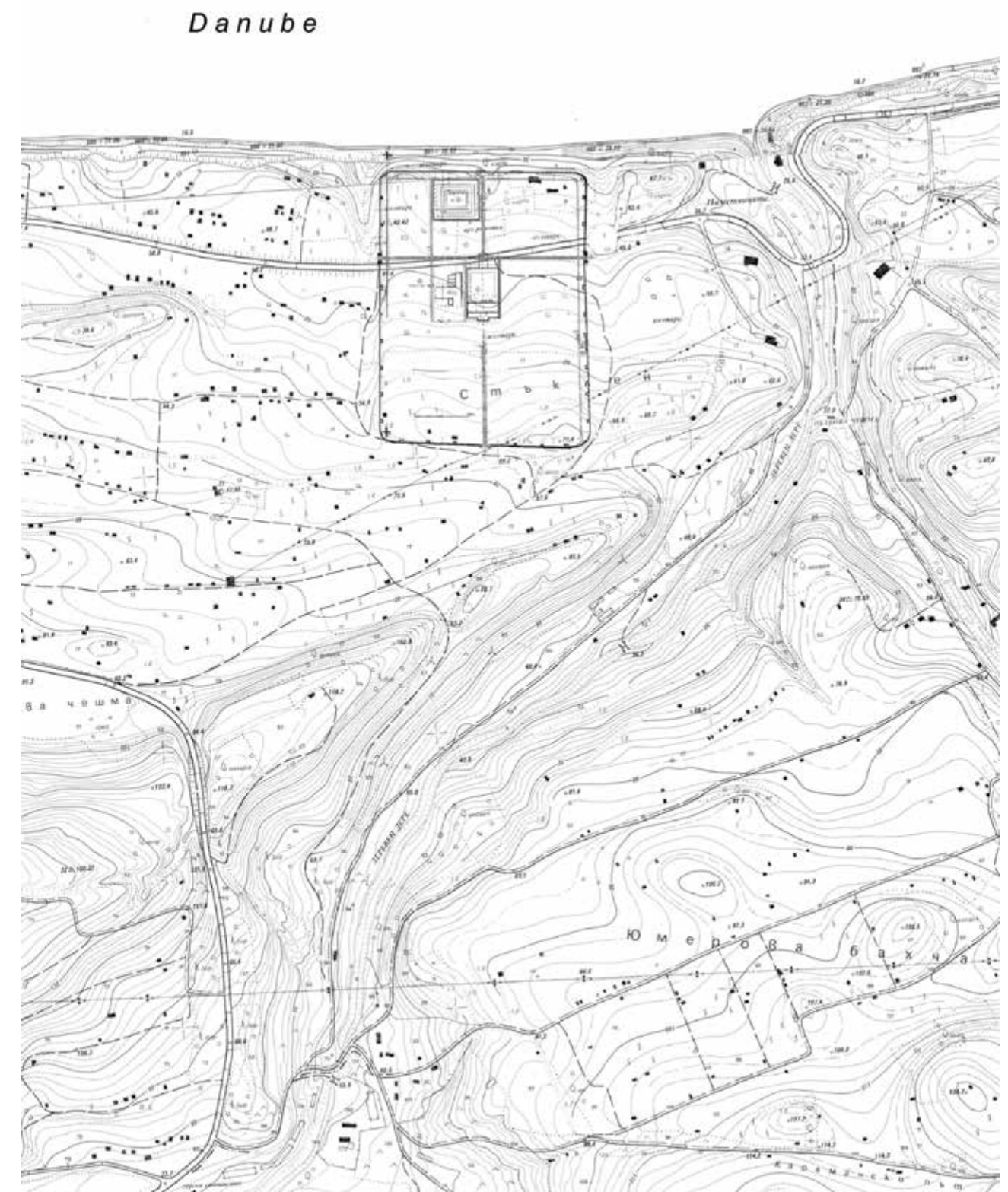


Fig. 2 - The terrain around Novae (after Lemke 2008, fig. 72)

<sup>14</sup>Panaite 2015; Tomas 2017, 45–50. For military geography see Lemke 2015

<sup>15</sup>Sarnowski 1997.

<sup>16</sup>Houston 1988, 561–563

<sup>17</sup>Lemke 2018; Tomas 2011; Tomas 2017, 50–54



Even after almost 60 years of excavations, the network of the aqueduct/drainage system at *Novae* still shows many blank spots. However, parts of the principal structures have been investigated thoroughly: the *scamnum tribunorum*, *principia*, *thermae*, *vale-tudinarium*, parts of the *canabae*, some barracks, the gates, streets, towers, etc. And virtually everywhere fieldwork has brought to light at least some small part of the water supply network.<sup>18</sup>

We know that at *Novae* the main aqueducts collected water from four springs and delivered it to reservoirs west and south of the fortress. From there the distribution to the various receivers in the camp was established using terracotta and lead pipes as well as conduits built of stone and/or bricks. The drains and sewers usually consisted of stone channels only which brought the excess and sewage water to the Danube.

#### Provisioning & supply lines (local, provincial, long-distance)

*Novae* like other legionary forts was obviously meant to be as self-sufficient as possible, but garrisons usually were heavily interconnected with one another and with other centres near and far, to ensure stable supply routes. Provisioning an army locally may have always been the most economic option, but only when certain prerequisites had been fulfilled and the supply system stabilized which happened in Moesia in Flavian times.<sup>19</sup>

Generally in Moesia Inferior, olive oil and wine were the basic imported products (from the Eastern Mediterranean, especially Asia Minor). The prime evidence for this are the relevant amphorae, on one hand mirroring the extent of military control in a given frontier zone and on the other reflecting the long distance nature of these imports. In the first century, *Novae* was supplied with oil from Histria, transported in Dressel 6 amphorae. The other Greek Pontic cities also played their part in turn in supplying the Lower Moesian army.

The import was supplemented with Spanish olive oil in Dressel 20 amphorae. Zeest 90 amphorae with olive oil from Ionia appeared toward the late second century.<sup>20</sup> Further long distance imports in *Novae* included tableware, especially the prized terra sigillata, lamps, wine, glass, worked stone (including marble from Proconnesos), lead and jewelry.

Ceramics are actually probably the best (if not the most fascinating) category of finds to investigate diversification, trade routes, economic potential of a legion, in this case at *Novae*. By and large we can distinguish three types of ceramics depending on their origin (Fig. 3): the first is locally made (“legionary”) pottery, such as the ceramic lamps from a kiln on the Danube bank just outside the camp.<sup>21</sup> The second category includes pottery produced within the province and brought to *Novae*, the best example being Butovo-ware, the Moesian version of (mostly) red slip fine tableware.<sup>22</sup> The third category encompasses any pottery imported for all sorts of reasons from a long distance to *Novae*, e.g. “true” terra sigillata (from workshops in Italy or Gaul)<sup>23</sup>, Firmalampen, and most of all the aforementioned amphorae.

#### Horrea

A further precautionary measure to ensure a stable stock of basic nourishment was building horrea (warehouses, mostly used as granaries), where food could be stored for an extended period of time. The horrea also allowed camps to function as tactical bases for military excursions, beyond the Danube for instance in the case of Moesia. The existence of granaries within legionary forts is sensible and well documented and particularly necessary in the winter when the garrison could rely on such reserves while the main transport route – the Danube – could be frozen.

Several such buildings, albeit from different periods have been identified at *Novae*. The space to the east of the *via praetoria*, opposite the valetudinarium seems

<sup>18</sup>Lemke 2021; 2019a; 2018

<sup>19</sup>Lemke 2016, 23

<sup>20</sup>Dyczek 1997a; Dyczek 2001; Dyczek 2005; Biernacki Klenina 2015

<sup>21</sup>Dyczek 2005. On legionary ware in general: Dyczek 2016

<sup>22</sup>Sultov 1983

<sup>23</sup>Dyczek 2018; Dimitrova-Milceva 2000



Fig. 3 - Three types of pottery. Locally made lamps (M. Lemke), Butovo-ware (J. Reclaw) and imported terra sigillata (M. Lemke)



to have been occupied by two consecutive granaries: the first one from the first phase of Novae in Flavian times<sup>24</sup>, the subsequent *horreum* from Trajanic times, when the northern area of the fort underwent extensive remodelling which included moving the baths towards the center of the castra to make space for the military hospital.

The organisation of the Roman army underwent intensive changes in Late Antiquity which encompassed logistics, as shown by the *pastus militum* related inscriptions from Novae below. What did not change however was the necessity of possessing a granary or two within the army fort which had by the late 3<sup>rd</sup> c started evolving into a civil town<sup>25</sup>. Such a late antique *horreum* has been discovered in the layers above the *valetudinarium* that is on the other side of the *via praetoria*.<sup>26</sup> Incidentally, within the fill layers of this granary another item related to logistics was found: a lead ingot bearing no less than 14 stamps which document its provenance (Moesia superior), quality and the administrative process related to the import of raw metal.<sup>27</sup>

It also seems quite likely that the large structure west of the legionary baths of the 2<sup>nd</sup> c., measuring no less than 43 x 43 m., and currently dubbed an “armamentarium turned horreum” in the early 4<sup>th</sup> c. by the excavators<sup>28</sup> was simply a big granary with several phases, just like the one opposite the *valetudinarium*, all along.

### Epigraphy / shift towards privateers in late antiquity

Novae was among the few strongholds of Moesia and Thracia that did not fall during the first Gothic raids of the mid-third century. However, later invasions and the structural changes that followed the years of crisis changed Novae, too. Due to the depopulation of the entire area, as well as changes in defensive strategy, larger settlements were fortified, and civilians also star-

ted using the free space available within military forts after the reduction of garrison strength.<sup>29</sup>

The *primipilarii* were civilian officials responsible for supplying the troops on the limes, employed by provincial governors. Their task, called *pastus primipili* or *pastus militum* was originally, from the start of the third century, a responsibility of the *primi pili* of the army. However, as part of the aforementioned modifications in the administration, their responsibility was transferred over to the *primipilarii*. The duty of the *primipilarii* lasting one year was to transport supplies from the province in which they were collected (which was also their home province) to the location at which the given legion was stationed.<sup>30</sup>

Supplying the legions of Lower Moesia from distant provinces of the Mediterranean seems to have been a consequence of the devastations the Goths brought with them and the subsequent logistic complications. Also, relying on privateers for the supply of the army returned those forces to the fighting pool that had earlier been engaged in the logistic process. In a time of constantly shrinking troops this could have been a successful measure to have more soldiers available for guarding the frontier.

### Conclusions

Understanding army logistics is important for understanding the limes as such, in the case of Novae also the fundamental and dual role of the Danube as both a border and a transport route. The archaeological record demonstrates that food and other essential products were acquired by all available means: own production on the premises of the *prata legionis*, taxation of the local population, transport on short supply routes within the province and long ones within the entire Empire.

The various logistic factors, like developing infrastructure, transport and the demography of a province, were

not only interconnected, but also influenced by one another on a more abstract, strategic level.

Logistics at Novae, which started with choosing a place for the future fort, highlight the importance of a military - civilian symbiosis which was the basis for the soldiers being self-sufficient on the spot. The diversity of imports are proof of both the needs beyond the minimum requirements as well as the capabilities of the supply experts of the army, who showed true bureaucratic diligence<sup>31</sup> in achieving their high level of reliability.

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<sup>25</sup>Lemke 2015a. On Late Roman horrea see: Rizos 2013

<sup>26</sup>Dyczek 1997.

<sup>27</sup>Kolendo 1986.

<sup>28</sup>Biernacki 2019, 234–236

<sup>29</sup>Lemke 2015a.

<sup>30</sup>Lajtar 2013; Sarnowski 2013.

<sup>31</sup>As shown for instance by the document called “Hunt’s pridianum” which does not concern Novae per se, but the province of Moesia inferior overall. Cf. Lemke 2016, 24–26.

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**Zusammenfassung**

Das Verständnis der Heereslogistik ist wichtig die römische Armee und des Limes als solche zu verstehen, und im Falle von Novae insbesondere im Hinblick auf die doppelte Rolle der Donau als Grenze und Transportweg. Novae war, wie andere Lager und kleinere Kastelle auch, aus besonderen Gründen gebaut worden und die geographischen Bedingungen und deren Einfluss auf die Versorgung der Legio I Italica wurden dabei berücksichtigt.

Die Entwicklung von Novae und der gesamten Provinz Moesia Inferior zeugt von der Planung, die eine gründliche Analyse dessen umfasste, was in der Pro-

vinz verfügbar war und was nicht, und ob eine stabile Koordination der Armeeversorgung möglich war. Verschiedene Arten von Produkten und Rohstoffen, die für den Bau und die Instandhaltung von Novae und seiner Garnison benötigt werden, werden nach Herkunft diskutiert: Dinge, die vor Ort produziert oder erworben werden konnten, solche die irgendwo in der Provinz verfügbar waren und schließlich Erzeugnisse, die aus der Ferne importiert werden mussten. Eine willkommene Ergänzung sind die epigraphischen Funde zur Bereitstellung der ersten kursiven Legion.





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# **Patterns of urban settlement on and behind the Danube *Limes*: a geographical perspective\***

## **ABSTRACT**

The study of the urban system of the Balkan and Danube provinces has brought to light a dim pattern in the distribution of the urban settlements in the frontier zone – ca. 70 km of the right bank of the Danube. Along certain sections of the frontier, towns tend to appear at distances of a day's walk from the *Limes* Road, whereas along others, they are pinned on the frontier. What inferences can be made on the basis of these distributions? In this paper we shall bring together a number of indications that point at the close connections between the civilian and military sector in the frontier zone. These have been found in the chronology of the urban system, the coincidence between the founding dates of the civilian towns and the establishment of the *Limes*; the epigraphic evidence of the activities of the urban elites in the frontier zone; the spatial patterns in the frontier zone and the quantitative properties of the urban systems. These scattered clues from the urban geography of the Middle and Lower Danube provinces seem to suggest a stable flow of people, goods and capital between the civilian and military sectors.

**KEY WORDS:** URBANIZATION, URBAN GEOGRAPHY, HIGH EMPIRE, THE DANUBE *LIMES*, RANK-SIZE ANALYSIS

## **Introduction**

**A**lmost 40 years ago, in the proceedings of the 12<sup>th</sup> Limes Congress, Andrew Poulter published a paper on the possible role of the *vici* in Moesia Inferior. (Poulter 1980) In this paper, the author has argued that the chief role of these settlements was to provide services to units garrisoned on the Lower Danube and bases for the settlement of veteran soldiers. (Poulter 1980, 729–744)<sup>1</sup> If this principle is valid for a small

section of the Lower Danube *Limes*, there is no apparent reason why it should not apply to the integral Danube frontier. In fact, Poulter's thesis is fully compatible with the general model in which the Roman army is a potential stimulator of economic growth. (Wierschowski 1984; Erdkamp ed. 2002) The army has been seen in a similar vein in a recent study of the impact of the permanent garrisons on the society and economy of Moesia Inferior. (Duch 2018) Notwithstanding its plausibility, this thesis is far from verified. (see the ba-

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<sup>1</sup>For a different view, see Suceveanu, Barnea, 1991.



lanced views of Erdkamp 2002, 47–69; Whitaker 2002, 204–234; the army as a negative factor: Isaac 2002, 181–191; Mattingly 2006) There is nothing inherently flawed in the view that the army was a potential factor of demographic and economic growth, but the interpretation of the evidence at disposal is often equivocal. Learning a new aspect about the supply and logistics of the permanent garrisons is not automatically indicative of the role and importance of the army for the economy of a given region, much less of its role on an empire-wide level. If the goal is to assess the role of the army as an economic factor, whether as a large consumer or transmitter of cultural values and technologies, it is not enough to determine the provenance of its essential supplies, although, obviously, this is the necessary first step. The crucial aspect that needs to be characterized are the conditions and modalities in which these transactions took place, as well as their volume and frequency. Clearly, the paucity of data does not allow us to address these issues and move the debate beyond the speculative realm.

This study adopts a different approach. Its goal is to explore the economic and demographic connections between the military and civilian sectors as reflected in the patterns of urban geography on the Lower and Middle Danube *Limes*. We do not nurture any illusions that this effort will bring us closer to understanding the role of the army in the economy of the frontier zone. Settlement patterns are conditioned by a multitude of factors and, like the movement of goods, they can be underlined by very different social and economic realities. Nevertheless, there are at least two good reasons why the evidence of settlement patterns should not be ignored. On a general level, we must not forget that the distribution of settlements, especially those of the highest order, reflects the distribution of people, services and wealth. Therefore, the settlement geography, as much as the physical geography, channels the economic currents in all pre-modern societies. The intensity and character of these relations might be invisible from this perspective but, as evidenced by the studies of economic geographers, intercity distances and size differences can be highly sensitive to the social and economic conditions in a given system. (Berry 1961, 573–588; Chorley, Haggett 1967; Henderson, Thisse 2004)<sup>2</sup> Talking about the Danube provinces, it is also

necessary to take into account the fact that the urbanization of this area was a centrally planned process that involved the founding of large settlements *ex novo* and, more to the point of this study, it must have been at least partly conditioned by strategic, military considerations. (Donev in press)

### The urban geography in the frontier zone

If we make a sharp distinction between the military and civilian sectors – a difference that is not as straightforward as it seems – it is possible to observe two principle patterns of distribution in the frontier zone. (Fig. 1) The first is typical of the Pannonian provinces. Its defining characteristic is the presence of double towns: the legionary fort and *canabae* represent the military segment, the *vicus* or *municipium*, usually located at a distance of slightly over two km from the centre of the legionary camp, the civilian segment. (Piso 1991) Scholars have looked for this pattern in the other Danube provinces, most fervently in Moesia Inferior, but although evidence of the presence of settlements at similar distances from the legionary camp has been found, this does not mean that these were urban settlements of the same rank as the *municipia* of Aquincum or Carnuntum. (Tomas 2006; Donevski 2009; see Boyanov 2010, for a different interpretation; Alexandrescu et al. 2015) This province, like the southern part of Pannonia Inferior adheres to a different pattern, whereby the nearest urban settlement is located up to 70 km behind the line of the *Limes*. In the case of the southern Pannonian *Limes*, the military segment is dispersed into a number of auxiliary forts, whereas in Moesia Inferior, autonomous, civilian towns like Nicopolis ad Istrum or Tropaeum Traiani are matched by legionary forts. Until the second half of the second century AD, the Scythian section of the *Limes* was “serviced” by the most prosperous among the Greek colonies. The *Limes* lied at a distance of about 70 km from the Black Sea and there would have been little room for new urban units in this strip of land.

Neither of these two patterns can be found on the short section of the *Limes* in Moesia Superior. There is no evidence of double towns in this province, whereas the large civilian towns were located hundreds of kilometres away from the *Limes*. (Fig. 2) The proximity

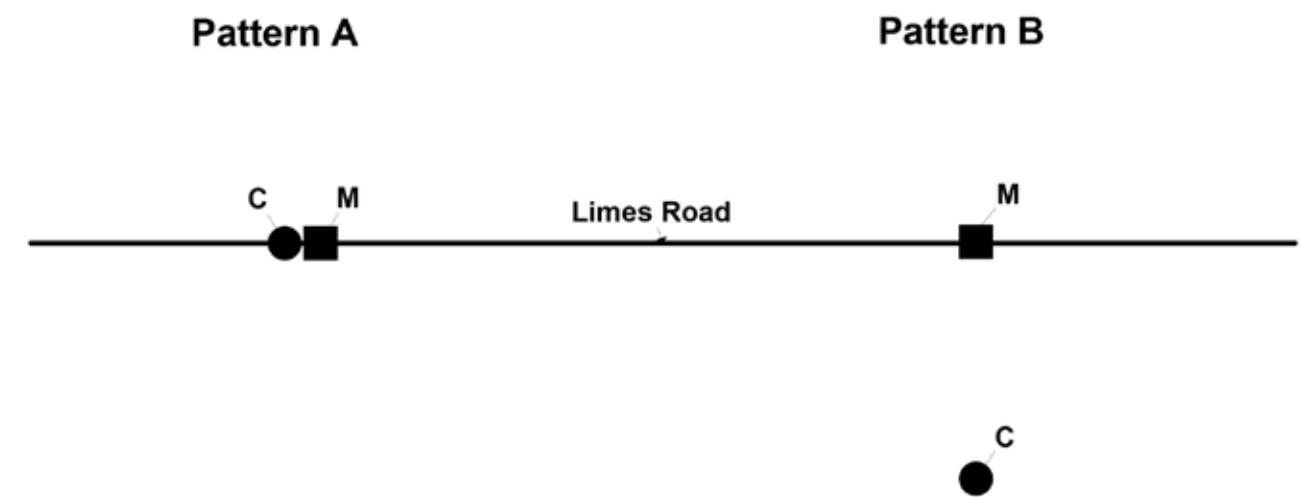


Fig. 1 - Patterns of urban settlement in the frontier zone; A – double town; B – civilian town behind the *Limes*

of the mining districts to the Danube might have been the cause for this deviation from the more typical patterns. (Dušanić 1977) The solution to this problem, implemented in Moesia Superior as early as the reign of Hadrian – the promotion of parts of the *canabae* into *municipia* –, paved the way for future developments in the urban patterns on the Danube frontier. By the time of the Severan dynasty, a number of *canabae* and *vici* on the Lower Danube were granted to an autonomous status. (Doruțiu-Boilă 1980; Suceveanu, Barnea 1991, 35–37) This process did not spread into the Pannonian provinces, in which pattern A continued to function. These divergent developments between the Middle and the Lower Danube demonstrate that the prevalent trend was to move the civilian settlement as close as possible to the legionary camp.<sup>3</sup> Pattern B survived only along the sections of the *Limes* that were guarded by auxiliary units. As long as the distinction between the military and civilian sectors was respected, model A offered the optimal solution. Once the border between the military and civilian sectors was eroded, the two settlements merged and both models became obsolete.

The pull of the military sector is self-evident. It is possible that pattern B was devised as an alternative to the unusual double town pattern, but it seems that it did not prove particularly successful. In economic geography, this close pairing of settlements is viable only in so far as the two settlements have complementary economies. (Garner 1967, 303–360) Had they performed the same or similar functions, the close positioning would have been disadvantageous to their prosperity.

### The chronological aspect

The connections between the military and civilian sectors are not only spatial. The century-long tradition of studies of the military installations on the Danube has clarified the time of establishment and the evolution of the Danube *Limes*. Controversies still surround the chronology of the *Limes* east of Novae (Suceveanu, Barnea, 1991, 7–17; Petculescu 2006) but, because in this section of the frontier the Romans relied on the pre-existing urban infrastructure, it is not crucial to know the correct answer to this question. The founding dates

<sup>2</sup>For the social aspects of settlement systems, see the seminal volume edited by Abrams, Wrigley 1978, or De Vries 1984.

<sup>3</sup>Possibly reflected in the preference of veterans to settle close to their former camps, Mócsy 1974; Ferjanić 2002.

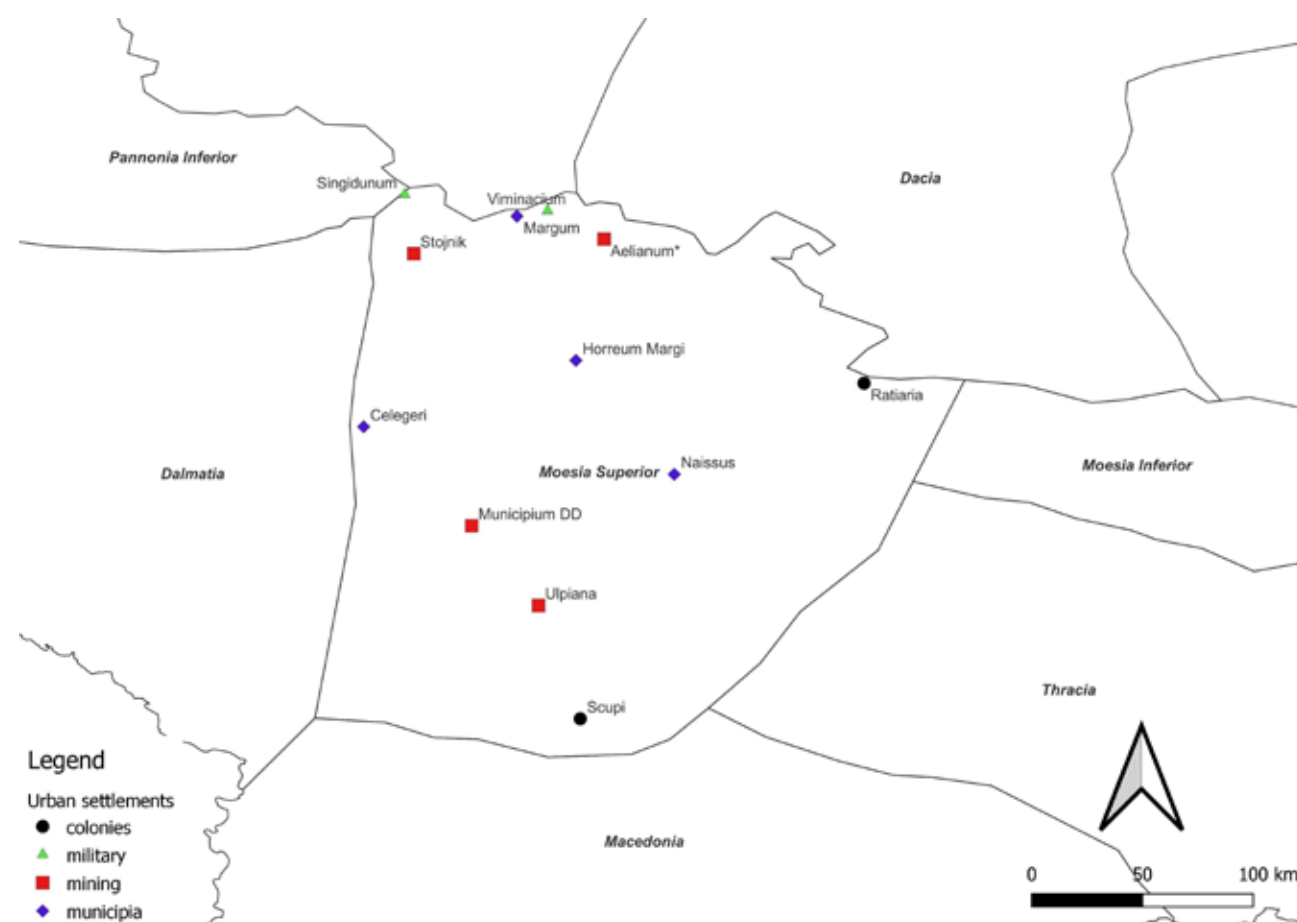


Fig. 2 - Distribution of the various settlement categories in Moesia Superior /

or the granting of autonomous status to most of the towns in the frontier zone are likewise known. A quick comparison of the founding dates of the two segments of the network will reveal that they were part of the same general process.

Although certain outposts had already been occupied at the time of the Julio-Claudian dynasty, the Pannonian sector of the Danube *Limes* was finally consolidated under the Flavians. (Visy 2003) The vast majority of the forts that constituted the Pannonian *Limes* at the time of the Severan dynasty were created under the Flavian emperors. Obviously, like the creation of the *Limes*, the creation of the urban geography of the Pannonian provinces was a gradual process, but if we exclude the group of pre-Roman settlements in the southwest of Pannonia and outside the frontier zone, most of the towns were either founded or granted official town-charters in the period between the reigns of Vespasian and Hadrian. (Šašel-Kos, Scherrer 2003, 2004) The only exception is Scarbantia and, possibly Sirmium, but both settlements became official towns only under the Flavian dynasty. (Gömöri 2003; Mirković 2004)

The Moesian sector of the *Limes* did not evolve at the same time. Parts of the area to the west of the river Olt might have been occupied as early as the time of Augustus and Tiberius, Novae and the segment to the river Yantra under Claudius, while the Scythian sector not before the Flavian dynasty and, according to some scholars, under Trajan. (Suceveanu, Barnea 1991, Ivanov 1997; Gudea 2005) In any event, it is evident that the *Limes* on the Lower Danube got its final shape – the partial demilitarization of the frontier west of the river Olt and the construction of the canal in the Iron Gate – only after the conquest of Dacia. The same applies to the *Limes* in Moesia Superior, although this segment of the frontier must have had an earlier phase under the Flavians. (Vasić, Kondić 1986; Mirković 2007) This is reflected by the relatively late urbanization of the interior of Moesia, – with the exception of Scupi – not before the first decades of the second century AD. The low population density recorded in the written sources, as well as the constant danger of Dacian or Sarmatian attacks would have not been conducive to the spread of urbanization, especially in Moesia Inferior. (Gerov 1997) It is striking that through-

out the first century AD, the legionary camps of Ratiaria and Oescus operated without a civilian centre in their hinterlands.

Thus, in both segments of the Danube Valley, the establishment of linear defences was followed by a process of urbanization or colonization of the land behind the frontier. Only two settlements in the entire segment of the frontier from the Alps to the Black Sea predate the final establishment of the *Limes*. This regularity cannot be ascribed to pure chance. The symbiosis between these two sectors is logical, albeit difficult to demonstrate in the archaeological or historical record. Even if we exclude the possible economic connections, the towns still needed the army to guarantee their security, whereas the army needed land, preferably urban territory, to accommodate veteran soldiers.

### The epigraphy of the frontier zone

The third connection between the civilian and military sectors concerns the agency of individuals, as evidenced in the epigraphic record from the *Limes*. A series of inscriptions commissioned by members of the urban aristocracy appears in a number of military camps on the Danube frontier. (examples include: CIL III 10993, Mogentiana; IL Jug 1040, Bassiana; CIL III 10243, Mursela; AÉ 1910 172, Sirmum; AÉ 1973: 445, Mursa; AÉ 1980: 725, Cibale; AÉ 1960: 357, Histria; AÉ 1998: 1143, Tropaeum Traiani? IG Bulg 5332, Nicopolis ad Istrum) Most commonly, these are dedications to the official state deities, sometimes in combination with the reigning emperor. These were acts of piety and demonstration of loyalty to the emperors that civilians normally performed in civilian settlements. Some scholars have argued – discussing individual examples – that these inscriptions were brought from sites located far behind the frontier line during the reconstruction of the *Limes* in Late Antiquity. (Doruțiu-Boilă 1980, 140–152; Barkóczi, Soproni 1981) It would have been indeed difficult to write off this possibility were there only one or two inscriptions of this sort. However, we have counted at least a dozen and a half examples spread along the entire stretch of the frontier between the Black Sea and Lower Austria. Over half of these inscriptions were commissioned by officials of the nearest civilian towns, but in some cases, they appear at considerable distances from the domicile town of the dedicator. It is highly unlikely that in all of these cases the material had been brought to the *Limes* from the

civilian sector in Late Antiquity. Equally unconvincing is the explanation that the segments of the frontier in which these inscriptions were found had been demilitarized in the course of the 2<sup>nd</sup> century and attached to the urban territories. (for example, Ruscu 2007) In fact, most of the findspots are auxiliary or legionary forts that had standing garrisons throughout Antiquity.

This series of inscriptions finds parallels among the rare epigraphic monuments discovered in the mining districts and imperial estates. (CIL III 14548; IDR III/3, 333; IDR III/3, 037; CIL III 7466; AÉ 1939: 246; CIL III 8151 and 1661; AÉ 1968: 415) Like the inscriptions discovered in the frontier zone, these monuments were commissioned by officials of the nearest towns or their representatives, although there is less uniformity in comparison to the IOM dedications in the frontier zone. Also, in addition to votive inscriptions, the members of the urban aristocracy often commissioned funerary monuments, implying a permanent or at least long-term involvement in these districts. (AÉ 1979: 451–452; CIL III 12739; IMS III/2: 26, 78) Although some scholars have interpreted these inscriptions as indicators of the extent of the urban territories, (Gerov 1997, 263–274) the small corpus of literary and epigraphic evidence points unambiguously to the likely role of the urban magistrates in the extra-municipal districts. Throughout the Principate and, possibly even in Late Antiquity, the preferred mode of exploitation of mineral riches was through concessions. (Domergue 1990; Dušanić 2004) The mining districts, at least the more important ones, were invariably state-owned and this undermines the thesis that they were part of the urban territories. A likelier explanation is that the magistrates referred to in these inscriptions were mining concessioners who have pledged to make a votive offering to the state or mining deities or who were buried on their estates or in the mining *vici*.

A similar explanation can be offered for the votive offerings discovered in the military forts on the Danube *Limes*. In this case, the magistrates would have been involved in the supply of the army units with certain categories of goods or in providing transport for the military supplies. (Herz 2002) Naturally, this does not imply anything about the conditions under which these dealings took place. It cannot be excluded that the local magistrates were simply impressed into providing the army at fixed prices or that they decided to shoulder the dues of their communities. Notwithstanding the precise



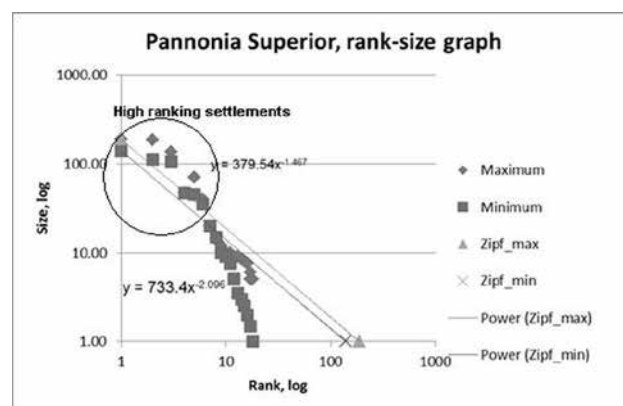


Fig. 3 - Rank-size graphs, Pannonia Superior

character of these relations, their existence can neither be denied nor underestimated.

### The quantitative properties of the urban systems

Our fourth and final clue to the connections between the military and civilian sectors lies in the settlement hierarchy or, more precisely, the settlement-size distribution in the frontier provinces. In order to demonstrate this relationship, we will borrow a method used by economic geographers to evaluate the intensity and modality of the economic relationships in the regional system under study. The technique, known as Rank-Size analysis, has been used in archaeology, and I may offer only a very basic introduction on this occasion. (Johnson 1977; Falconer, Savage 1995; Drennan, Peterson 2004)

Unlike the more familiar approach of observing the distribution of size-figures across arbitrary size-ranges, Rank-Size analysis focuses on the relations between all individual size-figures.<sup>4</sup> The size figures for all settlements in the system are listed in a descending order and each settlement is ranked according to its size. The largest settlement is ranked first, the second largest second, and so forth. If these series are plotted on a doubly logarithmic graph, the result will be a straight line or a curve of variable shape and position. Essentially, these lines represent the size-frequency trends in the systems under study.

Most commonly, scholars distinguish between three basic types of rank-size graphs, although there are some hybrid types that are of particular interest to this study. (Johnson 1980; Savage 1997, Figure 1) A straight line with a slope gradient of minus one represents the rank-size rule. In this type of size distributions, the first-ranking settlement is two times larger than the second-ranking settlement, three times larger than the third ranking-settlement and so forth. Size-frequency trends of this type have mostly been encountered in modern, highly developed economies, and they are of relevance to the ancient historian or archaeologist simply because the other types of rank-size graphs are seen as deviations from the rank-size rule. Most often, they are non-linear and can appropriate a concave shape – implying that most settlements in the system are larger than predicted by the rank-size rule – or, a convex shape, characteristic for the so-called primate systems, in which most towns are smaller than predicted by the rank-size rule.

The rank-size analyses were carried out for all known urban and urban-like settlements in the frontier provinces. Because the Greek colonies on the Black Sea coast constitute a large segment of the urban system of Moesia Inferior, the peculiarity of the urban hierarchy characteristic for the frontier zone cannot be readily observed on the rank-size graphs for this province. Civilian settlements in the frontier zone are nearly absent in Moesia Superior and, therefore, the discussion will be limited to the two Pannonian provinces.

As can be seen in Figs. 3 and 4, the rank-size graphs for the Pannonian provinces do not conform to any of the three principal types. The upper segments of the curves – approximately one third of the settlements included in the analysis – fall on or just above the trend-line for the rank-size rule. The remaining two thirds of the system are placed below this trend-line, implying size smaller than predicted by the rank-size rule. Therefore, the urban systems of these provinces can neither be interpreted as poorly integrated – the defining trait of the concave graphs – nor as primate or highly centralized – an attribute of the systems that exhibit convex size graphs. Another peculiarity of the rank-size graphs for

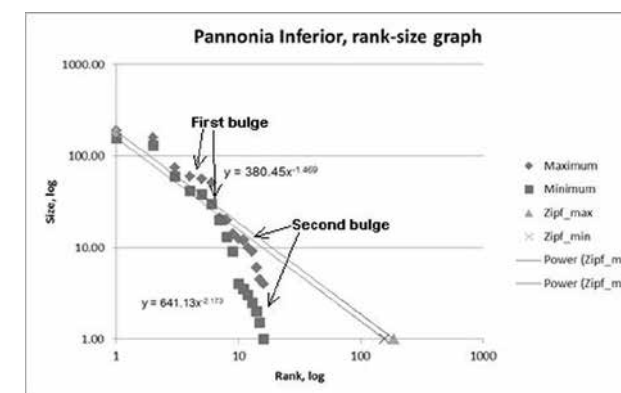


Fig. 4 - Rank-size graphs, Pannonia Inferior

the Pannonian provinces is the large gap or the breach in the slope gradient in the middle segment of the curve. This reflects the big difference in size between the groups of high- and low-ranking settlements.

The closest parallel for these graphs can be found among the proto-historic settlement systems in the Near East. These have been described as double concave graphs and are characterized by two bulges in the upper and lower halves of the curves. (double-convex in Savage 1997, 240–241, Fig. 7) In the case of the Pannonian provinces, especially in the rank-size graphs for the minimum size-estimates for Pannonia Superior, the lower bulge is truncated. This is because we do not have the complete data-set for the low-ranking settlements. Nonetheless, the breaches in the middle segments of the graphs point clearly at the two bulges that comprise the curve. These are especially pronounced in the rank-size graphs for Pannonia Inferior.

These double concave graphs have been associated with settlement systems in their early stages, in which a new tier of central places is superimposed over the existing network of rural settlements. Obviously, this explanation cannot be applied without major modifications to the urban systems in the Pannonian provinces. The urban systems of the Pannonian provinces existed for at least a century and a half without major changes, whereas most of the low-ranking settlements were established at the same time as the rest of the network. However, if the historical specifics in the two regions are disregarded for a moment, the only common trait of the urban systems in Chalcolithic Levant and Early Roman Pannonia is the co-existence of two separate and poorly integrated sub-systems. In the former case, these are represented by the emergent central places and the pre-existing network of rural settlements, whe-

reas in Roman Pannonia – and in other frontier provinces – a divide of a similar scale existed between the community of Roman citizens, distributed into autonomous towns and the *peregrini*, concentrated mainly in auxiliary *vici* and rural settlements.

If we look into the identity of the towns represented by the points in the graphs, it will become apparent that the upper segments of the graphs – mostly lying above the trend-line for the rank-size rule – are comprised exclusively of autonomous civilian and legionary towns. Almost all of the towns in the frontier zone belong to this group. On the other hand, the lower segments of the graphs consist entirely of auxiliary *vici* and road-stations. The towns that belong to the upper segments of the graphs are not only much larger than the low-ranking settlements. They also approximate the rank-size rule much more closely than the lower segments. This would imply that the economic relations between the civilian and legionary towns were more intensive than those between the low-ranking settlements. Unless this peculiarity of the urban systems in the Pannonian provinces is attributed to other factors or sheer chance, we will have to surmise the existence of stable and relatively strong economic and demographic ties between the high-ranking civilian settlements and legionary towns. It is a well-known fact that the latter provided security, administrative assistance and a steady flow of veteran soldiers. Apart from providing land for the settlement of veterans and a ready pool of recruits, the civilian towns in the frontier zone were ideally situated to provide at least a portion of the army supplies and logistics. Naturally, in this scenario, the legionary camps would have represented a highly attractive market. The great majority of the settlements in the province would have been left out of these economic currents, a circumstance that explains their depressed size.

### Conclusion

The signs observed in the urban geography of the frontier zone are clear and coherent, although their socio-economic correlates are not always readily identifiable. There is an undeniable spatial relationship between the civilian and military towns. The two not only appear in pairs, but it is possible to observe a consistent tendency to merge the two components, most plainly expressed in the phenomenon of double towns. This patterning is further underlined by the time of foundation of the Danube *Limes* and the urban network in the interior of

<sup>4</sup>Scholars who study the settlement geographies from the Late Medieval or later historical periods have population figures at disposal. There have been attempts to translate size-figures into population-figures, using sliding population densities for different settlement categories, Marzano 2011, but because so little is known about this subject, it was decided to run the analysis with size-figures.

the Balkan Peninsula. In all provinces on the Danube, the two processes were consecutive. At better researched sites, it has been established that the civilian town was founded within a couple of decades after the founding of the legionary town. The two components of the urban network could not exist independently of each other. This is most clearly expressed in the case of Moesia Superior. Because of the peculiarity of the administrative arrangements in the frontier zone – the extensive mining districts in the vicinity of the frontier – it was necessary to defy the ancient principle that separates the military from the civilian and create a civilian town from parts of the *canabae*, as early as the early second century AD. The aberration from this rule demonstrates that the imperative was to keep the military and civilian components close to each other at all costs.

A more direct indicator of the connections between the military and civilian segments can be found in the distribution of inscriptions erected by towns officials in the frontier zone. Their consistent appearance in the military forts on the Danube frontier is suggestive of regular economic connections between these two sectors. Like the other categories of ancient sources, they reveal little about the nature of these relationships, but they are not easily explained by the agency of “non-economic” factors. Finally, the size-frequency trends in some of the frontier provinces are very similar to the so-called double-concave patterns, observed originally in proto-historic southern Levant. The only thing these distant and unrelated societies had in common was the sharp divide between their constitutive segments. In the case of the frontier provinces of the Roman Empire, this was the status segregation between citizens and non-citizens. This surprising parallel serves to show that Rank-Size analysis is insensitive to the geographical and historical specifics or the level of social and technological complexity of the societies under study. Its results can be meaningful only against the background of the particular socio-economic realities that shape the settlement system.

We can get only this far by studying the clues preserved in the settlement geography. The only way to learn more about the character of the relationship between the military and civilian sectors or assess their importance as a general economic factor is to focus on the productivity of the towns in the frontier zone and the presence and distribution of local products at military

sites. A study of workshops and other productive capacities at military sites would be even more insightful, because this will potentially highlight the sectors in which the army was self-sufficient. Indubitably, these approaches hold great potential to bring us closer to the economic realities in the frontier zone. Unfortunately, because of the scarcity of quantitative data from these parts of the Roman Empire, it might be still too early to venture into this direction.

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**Riassunto**

L'analisi del sistema urbano delle province balcaniche e danubiane ha messo in luce uno schema poco regolare nella distribuzione degli insediamenti urbani nella zona di frontiera - ca. 70 km dalla riva destra del Danubio. Lungo alcune sezioni della frontiera, le città tendono ad apparire a una distanza di un giorno di cammino del limes, mentre in altri punti, sono proprio sulla frontiera. Quali deduzioni si possono fare sulla base di queste distribuzioni? In questo articolo metteremo insieme una serie di indicazioni che dimostrano gli stretti legami tra il settore civile e quello militare nella zona di frontiera. Tali legami sono stati trovati nella cronologia del sistema urbano (la coincidenza tra le date di fondazione delle città civili e l'istituzione del limes), la prova epigrafica delle attività delle élites urbane nella zona di frontiera, i modelli territoriali nella zona di frontiera e le proprietà quantitative dei sistemi urbani. Questi indizi sparsi della geografia urbana delle province del Medio e del Basso Danubio sembrano suggerire un flusso stabile di persone, beni e capitali tra il settore civile e quello militare.





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# *Patrimonium Caesaris* dans les provinces danubiennes I-III s. p.C. Les provinces de Mésie Inférieure et de Mésie Supérieure<sup>1</sup>

## ABSTRACT

The aim of the contribution is to point to the different testimonia relating to the imperial estates in the Danubian provinces of Pannonia, Moesia and Dacia during the first three centuries p.C. The study based on the epigraphical or literary evidence will enrich the general studies relating to the *patrimonium caesaris*. Highlighting the people and the nature of the estates will further improve the knowledge of the organization of the imperial management as well as the impact on the local and the provincial economy in this part of the Roman Empire.

**KEY WORDS:** ROMAN PERIOD, LOWER PANNONIA, UPPER MOESIA, CHEESE, COLUMELLA, PLINIUS, VARRO, ROMAN POTTERY, EXPERIMENTAL ARCHAEOLOGY

L'installation des Romains dans les Balkans se fait de façon progressive. Avant la constitution de la province de la Mésie, dont la date reste toujours sujet à débattre au sein de la communauté scientifique, la charge de contrôle des territoires limitrophes reposait essentiellement sur le proconsul de Macédoine et à partir de l'époque augustéenne, mais avant la création de la province de Thrace, sur les alliés thraces. Il n'y avait pas de frontière fixe, solidement établie, la *provincia* du promagistrat de Macédoine s'arrêtait là ou selon la formule de Cicéron (*Pis.* 38) s'arrêtait la puissance des armes. Quelques dates qui éclairent ce long processus peuvent néanmoins être retenues nous

permettant de fixer un cadre chronologique. Avant la proclamation de la soumission de la Mésie par Auguste en 27 a. C., il convient de mentionner l'expédition en 72 a. C. de M. Terentius Varro Lucullus (*cos.* 73), ainsi que celles de C. Antonius Hybrida (*cos.* 63) lors de son gouvernement de la Macédoine entre 62 et 58 a. C. Après une courte accalmie M. Licinius Crassus (*cos.* 30) porta victorieusement les armes contre les Mœsiens dans une série d'expéditions entre 29 et 28 a.C., ce qui aux dires d'Auguste aboutit à la soumission de cette contrée située le long du bas Danube. En 5-6 p.C. *Sex. Aelius Catus* (*cos.* 4) déplaça 50000 Gètes vers le sud, mais cette politique de repeuplement n'a pas eu

<sup>1</sup>Nous allons très brièvement mentionner les sources connues qui sont en liaison avec le patrimoine impérial, sans pour autant développer une analyse qui sera présentée à part lors de la publication prochaine des volumes issus du projet PATRIMONIUM (ERC-StG 716375).



----- - frontière selon Šašel Kos 2005, 51

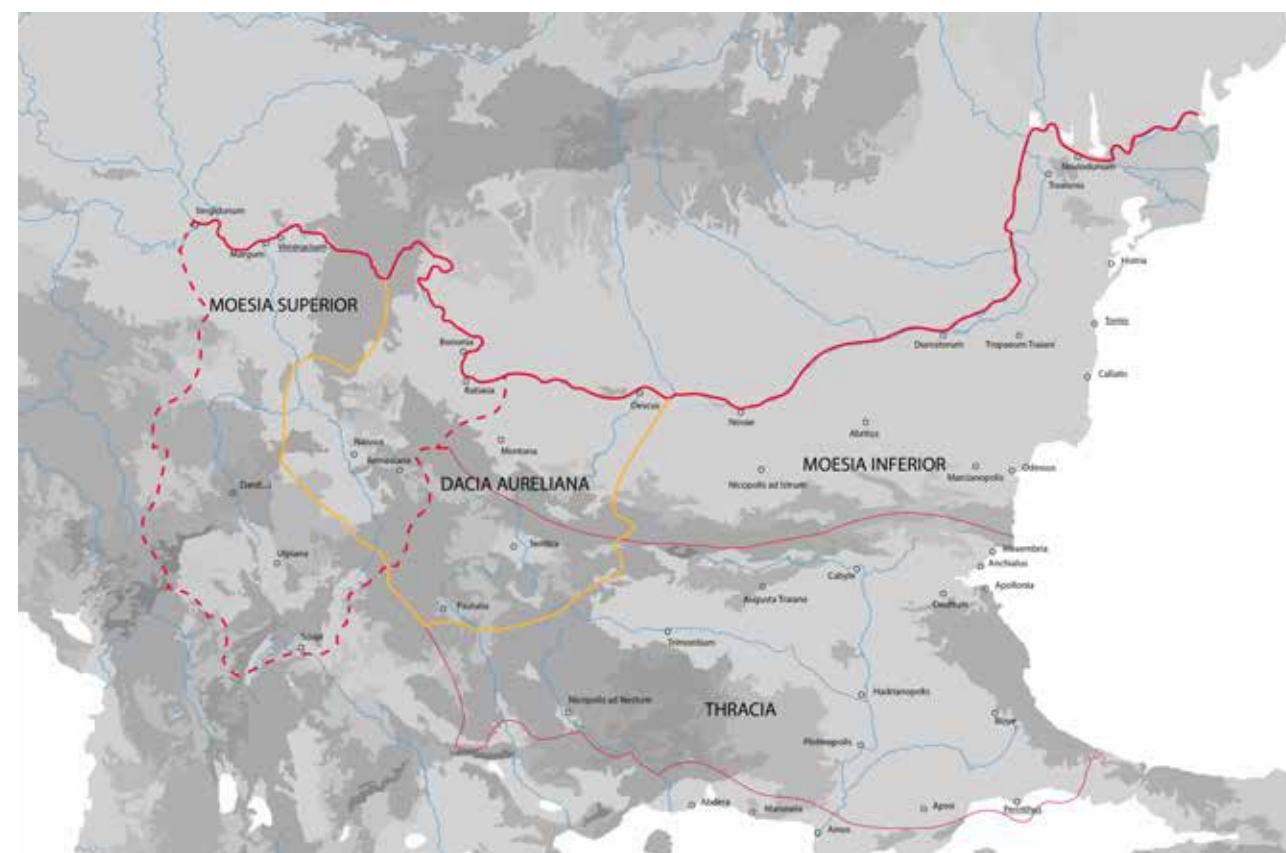
Carte 1 - Mésie Inférieure et Mésie Supérieure au III<sup>e</sup> s.

les effets escomptés, car sous Néron, en 60-67 p.C.,- Ti. Plautius Silvanus Aelianus (*cos. suff.* I 45, II 74) déplaça de nouveau 100000 transdanubiens en Mésie.

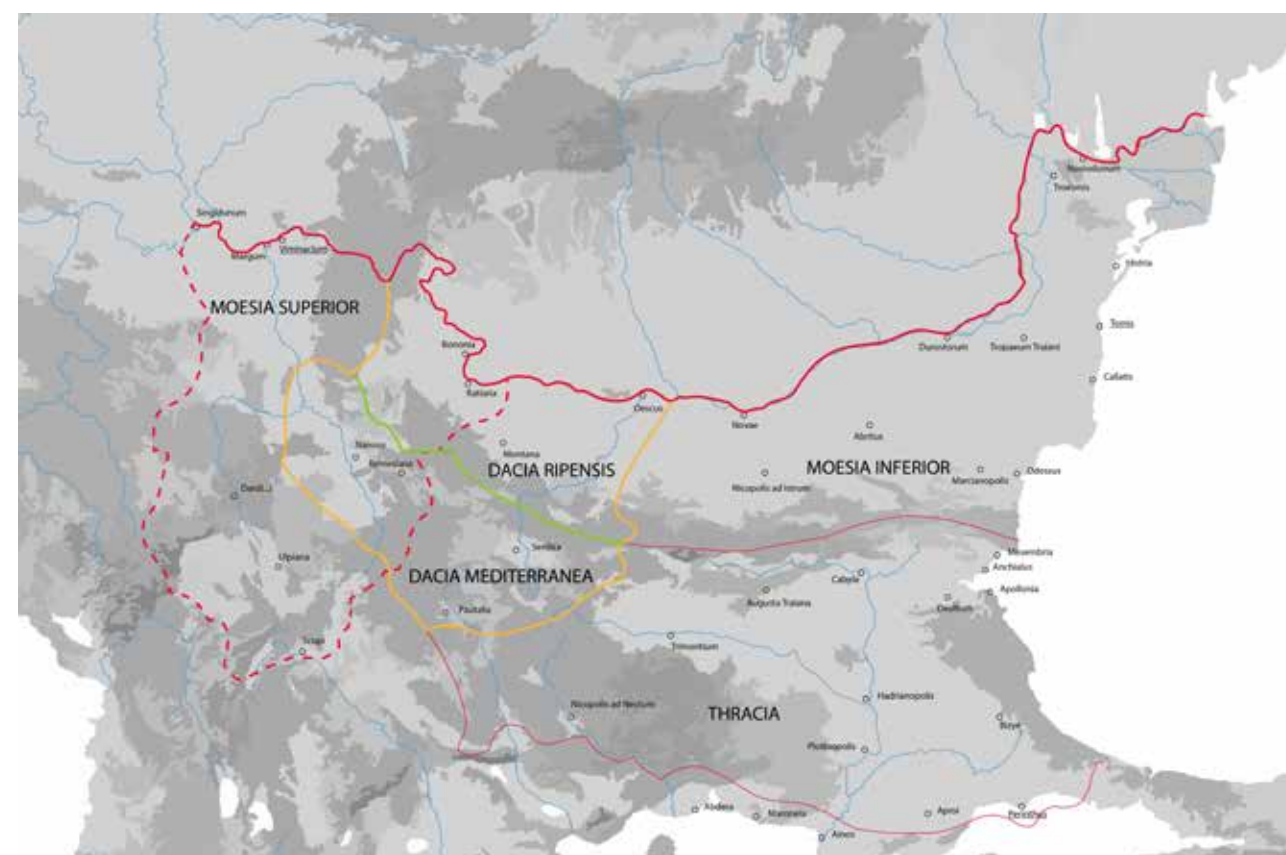
La crise survint une vingtaine d'années plus tard lorsque C. Oppius Sabinus (*cos.* 84) en affrontant les Daces trouva la mort. Le danger était jugé suffisamment grave pour que l'empereur s'y déplace en personne pour organiser la riposte. Par la même occasion – en 86 p.C. la province de la Mésie fut divisée en deux nouvelles entités administratives – Mésie Supérieure et Mésie Inférieure (celle-ci s'élargissant au profit la Thrace) (Carte 1). Les principales bases de l'armée furent établies sur la rive droite du Danube, mais avant la création des provinces transdanubiennes, le fleuve n'a jamais été une véritable frontière administrative. Les guerres de Trajan au début du II<sup>e</sup> s. permirent une extension conséquente des territoires placés sous contrôle romain vers le nord, mais en 272 p. C. Aurélien les abandonna. En réorganisant les Balkans il préleva des parties des deux Mésies et de la Thrace et créa la province de *Dacia Aureliana* (Carte 2), divisée elle-même plus tard en *Dacia Ripensis* et *Dacia Mediterranea* (Carte 3).

### Mésie

À la différence d'autres provinces de l'époque des Julio-Claudiens, nous ne disposons pas de témoignages sur des possessions impériales en Mésie. Les sources épigraphiques laissent sous-entendre une place prépondérante de l'armée dans l'organisation et le contrôle de la province. Nous ne savons pas à qui exactement appartenaient les terres, les carrières, les mines à l'époque préromaine et au profit de qui ils étaient exploités. Il est licite de supposer qu'une partie de la production était prélevée par les rois des différentes tribus, peuplant ce vaste territoire, mais nous en ignorons les détails. La conquête romaine transféra la propriété des nouveaux territoires au peuple romain, qui les rétrocéda à travers une imposition fût-elle directe ou indirecte. En extrapolant, nous savons qu'en Mésie des procurateurs de rang équestre géraient les finances de la province, mais nous en ignorons à la fois leurs noms et leurs parcours. Nous ne pouvons non plus affirmer si l'initiative de repeuplement de Néron est liée avec quelque projet économique de grande envergure incluant une mobilisation des ressources issues du patrimoine impérial



Carte 2 - Dacia Aureliana



Carte 3 - Dacia Ripensis et Dacia Mediterranea



(créations de domaines exemptés fiscalement pendant une période donnée, exploitation de mines, carrière, etc.), où il vise simplement le comblement d'un vide démographique.

### Mésie Inférieure

Nous ne sommes pas suffisamment renseignés sur les propriétés impériales en Mésie Inférieure. Aussi bien les sources littéraires que les sources archéologiques restent relativement silencieuses et seule l'épigraphie éclaire notre connaissance à ce sujet. Aussi les avancées de la recherche ne sont non plus spectaculaires – les informations sont rares et le dossier demeure toujours aussi peu fourni. Cet état se traduit par la rareté des études portant à la fois sur les propriétés impériales, mais aussi sur le personnel impliqué à la gestion du patrimoine et des finances en général. En effet, l'étude due à B. Gerov<sup>1</sup> fournit un état de la question assez complet, qui depuis ne s'est que très peu enrichi. Mais ce manque d'information ne reflète pas nécessairement une mauvaise conservation des sources. En revanche, ce silence reflète bien une réalité – l'absence de grands domaines impériaux en Mésie Inférieure. L'explication la plus plausible réside dans le mode d'occupation et d'exploitation de la terre. La séparation de la Mésie en deux provinces n'avait pas pour but la restructuration de la propriété foncière de la plaine danubienne, mais le renforcement du contrôle de la frontière. Ainsi à côté des terres allouées à la garnison de la Mésie Inférieure<sup>2</sup>, l'exploitation demeure aux mains de petits et moyens propriétaires terriens. Après les guerres daces de Trajan et la réorganisation de l'espace balkanique en général, la seule évolution demeure dans la constitution de nouvelles agglomérations ou bien dans l'élévation du statut de certaines déjà existantes. La stimulation de la vie urbaine se traduit par un afflux d'une population venant essentiellement d'Asie Mineure. Mais les grandes fortunes demeurent absentes de l'exploitation foncière. L'aristocratie municipale reste implantée à côté des agglomérations côtières, alors que l'intérieur de la province demeure parsemé de villages thraces.

L'installation de vétérans récemment étudiée<sup>3</sup> confirme cette importance de la petite et moyenne propriété pour la mise en valeur du sol provincial.

Un autre indice indirect qui est tout aussi instructif nous est fourni par la quasi absence d'une population servile. Or, l'emploi en masse du travail servile ne peut s'expliquer que par la présence de grands domaines ou en général d'activités nécessitant l'emploi d'une abondante main d'œuvre. Il en est de même pour les attestations d'affranchis, ou de tout autre témoignage sous quelque forme que ce soit d'un rapport de clientélisme.

Cette absence de sources relatant la présence de propriétés impériales ou d'activités économiques incluses dans le *patrimonium* est totale pour toute la Dobroudja et donc la partie orientale de la Mésie Inférieure. En revanche, quelques bribes subsistent pour la partie centrale et occidentale. Ainsi il est possible d'envisager l'existence d'une propriété impériale autour d'Abritus. La dédicace au Cavalier thrace d'un *saltuarius* impérial<sup>4</sup> à elle seule ne pouvait être un indice suffisamment explicite pour cette région, car il pouvait s'agir d'un acte pieux réalisé lors d'un déplacement. Cependant, lors des fouilles archéologiques à Abritus aussi bien dans les années 1950-1960, que plus récemment, ont été mis au jour des fragments de *tegulae* estampillés FISC(i), qui viennent seulement d'être publiés<sup>5</sup>. Des marques DD(ominorum)NN(ostrum) y étaient trouvées au même endroit, mais avec une datation bien plus tardive, qui peut s'expliquer soit par une éventuelle continuité de l'exploitation, si s'en est une<sup>6</sup>, soit par la reprise de la même activité.

Des briques estampillées issues d'une propriété ou d'une commande impériale ont été trouvées dans d'autres endroits en Mésie Inférieure. Jusqu'à récemment dans la littérature scientifique les briques estampillées (AVGG(ustorum duorum) | ANN(?)), AVG-G(ustorum duorum) | MAR (?)) et AVGG(ustorum duorum) | PRA(edia vel ta)) provenant de Pliska et de la forteresse de Kovačevsko kale non loin du village

Kovačevac, étaient datées du IIe -IIIe s., mais I. Dončeva<sup>7</sup> vient de remettre en cause cette datation.

Parmi les témoignages archéologiques, il convient de mentionner la villa près de Madara. Fouillée à plusieurs reprises dès la fin des années 1920, mais surtout durant la période 1949-1963<sup>8</sup>. Elle est constituée d'un ensemble architectural ayant concentré des activités économiques pendant près de quatre cents ans – entre la deuxième moitié du Ier s. et le début de VIe s. de n. è. En suivant l'éditrice des fouilles, en se basant entre autres sur le plan et l'architecture, l'existence d'un entrepôt pouvant contenir plus de 13 hl de vin, ainsi que des étables de très grande taille, deux *graphiti* faisant état de travail servile (*domini* et δεσποτικόν respectivement), le témoignage de K. Škorpil suivant lequel sur le site ont été trouvées deux statues de marbre de taille humaine, mais surtout une inscription provenant du cours d'eau à proximité immédiate mentionnant *M. Aurelius Caesaris libertus*<sup>9</sup>, il est possible d'y reconnaître un ensemble ayant fait partie à un moment de son histoire du patrimoine impérial<sup>10</sup>.

La part des témoignages épigraphiques dans ce maigre dossier est essentielle<sup>11</sup>. Outre les deux textes évoqués si dessus, il convient de mentionner la dédicace à Diane et Apollon par l'esclave impérial Anicetus offerte dans le temple de Diane à Montana<sup>12</sup>. Toujours à Diane une autre dédicace élevée par le *vilicus* Domitien, provient cette fois du village de Găbare<sup>13</sup>. À la différence de ces deux textes qui nous incitent à reconnaître l'existence d'une propriété impériale dans la région de Montana,

les mentions d'un *praefectus saltus* de la région d'Oescus<sup>14</sup> ne peuvent être retenues<sup>15</sup>.

De Tomis et de sa région proviennent deux inscriptions nommant des *liberti* impériaux<sup>16</sup>. Il ne faut pas y voir un hasard, car si Tomis était la capitale de la province comme le veut la tradition, il serait normal que des esclaves et des affranchis y soient établis en vue d'y exercer des activités économiques.

Même si nous ne sommes pas renseignés sur leur nature exacte, nous avons quelques références épigraphiques sur le personnel administratif, en l'occurrence des *servi* appartenant à l'empereur, qui s'occupent de la tenue et du contrôle des comptes liées à ces activités. Ainsi, Serapiacus nous est connu comme un *dispensator*, grâce à son subalterne Dionysius ayant dédié un ex-voto à Cérès<sup>17</sup>. Occupant le même type de poste, mais bien plus haut dans la hiérarchie, l'esclave Fronto, est connu par le sarcophage qu'il commanda pour son épouse<sup>18</sup>. Par une inscription hors de la province, nous connaissons le trésorier de la Mésie Inférieure des années 98-102 de n. è., lui aussi un esclave impérial<sup>19</sup>.

Une partie des agents des bureaux des douanes étaient aussi des *servi*, tel Memor<sup>20</sup>, *contrascriptor* à la *statio Dimensis* et Maceio<sup>21</sup> – *vilicus vectigalis*.

Le personnel administratif gérant les finances provinciales était placé sous la houlette de procureurs de rang équestre, dont les carrières, dernièrement étudiées en détail par D. Faoro<sup>22</sup>, sont devenues au fil des années strictement hiérarchisées. Les noms des procureurs

<sup>1</sup>Геров 1980, 55 *sqq.*

<sup>2</sup>Sur l'organisation en général cf. p.ex. Геров 1980, *sqq.*; Тачева 2000, 22 *sqq.*

<sup>3</sup>Боянов 2008, *passim*; Mihailescu-Bîrliba 2019;

<sup>4</sup>Радославова 2017.

<sup>5</sup>Иванов 2017, 258 *sqq.*; et Иванов 2017, 45–50.

<sup>6</sup>Malheureusement les *figlinae* n'étant pas encore localisées il est impossible de savoir s'il s'agit de commandes isolées passées auprès d'un atelier local, ou bien d'une *figlina* impériale.

<sup>7</sup>Дончева 2009.

<sup>8</sup>Дремсизова-Нелчинова 1984, *passim*.

<sup>9</sup>Detchev 1934 et Detchev 1936.

<sup>10</sup>Il est difficile d'admettre que la villa ait été une propriété impériale de façon discontinue pendant une si longue période.

<sup>11</sup>Mihailescu-Bîrliba 2006, 206–209.

<sup>12</sup>Божилова 1987, n°13.

<sup>13</sup>CIL, 3, 13722.

<sup>14</sup>AE 1900, 25; AE 2005, 1325.

<sup>15</sup>Bartels 2008.

<sup>16</sup>Stefan 1991; ISM, 2, 106.

<sup>17</sup>CIL 3, 12379.

<sup>18</sup>CIL, 3, 754.

<sup>19</sup>IGRR, 4, 333.

<sup>20</sup>CIL, 3, 12399.

<sup>21</sup>CIL, 3, 7435.

<sup>22</sup>Faoro 2011.

des finances de la Mésie Inférieure<sup>23</sup>, connus à présent, sont regroupés ci-dessous dans les Tableaux 1 et 2.

Enfin, il convient d'évoquer les sources littéraires, qui, même devenant relativement abondantes avec le déplacement du pouvoir politique à partir du IV<sup>e</sup> s., jusqu'alors restent peu utiles. Néanmoins, nous savons qu'avant d'accéder à la tête de l'Empire, Maximin de Thrace avait acquis des propriétés dans sa région natale, qui par la suite obligatoirement passèrent dans le *patrimonium Caesaris*.

### Mésie Supérieure

Même si la Mésie Supérieure disposant d'une plaine à l'est et au sud de Singidunum et de Viminacium, suffisamment importante pour permettre une exploitation agricole de grande envergure, de point de vue économique la province présentait un tout autre intérêt. En effet grâce à son relief montagneux, elle était richement pourvue en ressources minières, et plus particulièrement en matières premières à forte valeur ajoutée – de l'argent, du plomb, du fer et de l'or<sup>24</sup>. Depuis N. Vulić, la recherche moderne n'a, à juste titre, eu de cesse à souligner cette importance tout en combinant les résultats issus de différents domaines scientifiques. Il serait vain d'essayer de donner ici une liste ne serait-ce qu'approximative de la littérature à ce sujet<sup>25</sup>. Signalons simplement l'importance des travaux de S. Dušanić<sup>26</sup>, alors que la dernière synthèse avec la très riche bibliographie correspondante peut être trouvée chez A. Hirt<sup>27</sup>. Les études régionales complètent les efforts académiques rendant notre connaissance de plus en plus approfondie<sup>28</sup>.

L'essentiel, si ce n'est la totalité des inscriptions mentionnant des esclaves ou des affranchis impériaux est issu des régions d'exploitation minière et/ou ayant trait à cette activité. Ainsi nous n'avons pas des témoignages explicites sur la présence d'exploitations agricoles, bien qu'on puisse en supposer l'existence<sup>29</sup>. Ici aussi, comme en Mésie Inférieure, l'essentiel de la propriété foncière restait aux mains des petits ou moyens propriétaires, appartenant au monde paysan ou à l'aristocratie municipale. En revanche, des familles puissantes, sont bien attestées aussi bien par la mention de leurs membres que de leurs clients<sup>30</sup>.

L'exploitation minière provinciale se concentrait dans deux grandes zones – au sud (la Dardanie) et au nord (la région danubienne). Ces deux grandes zones regroupaient des régions ou des districts plus petits autour de : 1) pour le Sud – Municipium Dardanorum, Lopate, Ulpiana, Timacum Minus, Remesiana et ainsi que la zone de Kuršumlija, 2) pour le Nord – Pincus, Timacus et ainsi que la zone de la Šumadija. La délimitation de ces régions est tributaire à la fois des attestations d'un monnayage spécifique<sup>31</sup>, des traces archéologiques d'exploitation, mais surtout des témoignages épigraphiques. La production était supervisée par des procurateurs – des *liberti*<sup>32</sup> et des chevaliers<sup>33</sup>, alors que plusieurs entités pouvaient être regroupées sous la houlette d'un seul membre de l'ordre équestre. Les opérations d'extraction étaient confiées directement à des fermiers au moyen des contrats de location<sup>34</sup>, mais pour les *ferrariae* on pouvait recourir aux *conductores* intermédiaires<sup>35</sup>, y compris pour des sites dans plusieurs provinces<sup>36</sup>. Nous ne connaissons pas pour l'instant des esclaves appartenant à la *familia Caesaris* et chargés de l'extraction des minerais. Il faut en conclure

que l'essentiel de l'exploitation était aux mains des *pe-regrini* – des habitants locaux ou biens des migrants d'Asie Mineure comme l'atteste l'onomastique<sup>37</sup>. Les estampilles sur les lingots attestent qu'au moins une partie de la production était versée sous forme brute, mais il n'est pas à exclure que les fermiers vendaient une partie de leur production et versaient de l'argent. En revanche, le contrôle de l'État est bien perceptible à tous les échelons – aussi bien à travers les postes administratifs civils, que par la présence de l'armée.

L'importance de l'armée en Mésie n'est plus à démontrer<sup>38</sup>. Mais le rôle des légions n'était pas réservé exclusivement à la protection générale de l'empire. Les officiers supérieurs prenaient une part importante dans la gestion du territoire<sup>39</sup> et secondés par les différentes unités auxiliaires maintenaient la sécurité autour des exploitations, ainsi que le long des voies terrestres et fluviales, par lesquelles transitaient les métaux<sup>40</sup>. De ce point de vue les emplacements choisis pour les établissements des camps militaires témoignent d'un souci de quadrillage des régions minières. Il arrivait également que des soldats soient envoyés depuis les provinces voisines dans les régions minières<sup>41</sup>.

D'autre part l'armée était pourvoyeuse d'ingénieurs, qui grâce à leurs compétences spécifiques pouvaient prendre part à l'exploration et à la mise en exploitation minière<sup>42</sup>.

A côté des rares attestations de *procuratores* financiers provinciaux, dont la liste est dressée ci-dessous (cf. tableau 1 et tableau 3) et de quelques rares témoignages de *procuratores metallorum*, ce sont les postes sub-alternes – qui sont les plus connus et en particulier les

membres de la *familia Caesaris* attachés aux différents postes de la douane<sup>43</sup>.

Comme pour la Mésie Inférieure, certaines briques estampillées provenaient soit de propriétés impériales, soit étaient commandées spécialement par l'empereur. Du territoire de Ratiaria et notamment des villages de Gomotarci, Sinagovci et Vărtop proviennent quelques exemples de l'époque d'Hadrien (IMP(eratoris) HAD(riani))<sup>44</sup>. D'autres, très fragmentées, ne sont conservées que les lettres IMP(eratoris) [...] <sup>45</sup>. Les recherches durant les années 1960 avaient établi qu'elles étaient surtout utilisées lors de la construction de l'aqueduc de Ratiaria. Des tuyaux en plombs, signalés dès le début du XX<sup>e</sup> s.<sup>46</sup>, y avaient été utilisés, mais la récente publication d'un fragment d'un tel tuyau portant un timbre en forme d'une *tabula ansata* du même site, portant l'inscription IMP(eratoris) [...] <sup>47</sup> peut nous autoriser à envisager une production sur place ou à proximité<sup>48</sup>.

### Conclusion

La création de la province de la Mésie permit aux Romains de s'installer durablement sur le bas cours du Danube. Malgré les efforts militaires prodigués, Domitien jugea nécessaire sa séparation en deux entités administratives, qui du fait de leurs particularités géographiques et géologiques, eurent un développement économique axé sur des domaines différents. La part prépondérante de l'exploitation minière en Mésie Supérieure sous contrôle impérial, a laissé davantage de témoignages, qui quoiqu'encore demeurant disparates, nous permettent de mieux saisir le poids du *patrimonium Caesaris*, qu'en Mésie Inférieure, même si dans

<sup>23</sup>D'après Pflaum 1960-1961; Arnaud 1997; Faoro 2011.

<sup>24</sup>Dig., 48,19,16,10: « Euenit, ut eadem scelera in quibusdam prouinciis grauius plectantur, ut in Africa messium incensores, in Mysia uitium, ubi metalla sunt adulteratores monetae ».

<sup>25</sup>Merkel 2007, Petković 2009 pour un point sur les dernières publications.

<sup>26</sup>P.ex. Dušanić 1977; Dušanić 1994-1995; Dušanić 1999; Dušanić 2004; Душанић 2006.

<sup>27</sup>Hirt 2010, *passim*.

<sup>28</sup>Čerškov 1977; Tomović 1995; Tomović 2000; Stamenković 2013.

<sup>29</sup>Pour tout le IV<sup>e</sup> s. nous avons à la fois des témoignages archéologiques que littéraires.

<sup>30</sup>P.ex. Душанић 2006.

<sup>31</sup>Les *nummi metallorum* : *metalli Dardanici, metalli Ulpiani*.

<sup>32</sup>ILJug, 2, 504; IMS, 1, 103.

<sup>33</sup>ILJug, 1, 76.

<sup>34</sup>ILJug, 2, 501. À la différence des *coloni*, nous n'avons pas des témoignages d'*occupatores*.

<sup>35</sup>AE 1973, 411.

<sup>36</sup>CIL 3, 4809.

<sup>37</sup>Le recours aux *damnati ad metalla*, bien qu'attesté par la tradition hagiographique nous paraît aujourd'hui moins important surtout pour la période envisagée.

<sup>38</sup>Dušanić 2000.

<sup>39</sup>À côté du l'état-major « habituel », nous avons également l'attestation d'un *praefectus teritorii* de la région de Timacum Minus, cf. AE 1990, 858.

<sup>40</sup>HA M.Aur. 21.7.

<sup>41</sup>Fink 1958.

<sup>42</sup>Hirt 2011, 168 *sqq.*

<sup>43</sup>Mihailescu-Bîrliha 2006, 200–206 pour une liste non exhaustive.

<sup>44</sup>Bollini 1980, 100 *sqq.*

<sup>45</sup>AE 2014, 1100.

<sup>46</sup>Дякович 1900, 165.

<sup>47</sup>AE 2014, 1101.

<sup>48</sup>Il est dommage qu'une analyse du plomb ne soit faite, car elle pourrait indiquer l'origine du métal utilisé, qui pouvait provenir de la même province.



les deux cas il demeure largement moindre. Cependant, des similitudes persistent – la domination de la petite et moyenne propriété et l’absence d’utilisation intensive de travail servile, ainsi que le poids de l’armée dans la gestion du territoire.

n°	nom	date
	P. Livius Larensis (PIR <sup>2</sup> L 297)	vers 189 p.C. ?
	M. Papirius(PIR <sup>2</sup> P 111)	231-250 p.C.

Tableau 1 - Liste des procurateurs financiers de Mésie Inférieure ou de Mésie Supérieure

n°	nom	date
	L. Cornelius Latinianus (PIR <sup>2</sup> L 122)	105 p.C.
	L. Septi[...] Petro[nianus] (PIR <sup>2</sup> S 406)	avant 143 p.C.
	T. Aurelius Calpurnianus Apollonides (PIR <sup>2</sup> A 1471)	161 p.C.
	M. Valerius Maximianus	177-178 p.C.
	T. Claudius Xenophon (PIR <sup>2</sup> C 1054)	184-185 p.C. ?
	C. Titius Similis (PIR <sup>2</sup> T 272)	194-198 p.C.
	C. Servilius Diodorus (PIR <sup>2</sup> S 581)	avant 227 p.C.
	Modius Terventinus (PIR <sup>2</sup> M 671) (?)	vers 225-229 p.C.
	L. Titinius Clodianus signo Consultius (PIR <sup>2</sup> T 255)	vers 236-237 p.C. ?
	P. Aelius Ammonius (PIR <sup>2</sup> A 135)	239-240 p.C.
	<i>Ignotus</i>	?
	[S]ilvius Silvanus (PIR <sup>2</sup> S 743)	?
	Aurelius Dizzo	?

Tableau 2 - Liste de procurateurs financiers de la Mésie Inférieure

n°	nom	date
	<i>Ignotus</i>	84-96 ou 175-192 p.C.
	T. Caesernius Statius Quinctius Macedo (PIR <sup>2</sup> C 181)(?)	98-106 p.C.
	M. Valerius Maximianus	après 177-178 p.C.
	Flavius Optatus (PIR <sup>2</sup> F 234)	202 p.C.
	M. Domitius Tertius (PIR <sup>2</sup> D 165)	vers 200-207 p.C.

Tableau 3 - Liste des procurateurs financiers de Mésie Inférieure ou de Mésie Supérieure

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# Comments on Trade in the Danubian Roman Provinces

## ABSTRACT

In the late Roman period, finds of camel bones on sites along the Danube are recorded. However, they are single but important monuments. According to the author, thanks to them we have a clear source of information about caravans going from the Middle East to the West.

**KEY WORDS:** ROMAN EMPIRE, TRADE, CAMEL, TRANSPORT

For a number of years, archaeologists studying sites located on the middle and lower Danube and its tributaries have been interested in the commercial contacts of the inhabitants of the Roman provinces founded in this region (Ardeţ 2006, 55–60). Soldiers stationed at the borders received regular wages, which was attractive for civilians and led to the birth of civil settlements in the surrounding of military camps. They were inhabited by a population living in symbiosis with the army (Tomas 2017, 124–154). Part of this population were relatives of soldiers, some were people who earned their living by providing services or selling goods to them. As a result, large amounts of money appeared on the local markets (Găzdac 2002, 86–92). Both the legionaries and the civilians in their neighbourhood created attractive markets for imported products, as demanded commodities could not always be produced locally. A whole range of products had to be brought in. The Danube certainly was the main and most important transport route (Wilkes 2005, 124–225; Żmudziński 2001, 191–197). The river was perfect for transporting

heavy goods such as building stone, bricks, sarcophagi, marbles, grains, amphorae filled with food products and crates of luxury ceramics (Żmudziński 1999, 101–132). After the conquest and the establishment of the Roman provinces, roads were built along the Danube and its tributaries to connect cities and borderland legion camps like Novae, Viminacium or Carnuntum. Basically, the roads were designed to speed up the transfer of troops, but at the same time, they were also used by travelling suppliers and merchants. A large amount of finds bear testimony to trade contacts, for example western *terra sigillata* vessels (Dimitrova-Milčeva 1987, 108–152), olive lamps from Italy and other western regions (Čičikova 1987, 153–173), jewellery, Greek or Italian marble products, coins, fragments of amphorae, as well as some inscriptions (Szubert 1982, 144–162; Żmudziński 2004, 119–129). They show that goods such as Greek wines and Spanish fish sauces were transported sometimes from distant parts of the Empire to the Danubian regions (Dyczek 1999, 251–268). The consumers' tastes, their culinary

habits, lifestyle, occasional fashions for specific products, and – in the case of weapons from the Noricum – excellent technical properties were significant import criteria. More recent research by scholars from several countries has focused on visually less attractive sources such as animal bones. Archaeozoologists have discovered bones of species who did not occur naturally in these areas and probably were not bred there, such as, for example, camels. Unlike many other animals, they were not used in the gladiatorial games. Among the first finds, camel bones were excavated in Novae, on the territory of present Bulgaria (Schramm 1975, 214–241). Many years later, more camel bones were discovered in Popovo, several dozen kilometres away (Нинов 2008, 198–211). These discoveries puzzled the author and prompted him to inquire into the mass character of the phenomenon. His survey shows that camel bones have been found in numerous archaeological sites from the Roman Empire, in many countries. However, the state of research on such animal bones is still very uneven. Not all countries of today's Balkans and their surrounding areas have attempted to identify the bones unearthed on their territories. So far, some finds have been published from the territories of today's Hungary (Bökonyi 1989, 399–404; Bartosiewicz 1996, 447–453), Austria (Riedel 1999, 81–92) and Slovenia (Bartosiewicz 1999, 311–322; Bartosiewicz, Dirjec 2001, 279–285). High-level research was carried out in Serbia, where camel remains were found on several archaeological sites, i.e. in Viminacium, Sirmium, Gomolava, Vranj near Hrtkovi, Davidovac-Gradište, and Pirot-Sarlah Bazilika (Vuković, Bogdanović 2013, 251–267; Vuković-Bogdanović, Blažić 2014, 281–295). Results from Viminacium are particularly interesting: on this site, archaeologists discovered and carefully studied a very well preserved camel skeleton and separate remains belonging to other individuals. Serbian researchers S. Vuković and I. Bogdanović, who published this material, had the opportunity to study an exceptionally rare find in Europe (Vuković, Bogdanović 2013). The only known similar case comes from the area of present-day Luxembourg (Döwner, Oelschläger, Boherens 2017, 187–204). When it died, the animal from Viminacium was already old. It probably died naturally, from old age, or was killed because it was no longer able to work. The animal was a hybrid resulting from the crossing of a two-humped Bactrian camel with a one-humped African dromedary. This hybridisation was the result of a deliberate breeding operation: Bactrian males and Arabian or dromedary

females were cross-bred to obtain individuals more useful for hard work (Pots 2017, 143–165). These animals were indeed stronger and more resistant. Identified camel bones discovered in the area of the former Roman provinces along the Danube usually belong to either a variant of two-humped Bactrian camel or the aforementioned hybrids. The camel remains from Viminacium were found in an amphitheatre which had already been abandoned at that time, in layers dated to the second half or the end of the fourth century AD (Vuković, Bogdanović 2013, 263). Unlike in Syria or Africa, there were no camel rider units stationed in the Danube region. However, some military units may have used some of these animals to carry equipment or supplies. When comparing the camel bone findings from the studied area with the finds of coins minted in Asia in the Ancient times, it can be seen that both sets present some degree of convergence (Müelenaere 2017). According to the author, it can be assumed that this convergence is not accidental. At that time, a land trade route crossed the areas of the Danubian provinces, where goods were transported by camels. Camels were a particularly convenient means of transport for goods that could not be transported by waterways. It was independent of the water level or freezing of the rivers, and as an additional advantage, goods transported by land could reach places far away from the water routes. The abovementioned findings of camel bones and coins minted in Asia seem to indicate that the trade route connected areas lying north of the Mediterranean with Asian regions (Müelenaere 2017). Some of the goods transported on camels could be sold in the areas where the bones of these animals are discovered today, i.e. near the cities and legion camps, which, as mentioned, were likely to be good markets, and some were probably carried further west. Goods from distant Asia probably generated higher profits when sold in more remote places. In contrast to the above-mentioned categories of goods such as Western European luxury ceramics, Italian and Greek marbles or food products in amphorae, which are more visible in the archaeological findings, it is difficult to clearly specify which kinds of goods could be transported by camels. In this regard, unfortunately, we can only remain in the sphere of conjecture, although certain hypotheses seem to be particularly probable.

To sum up, we believe that the growing number of identified camel bones discovered in the Danube regions, in parallel with coins, seem to indicate the exis-

tence of a land trade route which connected the Roman Empire with Asian countries.

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**Zusammenfassung**

**Kommentare zum Handel in den Donauprovinzen des Römischen Reiches**

In den ehemaligen römischen Provinzen an der Donau und ihren Nebenflüssen werden Kamelknochen entdeckt. Sie werden oft in der Nähe von Straßen entdeckt, nicht unbedingt in militärischen Zentren. In Asien geprägte Münzen finden sich ebenfalls in der gleichen Gegend. Es gab keine Kamelkämpfe, die in diesen Gebieten stationiert waren. Die Armee konnte nur Kamele für den Transport von Gewichten und Lieferungen einsetzen. Laut dem Autor scheinen die Ergebnisse darauf hinzudeuten, dass es während des Römischen Reiches einen Landhandelsweg durch diese Gebiete gab, der sie mit asiatischen Gebieten verband. Ausgehend von den verfügbaren Quellen kann geschlossen werden, dass ein Teil der auf dieser Strecke transportierten Güter auf Kamelen transportiert wurde.

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# **Circulation of provincial coins "Provincia Dacia" at the territory of present-day Serbia**

## **ABSTRACT**

The lack of bronze coins of the senate issues in circulation in the Danubian and Balkan provinces at the start of the 3<sup>rd</sup> century was especially pronounced and was probably the main reason for opening the provincial mint in Viminacium in 239 and subsequently in Dacia in 246. Opening this two mints represented the official way for temporarily solving the problem in the functioning of the Empire's monetary system. However, it seems that the two newly founded mints had different roles. As shown by comparative analyses of monetary finds of these two mints, issues of Viminacium were intended for broader circulation, while issues of the province of Dacia seem to have been minted solely for the needs of the domicile province

Relatively small presence of Provincia Dacia issues at territory of present-day Serbia, nevertheless shows that they had certain significance in monetary circulation in this part of Roman empire.

**KEY WORDS: ROMAN PROVINCIAL COINAGE, "PROVINCIAL DACIA", SERBIA, VIMINACIUM**

The lack of bronze coins of the senate issues in circulation in the Danubian and Balkan provinces at the start of the 3<sup>rd</sup> century was especially pronounced and was probably the main reason for opening the provincial mint in Viminacium in 239 AD, and subsequently in Dacia in 246 AD. The lack of small bronze denominations was particularly evident in Moesia Superior and both Pannonias.<sup>1</sup>

In Pannonia Superior, from the beginning of the reign of Septimius Severus, there was an extraordinary increase in the number of *limesfalsa* coinage, which compensated for the lack of Senate issues. The minting of *limesfalsa* coins ceased at the beginning of the rule of Gordian III, and the cessation of his coinage can be linked principally with the start of operation at the

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<sup>1</sup>Borić-Brešković 2011, 417–418, ref. 34–49; Vojvoda, Petrović 2011: 288–289; Vojvoda, Jeseretić 2012: 121–122; Vojvoda 2013: 159–160; Vojvoda, Mrđić 2015: 14–17, ref. 10–13; Vojvoda, Mrđić 2017, 15–16; Borić-Brešković, Vojvoda 2018, 74, ref. 3; Vojvoda, Crnobrnja 2018, 133, ref. 10.



mint in Viminacium, and partly with the opening of the mint in Dacia.<sup>2</sup>

An analysis of the monetary finds from Moesia Superior, which includes the reign of Commodus, shows that bronze provincial coins of the Asia Minor, Thracian and Lower Moesian mints were not so frequent, whereas coins from the Macedonian mints were more numerous. During the rule of Septimius Severus, his sons and Elagabalus, the situation changed. In that period one notices a quantity of provincial bronze coins that was twice as high than before, wherein the largest number of issues came from the Macedonian mints, primarily Stobi. Also, the inflow of coins from the Bithynian mint of Nicaea gradually increased, the largest inflow of which was registered during the reign of Severus Alexander. The situation remained the same, even during the initial years of the rule of Gordian III. The opening of the mint in Viminacium and the start of circulation of its coins was immediately reflected in the reduced inflow of coins from the Nicaea mint. In the period from Philip I to joint reign of Valerian I and Gallienus, almost all the finds of provincial issues originated from the mint in Viminacium, and the issues from the province of Dacia and the Nicaea mint were represented in a lesser measure (Graphs. 1 and 2)

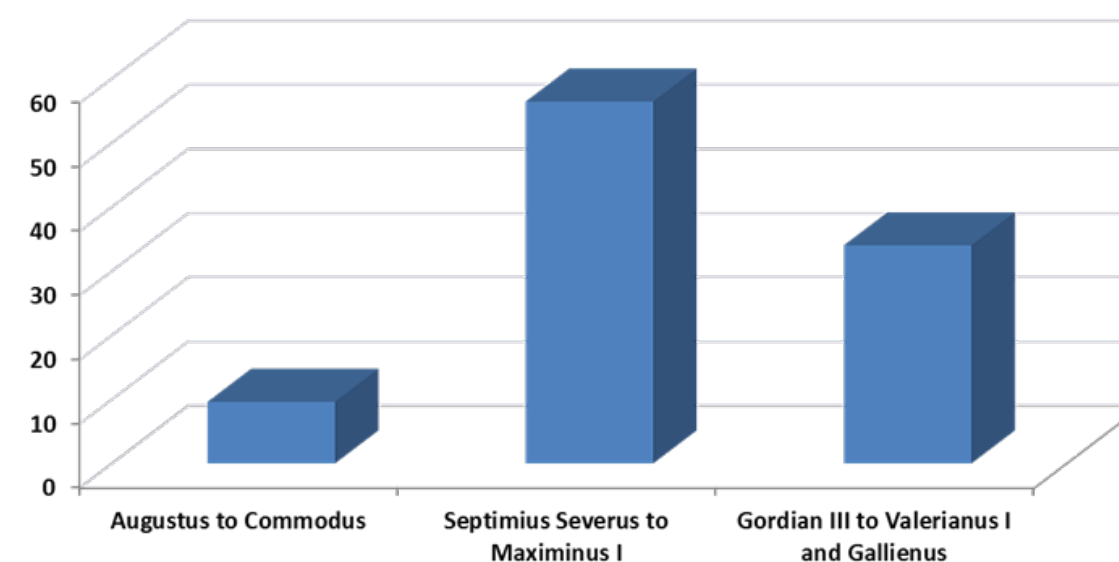
The majority of known Provincia Dacia coin finds, from the territory of present-day Serbia, have already been published. The volume of published finds includes several collections: the Belgrade City Museum (183 pcs),<sup>3</sup> Viminacium from archaeological excavations (11 pcs),<sup>4</sup> National Museum in Požarevac (43 pcs),<sup>5</sup> from Mačva district (4 pcs),<sup>6</sup> as well as specimens from

10 published coin hoards (62 pcs).<sup>7</sup> We know that a certain number of Provincia Dacia coins is still unpublished and comes from several museums in Serbia (Map 1). For example from the National Museum in Belgrade (105 pcs),<sup>8</sup> and we also know that Archaeological Museum in Zagreb keep (12 pcs) which originating from the territory of Serbia.<sup>9</sup>

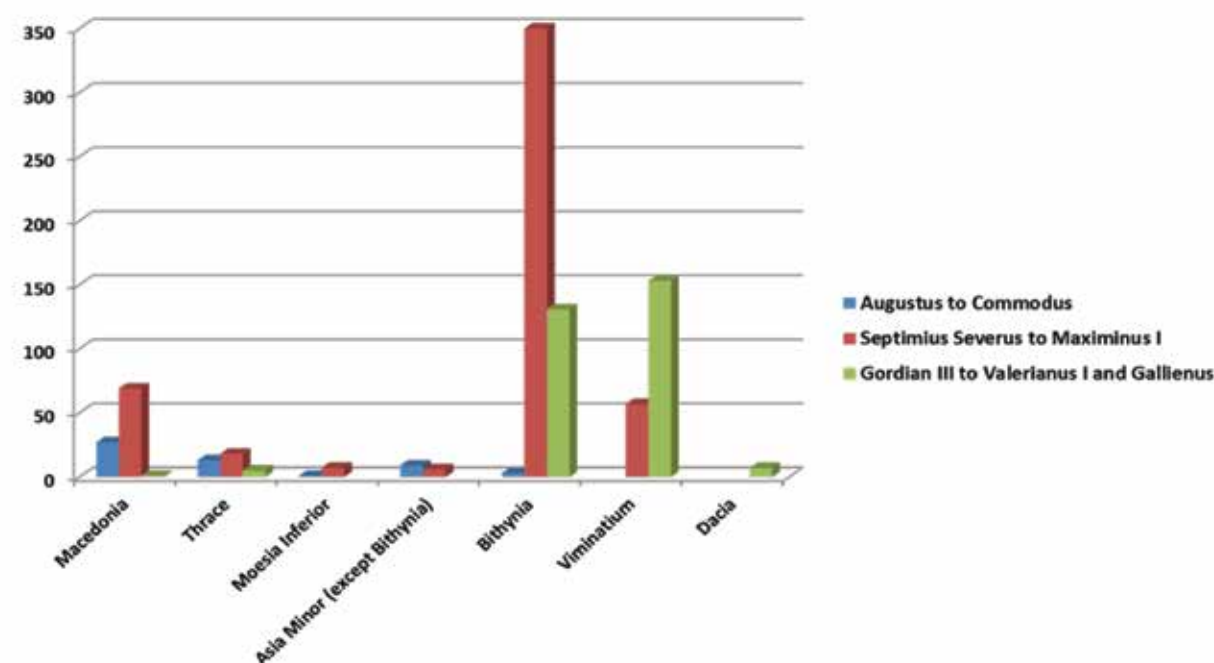
The discovered coins of Provincia Dacia, which were from a proportionately far smaller production compared with the Viminacium mint, played their role in monetary circulation at the territory of present-day Serbia. With a total of 416 pieces registered so far, coins of Provincia Dacia, compared with the monetary finds of the Viminacium mint, account for 8.33% in hoard finds (Graph. 3) and 5% of individual finds (Graph. 4).

Finds from the territory of present-day Serbia are also illustrative for the analysis of overall production of the Dacia mint. On the basis of all known specimens, a far greater representation was registered at the fifth year of the local era (ANNO V, i.e. 250/251 AD) with 42.50%. These are issues that were minted for Trajan Decius, Trebonianus Gallus and members of their families. Following are the third, first and second year of the local era, while only ANNO VIII is prominent among the later years (Graph. 5).

On the other hand, the circulation of Provincia Dacia coins is quite different at the territory of the domicile province. The frequency of coins of the first year of the local era is the highest in Dacia, and it only dropped as the years progressed. The index is a little lower in the second year and then it registers a drastic drop in



Graph. 1 – Presence of the entire provincial coinage in Moesia Superior, according periods



Graph. 2 – Presence of the provincial coinage from the Balkan and Asia Minor mints in Moesia Superior

the third.<sup>10</sup> Graph 6 illustrate a significant increase in issues of the third year of the local era is registered at the territory of present-day Serbia.

During 249-250 AD, that is ANNO IV, a large drop in production was registered both in Dacia and Moesia

Superior, after which the biggest inflow of Provincia Dacia coins was registered at the territory of present-day Serbia the following year. Moreover, an increase is also observed in Dacia, but far below the maximum registered in Moesia Superior in the fifth year of the local era. From then on, until the end of operation of

<sup>2</sup>Martin 1992, 9; Găzdac 2005, 499–500; Găzdac, Alföldy- Găzdac 2008, 136, ref. 10; Nad 2012, 387–388, Table 2; Borić-Brešković, Vojvoda 2018, 74, ref. 4;

<sup>3</sup>Crnobrnja 1993.

<sup>4</sup>Vojvoda, Mrđić 2015, 341–342, cat. 2605–2608; Vojvoda, Mrđić 2017, 439–440, cat. 3283–3285; four pieces are unpublish.

<sup>5</sup>Бенцаревић, Бранковић 2016, 143–167.

<sup>6</sup>Борић-Брешкович, Петровић 2012, 149, cat. 80–83.

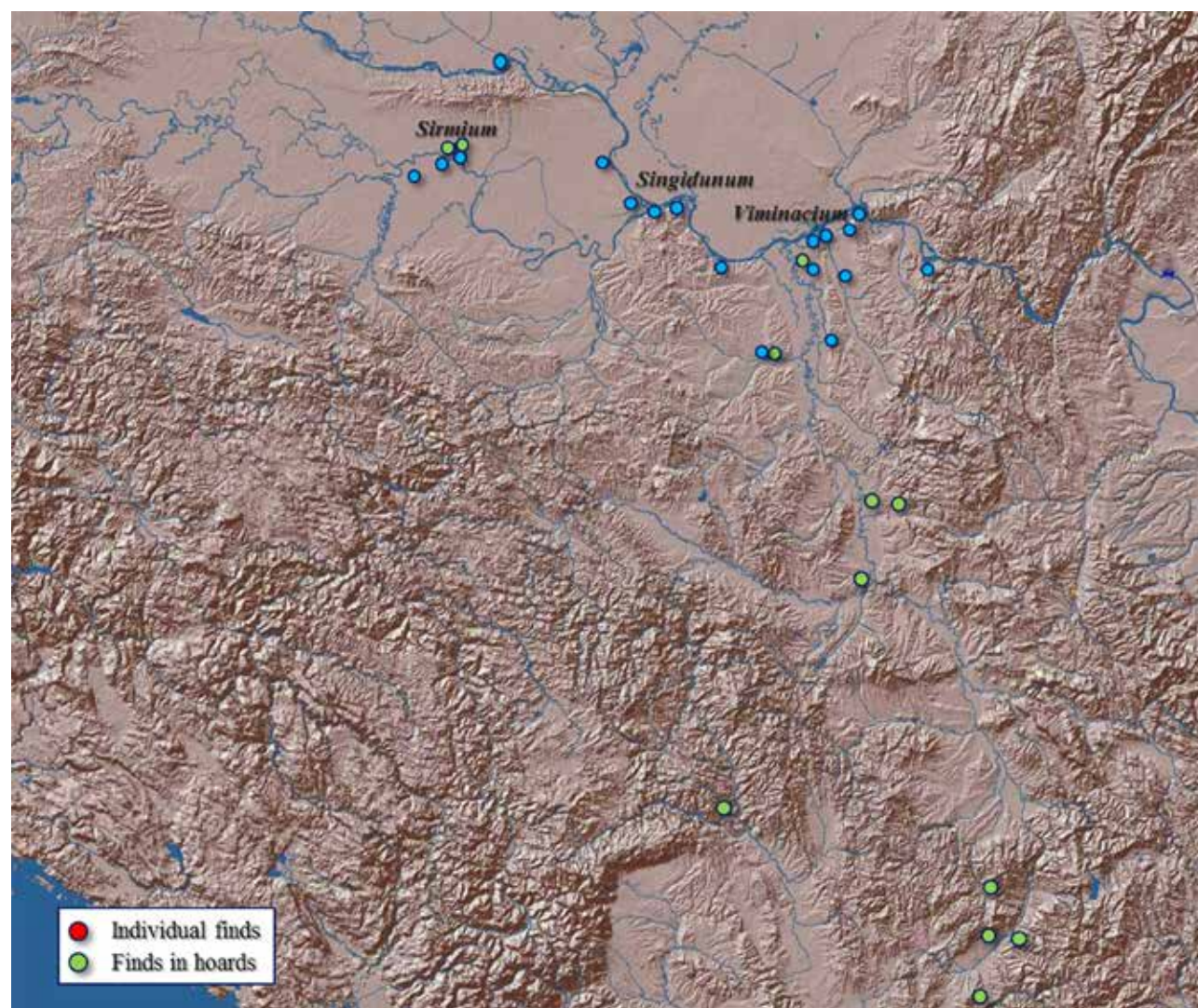
<sup>7</sup>Bošnjane, Varvarin, 2 pcs (cf. Борић-Брешкович 1988, 89–96); Brežane, Požarevac, 2 pcs (cf. Вулић 1905, 92–93); Bujkovac, Vranjska Banja, 12 pcs (cf. Борић-Брешкович, Митровић 2014, 87–134; Vlajića Brdo I, Smederevska Palanka, 14 pcs (cf. Арсенијевић 1997, 43–108); Vranje, surroundings, 3 pcs (cf. Борић-Брешкович 1988, 89–96); Vrkašice, Sremska Mitrovica, 10 pcs (cf. Орлов 1970, 153–161); Izvore, Kosovska Mitrovica, 2 pcs (Стаменковић, Самарџић 2013, 163–181); Popovac, Paraćin, 2 pcs (cf. Борић-Брешкович 1979, 39–54); Sremska Mitrovica, 8 pcs (cf. Орлов 1972, 153–161); Ćurija, surroundings, 7 pcs (cf. Борић-Брешкович 1983, 69–84); Борић-Брешкович, Петровић 2012, 136, ref. 6; Бенцаревић, Бранковић 2016, 149, ref. 31–41.

<sup>8</sup>We would like to extend our sincerest thanks to Mrs. Borić-Brešković from National Museum in Belgrade, for the kindly shered information.

<sup>9</sup>Cavagna 2012, 183, ref. 5; Бенцаревић, Бранковић 2016, 150, ref. 45; We would like to extend our sincerest thanks to colleague Miroslav Nad from Archaeological Museum Zagreb, for the kindly shared information.

<sup>10</sup>Găzdac 2008: 275, 277, Fig. 9; Găzdac, Alföldy-Găzdac 2008:152, Fig. 10; Borić-Brešković, Vojvoda, 2018, 86, ref. 66.





Map 1 – Distribution of »Provincia Dacia« coins at the territory of present-day Serbia

the mint, the registered inflow of this type of coins was approximately the same in both provinces, with only ANNO VIII being a little more prominent in frequency.

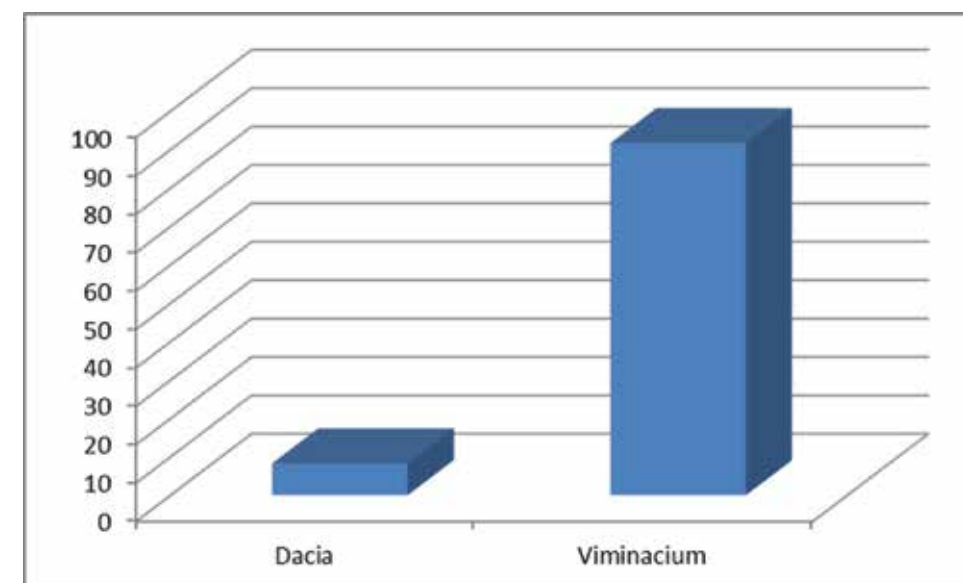
The following graphs demonstrate that issues of the Dacia mint had different roles in circulation in the domicile province compared with Moesia Superior and both Pannonias (Graphs. 6-8).<sup>11</sup> The inflow of coins from the Dacia mint in both Pannonias is almost identical to that in Moesia Superior. In the domicile province of Dacia, this inflow differs, especially in the initial years of the mint's operation. It should be stressed that, from the years 249 and 250 AD, monetary finds of this mint are encountered almost exclusively in the southern parts of the province. This is one of the facts

that speaks in favour of the claim that the mint was located in Apulum, and not in Ulpia Traiana Sarmizegetusa. Besides, Apulum was the base of the Legio 13<sup>th</sup> Gemina, and the ore-rich areas in the Western Carpathians were also nearby.<sup>12</sup>

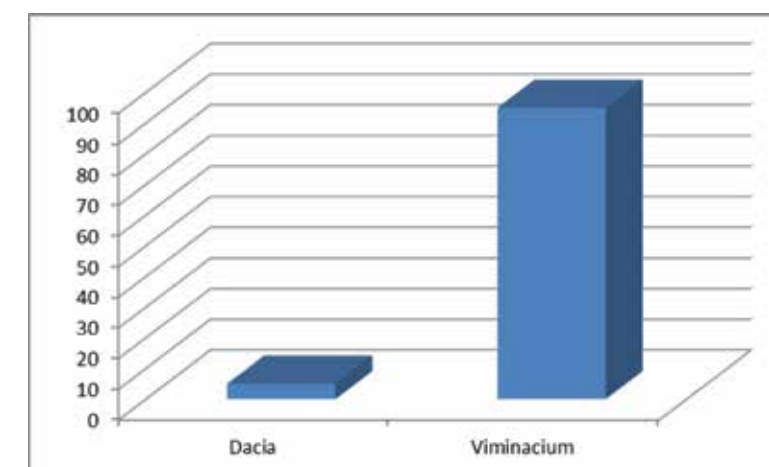
Events in the Roman Empire, especially in the eastern Balkans, certainly affected to the work of the Viminacium and Dacia mints. Due to the usurpation of Pacatianus, who used Viminacium as his base, and the subsequent conflict between Philip I and Trajan Decius during the summer of 249, there was a brief interruption in operation in both provincial mints. 10<sup>th</sup> year of local era, from October 248 -October 249, being completely absent in Viminacium, while the mint in Dacia

<sup>11</sup>Găzdac, Alföldy-Găzdac, 2008, 139–140.

<sup>12</sup>Găzdac-Alfoldy, Găzdac 2005, 651; Găzdac, Găzdac-Alfoldy 2008, 145–146.



Graph. 3 – Presence of »Provincia Dacia« and Viminacium coins in hoards from the territory of present-day Serbia



Graph. 4 – Presence of »Provincia Dacia« and Viminacium individual coin finds from the territory of present-day Serbia

issued 4<sup>th</sup> year of its lokal era, only after the Senate's recognition of Decius in October 249 and there is no issue of the same lokal year for Philip I, while ANNO IV began in July or August 249.<sup>13</sup>

The events from 250-251 AD, (the 12<sup>th</sup> year of the Viminacium era and 5<sup>th</sup> year of the Dacia local era) are in connection with the military activities of Gothic tribes and their raids of the Moesia Inferior and Thracia, also with the stay of Trajan Decius in the Balkans and his passing through Viminacium. In summer 250 AD, Decius was in Moesia Inferior and, after the victory at Nicopolis on the Danube, he crossed into Dacia

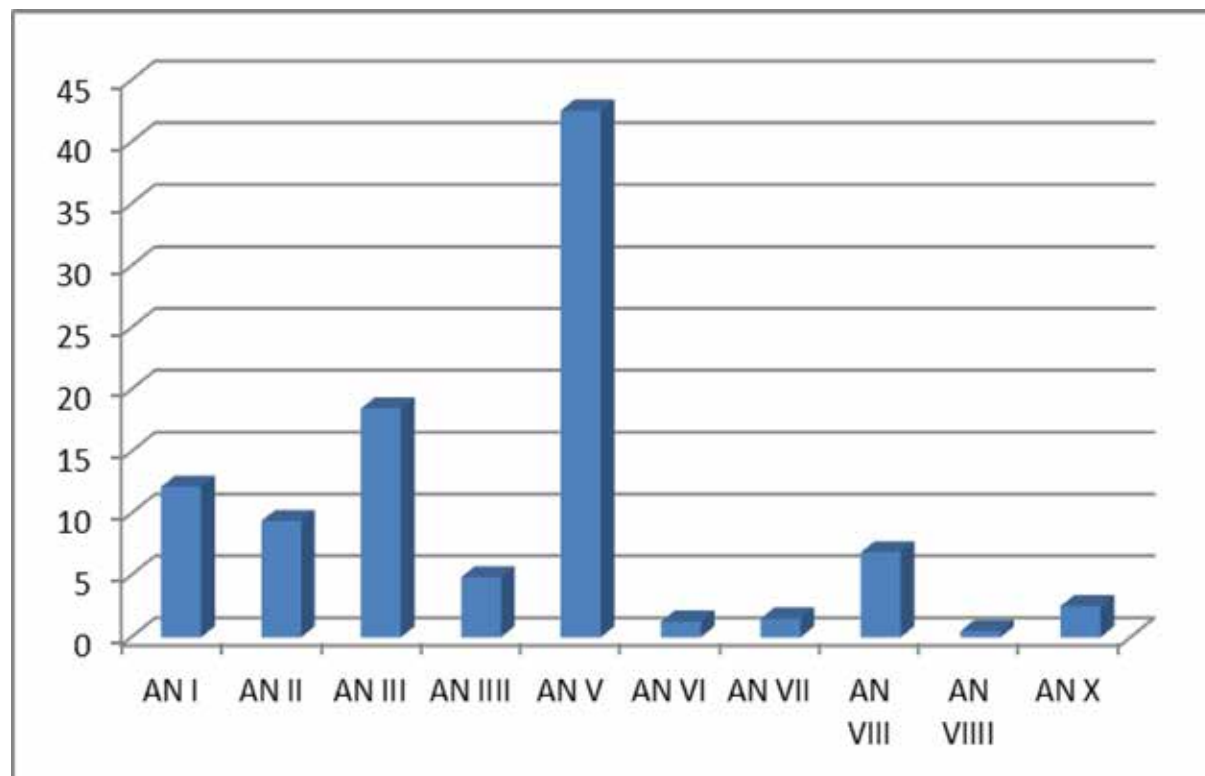
where he defeated the Carpi, and returned to Thracia in autumn.<sup>14</sup> The increased presence of the military was certainly reflected in the greater output of both Balkan mints during 250-251 AD. The mints in Dacia and Viminacium supplied the military units that were transferred to the war zones and the hinterlands.

The highest concentration of Provincia Dacia coins was registered along the Danube limes, especially in Viminacium and its nearer and broader vicinity. The areas with the second most frequent monetary finds of such a type is along the Morava land route southwards, all the way to Vranje and its vicinity. A lone find, out-

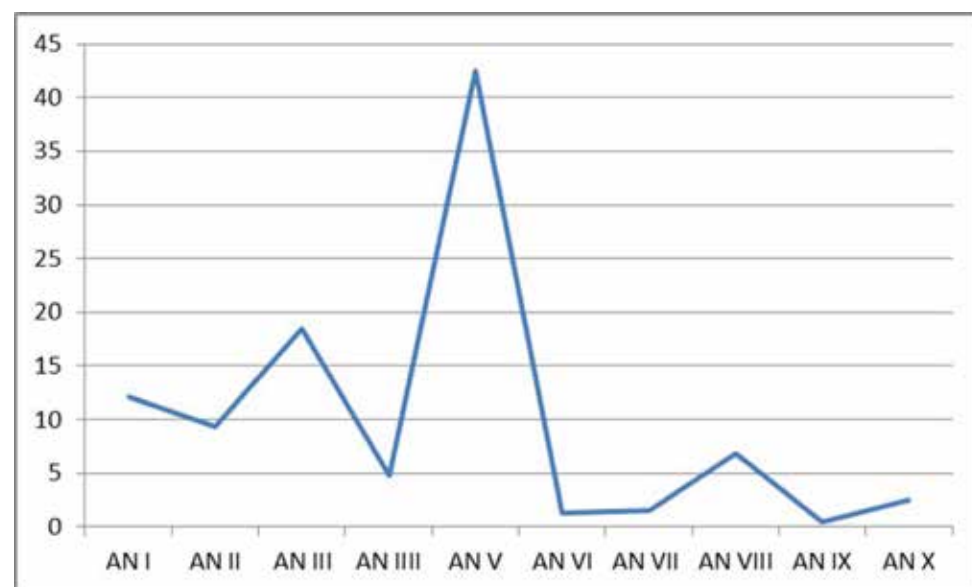
<sup>13</sup>Găzdac, Găzdac-Alfoldy 2008, 141–142.

<sup>14</sup>Васић 2012, 16–19.





Graph. 5 – »Provincia Dacia« coins from present-day Serbia, according to the minting years

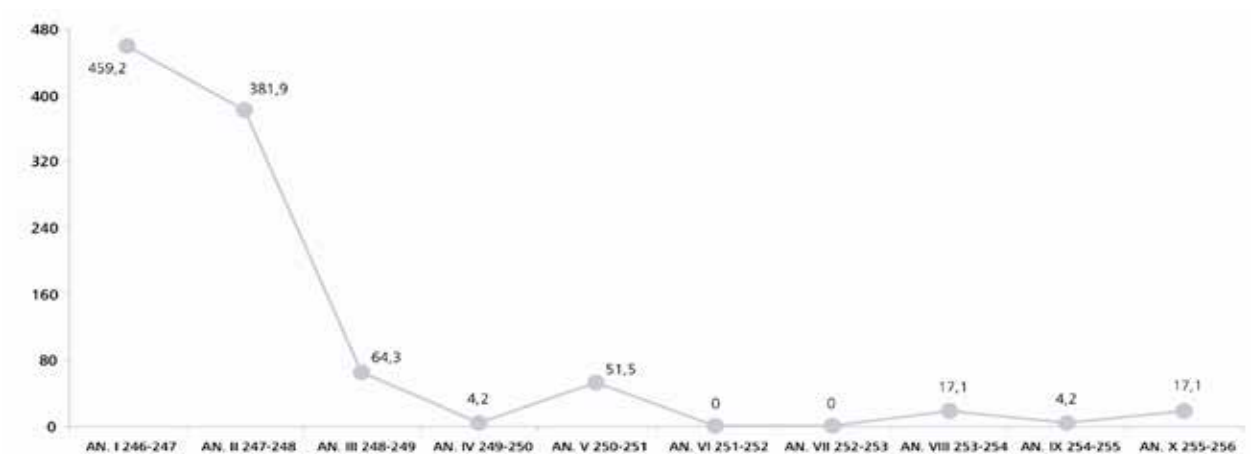


Graph. 6 – Presence of »Provincia Dacia« coins at the territory of present-day Serbia

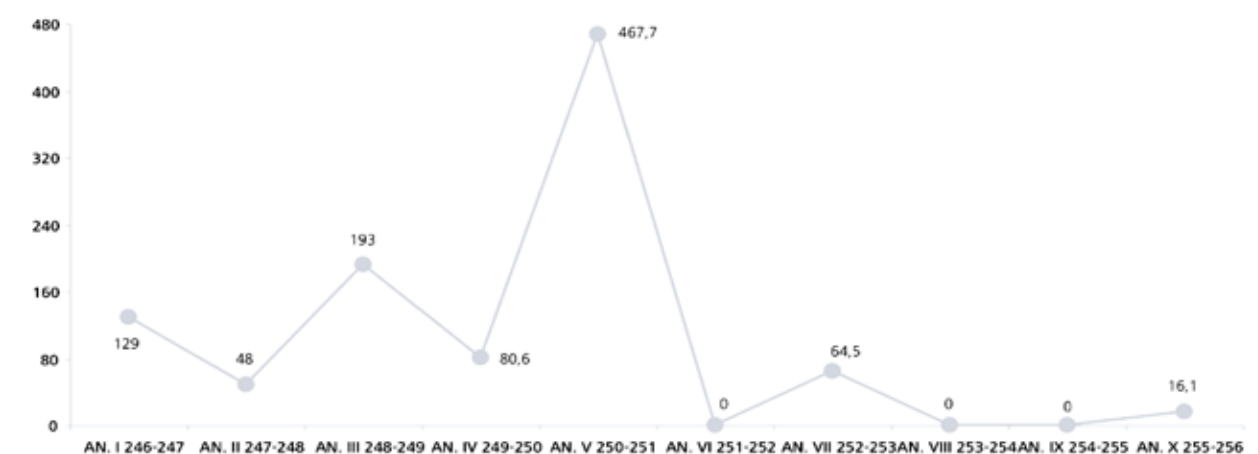
side of these directions, is the hoard from the village of Izvore near Kosovska Mitrovica, which is probably the result of insufficient exploration. The third significant area of concentration of Provincia Dacia coinage was noticed along the Sava valley, especially in its lower part.

The founding of the mint in Viminacium and, a little later, in Dacia, represented an official attempt to tem-

porarily solve the problem in the functioning of the Empire's monetary system. However, it seems that the two newly established Balkan mints had different roles. Viminacium issues had a far greater production and a broader area of circulation, while issues of the province of Dacia seem to have been minted solely for the needs of the domicile province. Besides, Viminacium issues were more frequent than Dacian ones even in Dacia. Only in the period from 246 to 249 did the mint



Graph. 7 – Coin index of the »Provincia Dacia« coins in Dacia (according Găzduc, Alföldy-Găzduc 2008, 152, fig. 9)



Graph. 8 – Coin index of the »Provincia Dacia« coins in Pannonia Superior and Pannonia Inferior (according Găzduc, Alföldy-Găzduc 2008, 146, fig. 4)

in Dacia have a greater output and exceed the number of Viminacium issues in Dacia, whereas Viminacium issues were once again more frequent after the reign of Philip I until Valerian I.<sup>15</sup> The production of the two Balkan mints, in Dacia and Viminacium, represented the way to manage the monetary crisis in the middle of the 3<sup>rd</sup> century AD and supply the military with the necessary coins.

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<sup>15</sup>Găzduc 2008, 275, 277, Fig. 9; Găzduc, Alföldy-Găzduc 2008, 152, Fig. 10; Borić-Brešković, Vojvoda 2018, 86, ref. 65.

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# **Evidence of cheesemaking in Lower Pannonia and Upper Moesia**

## **ABSTRACT**

Evidence of cheese making at sites in lower Pannonia and Upper Moesia are shown in the typical ceramic molds for cheese. We have no written evidence about cheese production in Pannonia and Moesia, and the cheese itself or the woven strainers are archaeologically invisible. We can thus learn about cheese-making exclusively from ceramic fragments. The finds of vessels that we consider to be strainers/molds for cheese allow us to reckon with a production that must have satisfied at least the local demands for this product. It is known that the Emperor Hadrian lived the life of a regular soldier for a while (SHA, Hadrian X, 2) and enjoyed “larido, caseo et posca”. This source gives us an evidence that cheese was part of soldier’s diet, and most the soldiers were probably able to produce the cheese by themselves. The production of good-quality cheese is considered an art even today, and the case was the same with the Romans and the process itself has not undergone substantial changes. Experiments that follow guidelines from Collumela and other authors show similarities with the cheese making known from ethnology and from the way cheese is made in farms of today. This paper contains an overview of ceramic cheese molds from Lower Pannonia and Upper Mesia, which show intensive production in this area. Cheese molds have been found in urban, rural and military contexts.

**KEY WORDS:** ROMAN PERIOD, LOWER PANNONIA, UPPER MOESIA, CHEESE, *COLUMELLA*, *PLINIUS*, *VARRO*, ROMAN POTTERY, EXPERIMENTAL ARCHAEOLOGY

**T**he finds of vessels interpreted as a mould/strainer for cheese inspired us to attempt a comparative reconstruction of the cheese-making process in the Roman period and the home-made cheese production of today.<sup>1</sup>

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<sup>1</sup>The article results from the project LIFE ON THE ROMAN ROAD: communications, trade and identities on Roman roads in Croatia from the 1<sup>st</sup> – 8<sup>th</sup> CE UIP-05-2017-9768, supported by Croatian Science Foundation



## Introduction<sup>2</sup>

The production of good-quality cheese is considered an art even today, and from written sources and archaeological records we can see that the case was the same with the Romans. Sources tell us that the Romans placed cheese into wicker baskets or moulds, or they could be made with a simple cloth. Woven baskets have not been preserved today and written sources are silent on the topic of cheesemaking in Lower Pannonia and Upper Moesia. We can thus learn about cheese-making exclusively from ceramic fragments. In archaeological records we can find flat-based vessels with a perforated base and side walls that were used as cheese moulds or strainers. The perforations in the base and side walls served for straining the whey from the curd.

## Typology

In typology of cheesemaking moulds there are two major groups, first are the moulds that were made specially for the production of cheese and second group are strainers that could be used to make cheese but also could have some other purpose as kitchenware (Pl.1).

### Group 1 - moulds

Group 1 are vessels made specially for cheesemaking. There are three types of plate like moulds. Mould type 1 and 2 are dated from the 2<sup>nd</sup> to 3<sup>rd</sup> CE, whilst mould type 3 is dated from the 4<sup>th</sup> CE.

#### Mould type 1

According to the data published so far, flat-based vessels with perforations on the base and walls and outward rims were found in Vinkovci (*Cibalae*), Ilok (*Cuccium*) Srijemska Mitrovica (*Sirmium*), Gomolava, Progar, in villae rusticae of Prosina and Kudoš, roadside settlement at Ivandvor and at the military site Dragojlov brijeg. They are dated from the 2<sup>nd</sup> to 3<sup>rd</sup> cent. A.D. As we can see, in Lower Pannonia they were found in military, rural and urban contexts, which indicates that such vessels were in widespread use. The size of the vessels varies from 9 cm in diameter to 22 cm, but we also know from the sources that the cheeses came

in various dimensions (Brukner 1981: T. 99: 1–6, 8; Brukner 1995: T. III: 27, T. IX 84; Ožanić 2004: 114, T. 69: 9, T. 22: 18).

#### Mould Type 2

Type 2 moulds differ from the previous ones because their walls are slightly curved and the rim is simple. They were found in Viminacium and Cucium. This type was found in the layers of the 2<sup>nd</sup> CE of Viminacium.

#### Mould Type 3

As described by O. Brukner (Brukner 1981: T 99:1) it is a simple and a bit shallow plate like a vessel that is bigger in diameter than the previous types.

#### Strainers

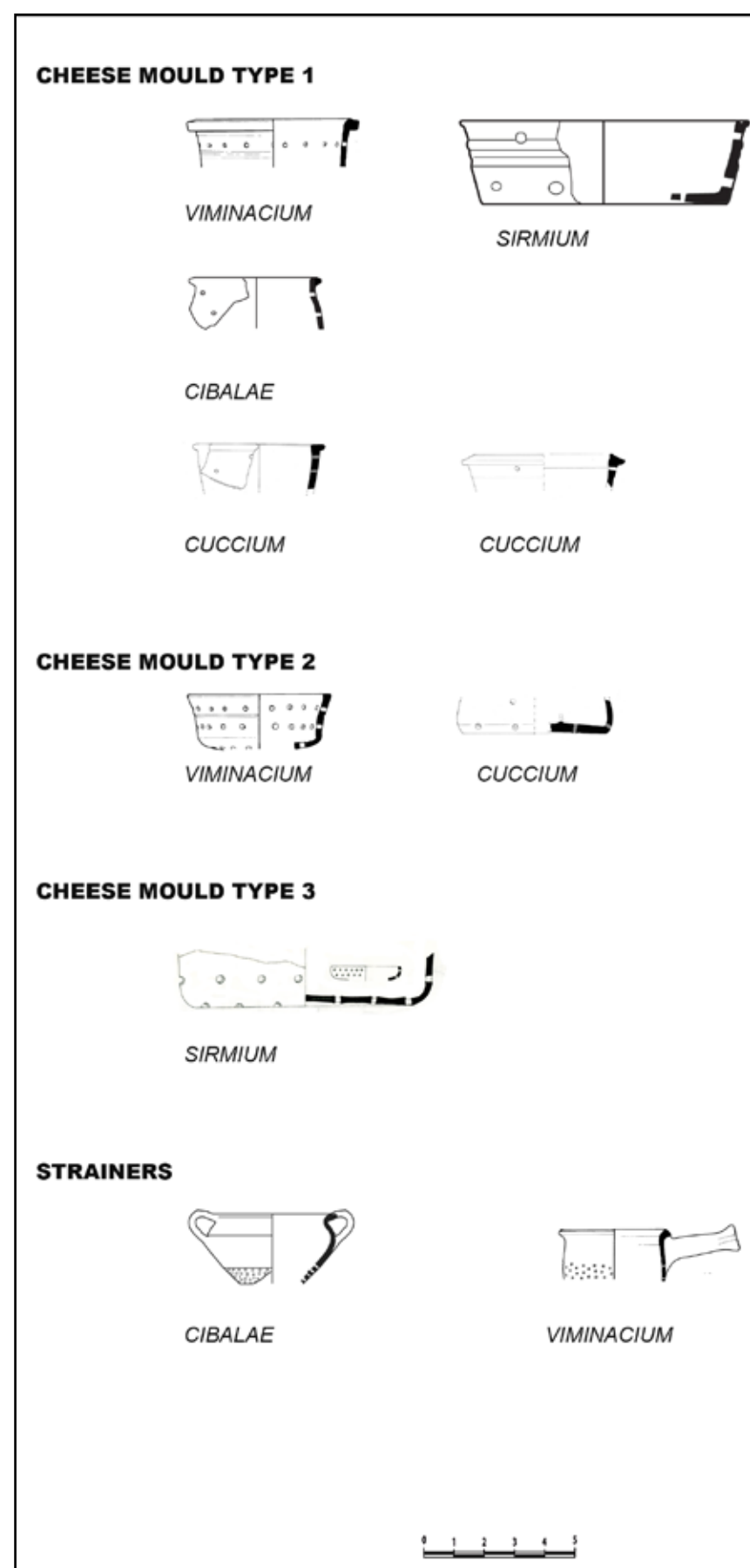
Strainers (Pl.1) are used for the preparation and processing of food, for straining wine or they can be used for straining soft cheese. Ceramic strainers were made to replace rare and precious metalwork.

#### Strainer type 1

Strainers are made in a way that they resemble S-profile bowls with a V-shaped bottom which belong to usual kitchen accessories. During the Early Imperial period they were found in *Sirmium*, Progar, Vojka, *Burgenae*, *Acumincum*, *Mursa*, *Cibalae*, *Dumovo*, Gomolava kod Hrtkovaca (Brukner 1981: 41; Brukner 1987: T 24: 12; Ožanić Roguljić 2009: 188, CPS 1; Ožanić Roguljić 2016: 79).

#### Strainer type 2

In Viminacium a bowl-like strainer with long handle was found. It has not been preserved so the complete reconstruction is not possible. The handle is useful while straining cheese but it also can be used in some other food processing activities. According to the context of the finds this type is dated from the end of the 2<sup>nd</sup> to the middle of the 3<sup>rd</sup> century AD.



Pl.1 - Typology of moulds and strainers

<sup>2</sup>Special thanks to Kristina Jelinčić Vučković, Asja Tonc for the information and drawings of jet unpublished *Cuccium* finds.

Cheese in literary sources

That cheese was extremely important for the everyday diet of the Romans which is best seen in the preserved recipes in which it is the main ingredient. Cheese is found in sacrificial bread (*libum*) and cakes (*placenta*, *spaerita*, *scribilita*, *erneum*), in grape-must bread (*mustaceus*) as well as in desserts (*seconda mensa*) such as dumplings or cakes made of cheese, honey and poppies (*globi*, *savillum*) (*Cato, De agricultura* 74 - 79, 82, 84, 121) or spiced cheese and garlic salads (*Moretum, Appendix Vergiliana*). Cheese was also a part of the obligatory ration (*ciba castrensia*) that soldiers carried during wartime, which most often consisted of pork bacon, wheat, sour wine (*posca*) and cheese (*SHA, Hadrianus*, 19, 2; *SHA, Avidius* 5,3; Davies 1971: 124; Junkelmann 1997: 87; Ožanić 2005: 246). The exceptionally high demand for cheese forced Emperor Diocletian to fix the maximum price, and we thus learn that a pound (327 g) of fresh cheese cost 8 denarii (Humphrey, Oelson, Sherwood 1998: 503; Fox, McSweeney 2004: 2). Excellent information about cheese production is available from literary sources.<sup>3</sup> Columella left us an incredibly detailed description of the production of cheese. He states that milk used for the production of cheese should be as whole and fresh as possible, because it quickly turns sour if left to stand or is mixed with water. It is curdled with the addition of the rennet (*coagulum*) of a calf or a kid. As little time as possible should pass between the time the pot is filled with milk and its heating; likewise, the pot should not be in contact with an open flame (a popular technique with certain people), but rather stand by the fire. The moment the liquid begins to curdle it is transferred to wicker strainers or moulds, because it is crucial to strain it entirely from solid matter at the first possible instance. After the cheese is removed from baskets or strainers it is placed on clean boards in a cold and dark place in order to prevent spoiling, whereupon it is salted to remove the whey. When it hardens—and if pressed with full force—it becomes compact. It is then again slightly salted and pressed with weights. The same procedure is repeated over nine days, at the end of which cheeses are washed with fresh water and arranged in rows on specially formed wicker racks so as not to touch, to dry a little. To make sure cheeses are not too soft, they are placed on several racks in a closed

space protected from wind (*Columella, De agri cultura* 7.8.1; Humphrey, Oleson & Sherwood 1998: 164–165; Fox, McSweeney 2004: 2–3). Varro says that cheese made from cow’s milk is the most nutritious, although it is difficult to digest. Sheep’s cheese comes second (in quality), while goat cheese is the least nutritious and the easiest to digest. Cheeses are distinguished by whether they are soft and fresh or dry and old: soft cheeses are more nutritious and less constipating, in contrast to old, dry cheeses. The time of year when cheeses are made stretches from the rising of the Pleiades in the spring to the rising of the Pleiades in the summer. During spring, milk for cheese is expressed in the morning, whereas during the other seasons it is expressed around noon. Varieties in the practice are due to local differences and food. To curdle two *congii* (3.3 l) of milk one adds rennet the size of an olive; it is better (to use rennet) from hare or kid than from lamb. Others use fig’s milk and vinegar, and mix into it also other ingredients that in Greek are called ὀρός and sometimes δάκρυον (*Varro, De agri cultura*, 2.11.3–4). Goats also make excellent cheese, which has recently been valued highly, and whose flavour is enhanced by smoking. Cheese of this type that is made in Rome is better than the others; because that produced in Gaul has a strong flavour, like medicine. Of the cheeses produced overseas, the pride of place in quality is reserved for the one from Bithynia in Asia Minor. The pastures obviously contain salt, because as (the cheese) matures, its flavour turns more salty, but not excessively; it is also known that it will regain its original fresh flavour if soaked in a mixture of thyme and vinegar. It is said that Zoroaster lived thirty years in the wilderness solely on cheese, prepared in a manner so special that it rendered him immune to aging (*Plinius, Naturalis Historia* XI, 97).

The cheese-making process

The cheese-making process described by Columella is not different from the one still used today. According to the information from ethnography, homemade cheese—which she refers to as “rennet cheese”—is most often made from 5 litres of milk. The milk has to be lukewarm, like that freshly expressed. Its temperature must not exceed 35 degrees. A spoonful of rennet is added to 5 litres of milk. The milk must remain on

<sup>3</sup>The translation is liberal, the online databases Latin Library and Lacus Curtius were consulted.

Site	Province	Type of site; context	Datation	Types of the moulds for cheese	interior Diameter approximately	Bibliography
Ivandor	<i>Pannonia Inferior</i>	<i>vicus/pagus</i>	2 <sup>nd</sup> – 3 <sup>rd</sup> CE	Type 1	9,8 cm	Lipovae Vrkljan, Šiljeg 2006: 13–19; Leleković 2007: 13–14; Balen, Bilić, Bunić, Drnić, Solter 2009: 35–45
Srijemska Mitrovica ( <i>Sirmium</i> )	<i>Pannonia Inferior</i>	<i>colonia</i> Capital of the province	2 <sup>nd</sup> – 3 <sup>rd</sup> CE	Type 1	16 cm	Brukner 1981: T. 99: 3, 5
Srijemska Mitrovica ( <i>Sirmium</i> )	<i>Pannonia Inferior</i>	<i>colonia</i> Capital of the province	4 <sup>th</sup> CE	Type 3	24 cm	Brukner 1981: T. 99: 1,
Vinkovci ( <i>Cibalae</i> )	<i>Pannonia Inferior</i>	<i>Colonia</i>	2 <sup>nd</sup> – 3 <sup>rd</sup> CE	Type 1	No data	Ožanić Roguljić 2016:79
Gomolava	<i>Pannonia Inferior</i>	<i>Villa rustica</i>	2 <sup>nd</sup> – 3 <sup>rd</sup> CE	Type 1	16 cm 17cm	Brukner 1981: T. 99: 4, 8
Vojka	<i>Pannonia Inferior</i>	<i>Villa rustica</i>	2 <sup>nd</sup> – 3 <sup>rd</sup> CE	Type 1	12 cm	Brukner 1981: T. 99: 2
Progar		<i>Villa rustica</i>	2 <sup>nd</sup> – 3 <sup>rd</sup> CE	Type 1	13 cm	Brukner 1981: T. 99: 6
Prosina	<i>Pannonia Inferior</i>	<i>Villa rustica</i>	2 <sup>nd</sup> – 3 <sup>rd</sup> CE	Type 1	12 cm	Brukner 1995: T. III: 27
Kudoš	<i>Pannonia Inferior</i>	<i>Villa rustica</i>	2 <sup>nd</sup> – 3 <sup>rd</sup> CE	Type 1	21 cm	Brukner 1995: T. IX 84
<i>Viminacium</i>	<i>Moesia Superior</i>	<i>colonia</i> Capital of province	2 <sup>nd</sup> – 3 <sup>rd</sup> CE	Type 1 Type 2	15,5 cm	Not published, Archive of Institute of archaeology in Beograd
<i>Viminacium</i>	<i>Moesia Superior</i>	Capital of province	2 <sup>nd</sup> – 3 <sup>rd</sup> CE	Type 2	14 cm	Not published, Archive of Institute of archaeology in Beograd
Ilok ( <i>Cuccium</i> )	<i>Pannonia Inferior</i>		2 <sup>nd</sup> – 3 <sup>rd</sup> CE	Type 1		Not published Archive of Institute of archaeology in Zagreb
Ilok ( <i>Cuccium</i> )	<i>Pannonia Inferior</i>		2 <sup>nd</sup> – 3 <sup>rd</sup> CE	Type 2		Not published Archive of Institute of archaeology in Zagreb
Stari Pekrovci	<i>Pannonia Inferior</i>	Rural settlement	2 <sup>nd</sup> – 3 <sup>rd</sup> CE	Type 1	No data	Not published, information given by Ivana Hirschler
Dragoļov brjag	<i>Pannonia Inferior</i>	Military camp	2 <sup>nd</sup> – 3 <sup>rd</sup> CE	Type 1	No data (shard)	Not published Archive of Institute of archaeology in Zagreb

Pl. 2 - Table with sites and dimensions of moulds for cheese



low heat until whey is formed without boiling. It is stirred in half-hour intervals until all the whey is removed. It is strained and put in a mould, and when it “tightens” it is removed from the mould and salted first on one side and then on the other. After 24 hours it is washed and left to dry. While drying, it has to be turned every day. As literary sources tell us, rennet is obtained from the stomachs of small ruminants. It contains enzymes that facilitate milk coagulation. It can be procured in liquid form, but rennet mentioned by Varro is olive-sized, which tells us that it was solid, perhaps a part of a stomach (Fox, McSweeney 2004: 3). Columella also cautions that the milk for cheese must not overheat, advising to place it near a fire.

Varro mentions also cheese from vinegar which is also known in traditional cheese-making.

It can be made from 5 litres of milk, which is cooked until it boils. Two spoons of vinegar are added and the cooking continues until whey is formed. Fire is then reduced and cooking continues for 5 to 10 minutes to make it a little harder. It is cooled until it is lukewarm whereupon the whey is drained and salt is added according to taste (around half a spoon). It is strained through a gauze and placed in a mould or a strainer. When it tightens it is put to dry. It can then dry or be consumed after a day (Ožanić Roguljić 2010).

Varro mentions the most appropriate period for making cheese, i.e. from the spring rising of the Pleiades until their rising in the summer. The Pleiades rise around the middle of May, and during the summer they are one of the dominant constellations. The pasture is best from spring to early summer, which can be related to the monitoring of the movement of the Pleiades. During that period the milk is thinner and the cheese made from thinner milk is “lighter”, while in the dry period the milk is denser and the cheese is “heavier”. Pasturage is definitely extremely important in cheese-making, as stressed also by Pliny the Elder when he says that the Bithynian cheese owes its excellent flavour precisely to grazing, which is in this case salty.

According to the current knowledge, 4 l of milk in a mould 14 cm in diameter will yield a cheese of ca 1 kg. Drying renders it more compact, so after three months its weight is around 70 dag. According to these data, one congius (3.3 l) of milk will produce a cheese of around 2 pounds, i.e. 654 g. According to Cato, two

pounds of cheese is precisely the amount needed to make Roman sacrificial bread (libum Katon, *De agricultura*, 75), while by Diocletian’s prices this cheese cost 18 denarii.

### Conclusion

Typology of moulds from Pannonia and upper Moesia confirms the making of cheese „the Roman way” from the 1st CE. Ceramic moulds are found in rural and urban, as well as in the military context. Production of cheese can be for personal needs, trade, and for military supplies. The amount of moulds found does not allow us to make conclusions about standardization of its products, as far we can see their dimensions vary (Pl. 2).

The finds of vessels that we consider to be strainers/ moulds for cheese in the territory of Pannonia and upper Moesia allow us to reckon a production that must have satisfied at least the local demands for this product. The diet in which cheese occupies a prominent place requires a substantial output, so cheese must have been produced in large quantities on Roman rural estates, and as such must have been used as merchandize that was traded, processed and used in everyday diet.

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# LIMES XXIII

## Session 7

What about us?

Exploring the lives of women and Children  
on the Frontiers





## INTRODUCTION

Session organisers / Chairpersons:

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experience of these individuals? We hope that papers will incorporate diachronic and comparative analyses as life on the limes changed because of migration, warfare, conquest, and shifting political and economic endeavors.

We encourage multidisciplinary approaches, so scientists from different disciplines – archaeologists, bioarchaeologists, epigraphists, historians, art historians and others – are welcome to contribute to the session.

The last three Limes Congresses have featured papers focusing on the role of women, children and families living on the frontiers in both military and civilian contexts in order to address the imbalanced preoccupation with topics related to the “male domain”. The last three decades generally have seen a great deal of attention being paid to the critique of this approach and considerable efforts were made towards exploring aspects of private life and studying population groups other than the ruling male elites and soldiers. Regardless, several important issues remain unexplored. Certain geographical areas of the Roman limes were left out of this research trend to date, and we are at times still left with the continuation of gender and age stereotypes, as well as incorrect attribution and interpretation of various artifacts.

This session strives to address some of these issues by focusing on aspects of private life and social relations on the limes, with emphasis on the lives of women and children. Taking into account archaeological data, historical sources and epigraphic monuments, bioarchaeological analysis and visual culture, we will try to advance our knowledge on the subject and address some of the topics and geographical areas missing from research up to this point. We hope especially to provide a venue to incorporate new data from emerging archaeological research into the current debate on this matter. Paper topics may include but are not limited to: How were families organized and what were the various social roles and routines of family members at various life stages? How was identity constructed through dress, actions and familial role of different members of the family? How did civilian, military or transient families differ or do they live similarly in the context of frontier life? How did other characteristics such as status, wealth and occupation affect the lived





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# ***Mater Castrorum*: representation of an ideal Empress or the rebirth of a Republican ideal woman?**

## **ABSTRACT**

Among many titles that Roman empresses received, the most interesting and debatable is the one of *mater castrorum*. Marcus Aurelius honored his wife Faustina Minor with this title in 174 AD, therefore giving the official military title to a woman. From that moment on representations of Empresses as *mater castrorum* served as an instrument in promotion of respected Roman values, indicating a prototypical good wife. Along with the title, the role and image of empresses changed.

The aim of this paper is to establish connections between the apparition of the title and imperial representations in art and on coins. It will also explore how the iconography of those representations functioned within a wider concept of women's role in political and religious life of the Empire, and in what way they communicated with the pre-imperial representations of an ideal woman and mother. To what extent have oriental influences contributed to the formation of the empress' image? In what way did image of an empress imply the military aspect of her title? In this paper we will demonstrate that she was seen as a wife, mother, priestess, comrade, and goddess in her own right, not only as hypostasis of maternal goddesses, but also of those crucial for enabling Rome's victories, strength and longevity. With iconographic examples of coins, statues, reliefs, cameos, many of which originated from the liminal territories of the Empire, multiple role of a woman embodied in an Empress will be analysed, announcing the dawn of the new era.

**KEY WORDS:** *MATER CASTRORUM*, FAUSTINA MINOR, JULIA DOMNA, ROMAN EMPRESS, ROMAN COINS, IMPERIAL TITLE, SEVERAN DYNASTY

**I**n Bela Palanka, once flourishing Roman city of Remesiana in Province Dacia Ripensis, an inscription with the following text was discovered (Fig. 1).

*Iuliae Domnae Augustae mater castrorum R(es)  
P(ublica) sua Ulp(iana) curante Q. Anicio Fausto  
Leg(ato) Augustorum pr(o)pr(aetore).*

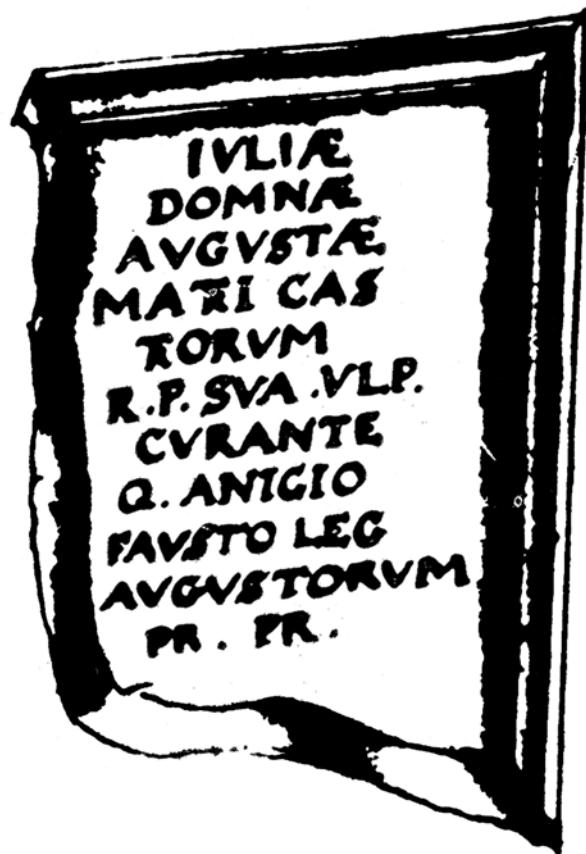


Fig. 1 - Inscription from Remesiana (after: Petrović 1979, 103, no. 71)

It is an epigraphic monument that Anicius Faustus, official magistrate of the province, dedicated to the empress Julia Domna, wife of the emperor Septimius Severus and mother of his two sons and heirs. It is not completely clear on what occasion was this inscription installed. One of the assumptions is that it was dedicated in 202, the year when Septimius Severus traveled from the eastern provinces back to the West after he successfully ended Parthian campaign. After establishing the Province of Mesopotamia and reorganizing local government in Egypt, Severus made a long journey back to Rome.<sup>1</sup> Knowing the itinerary of most important Roman roads of that time, it is reasonably assumed that during that journey he passed through Remesiana. The adventus of the Roman emperor was provincial parallel of triumphal processions that took

place in the capital. This event was certainly important enough for the city to be commemorated with an inscription. Another possible reason for dedication of this monument is the celebration of imperial *decennalia* of Severus, which also happened in 202. Annual imperial celebrations were naturally strongly tied to the city of Rome, but were likewise commemorated throughout provinces.<sup>2</sup> Yet, what attracted our attention the most is the fact that the inscription was dedicated solely to the empress, named *mater castrorum* – ‘mother of the camps’. Title follows the empress’ name and her principle title of Augusta. It was one of the most important titles Julia Domna bore which marked her as a loyal consort who accompanied Emperor during his military campaigns. But at the same time, this title indicates social and political changes that occurred within the rather conservative Roman Empire of the late second and the early third century. Although this denomination was first created by Marcus Aurelius in 174 for his wife Faustina ‘Minor’ (Annia Galeria Faustina), Julia Domna certainly was the most prominent empress who held the title.

It was in the eight decade of the second century that for the first time in Roman history a woman gained an official military title, along the ones accentuating her as faithful, obedient, modest and affectionate wife and mother, becoming even more important than the well-known role of the Augusta. It was the turbulent times of the Late Antiquity that changed the role of female members of the imperial family.<sup>3</sup> Being the first empress to hold the title, Faustina Minor was not only an imperial wife, but also “in purple born” imperial daughter of Antoninus Pius and Faustina Major, whose marriage to her father’s heir was to ensure the legitimacy of the dynasty. In 174 she accompanied her husband to Sirmium, the seat of the Province of Pannonia Secunda, and on that occasion, and because of the birth of their 13<sup>th</sup> child, Marcus Aurelius decided to announce her public role as his comrade, protectress of the army and guarantee of the military success.<sup>4</sup> This act was of great importance because the wars he fought in this part

of the Empire were crucial for survivor of vast territory he inherited from his powerful precedents. That was also the time and the place when the ‘rain miracle’ happened, an event noted by many contemporary writers. It was recorded as a mysterious storm that frightened Quadi tribe and relieved a thirst of the Roman army. The most detailed “pagan” version of the event was presented by Dio Cassius.<sup>5</sup> In his description Faustina Minor was with the emperor in his summer camp during the above-mentioned storm.<sup>6</sup> Placing Faustina Minor in the very centre of this crucial event proved that she indeed earned her *mater castrorum* title. The empress set an example for the new role of women in a military setting.

Both Bruttia Crispina, Commodus’ wife, and Julia Domna, Severus’ wife, gained the same title.<sup>7</sup> On the coins of Severan empresses several more titles sometimes accompanied that of *mater castrorum*, such as *mater castrorum et Senatus et patriae* emphasizing their importance for the Empire.<sup>8</sup> This title was created for Julia Domna after Severus’ death and deification in 211, when she became a living wife of a *divus*, suggesting that she is the protectress of the military camps, Senat and the fatherland as a whole.<sup>9</sup> She was not only the mother of a ruler but her motherhood was likewise tied to some of the most important aspects, real as well as personified, of the Roman State, even before the Principate. Her successors, Julia Soemias and Julia Mamaea, also held the *mater castrorum* title, while Diocletian’s daughter and wife of his adopted son and heir Galerius, Galeria Valeria, was the last empress with the titles of Augusta and of *mater castrorum*.<sup>10</sup> With these empresses we can acknowledge that the traditional image of a woman changed alongside many other things during the Late Antiquity. A better insight into the idea of *mater castrorum*, together with mo-

therly and divine protection empresses provided, we can find in visual representations, primarily on coins.

The inscription *mater castrorum* appeared on coins with the portrait of Faustina Minor on the obverse, and with one quite innovative iconographic solution on the revers (Fig. 2). The empress is depicted standing in a long dress, veiled head, while pouring libation from the patera in her right hand over an altar decorated by garlands. In her left hand she is holding a box, supposedly with incense, which is also lit on the altar. On the other side of the altar are three military standards, one of them surmounted by Victory. Empress is depicted as a priestess during the act of sacrifice, while three standards could be understood as the substitution for legions attending the act that would guarantee successful victory in any battle. The recipient of the sacrifice may be the Victory represented on one of the standards, who will enable the successful conclusion of any war Roman army fought.

Not only that Faustina Minor traveled with her husband during the campaigns, she also died on one such journey,<sup>11</sup> which added another dimension to her role of the wife of militant emperor. Namely, her death, while performing her most important duty, embedded in the *mater castrorum* title, meant that she became closer to her own deification. Therefore, the coins minted after her death kept similar meaning, although iconography changed. On one posthumously minted coin Faustina Minor is depicted in usual manner, standing veiled and pouring libation. On the second posthumous issue, Faustina Minor was depicted seated, facing three standards, holding a globe with phoenix in one and scepter in other hand (Fig. 3).<sup>12</sup> There is another very similar posthumous issue, only with two standards in front of the seated empress.<sup>13</sup> Namely, standing empress

<sup>1</sup>Campbell 2005, 7.

<sup>2</sup>Мирковић 1970, 87; Petrović 1979, 103, no. 71.

<sup>3</sup>Although there are various chronological determinants of Late Antiquity, for the purpose of this work we incline toward the definition of Peter Brown who dated it from the rule of Marcus Aurelius to the appearance of Muhammad, c.f. Brown 1971. For some other possible chronological definitions of the term, c.f. Liebeschütz 2004; Marcone 2008.

<sup>4</sup>Boatwright 2003, 249; Bojvoda 2013, 28. Philostratus informs us that, at that time, Sirmium was emperor’s main Pannonian base, c.f. Kovács 2009, 233.

<sup>5</sup>Dio Cas. LXXII. 8–10. Kovács 2009, 30–31.

<sup>6</sup>Dio Cas. LXXII. 10.5. Some scholars believe that the part of Dio’s text that mention Faustina’s *mater castrorum* title is a later interpolation. About various interpretations, c.f. Kovács 2009, 5. It can also be supposed that the emperor actually had his residence in the city of Sirmium, where he and his imperial family stayed, c.f. Kovács 2009, 233. Yet, this possibility does not undermine the fact that the empress was in the close vicinity of the battle field.

<sup>7</sup>Lusnia 1995, 123–124; Melone 2015, 28; O’Grady 2015, 27, 49.

<sup>8</sup>Benario 1958, 67; Hemelrijk 2010, 456.

<sup>9</sup>Benario 1958, 68; Bojvoda 2013, 30; O’Grady 2015, 54–55. About different dating of the title, as well as of a separate title *mater Senatus*, cf. Lusnia 1995, 134–135, 137. About the possibility that the title was acquired by Julia Domna even before 211, c.f. Günther 2017, 118.

<sup>10</sup>Angelova 2004, 7.

<sup>11</sup>Kovács 2009, 239.

<sup>12</sup>Mattingly, Sydenham 1930, 274, No. 751.

<sup>13</sup>Mattingly, Sydenham 1930, 274, No. 753.





Fig. 2 - Coin of Faustina Minor as *mater castrorum* (after: Boatwright 2003, 256, fig. 1)

performing sacrifice was substituted by a seated one, meaning that Faustina Minor was not an active participant in military acts anymore. She acquired completely new status – that of a *diva*, whose intervention in military setting could become more powerful once she was deified. On another coin, empress is portrayed on the obverse with an inscription *mater castrorum*, while on the reverse is a consecration monument,<sup>14</sup> the most important tool in consecrating the deceased member of the Roman imperial family (Fig. 4). Although military associations are visually missing from this third issue, the inscription *mater castrorum* is clearly visible.<sup>15</sup> It is evident that the iconography differed on the coins



Fig. 3.  
Posthumous coin of Faustina Minor as *mater castrorum* (after: Boatwright 2003, 256, fig. 2)

minted during her life and those minted after her death. The change is directly noticeable in the fact that Faustina Minor is represented seated, since she was a *diva* who in celestial realm accepted the offers herself. The newly acquired status of deified empress, as well as of her sons as children of a goddess, is additionally accentuated by the phoenix bird, as the symbol of eternal life in Elysium. Although not among the living, she continued to protect the army, led by her husband and sons.

The appearance of empresses and goddesses on coins has a lot to do with numerous worshipers of mother goddesses among the soldiers, such as those of Isis or the Matronae, both having maternal protective role. It can be seen on one inscription discovered in Alexandria in 1993, which names Faustina Minor as *Faustina Pharia Sosistolos*.<sup>16</sup> The epithet *Pharia* equates the empress with Isis.<sup>17</sup> This Egyptian goddess was praised all over the eastern Mediterranean as protectress of voyagers,<sup>18</sup> but likewise as the patron deity of sailors worshiped in Alexandria.<sup>19</sup> This epithet is combined with another, that of *Sosistolos*, the protector of the fleet.<sup>20</sup> Here she is given the role alongside with Minerva and Juno and she is *mater castrorum*, providing divine protection for the army on the ground and at the sea, while the Emperor, equated with Jupiter, preserves the soldiers and the Empire.<sup>21</sup> Together they are offering divine protection to both soldiers in battle and people at home.

In the year 195 Septimius Severus was formally adopted into the Antonine household and, although army made him an Emperor, he created artificial dynastic concept by which he was an heir of virtuous emperors of the 2<sup>nd</sup> century. His wife acquired the title *mater castrorum*, as the legitimate successor of Faustina Minor, Antonin's daughter and wife of Marcus Aurelius.<sup>22</sup> On the reverse of coins with *mater castrorum* inscription, Julia Domna intentionally kept the same iconographic



Fig. 4 - Posthumous coin of Faustina Minor as *mater castrorum* (after: Speidel 2013, 147)

solution as Faustina Minor. She was portrayed standing, facing a lighted altar and performing a libation. In her left hand she is holding a box, likewise most probably containing incense. On the other side of an altar are two or three military standards. On another version, she is holding a long scepter in her left hand while a snake is wrapped around the altar. The second iconographic solution also copies the older one of Faustina Minor: she is represented seated, holding a globe surmounted by phoenix in one and long scepter in other hand, and facing two military standards (Fig. 5). What is interesting is that this last solution appeared obviously while Julia Domna was still alive, not deified like in previous case of Faustina Minor's issue. There is also one bronze medallion with *mater augusti et castrorum* inscription, where the empress is represented seated, accompanied by a woman carrying a child, which accentuated her *mater augusti* title, and a soldier in front of her, accentuating the *mater castrorum* title.<sup>23</sup> Such iconographic solution is the most direct visual representation of the prominent title empress held.

Even though Julia Soaemias and Julia Maesa bore the same title, there is no preserved record on coins, but there exists *mater castrorum* issues of Julia Mamea, since she accompanied her son Alexander Severus during his military campaigns. Inheritance of this title was in accordance with immense power that women of Severan dynasty possessed and expressed, and coins were perfect devices for their self-representation. On the reverse of one of the issues of Julia Mamea, she is depicted seated, facing two standards, accompanied by a female person that stands behind her throne, while on another she is represented standing in front of three military standards. Mamea went further on in accentua-

ting her importance, not only for imperial family and the Empire but for the entire Ecumene as well. Namely, she held several more maternal titles, some older one such as that of *mater senatus* and *mater patriae*, but even some completely new ones such as *mater universi generis humani*.<sup>24</sup> On one issue that bears *mater augusti et castrorum* inscription she is represented seated, leaning on cornucopia, with personification of Pietas carrying a box with incense in front of her, and two standards behind her throne (Fig. 6). This picture was completely new in Roman coinage at that time. It accentuates the importance empress had in military context: she was no longer the one who offers sacrifice in the presence of an army symbolized with standards, but was almost a divine person more important than the personification of Piety itself.

Julia Mamea introduced several more new iconographical solutions that represent similar ideas as the above mentioned coin, like that on the medallions where she is represented seated, holding patera and cornucopia. In front of her are standards and behind her personification of Securitas. On one example Mamea is represented sitting in front of standards with accompanying *mater castrorum* inscription: there was no need for empress to perform any action, nor to be accompanied by any personification. Her sole presence was sufficient for successful military campaign. Actually, these are the last issues of this type. Although several more future empresses held the title, none of them were represented in this manner. We believe that it has to do with the complex political situation of the Late Empire: the death of Alexander Severus and Julia Mamea marked the end of the dynasty and the beginning of the turbulent third century, when emperors and empresses ruled short and died violently.

When iconography is in question, *mater castrorum* coins of Faustina Minor, Julia Domna or Julia Mamea were not the first representations of Roman imperial women in military context. One famous early imperial cameo, *Gemma Claudia*, depicts Claudius and his brother Germanicus with their spouses, Agrippina Minor and Agrippina Maior (Fig. 7). Agrippina Minor, the ruling empress, was represented as Tyche/Ceres, which was introduced by Hellenistic queens and was

<sup>14</sup>Faustina Minor was divinized after death, and her ashes were placed within the mausoleum of Hadrian, c.f. Kovács 2009, 157.

<sup>15</sup>Boatwright 2003, 257.

<sup>16</sup>Bernard A., Bernard E. 1998, 97–101; Bricault 2000, 136.

<sup>17</sup>Epithet *Pharia* can be observed in wider Isiac context, not only for imperial women, as is shown by epigraphic monuments for praising deceased females, c.f. Alvar 2008, 183.

<sup>18</sup>Alvar 2008, 239.

<sup>19</sup>One temple in Pharos Island was possibly dedicated to Isis, c.f. Bricault 2000, 138.

<sup>20</sup>Bricault 2000, 147.

<sup>21</sup>Speidel 2012, 143–144.

<sup>22</sup>Lo Cascio 2005, 137–138; Hekster 2015, 146; Günther 2017, 125.

<sup>23</sup>Войвода 2013, 30, сл. 7.

<sup>24</sup>Lo Cascio 2005, 140; Günther 2017, 116, 121.





Fig. 5 - Coin of Julia Domna as *mater castrorum*  
(photo in public use)

used by Augusta Livia. Agrippina Maior on the other hand was represented as Minerva, the goddess of war, likewise repeating earlier *imitatio deorum* very popular among Ptolemaic queens. Although Minerva is neither peaceful nor fertile, she became quite popular *imitatio deorum* of Roman imperial women. Since it is recorded that Agrippina Maior always followed her husband on his campaigns, it was appropriate for her to acquire the *imitatio deorum* of Minerva, as a woman whose presence in military context was perceived as crucial for victories of her husband Germanicus and of Roman legions. Therefore, the military iconography was considered appropriate for cameo most probably produced in the time of Claudius' marriage with his niece. It also explains why military equipment, weapons and armors were likewise represented in this metaphorical scene, which can be understood as a closest forerunner of a *mater castrorum* military iconography.<sup>25</sup> Yet, it must not be forgotten that the works of glyptic were



Fig. 6 Coin of Julia Mamaea as *mater castrorum*  
(after: Vojvoda 2013, 33, sl. 8)

by their character items for personal and not for public use. From the time of Julio-Claudian dynasty, iconographical parallels between empresses' portraiture and Minerva were abandoned from official iconography. They reappeared once again on Julia Domna's public portraits, testifying that military, masculine element, became very important in Domna's public iconography.<sup>26</sup> It became clear that what was once private now became public.

Although the title *mater castrorum*, and the iconography that accompanied it were perceived as innovative, they were actually rooted in an ideal of pre-imperial matrona. Celebrated values of Roman republican women, such as chastity, modesty, austerity, domesticity and devotion to her family,<sup>27</sup> continued to play an important role in imperial ideology, both in panegyrics and visual representations. The first empress who tied them together with her role in public life and military achievements was naturally Livia, who became an exemplum for all the empresses to follow, and by imitating her they spontaneously followed the concept of respectful women who dedicated their lives to the well-being of the Empire.<sup>28</sup> The accentuation of their own iconography, independent of that of the emperors, was actually very useful device for dynastic self-representation. Among them, *mater castrorum* representations bore strong connections with the religious aspect visible in the representations of empresses as goddesses, protectresses of army. One cannot underestimate the importance army had in promoting emperors during the period in question. Severus himself, for example, gained the power because he was acclaimed by soldiers. Since his power and strength of his successors depended much on the army, it was necessary for female members of imperial family to be closely connect to the military sphere of Roman culture.<sup>29</sup>

We can conclude that militarization of the late 2<sup>nd</sup> and the early 3<sup>rd</sup> century, visible in *mater castrorum* title, indicates a new era. Era of divine rulers who continue to protect their Empire even after their death, and of powerful women that bore *mater augusti*, *mater Se-*

<sup>25</sup>Smith 1994, 97; Hekster 2015, 150.

<sup>26</sup>Lundgren 2004, 69–70.

<sup>27</sup>Hemelrijk 2005, 6.

<sup>28</sup>Intentional evocation of Livia's title and all that it implied, can be seen in the inscription *Julia Augusta*, that were used by Julia Domna on some coins, c.f. Hekster 2015, 146.

<sup>29</sup>Günther 2017, 116 with older literature.



Fig. 7 - *Gemma Claudia*, 1st century AD  
(photo in public use)

*natus et patria* titles. Women were gaining power that was by then reserved only for emperors. Empresses became symbols of military and civil stability of the Empire.<sup>30</sup> They created new imperial female ideal, new "ideal women" reborn from the Republican one, that ties together all the members of a family. Republican family was perceived as a bearer of some of the most esteemed Roman values, such as loyalty and devotion. In the time of the Principate these values were even more important, not only among the members of an imperial family, but also among all the Roman citizens. By giving an important role to women in military context, those values were transferred to entire army: emperors and soldiers belonged together, in war as well as in peace. Loyalty of the soldiers to the emperor, and of the emperor to his troops, was the only guarantee of successful campaigns that will keep the Empire in peace and empresses were the agents that enabled such interaction. Therefore, we must once again go back to the very beginning of this text and to the inscription from Remesiana. It proves that one Roman magistrate dedicated a monument solely to the empress as *mater castrorum*, believing that her "intervention" is all that is needed for the peace and well-being of the entire city or Province.

<sup>30</sup>Lusnia 1995, 138; Günther 2017, 144. It must be emphasized that *Augusta mater patriae* title was used for Livia, although in Leptis Magna, namely outside Rome, even outside Appenine Peninsula, where it could have been understood as inappropriate, c.s. Hekster 2015, 121.

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**Сажетак**

Од бројних титула које су римске царице носиле, најзанимљивија и најдискутабилнија је титула *mater castrorum*. Марко Аурелије је 174. године доделио ову титулу својој жени Фаустини Минор, чиме јој је дао званичну улогу у војном контексту. Од тог тренутка су представе царице као *mater castrorum* служиле као инструмент у промовисању римских вредности, указујући на прототип добре супруге. Осим титуле, промениле су се улога и слика жене.

Циљ овог рада је да се установе везе између поменуте титуле и царских представа у уметности и на новцу. Такође се истражује како је иконографија тих представа функционисала у оквиру ширег концепта улоге жене у политичком и религиозном животу Царства, те на који је начин иконографија комуницирала са републиканским идеалом жене и мајке. У којој мери су оријентални утицаји допринели развоју слике царице? На који начин је слика царице имплицирала војни аспект њене титуле? У овом раду се показује да је она била схваћена као супруга, мајка, свештеница, пријатељица и богиња, не само као хипостаза неких од бројних култова богиње-мајке, већ и оних богиња које омогућавају победу Рима, његову снагу и дуговечност. Са иконографским примерима на кованом новцу, у скулптури, рељефима, глиптици, од којих су многи настали у ободним деловима Царства, анализира се вишеструка улога жене, отелотворене у царици са титулом *mater castrorum*, која најављује ново доба.

# LIMES XXIII

## Session 10

### Going Wild!

**The Roles of Wild Animals in Life  
and Death on the Frontier**





## INTRODUCTION

Session organisers / Chairpersons:

Sonja Vuković-Bogdanović, Laboratory for bioarchaeology, Department of Archaeology, Faculty of Philosophy, University of Belgrade  
Sue Stallibrass, Historic England and University of Liverpool

(ancient texts, bioarchaeology (animal and human bones), iconography, social status, hunting and fishing techniques and equipment, etc.)

**H**unting of wild animals in a well-developed agricultural society – the Roman world, is usually considered solely as a sport or entertainment activity of the Roman elite. However, this phenomenon is connected to different aspects of life of the Romans, from heroic to symbolic, from economic to entertaining, etc. Numerous depictions of hunts on monuments, and the mention of hunts in ancient texts point to a meaningful role of hunting in the Roman world. With rapid development of different archaeological disciplines, such as archaeozoology, it is possible to give more answers on human-game interrelations in the past. The session includes a wide range of evidence: ancient texts, iconographic data (mosaics, tombstones, frescoes, etc.), artefacts, burial assemblages, archaeozoological evidence (wild mammal remains, wild birds, fish and molluscs) in order to give answers to a wide range of topics regarding the role of wild animals within the Roman frontiers, such as:

Who hunted at frontiers? Was hunting limited to persons and soldiers of high status? What was the attitude of Roman society to wild animals?

At what level was the concept of “wildness” present in Roman culture?

Economic vs. symbolic role of game in the Roman world. Which animals were hunted for food and which animals were hunted for pleasure (vivaria and Roman games)? How can we tell the difference?

To what extent was game present on the menu? Are there any differences between contributions of wild species within faunal assemblages between urban/rural/military settlements?

Were the hunted animals from other parts of the Empire traded for food and pleasure along the frontiers? Is there any evidence of exotic game within frontiers? Were the animals transported from frontiers to Rome and Italy for big spectacles?

What did hunting strategies and hunting equipment look like? Are there any similarities between ancient texts, depictions on monuments and direct archaeological evidence (artefacts, injuries on animal/human bones, etc.)?

Were wild animals used as material for military costumes at the frontiers? How did the army acquire feathers and furs?

Did wild animals play a role in ritual activities? Were they sacrificed, buried or associated with human burials?

What was the role of fishing at frontiers? Where and where from were fish products transported along the frontiers?

Were wild (migratory) birds also hunted and what for?

We strongly encourage scientists from different disciplines, historians, art historians, Roman archaeologists, archaeozoologists, ichthyoarchaeologists and others to contribute to this session.





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## **A new attempt at interpreting arrowheads from the Roman legionary fortresses *Burnum* and *Tilurium* in Dalmatia**

### **ABSTRACT**

The arrowhead is the most important part of the arrow because its shape can reveal its purpose. The authors of this paper will try to answer whether the particular arrowheads found during the archaeological research of the Roman legionary fortress *Burnum* and *Tilurium* were also used for wildlife hunting. Namely, the uncovered arrowheads suggest not only that their shape was designed to cut through as much body tissue as possible, but they may have also caused unusually painful wounds when attempting to remove them from the body. Consequently, such arrowheads could have been used successfully for hunting game.

The authors were inspired to write this article not only by the shape of the discovered arrowheads but also by the remains of the wild animal bones found in *Burnum* and *Tilurium* as well as by epigraphic sources referring to soldiers as hunters.

### **DALMATIA, *BURNUM*, *TILURIUM*, ROMAN MILITARY, HUNTING, ARROWHEADS**

**T**he most important part of the arrow is its head. As the arrowheads are made of metal, they are widely considered as a part of the bow and arrow that could be preserved for centuries and analyzed by the researchers. The shape of the arrowheads can reveal not only its origin, but its purpose. The aim of this paper is to attempt to answer the question of whether cer-

tain arrowheads found during archaeological research of Roman legionary fortresses *Burnum* and *Tilurium* could have been used for hunting.

Archeological sites *Burnum* and *Tilurium*, the only two legionary fortresses in the Roman province of Dalmatia, have been subject of an ongoing, systematic ar-

chaeological research for more than a decade.<sup>1</sup> This research has brought remarkable results, and accordingly, new insight into the architecture of the fortresses and everyday life of their legionaries.

The legionary fortress *Burnum* is located on the left bank of the River Krka (*Titius flumen*), on the former territory of the autochthonous Liburnian tribe of *Burnistae*, mentioned by Pliny (*NH* III, 139).<sup>2</sup> The legionary fortress *Tilurium* is located on the right bank of the Cetina River (*Hippus flumen*). In his work, Pliny (*NH* III, 141) refers to both sites as *nobilitata proeliis castella*.<sup>3</sup> It is believed that the territory of *Burnistae* has already fallen into the hands of the Romans during Octavian's Illyrian War (35-33 BCE).<sup>4</sup> The remains of the fortress are located at the site of Šupljaja, about 3 km east of the village of Ivoševci and about 14 km west of the town of Knin. The fortress itself was located on a wide plateau that rises above the River Krka.

Over the past decades, collections of local museums were greatly expanded with numerous monuments from *Burnum*, with a particular emphasis on the epigraphic monuments. These epigraphic monuments enabled reconstruction of all the troops that were stationed in the fortress. As of today, experts are of the opinion that a short stay of *legio XX* in *Burnum* was followed by the arrival of the *legio XI*. Furthermore, after *legio XI* left *Burnum* it was replaced by the *legio IIII Flavia* which resided there until 86 CE, at the latest. After that, military significance of *Burnum* faded away and it was used by smaller military units: *ala I Hispanorum*, *cohors II Cyrrhestarum*, *cohors III Alpinorum* and *cohors I Montanorum civium Romanorum*. During the first century, a civilian settlement has been developed in its proximity, making it different

from *Tilurium* where this was not the case.<sup>5</sup> The *municipium* was developed on the plateau of the legionary fortress, with another auxiliary fort being built in its northeastern part.

The first archaeological research of *Burnum* was carried out in two summer campaigns in 1912 and 1913.<sup>6</sup> Research was renewed in 1973 and 1974 through two summer campaigns.<sup>7</sup> The discovery of amphitheater in 2002, which was located west of the former legionary fortress encouraged further systematic archaeological excavations in *Burnum*.<sup>8</sup> Analysis of small findings demonstrates concentration of archaeological material dated in time period from the Late Republican Era to the mid-4<sup>th</sup> century CE.<sup>9</sup>

The legionary fortress *Tilurium* is located on the north-eastern part of a plateau that rises above the River Cetina (*Hippus flumen*). Today, the village of Gardun – including the church of St. Peter – is located in the area of the fortress. This dominant and strategic position (an absolute height of 429 meters) offers a view across the River Cetina, as well as the surrounding fields and highlands. Systematic archaeological excavations of *Tilurium* began in 1997 and are still ongoing. The majority of the preserved architecture and small findings could be dated from the Late Republican Era to the mid of the 3rd century CE.<sup>10</sup> Epigraphic monuments found in the area clearly indicate which military units were present in *Tilurium*: *legio VII* (from 42 CE known as *legio VII Claudia pia fidelis*), *legio XI* (from 42 CE known as *legio XI Claudia pia fidelis*), *legio IIII Flavia felix*, *cohors II Cyrrhestarum*, *ala Claudia nova*, *ala (Tungrorum) Frontoniana*, *cohors I Belgarum*, *cohors III Alpinorum* and *cohors VIII voluntariorum civium*

*Romanorum*. Among them, the *legio VII Claudia pia fidelis*, stayed the longest in the fortress.<sup>11</sup>

The development of human history is, to this day, closely associated with hunting, as evidenced by the depictions of hunting from Lascaux from Upper Palaeolithic Magdalenian culture, as well as by many hunting societies of the modern era.<sup>12</sup> Wild animals were hunted not only for food but also for raw materials such as fur, bones or tendons. Egyptian, Assyrian and especially Hellenistic rulers have shown their passion for hunting as a virtue, thus creating a link between hunting and the ruling aristocracy.<sup>13</sup> Even some Roman emperors of the later period used hunting iconography to represent themselves – as patron of the state and its people.<sup>14</sup> If judging by literary sources, the enthusiasm of the Romans towards game hunting was not too great.<sup>15</sup> However, archeological data on hunting, referring to direct sources such as epigraphic monuments, images of hunting and the results of zooarchaeological analyses, as well as indirect ones, including the dedications to the protectors of the hunt – divinities Diana and Silvanus, provide clear indication about continuity of hunting during the Empire's lifetime.<sup>16</sup>

In contrast to the opinion of experts from the period of the late 19th and early 20th century, today it is generally accepted that the Roman soldiers regularly consumed meat.<sup>17</sup> This meat was obtained from domestic

animals, as well as from nature – primarily by hunting wild animals, birds, fish, shellfish.<sup>18</sup>

The starting point of our study were four facts that could point to the possibility of military hunting by using bow and arrow for the purpose of eating in *Burnum* and *Tilurium*.

The first fact refers to the dimensions of the arrowheads, i.e. their length (up to 5 cm) and weight (up to 12 g), both of which indicate that these were indeed arrowheads, and not any other weapon such as the spear or lances.<sup>19</sup> Both in *Burnum* and *Tilurium* the monuments of the members of *cohors II Cyrrhestarum Sagittaria* (ILJug II, 842; CIL III 2820; CIL III 14934), who used bows and arrows, were found.<sup>20</sup> Despite having small arrowheads, such arrows were not harmless and could disable the enemy, especially when a large number of arrows would be used against the enemy.<sup>21</sup> In addition, these arrowheads were designed not only to cut through the tissue as much as possible, but also to cause unusually painful wounds.

The second fact is that there are literary and epigraphic sources related to the soldiers hunters (*immunes venatores*).<sup>22</sup> Thus, for example, Justinian's Digest (*Dig.* 50, 6, 7, (6)) transcribes the text of *Tarutienus Paternus* from the second half of the 2nd century and its list of military immunities among which are *vena-*

<sup>1</sup>For more on *Tilurium* see: Sanader 2003; Šimić-Kanaet 2010; Sanader *et al.* 2014; Sanader *et al.* 2017; Sanader *et al.* 2021; Sanader 2020. For more on *Burnum* see: Cambi *et al.* 2007; Miletić 2010a, 113–141; Miletić 2010b, 143–176.

<sup>2</sup>*conventum Scardonitanum petunt Iapudes et Liburnorum civitates XIII, ex quibus Lacinienses, Stulpinos, Burnistas, Olbonenses nominare non pigeat.* [http://penelope.uchicago.edu/Thayer/L/Roman/Texts/Pliny\\_the\\_Elder/3\\*.html](http://penelope.uchicago.edu/Thayer/L/Roman/Texts/Pliny_the_Elder/3*.html)

<sup>3</sup>*in hoc tractu sunt Burnum, Andetrium, Tribulium, nobilitata proeliis castella.* [http://penelope.uchicago.edu/Thayer/L/Roman/Texts/Pliny\\_the\\_Elder/3\\*.html](http://penelope.uchicago.edu/Thayer/L/Roman/Texts/Pliny_the_Elder/3*.html)

<sup>4</sup>Zaninović 1996a, 212.

<sup>5</sup>Zaninović 1968, 119–130; Zaninović 1996b, 280–291.

<sup>6</sup>Reisch 1922, 112–135.

<sup>7</sup>Zabehlicky Schaffenegger, Kandler 1979.

<sup>8</sup>Glavičić, Miletić 2009, 75–84.

<sup>9</sup>Cambi *et al.* 2006, Cambi *et al.* 2007, Borzić *et al.* 2014.

<sup>10</sup>Sanader 2003; Šimić-Kanaet 2010; Sanader *et al.* 2014; Sanader *et al.* 2017; Sanader *et al.* 2021.

<sup>11</sup>Sanader, Tončinić 2010, 33–53.

<sup>12</sup>About the hunting societies in the area of Šibenik Knin County see: <http://www.lovackisavez-skz.hr/lovacka-drustva/>

<sup>13</sup>Anderson 1985; Jallet Huant 2008.

<sup>14</sup>Tuck 2005, 21–45.

<sup>15</sup>Seneca, Ad Lucilium Epistulae Morales Ep. 85.41: *Certi sunt domitores ferarum, qui saevissima animalia et ad occursum expavescenda hominem pati subigunt nec asperitatem excussisse contenti usque in contubernium mitigant. Leonibus magister manum insertat, osculatur tigrim suus custos, elephantum minimus Aethiops iubet subsidere in genua et ambulare per funem. Sic sapiens artifex est domandi mala. Dolor, egestas, ignominia, carcer, exilium* <http://perseus.uchicago.edu/perseus/cgi/citequery3.pl?dbname=LatinAugust2012&query=Sen.%20Ep.%2085.41>

<sup>16</sup>For ancient sources of the military diet, see: Roth 1955, 27–32; Davies 1971, 122–126. On one of the altars from Britain (EDCS-07801332), prefect of the *ala Sebosiana* is giving thanks to Silvan for helping him catch a huge wild boar. Altar inscription: *N[u]m[i]n[u]b(us) [August]orum / et Silvano // Silvano Invicto sacr(um) / C(aius) Tetius Veturius Micia/nus pr[ae]f[ectus] alae Sebosian[ae] ob aprum eximiae / formae captum quem / multi antecessores eius praedari / non potuerunt v(oto) s(uscepto) l(ibens) p(osuit).*

<sup>17</sup>Davies 1971, 126.

<sup>18</sup>Davies 1971, 136; See also: Stallibrass, Thomas 2008.

<sup>19</sup>For the use of bow and arrow in the Roman army see: Ureche 2013, 183–196; Riesch 2017, while for armament of the archers see: Tentea 2012, 102–106.

<sup>20</sup>So far, there are 10 inscriptions from Dalmatia that mention archers of the *cohors II Cyrrhestarum sagittaria*. See: Matijević 2009b, 35–44 (41).

<sup>21</sup>Coulston 1985, 220–366.

<sup>22</sup>*Immunes* were Roman soldiers who, thanks to their special skills, were excused from the regular work in the camp. See: Domaszewski 1908, 26 i 46; Breeze 1969, 33–34; Wesch Klein 1998, 31–41; Southern 2007; Speidel 2009, 283–304; *Veg. 1.7* mentions hunters of deer and wild boar.



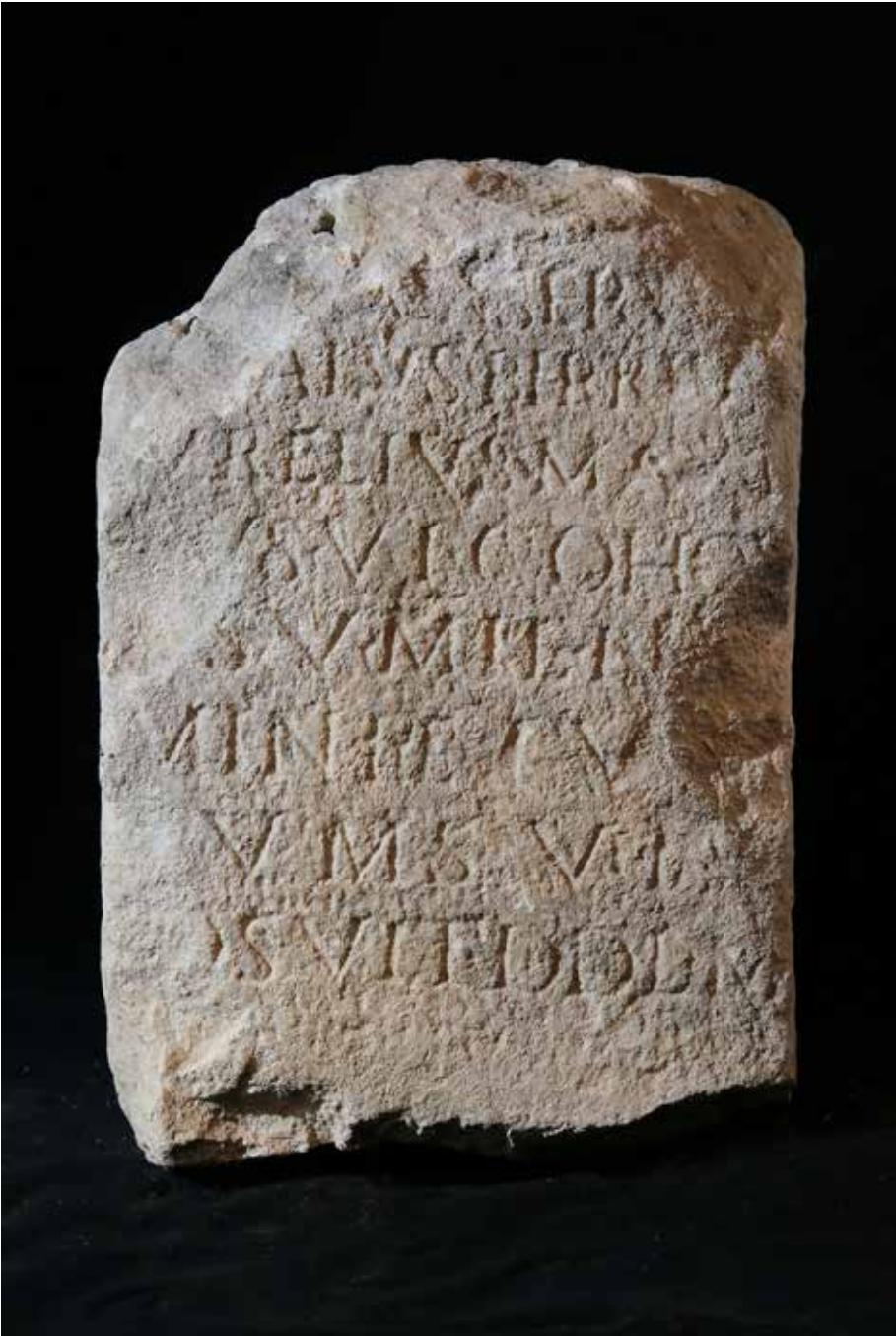


Fig. 1 - Altar by venator immunes from Klis, Archaeological museum in Split, Inv. No. AMS A-1509 (photo I. Krajcar/ Archaeological museum in Split)

tores.<sup>23</sup> There are also a number of epigraphic monuments that mention *immunes venatores*. Domaszewski managed to link this military service with *custos vivari* service thanks to one epigraphic monument from

<sup>23</sup>50.6.7 Tarruntenus Peternus libro primo militarium: Quibusdam aliquam vacationem munerum graviorum condicio tribuit, ut sunt mentores, optio valetudinarii, medici, capsarii, et artifices et qui fossam faciunt, veterinarii, architectus, gubernatores, naupegi, ballistrarii, specularii, fabri, sagittarii, aerarii, bucularum structores, carpentarii, scandularii, gladiatores, aquilices, tubarii, cornuarii, arcuarii, plumbarii, ferrarii, lapidarii, et hi qui calcem cocunt, et qui silvam infidunt, qui carbonem caedunt ac torrent. In eodem numero haberi solent lani, **venatores**, victimarii, et optio fabricae, et qui aegris praesto sunt, librarii quoque qui docere possint, et horreorum librarii, et librarii depositorum, et librarii caducorum, et adiutores corniculariorum, et stratores, et polliones, et custodes armorum, et praeco, et bucinator. Hi igitur omnes inter immunes habentur. See: <https://droitromain.univ-grenoble-alpes.fr/Corpus/d-50.htm#6>

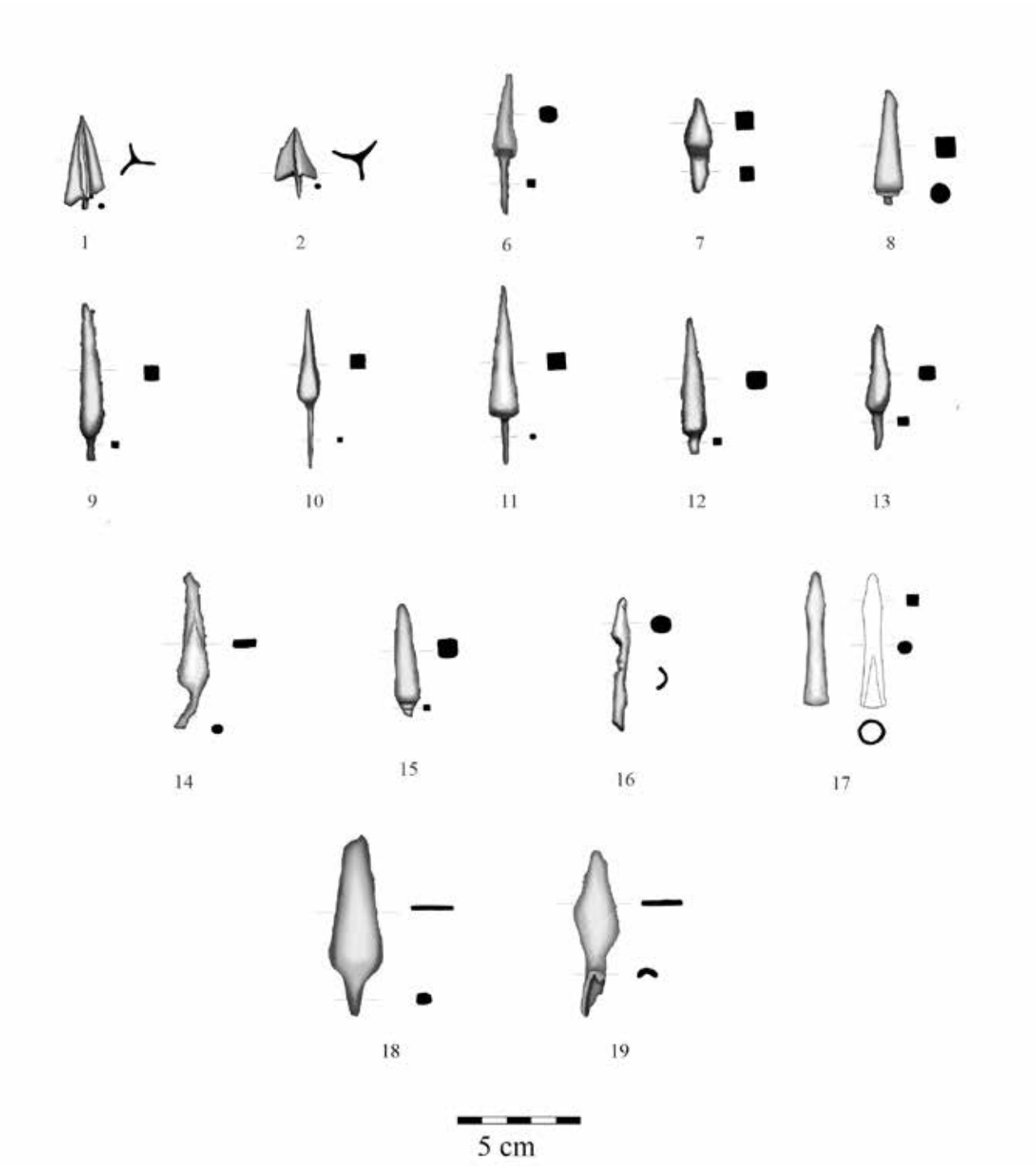


Fig. 2 - The arrowheads from Burnum

Rome (CIL 06, 00130). He also believed that their task was to hunt wild animals for fighting.<sup>24</sup> This opinion of Domaszewski has seen a lot of admirers in scientific literature.<sup>25</sup> We are also of the opinion that these sol-

diers could have engaged in the game hunting as part of amphitheater shows or for imperial beast hunting, but we also suggest that soldiers hunted wild animals purely for food-hunting.

<sup>24</sup>Domaszewski 1908, 26, 46.  
<sup>25</sup>Breeze 1969, 33–34; Epplert 2001, 210–222 (219–220).

Furthermore, we believe that the animals that were used for fighting should have been captured alive and completely healthy, thus requiring different hunting skills and hunting tools than those required for killing animals, which is the type of hunting that is the subject of our work.<sup>26</sup> There is an inscription from the Roman province of Dalmatia (CIL III 8672), which mentions two soldiers who, as it seems, served as *venatores immunes*.<sup>27</sup> The inscription is on the sacrificial altar that is now kept in the Archaeological Museum in Split (Inv. No. A-1509). The altar was found at the site Klis, located in the vicinity of Salona, the capital of the province. *[G]aius Beri[.]u[s?]* and *[A]urelius Maxi[m]us* served in a cohort whose name on the inscription is no longer readable today. As the altar lacks the crown and the first line of the inscription, we can only assume that, and on the basis of the preserved epithet *Conserv(atori)*, it was dedicated to Jupiter.<sup>28</sup>

The third fact linked to the military hunting for nutrition relates to the findings of wild animal bones in military establishments. Zooarchaeological analyses that were carried out on animal bones from legionary fortresses, as well as those from civilian settlements, point to the presence of wild animal bones.<sup>29</sup> Among others, zooarchaeological analyses carried out in *Burnum* confirm the bones of deer, while several bones of European hare (*Lepus Europaeus*) were found in *Tilurium*.<sup>30</sup>

The fourth fact, which could have affected *Burnum* and *Tilurium* hunting, is that after the 9 CE – when

the Delmataean-Pannonian Rebellion was crushed – the province of Dalmatia experienced a peaceful period.<sup>31</sup> An extraordinary situation occurred only in 42 CE due to the rebellion of *Lucius Arruncius Camillus Scribonianus*, the provincial consul.<sup>32</sup> For more than a decade, the military in Dalmatia has not been exposed to the dangers of warfare, which is why it was able to participate in various jobs, primarily in infrastructure construction, as well as game hunting.<sup>33</sup>

Once we managed to connect the bones of wild animals found in the legionary fortresses *Burnum* and *Tilurium* with military debit "hunter", i.e. *venator immunes*, as well as with the peaceful political situation in the province of Dalmatia, we believe that we can accept the proposal that the soldiers from these two Dalmatian legionary fortresses also consumed meat of wild animals. On this occasion, we are exploring which type of weapon the soldiers from *Burnum* and *Tilurium* used for hunting. Since there are no preserved sources of game hunting instructions, we can only use assumptions – however, it is clear that the selection of hunting weapons was not dependent solely on the configuration of the field on which hunting took place, but also on the type of animal that hunters tried to catch, that is, its size, thickness of skin and fur as well as its mobility and ultimately the danger it presented for the hunter. Figuratively speaking, rabbit, wild boar or deer could not have been hunted in the same way.

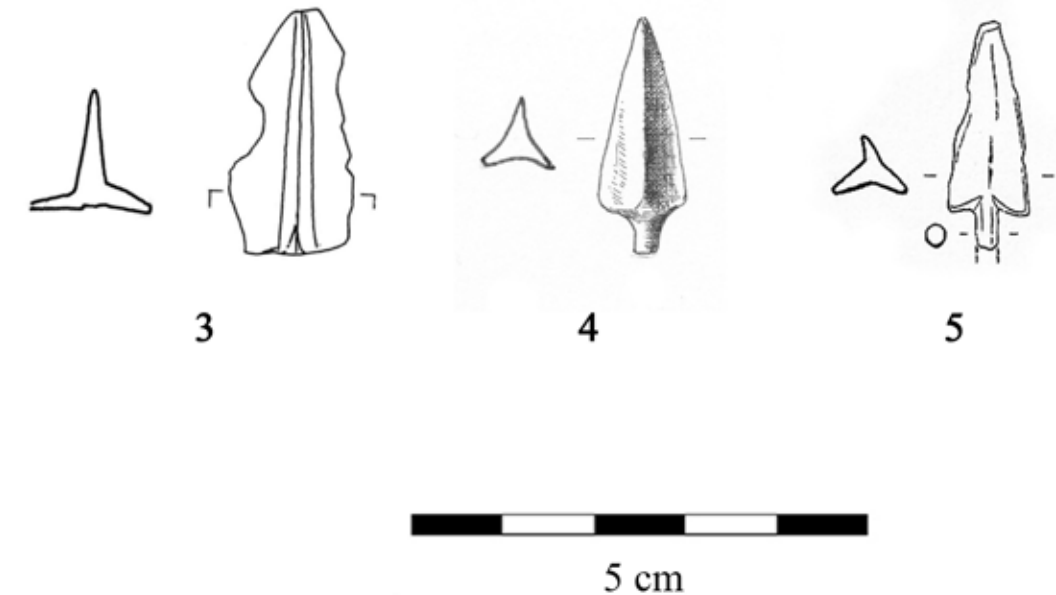


Fig. 3 - The arrowheads from *Tilurium*

It should be reemphasized that the effectiveness of the arrow was the object of experimental archeology, where it was shown that a whole series of variables had to be taken into account when evaluating their effectiveness.<sup>34</sup> These are, for example, the weight and size of the arrowheads because they depend on air resistance, which again affects the decision from which distances should be the weapon shot. In addition, the quality of the material from which the arrows were made and the weather conditions were also important factors with influence on the effectiveness.<sup>35</sup>

When answering the question, we asked at the beginning of the paper, whether the arrowheads found in *Burnum* and *Tilurium* were used for hunting, we also used the Roman artworks depicting game hunting. The scenes of hunting were displayed on various media (sarcophagi, reliefs, frescoes, bronze, glyptic, mosaics), with the greatest number of them preserved on mosaics. Although there are no preserved depictions of soldiers in the hunt, we believe that the scenes of civi-

lians in the hunt may offer certain technical parallels. By analyzing the collected depictions, one can see that there are scenes such as killing and capturing wild animals. As we are interested in those animals who have been killed for eating, we have outlined the scenes of killing a wild boar and rabbit, that is, depicting hunting weapons used by hunters. By analyzing the depictions of weapons used in hunting of wild boars at four mosaics from different parts of the Empire (Villa Romana del Casale in Sicily, La caza del jabalí in Merida in Spain, Villa from Montevera in Italy, Vila la Olmeda from Pedrosa del la Vega in Spain), we could determine that in all these cases the same type of weapon was depicted. Namely, it is a long lance with trilobate arrowheads, equipped with a T-shaped bar. In the three depictions of hunting rabbits from two sites (two from the villa Romana del Casale in Sicily and one from El Jem in Tunisia), the same type of weapon is displayed. In these instances, it is a long double-headed lance. Based on these representations, we can assume that the craftsmen who made mosaics differed the types of

<sup>26</sup>Jallet Huant 2008.

<sup>27</sup>The altar bears the following inscription: *I(ovi) O(ptimo) M(aximo) Conserv(atori) / [G]aius Beri[.]u[s?] / [A]urelius Maxi[m]us v(enator?) i(mmunis?) coho(r)[.]ti[s] V Mil(i) N[.]u[.]mini eius / [c]um suis / [p]osuit d(onum) d(edit) l(ibens) m(erito)*

<sup>28</sup>Bulić 1889, 161–164; Medini 1976, 185–207; Perinić Muratović 2003; Sinobad 2010, 145–228; Matijević 2009a, 45–58; Matijević 2015, 267; Bekavac 2015, 23; Cvetko 2022, cat. no. 415.

<sup>29</sup>According to the analyzes that have been made on the bone remains from military fortifications, it can be established that soldiers were fed with game meat. For comprehensive bibliography on animal bones see: King 1984, 214–218. In addition, see also: Piehler 1976; Monk 1978, 98–103; Schibler, Furger 1988, 28; Shotton, White 1990, 167; Deschler Erb, Deschler Erb, Schaub 1991, 121–124; Seaward 1993, 91–119; Peters 1994, 159–176; Izard 1997, 363–370; Lignereux, Peters, Tassaux, Tronche 1997, 399–412. All these works mention the findings of wild animal bones, primarily deer and wild boar.

<sup>30</sup>Cambi *et al.* 2007, 58–60; Boschi, Campedelli, Curci, Silani 2007, 131–138; Radović, Tončinić, Buljubašić 2021.

<sup>31</sup>Zaninović 1996b, 280–291.

<sup>32</sup>The course of the rebellion is known to us from literary sources in which the governor is mentioned as *Furius Camillus Scribonianus*. *Suetonius* (Suet.Claud. 13. 2) reports on the rebellion: „The civil war was set on foot by *Furius Camillus Scribonianus*, governor of Dalmatia; but his rebellion was put down within five days, since the legions which had changed their allegiance were turned from their purpose by superstitious fear; for when the order was given to march to their new commander, by some providential chance the eagles could not be adorned nor the standards pulled up and moved.”. *Cassius Dio* (LX 15, 2) reports that the legions did not want to support the reconstruction of the Republic, which was proclaimed by *Scribonianus*. When the legions VII and XI canceled support, the rebellion suffered a failure. See: Tončinić 2014, 79–95.

<sup>33</sup>The inscriptions testify to the involvement of soldiers in the construction of roads, the monitoring of quarry jobs, and their participation in defining the boundaries between different tribal communities in Dalmatia. See: Tončinić 2020.

<sup>34</sup>A detailed overview of experimental research can be found in H. Riesch, *Pfeil und Bogen in der römischen Kaiserzeit*, Ludwigshafen 2017, 176–198.

<sup>35</sup>Thomson 1955, 80–82; Miller, McEwen, Bergman 1986, 178–195; Bergman, McEwen, Miller 1988, 658–670; Conyard 2013, 523–567.



hunting spears; moreover, they knew which spear is used for the specific animal being hunted.<sup>36</sup>

As the subject of this paper is hunting with bow and arrow, we sought such representations, particularly focusing on the representations of the arrowheads. A certain number of such representations have been preserved, but the arrowheads are rarely seen well because the attention of the artist was mostly devoted to bows and quivers. For such representations, one can only benefit from the mosaic of the Lillebonne hunt where the arrowhead is very clearly visible.<sup>37</sup> There are also a number of relief representations of hunting with a bow and arrow, but the arrowheads are mostly not visible or can no longer be detected. This was possible only on the relief of Csopak, and on two stelae from Dugopolje.<sup>38</sup> Comparing the representations from Lillebonne, Csopak and Dugopolje, it is clear that in these cases the same type flat-bladed arrowheads is shown. On the northern side of the base of Trajan's column trilobate arrowhead could possibly been recognized.<sup>39</sup> However, we do wonder whether it was possible for the craftsmen to show the difference between the trilobate or bodkin arrowhead?

In the legionary fortresses *Burnum* and *Tilurium*, several arrowheads were found, of which for this occasion we singled out 19 pieces, for which we suggest that they could have been used by the soldiers in the hunt. Five of these pieces belong to trilobate type, 12 to bodkin type, while remaining two pieces belong to flat-bladed type of arrowheads.

To conclude, we suggest that the arrowheads reviewed in this paper, which have been found in *Burnum* and *Tilurium*, were used by soldiers for game hunting with intention of obtaining food for consumption. This suggestion could be based on four facts, the first of them being their dimensions, i. e. their length (up to 5 cm) and their weight (up to 12 g), which are proof that they were once part of the bow and arrow. The second fact relates to the existence of epigraphic sources on the soldier hunters in Dalmatia while the third testifies to the findings of the bones of wild animals within the

fortresses. The fourth fact is that the fortresses *Burnum* and *Tilurium* were located in the area of the province of Dalmatia where soldiers for decades did not fight which allowed them to engage in other activities, including hunting.

We are also of the opinion that for the need of determining the purpose of such arrowheads, of crucial importance are the data on the circumstances of its discovery. This is the case with the represented arrowheads from *Burnum* and *Tilurium*, since they were found in recent excavations and their stratigraphic position has been noted.

Finally, even though we have used all available data to determine the use of these arrowheads, it is still not possible to state with complete certainty that they were also used in hunting. Hence, we are left with the hope that future research will pay more attention to military hunting and the weapons that were used for that purpose.

### Catalogue

#### 1. Tanged trilobate arrowhead

Find site: *Burnum*, amphitheater  
Current location: Krka National Park, Archaeological collection Burnum, Inv. no. 1947  
Procurement method: archaeological excavation, 2010.  
Material: iron  
Dimensions: height 3,5 cm, width 1,4 cm, weight 2,4 g  
Dating: 1<sup>st</sup> half of first century CE  
Published: unpublished

#### 2. Tanged trilobate arrowhead

Find site: *Burnum*, campus, PN 109/2015  
Current location: Krka National Park, Archaeological collection Burnum, Inv. no. 3577  
Procurement method: archaeological excavation, 2015.  
Material: iron  
Dimensions: height 3,3 cm, width 2,1 cm, weight 2,5 g  
Dating: 1<sup>st</sup> half of first century CE  
Published: unpublished

#### 3. Trilobate arrowhead

Find site: *Tilurium*, GAR 04 PN 44  
Current location: Trilj Territorial Museum, Inv. no. MTK 964  
Procurement method: archaeological excavation, 2004.  
Material: iron  
Dimensions: height 2,8 cm, weight 2,1 g  
Dating: 2nd century BCE – 4th century CE  
Published: Ivčević 2010, 58, cat. no. 6; Ivčević 2014, 163, cat. no. 1; Ivčević 2016, 208–209, cat. no. 26.

#### 4. Tanged trilobate arrowhead

Find site: *Tilurium*, GAR 98 PN 4  
Current location: Trilj Territorial Museum, Inv. no. MTK 52  
Procurement method: archaeological excavation, 1998.  
Material: iron  
Dimensions: height 2,5 cm, width 1,2 cm, weight 1,08 g  
Dating: 1st to 4th century CE  
Published: Šeparović 2003, T. 3. 1; Ivčević 2010, 59, cat. no. 7; Ivčević 2016, 209, cat. no. 27.

#### 5. Tanged trilobate arrowhead

Find site: *Tilurium*, GAR 08 PN 26  
Current location: Trilj Territorial Museum, Inv. no. MTK 1884  
Procurement method: archaeological excavation, 2008.  
Material: iron  
Dimensions: height 2,5 cm, width 0,85 cm, weight 1,5 g  
Dating: 2nd century BCE – 3rd century CE  
Published: Ivčević 2017, 267, cat. no. 5.

#### 6. Tanged bodkin arrowhead

Find site: *Burnum*, amphitheater, PN 64/2010  
Current location: Krka National Park, Archaeological collection Burnum, Inv. no. 1488  
Procurement method: archaeological excavation, 2010.  
Material: iron  
Dimensions: height 5,8 cm, width 1 cm, weight 10,2 g  
Dating: 1<sup>st</sup> half of first century CE  
Published: unpublished

#### 7. Tanged bodkin arrowhead

Find site: *Burnum*, amphitheater, PN 73/2010  
Current location: Krka National Park, Archaeological collection Burnum, Inv. no. 1885  
Procurement method: archaeological excavation, 2010.  
Material: iron  
Dimensions: height 3, 6 cm, width 1,2 cm, weight 11,8 g  
Dating: 1<sup>st</sup> half of first century CE

Published: unpublished

#### 8. Tanged bodkin arrowhead

Find site: *Burnum*, campus, PN 13/2015  
Current location: Krka National Park, Archaeological collection Burnum, Inv. no. 3481  
Procurement method: archaeological excavation, 2015.  
Material: iron  
Dimensions: height 4, 8 cm, width 1, 3 cm, weight 19,4 g.  
Dating: 1<sup>st</sup> half of first century CE  
Published: unpublished

#### 9. Tanged bodkin arrowhead

Find site: *Burnum*, campus, PN 16/2015  
Current location: Krka National Park, Archaeological collection Burnum, Inv. no. 3484  
Procurement method: archaeological excavation, 2015.  
Material: iron  
Dimensions: height 6,1 cm, width 1,7 cm, weight 15,1 g.  
Dating: 1<sup>st</sup> half of first century CE  
Published: unpublished

#### 10. Tanged bodkin arrowhead

Find site: *Burnum*, campus, PN 19/2015  
Current location: Krka National Park, Archaeological collection Burnum, Inv. no. 3487  
Procurement method: archaeological excavation, 2015.  
Material: iron  
Dimensions: height 7,8 cm, width 0,9 cm, weight 12,1 g.  
Dating: 1<sup>st</sup> half of first century CE  
Published: unpublished

#### 11. Tanged bodkin arrowhead

Find site: *Burnum*, campus, PN 221/2016  
Current location: Krka National Park, Archaeological collection Burnum, Inv. no. 4041  
Procurement method: archaeological excavation, 2016.  
Material: iron  
Dimensions: height 6,9 cm, width 1,3 cm, weight 19,1 g  
Dating: 1<sup>st</sup> half of first century CE  
Published: unpublished

#### 12. Tanged bodkin arrowhead

Find site: *Burnum*, campus, PN 125/2017  
Current location: Krka National Park, Archaeological collection Burnum, Inv. no. 4996  
Procurement method: archaeological excavation, 2017.  
Material: iron  
Dimensions: height 5,6 cm, width 1,2 cm, weight 16,3 g.

<sup>36</sup>Similar opinion was also made by H. Riesch, who thinks the weapons display is more or less authentic. Riesch 2017, 21.

<sup>37</sup>Darmon 1994, 90–102.

<sup>38</sup>Thomas 1955; Cambi 1993.

<sup>39</sup>Pollen 1874, 308.

Dating: 1<sup>st</sup> half of first century CE  
Published: unpublished

**13.** Tanged bodkin arrowhead  
Find site: *Burnum*, campus, PN 184/2017  
Current location: Krka National Park, Archaeological collection Burnum, Inv. no. 5055  
Procurement method: archaeological excavation, 2017.  
Material: iron  
Dimensions: height 4,5 cm, width 0,9 cm, weight 8,4 g.  
Dating: 1<sup>st</sup> half of first century CE  
Published: unpublished

**14.** Tanged bodkin arrowhead  
Find site: *Burnum*, campus, PN 384/2016  
Current location: Krka National Park, Archaeological collection Burnum, Inv. no. 4243  
Procurement method: archaeological excavation, 2016.  
Material: iron  
Dimensions: height 6,4 cm, width 1,6 cm, weight 11,5 g  
Dating: 1<sup>st</sup> half of first century CE  
Published: unpublished

**15.** Tanged bodkin arrowhead  
Find site: *Burnum*, amphitheater, PN 23/2010  
Current location: Krka National Park, Archaeological collection Burnum, Inv. no. 2107  
Procurement method: archaeological excavation, 2010.  
Material: iron  
Dimensions: height 5 cm, width 1,2 cm, weight 16,6 g  
Dating: 1<sup>st</sup> half of first century CE  
Published: unpublished

**16.** Socketed bodkin arrowhead  
Find site: *Burnum*, campus, PN 11/2013  
Current location: Krka National Park, Archaeological collection Burnum, Inv. no. 2830  
Procurement method: archaeological excavation, 2013.  
Material: iron  
Dimensions: height 5,7 cm, width 0,9 cm, weight 6,8 g  
Dating: 1<sup>st</sup> half of first century CE  
Published: unpublished

**17.** Socketed bodkin arrowhead  
Find site: *Burnum*, campus, PN 23/2016  
Current location: Krka National Park, Archaeological collection Burnum, Inv. no. 3766  
Procurement method: archaeological excavation, 2013.  
Material: iron  
Dimensions: height 5,1 cm, width 1 cm, weight 9,9 g

Dating: 1<sup>st</sup> half of first century CE  
Published: unpublished

**18.** Socketed flat-bladed arrowhead  
Find site: *Burnum*, amphitheater, PN 165/2007  
Current location: Krka National Park, Archaeological collection Burnum, Inv. no. 2236  
Procurement method: archaeological excavation, 2007.  
Material: iron  
Dimensions: height 7,1 cm, width 2,1 cm, weight 12,6 g  
Dating: 1<sup>st</sup> half of first century CE  
Published: unpublished

**19.** Socketed flat-bladed arrowhead  
Find site: *Burnum*, amphitheater, PN 68/2007  
Current location: Krka National Park, Archaeological collection Burnum, Inv. no. 2096  
Procurement method: archaeological excavation, 2007.  
Material: iron  
Dimensions: height 6,6 cm, width 1,8 cm, weight 9,9 g  
Dating: 1<sup>st</sup> half of first century CE  
Published: unpublished

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**Zusammenfassung**

Die Pfeilspitze ist der wichtigste Teil des Pfeils, weil uns ihre Form auch den Zweck enthüllt, wofür der Pfeil dienen sollte. Die Autoren dieser Arbeit werden versuchen auf die Frage zu antworten, ob die Pfeilspitzen, die während der archäologischen Ausgrabungen der römischen Legionslager *Burnum* und *Tilurium* auch für die Jagd auf Wildtiere verwendet wurden. Die entdeckten Pfeilspitzen zeigen uns nämlich, dass ihre Form nicht nur die Aufgabe hatte, durch so viel Körpergewebe wie möglich durchzudringen, sondern auch ungewöhnlich starke Schmerzen zu verursachen, wenn versucht wurde, sie herauszuziehen. Das lässt den Schluss zu, dass solche Pfeile auch bei der Jagd erfolgreich eingesetzt werden konnten. Die Autoren wurden dazu bewogen, diesen Artikel zu schreiben, nicht nur wegen der Form der entdeckten Pfeilspitzen, sondern auch durch die Überreste des Amphitheaters mit Knochen der wilden Tiere sowie durch die epigraphischen Quellen, in denen Soldaten als Jäger erwähnt wurden.

# LIMES XXIII

## Session 11

### Religion and Beliefs on the Frontiers





## INTRODUCTION

Session organisers / Chairpersons:

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Inscriptions, reliefs, cults both in civilian settlements  
and forts. Burial rites, cemeteries, death and afterlife.

**E**pigraphic and archaeological material represent the main sources for insight into religious life and beliefs of Roman army, situated in numerous localities along the Limes frontiers. This session proposes to analyse and interpret different aspects of various spheres of religious and spiritual life of Roman soldiers – official dedications made to Roman emperor and beliefs in connection to the imperial cult, more private dedications to gods in whom soldiers individually believed and considered as their protectors, the degree of the acceptance or resistance to Roman deities, the degree of conservatism and syncretism of indigenous deities with similar Roman ones, cult practices, different cultural influences (from other cultures, provinces etc.), the degree of influence of official ideology to beliefs of Roman soldiers, the role of soldiers in distribution of certain cults etc. In connection to religious beliefs of Roman soldiers is closely connected the sphere of life after death, burial rites and beliefs that can be perceived in different ways of burials of the dead ones, the various grave goods found in tombs and personal beliefs of dedicants for the dead ones, which can be observed in the texts and iconography of funerary monuments. Therefore, all the papers dealing with the various aspects of religion and religious beliefs in Roman army, sanctuaries or sacred places, burials and different beliefs in life after death, mystery religions and the appearance of Christianity as well, new results from excavations, finds and research, are more than welcome to be presented and fully discussed in all its variety.





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# **The Cult of God Mithras on Roman Danube Limes in Pannonia Inferior and Moesia Superior\***

## **ABSTRACT**

The existence and practice of the cult of the god Mithras, as well as the existence of mithraea, have been confirmed in the localities on Danube Limes in Lower Pannonia and Upper Moesia. In this paper, an update of already known and published epigraphic and archaeological monuments will be presented, along with the new findings, its interpretation in the local, regional context, with the emphasis on the iconography of the monuments, which in some monuments exhibits certain not often seen traits and details (like for example attribute of pedum or attribute of flagellum carried by dadophores). We shall discuss the possible ways of diffusion of the cult and locations of the workshops and try to resolve some of the questions about dedicants' identity, in the light of the hypothesis established in earlier literature that the main carriers of the cult were soldiers and military personnel in Roman army on Danube Limes in Lower Pannonia and Upper Moesia. We will also emphasize the significance of certain iconographic particularities characteristic for the Mithras' cult in the territories of the Central Balkans' Roman provinces which can be perceived also in some of the material found in Limes localities and try to interpret them in the light of other, so far known analogies in other Roman provinces.

**KEY WORDS: UPPER MOESIA, CULT, MITHRAS, ARMY, DANUBE LIMES**

**D**ifferent cults of Asia Minor and Syrian origin have been confirmed so-far on numerous localities in Danube Limes territory of Pannonia Inferior and Moesia Superior most prominent being the cult of god Iuppiter Dolichenus, gaining respect as among autochthonous population as well as among Roman-

ized inhabitants as well.<sup>1</sup> But even more popular deity among the military, but also civilian population, was the cult of god Mithras, whose first confirmations in the shape of the votive monuments and votive icons are known from the 2<sup>nd</sup> century. The analysis of epigraphic and archaeological monuments in the context

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<sup>1</sup>The Asia Minor and Syrian cults that have been confirmed so-far on the localities of Danube Limes in Pannonia Inferior and Moesia Superior are the cults of: Magna Mater, Attis, Iuppiter Dolichenus, Iuppiter Turmasgades, Iuppiter Melanus, Iuppiter Cidiessus, Zeus Okkomenos, Zeus Ezzaio, Zeus Synenos, Sabazius, Mên, Artemis of Ephesus, Dea Syria and Sol Invictus, Gavrilović Vitas 2010.

of Mithraic dedications, dedicants, iconography of tauroctony scene and discussing the possibilities of sacred topography of a mithraeum, ritual practices and the process of initiation through seven Mithraic grades were encompassed in the process of interpretation of the so-far known Mithraic monuments from Limes area in Pannonia Inferior and Moesia Superior. Particularly, the focus in this paper is on the most important finds and *mithraea* from mentioned territory, as to less known Mithraic monuments and temples from Limes localities.

The god Mithras, Iranian god of light, Creator of the Universe, was a solar deity whose cult was the last to penetrate western parts of Roman Empire from the Hellenized East. However, very soon god Mithras attained many worshippers in almost all Roman provinces, particularly in Rhine and Danube area. As a warrior against Evil, god Mithras was an excellent *exemplum* to follow for soldiers and military officials, with alluring hope of salvation and rebirth contained in the theology of the cult. The abundance of epigraphic and archaeological material in the territory of Danube Limes in Pannonia Inferior and Moesia Superior confirms the popularity which god Mithras enjoyed in the localities in aforementioned area. The votive monuments dedicated to god Mithras were found in the Pannonia Inferior localities like: Sremska Mitrovica (Sirmium),<sup>2</sup> Ilok (Cuccium), Petrovaradin (Cusum),<sup>3</sup> Budapest (Aquincum),<sup>4</sup> Dunaujvaros (Intercisa)<sup>5</sup> and Surduk (Ritium).<sup>6</sup> In the province Moesia Superior, epigraphic testimonies were found in the localities Arčar (Ratiaria), Smederevo (some monuments originally being brought from Viminacium to Smederevo

and used as *spolia*), Singidunum, Viminacium and Prahovo (Aquae).<sup>7</sup> Votive relief icons of god Mithras were, however, found in abundance, as in Limes area, but also in the interior of the provinces as well, confirming the wide diffusion of the cult among indigenous inhabitants as well. In the majority of the votive monuments, god Mithras is venerated by the epithet *Invictus*, as the deity under whose protection the dedicant and his family put themselves.<sup>8</sup> The most frequent consecration formulas are *Deo Invicto Mithrae* and *Deo Soli Invicto Mithrae*. In a few monuments, like in the case of a votive altar from Aquincum or monument from Ritium, beside the epithet *Invictus*, Mithras has also the epithet *Sacrum*, which underlines his sanctity and the grandeur of the divinity. As for the dedicants, their origin and their social status, the analysis of dedicants' names and professions showed that majority of dedicants were soldiers, like in the case of *hastatus* from the votive monument found in Viminacium,<sup>9</sup> veterans, even one *nauclerus*, commander of a ship – again from the votive monument from Viminacium.<sup>10</sup> Other professions of the dedicants include *vestiarius*, clothes dealer from the monument found in Smederevo but originally from Viminacium (we already mentioned that some of the monuments were transferred from Viminacium to Smederevo and used as *spoliae*) and a *magistrate* – again from the monument found in Smederevo.<sup>11</sup> Dedicant of the votive monument from Ratiaria is also a magistrate Marcus Cocceius Valens.<sup>12</sup> However, there is only one votive monument, found in Petrovaradin (Cusum), whose dedicant could be a Mithras' *sacerdos* – the abbreviation *sac*, could be read as *sacerdos* but also as *sacrum* and since on the wider territory of Cusum there are no other confirmations of

the god's cult, if the inscription from Cusum was really dedicated by Mithras' priest, it would make a single dedication of this type, dedicated by the god's priest.<sup>13</sup>

As for the votive icons dedicated to god Mithras, among numerous finds with "bull-slaying scene" known as *tauroctony* in the icons' center, where the cloaked Mithras with Phrygian hat is stabbing the bull, accompanied by torchbearers Cautes and Cautopates, busts of Sol and Luna in the upper corners of the scene and different animals around the deity, we can differ the icons which represented high quality works with elaborated iconography, which reflects solid artisan's knowledge of the cult's theology and icons which were custom local artifacts of average quality and uniform iconography, serially produced. The majority of so far discovered votive icons contain only the scene of tauroctony, while rare examples include upper and lower register, where different scenes from Mithras' mythology narrative are represented.

Sculptural and statuary finds are quite rare, but among them, some are really exquisite in the direction of knowing better the iconography of main protagonists of Mithras cult. In that context it is important to mention the head of god Mithras or Cautes from Aquincum (Fig. 1) or the statue of a dog from Intercisa.<sup>14</sup> An impressive find is represented in a sculptural composition from Symphorus and Marcus' mithraeum in Aquincum, known as mithraeum IV, where god Mithras is flanked with his two torchbearers who instead of torches, hold shields in their hands (Fig. 2).<sup>15</sup> A solid quality work is represented by a fragmented statue of Cautopates, also found in Aquincum. All these finds were discovered in the sanctuaries of god Mithras – *mithraea*, among which some *mithraea* like Symphorus and Marcus mithraeum from Aquincum, were discovered inside the walls of the camp, next to the house where the military tribune lived.<sup>16</sup> This particular position of the mithraeum, known for its rich finds, confirms already presumed active senatorial participation in the Mithras'



Fig. 1 - Head of Mithras or Cautes (?)  
(Photo: Ortolf Harl 2006, <http://lupa.at/8367>)

cult in the city, which was based on the numerous dedications offered by the senatorial commanders to the god.<sup>17</sup> Archaeological material, 15 votive monuments dedicated to the god Mithras and so far confirmed five *mithraea* in Aquincum, imply that senatorial commanders were very involved in the practicing and maintaining of the god's cult, continually embracing local practice of Mithras' worship.

Deeper knowledge about the Mithras' cult doctrine is implied also with round stones found in the mithraeum of Symphorus and Marcus from Aquincum, which re-

<sup>2</sup>ZPE-198-302, 303; Lupa 5710, 5711.

<sup>3</sup>CIL 3 3260.

<sup>4</sup>CIL 3, 3383, 3475, 3476, 3479, 3480, 3481, 3482. 10467; AE 1937, 198; AE 1910, 127; AE 1982, 808; AE 1990, 814, 815, 818, 819, 820; *TitAq*-01, 266; AE 2004, 1133; CIL 3, 10466, 14343, 14347.

<sup>5</sup>CIL 3 10309; AE 1908, 51; *RIU*-05, 1092. A votive altar dedicated to god Mithras, but without any dedication, only the bust of the god Sol, Lupa 8060.

<sup>6</sup>CIL 3 15138.

<sup>7</sup>AE 1966, 344; *IMS* II, n. 29, 30, 31, 32, 34, 308; *IlJug* 7; *IlJug* 483. We should mention a votive altar found in the locality Karataš (Dijana) with two letters D M, which could be read as *Deo Mithrae*, Mirković 2015, 93, n. 40.

<sup>8</sup>The epithet *Invictus* encompasses the braveness, strength, invincibility and triumph of the god in question, which's name the epithet accompanies. Besides god Mithras' name, in Moesia Superior the epithet *Invictus* stands only beside the name of god Hercules, Gavrilović 2014, 19–20, cat. no. 1, 13 with bibliography.

<sup>9</sup>*IMS* II, 32.

<sup>10</sup>*IMS* II, 31.

<sup>11</sup>*IMS* II, 30.

<sup>12</sup>AE 1966, 342.

<sup>13</sup>CIL 3 3260; *CIMRM* 2, 248, no. 1841; Cumont 1896, n. 320; The votive altar dedicated to god Mithras was found at the locality Petrovaradin (Cusum) around 1690. year. The word *sacerdos* which could stand for the abbreviation *sac* isn't the ultimate solution, because it can also stand for the epithet *sacrum*, Zotović 1973, 41, no. 53.

<sup>14</sup><http://lupa.at/11079>

<sup>15</sup>*CIMRM* II, n. 1791; Clauss 2001, 45–46;

<sup>16</sup>Szabo 2018, 106; Varheliy 2010, 145–146.

<sup>17</sup>Varheliy 2010, 145–146.



present seven spheres<sup>18</sup> and preserved fresco painting, which is quite rare and so far known only from mithraea in the localities Dura Europos, where hunting scene is preserved, Hawarti and few mithraea in Italy, as also again from Symhorus and Marcus' mithraeum in Aquincum, where some fragments of line painting were found.<sup>19</sup> In Moesia Superior, however, so far no traces of fresco painting were found in presumed *mithraea*. Mithras' cult had many worshippers in the locality Intercisa, which is confirmed with the remains of the god's sanctuary and with a Mithras' relief which represents a kind of archetype of the *Mithras tauroctonos* depictions, the original scheme characteristic for Italian and Pannonian representations of tauroctony, which sharply differs from the Balkan, Dacian and German depictions of the scene, with their own original iconography.<sup>20</sup> However, a votive icon found in Horreum Margi represents a close analogy to the icon from Intercisa which is very interesting because of the diffusion of the Mithras' cult in Moesia Superior.

As for Sirmium, the capital of the Roman province Pannonia Inferior, four votive monuments dedicated to god Mithras were found so far, of which two altars were dedicated by the decurion C. Iulius Italicus for the restoration of the god's sanctuary.<sup>21</sup> Both votive altars were found in the area of the northern periphery of the forum, where also votive altars dedicated to the Mother of the gods, god Sylvanus, the representation of a scene from the myth about Artemis/Diana and Actaeon and a relief ceramic handle of a patera with the image of the goddess Luna, were found. The very place of the monuments' discovery is near the point of the intersection of the two main city communications and it is certain that there, in the area of the north periphery of the Sirmium city forum, from the second half of the 2<sup>nd</sup> to the middle of the 3<sup>rd</sup> century, the temples of deities Diana/Luna, Magna Mater, Silvanus and god Mithras, existed.<sup>22</sup>

Judging by the inscriptions from the votive monuments and the cult objects in connection with the god Mithras found in Moesia Superior Danube Limes centers, like Ratiaria, Singidunum and Viminacium, the deity was favored among the persons in military service, but also ordinary citizens and inhabitants. As many authors agree, the god was at first rooted in the army, but soon gained his followers among the civilians too - from the inscription dedicated by Gaius Iulius Valens, veteranus of the legion VII Claudia, we find out that Mithras' temple which existed in Viminacium was restored (the inscription is dated to the second half of the 2<sup>nd</sup> century).<sup>23</sup> Gaius Iulius Valens served in the governor's office in Viminacium, at the end of his prosperous career he became a decurion of the city and repaired the mithraeum at his sole expense.<sup>24</sup> On approximately half of the votive monuments found in Moesia Superior Danube Limes area, Mithras' dedicants were in a military service, like already mentioned *hastatus* Claudius Diogenes from the legion VII Claudia (Fig. 3) or Valerius Liberalis, a soldier of legion VII Claudia. All these dedicants were probably initiated as soldiers into the Mithras' cult and when they retired, as we can see from the votive monument of Gaius Iulius Valens from Viminacium, they acted as multipliers in their civilian surroundings. Other professions of Mithras' dedicants included administrative personnel, tradesmen, artisans, freemen etc. Chronologically, the majority of Mithras epigraphic monuments and votive reliefs from Pannonia Inferior and Moesia Superior Limes area are dated from the second half of the 2<sup>nd</sup> century and to the 3<sup>rd</sup> century (Fig. 4). In certain cases, we can be more precise, like for example in the case of the mentioned votive altars from Sirmium, on which Sirmium is mentioned as *colonia*, so we can date the monuments from the middle of the 2<sup>nd</sup> century onwards or as in the case of the votive monument from Viminacium (found in Smederevo, Fig. 6), where the colonial status of the city is also mentioned and therefore the monument dates from the period after the 238. year. How well or not were

<sup>18</sup>In mithraeum from Aquincum, four stone pine-apples, seven sandstone altars (presenting spheres), eleven balks in stone (found in the northern part of the temple) and twelve stone balls found in the central aisle, were found, CIMRM II, n. 1772. These finds are similar to single examples from Lamaesis, Santa Prisca and *Castra Peregrinorum mithraea* in Rome, Clauss 2001, 126.

<sup>19</sup>Elsner (with previous bibliography) 2001, 277–279; Dirven 2016, 17–33; Gawlikowski 1999, 197–204; CIMRM II, n. 1767.

<sup>20</sup>Toth 1997/1998, 535–537.

<sup>21</sup>Mirković 1999, 94, n. 5 no. 1, no. 2; Ferjančić, Vujović, Davidović 2016, 303–304.

<sup>22</sup>Popović 2008, 119–134; Popović 2012, 26–29.

<sup>23</sup>CIL 3 14217; IMS II, n. 308; Ferjančić 2008, 289, n. 361.

<sup>24</sup>Clauss 2001, 36.



Fig. 3 - Votive altar from Viminacium  
(Photo: Ortolf Harl 2018, <http://lupa.at/5426/photos/1>)



Fig. 4 - Fragmented votive relief of Mithras, Viminacium  
(Photo: Ortolf Harl 2018, <http://lupa.at/29799/photos/2>)

the followers and initiates in Mithras cult in Danube Limes localities in Pannonia Inferior and Moesia Superior Limes area acquainted with the cult doctrine, ritual practices and initiation grades, we can't presume, because unlike for example Dura-Europos graffiti from

which we see that the initiates of a Mithraeum were named with their Mithraic grades or unlike Virunum, where the membership-list of deceased members of the Mithras' cult was saved in an inscribed plaque, we have no written proofs of Mithras' initiates whatsoever from any locality.<sup>25</sup>

In Singidunum, in western suburb of lower part of Kalemegdan Fortress, on the northern part of the area of *canabae legionis*, a mithraeum with a dromos was found, built in a cave, of total length of 10.7m, 2m wide and of 4.3m height in the middle of the cave.<sup>26</sup> In the interior of the cave, six fragmented votive altars were found, of which one was dedicated to god Mithras and one to the goddess Nemesis, while in the *dromos* two votive icons with the scene of tauroctony (Fig. 5), along with the fragments of ceramics and terra sigillata, one bone pin and one glass bracelet, were discovered. Discovered votive icons represented the Danube horsemen and the Thracian horseman. It is clear that in some moment the cave was adapted into a mithraeum and used as a sanctuary of the god. Analogous to the discovered mithraeum in Singidunum, we may presume that the dimensions of the sanctuaries in Moesia Superior Limes area, which probably existed in the localities Ratiaria, Viminacium, Aquae, Diana and Tekija, were not large and could have receive maybe 30 or little more Mithras' followers. Off course, that had nothing to do with the real number of worshippers, which is implied by the abundant epigraphical and archaeological material confirmed in Limes area. In that context, we shall return to already mentioned fragmented votive icon from the locality Horreum Margi - during the excavations of Roman municipium Horreum Margi in 1990., a fragmented marble Mithras' votive icon was found (width 57cm, height 35 cm).<sup>27</sup> In upper missing register, scenes from Mithras' life were probably presented, while in lower register below the scene of tauroctony, is a field for a votive inscription. Judging by the dimensions of the relief icon, it could have been a central icon in mithraeum which existed in Horreum Margi. Votive icon's iconography is solved in a rare way, since the scene of tauroctony was composed inside of a triangular shape, similar to the votive relief from Intercisa mithraeum. The votive icon from Horreum Margi is

<sup>25</sup>Clauss 2001, 139.

<sup>26</sup>Ђојовић 1977-1978, 139–140.

<sup>27</sup>Васић 1991, 379–385.





Fig. 5 - Votive icon from mithraeum in Kalemegdan fortress (Божовић 1977-1978, T. II, 1)



Fig. 6 - Votive icon from Smederevo (Photo: <http://virtuel-nimuzejdunava.rs/pocetna/reljef-mitre.i-62.125.html>)

dedicated by Aurelius Aquila, soldier in the military unit with the honorary title *Gordiana*, which could be the VII legion Claudia, since its presence is confirmed in the locality Horreum Margi. The epithet *Gordiana* was given after Gordian the third and since he reigned between 238. and 244, that would probably be the time frame in which the votive icon could be dated. The modeling of the tauroctony scene in triangular shape, flanked with vegetable ornament (palm?) in Horreum Margi icon, suggests deeper symbolism with eastern origin connotation. Both symbols, the triangle and tree of life imply the principles of divine and celestial, but also earthly life and there is also the connection with pithagorean meaning.<sup>28</sup> The votive icon from Horreum Margi is stylistically most similar to the votive icon from locality Tekija (Transdierna), which implies the possibility that both icons were made in some local workshop which produced this type of icons during the fifth decade of the 3<sup>rd</sup> century. However, the Tekija' votive icon represents the work of much better quality (dim. width 57cm, height 34cm) and represents a rare Mithras' find with upper and lower register, which unfortunately is damaged (the lower register is missing, Fig. 7).<sup>29</sup> The narrative in upper register of Tekija Mithras' votive icon consists of the following scenes: image of a bull in a boat, figure of a bull in front of an altar, image of seven altars which symbolically represent seven planets, the figures of a ram, a dog and a he-goat on the run, two shepherds in oriental dresses and a figure of semi lying Ocean.<sup>30</sup> The other Mithras' votive icon found also in the locality Tekija, dated to the 3<sup>rd</sup> century, a solid provincial work, is rare because of two details in the context of the images of Cautes and Cautopates – Cautes is represented not passively, but holding a bull's tail and Cautopates is holding not only a torch, but also an ear of wheat.<sup>31</sup> Holding of an ear of wheat in Cautopates left hand, represents a rare detail as a pedum in Cautopates' hand in a votive icon from Singidunum and on a votive icon from Viminacium, where both dadophors hold pedum. As an attri-



Fig. 7 - Votive icon from Tekija (Transdierna) (Photo of National museum Belgrade: <http://www.narodnimuzej.rs/antika/zbirka-djerdap-rimski-period/>)

bute replacing a torch in dadophors' hands, a pedum is frequently seen on Mithras' votive icons from Thracia, Dacia and Moesia Inferior, but also in the area of the Rhine Limes. The bull's tail is represented as an ear of wheat, which is a unique detail among the votive icons from Moesia Superior Limes localities, unlike from the finds discovered in the western Moesia Superior where this detail is frequently seen. Another rare iconographic detail on the second icon from Tekija is the *dorsuale*, ritual ribbon which is represented over the bull's back before the sacrificing of the bull, which is known in a few other Mithraic reliefs from Bologna, Sarmizegetusa and Oltenia.<sup>32</sup> Two figures of Mithras' mistae before the tripod are represented on the fragmented marble votive icon from Viminacium, similarly as in the votive icon from the mithraeum in Konjic, where Mithras' misti are also shown.<sup>33</sup> Here, vessels with snake-like applications, produced from the middle of the 2<sup>nd</sup> throughout the whole 3<sup>rd</sup> century in Viminacium, like big pots with medallions around which

a snake is applied, were found at several locations at Viminacium and some of them were probably used as ritual vessels in the Mithraic ritual practices.<sup>34</sup>

Also, so far unique find of a Mithras' votive icon was discovered in a Jupiter Dolichenus' sacrarium in the locality Brza Palanka (Egeta), with other epigraphic and archaeological cult monuments connected to the cult of Jupiter Dolichenus.<sup>35</sup> The find of Mithras' votive icon in *dolicheneum* allows the hypothesis that in its vicinity, a mithreum also existed, analogue to localities in other Roman provinces like Rome, Poroissum, Carnuntum etc., where a mithraeum and a dolicheneum were found situated close one to the other.<sup>36</sup> Unlike the other oriental cults, like the cult of Magna Mater or the cult of Sol Invictus,<sup>37</sup> the cult of god Mithras was never included into the official cults of the Roman state and as the powerful opponent to the Christianity, particularly after the edict of Theodosius the first in 394. year, when it publicly disappeared for good. However, there is an urgent need for the revision of all so-far known cult objects and newly found artefacts in connection with Mithras' cult from Moesia Superior, in the light of the contemporary interpretations and more thorough knowledge about the cult of this romanised oriental deity with numerous dedicants and worshippers during the period of the late antiquity.

### Abbreviations

#### CIL

Corpus inscriptionum Latinarum

#### CIMRM

Corpus Inscriptionum et Monumentorum Religionis Mithriacae, II, Hague 1960

#### IMS

Inscriptions de la Mésie Supérieure, I, II, III/2, IV, V,

<sup>28</sup>Ibid.

<sup>29</sup>Зотовић 1973, 74, n. 96; Few more votive icons of this type are known from localities Biljanovac, Sisak and Janjevo, Zotović 1966, 6.

<sup>30</sup>Fragmented marble votive relief icon of god Mithras, with the central scene of *tauroctony*, found in locality Tekija (Transdierna), represents one of the provincial reliefs of the highest quality. This type of Mithras' votive icons belongs to the type III of L.A. Campbell typology of composition of the reliefs, where the relief is divided into three fields of composition, among which a main scene of *tauroctony* is in the middle and is much wider than the upper and lower register. This type of reliefs is well known not only in Roman province Moesia Superior, but also in Moesia Inferior and Dacia territory. As A. Cermanović-Kuzmanović points out, since the upper part of the Mithras' votive icon was used as *spolia* in the walls of the fort from 3<sup>rd</sup>-4<sup>th</sup> century, the icon itself can be dated to the end of the 2<sup>nd</sup> or the beginning of the 3<sup>rd</sup> century, Цермановић-Кузмановић 1972, 147–151; Campbell 1968, 1–2; Зотовић 1973, 74, n. 96.

<sup>31</sup>Зотовић 1973, 74–75, n. 97.

<sup>32</sup>Mastrocinque 2017, 38.

<sup>33</sup>Зотовић 1973, 32, n. 38.

<sup>34</sup>Raičković, Redžić, Milovanović 2006, 69–76; Raičković 2007.

<sup>35</sup>Гавриловић Витас 2019, 189–206; Gavrilović Vitas 2020.

<sup>36</sup>So far known localities where sanctuaries of god Jupiter Dolichenus and god Mithras were confirmed, approximately close one to the other, are: Doliche and Dura-Europos in Syria, Rome (Aventine), Porolissum in Dacia, Carnuntum and Brigetio in Pannonia Superior, Stockstadt and Saalburg in Germania Superior and probably Virinum in Noricum (two mithraea are mentioned on the inscriptions from votive monuments), Schwarzer 2012, 172.

<sup>37</sup>Here we are referring to the introduction of the Syrian god Sol Invictus, who was introduced to Rome in 2<sup>nd</sup> century and worshipped (starting from the emperor Hadrian to Commodus, Septimius and Alexander Severus, but mostly Elagabalus), not old indigenous Roman god of sun, whose cult existed for many centuries, Halsberghe 1972, 46–47.



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## Rezime

Pored kulta boga Jupitera Dolihena, koji je brojaio najviše poklonika na dunavskom Limesu Donje Panonije i Gornje Mezije, najpopularniji kult od drugog do četvrtog veka je bio kult boga Mitre. Obilje epigrafskog i arheološkog materijala sa lokaliteta Sremska Mitrovica (Sirmium), Ilok (Cuccium), Petrovaradin (Cusum), Budimpešta (Aquincum), Dunaujvaros (Intercisa) Arčar (Ratiaria), Smederevo, Singidunum, Viminacium i Prahovo (Aquae), svedoče o izuzetnoj popularnosti kulta iranskog boga svetla. Votivne ikone božanstva, sa centralnom scenom tauroktonije (ubijanje bika od strane Mitre, u prisustvu dadofora Kautes i Kautopatesa, bisti Sola i Lune i životinja – pas, zmija, gavran...) uglavnom predstavljaju serijske proizvode, retko sa gornjim i donjim registrom u kojima su prikazani mitološki narativi iz kulta boga Mitre.

Skulpturalni i statuari nalazi u vezi sa kultom Mitre su vrlo retki, poput glave Mitre ili Kautesa iz Akvinkuma ili fragmentovane statue psa iz Intercise. Među votivnim ikonama uobičajene kanonizovane ikonografije, se po svojoj ikonografiji i kvalitetnim stilskim odlikama izdvajaju nalazi iz Čuprije (Horreum Margi)

i Tekije (Transdierna). Analiza epigrafskih spomenika je ukazala na dedikante većinom vojna lica, ali i vernike među običnim stanovništvom. Iako je konstatovano više epigrafskih i arheoloških kulturnih spomenika, saznanja samog stanovništva o teologiji kulta, religijskoj praksi i inicijaciji u kult, i dalje ostaju u domenu nagađanja.

Pored konstatovanih svetilišta boga Mitre – mitreja u Akvinkumu, Inercisi itd., postojanje mitreja se pretpostavlja i na više lokaliteta u Gornjoj Meziji kao što su Arčar, Singidunum, Viminacium, Prahovo, Karataš, Tekija, Brza Palanka. Većina spomenika kulta boga Mitre na dunavskom Limesu Donje Panonije i Gornje Mezije se može datovati od druge polovine 2. veka i u 3. vek.





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# Understanding the Danubian Horsemen Cult: New approaches

## ABSTRACT

This paper aims to summarize and present existing research aspects of the 3<sup>rd</sup> and 4<sup>th</sup> c. cult fusion phenomenon, colloquially known as the Danubian Horsemen Cult, primarily focusing on metal (lead, bronze, silver-plated) plaques as the most common objects related to the Cult. Each aspect, be it theoretical, iconographical, technical, typological, spatially-statistical or epigraphical, is presented with a brief overview of past research suggesting correlations of different methodologies and new approaches, striving to a more complete and clearer understanding of this phenomenon.

**KEY WORDS:** LEAD PLAQUES, DANUBIAN HORSEMEN CULT, DANUBIAN RIDERS, 3<sup>RD</sup> – 4<sup>TH</sup> C. AD CULT SYNCRETISM, CULT FUSION

## Introduction

The Danubian Horsemen Cult is an established term describing a specific phenomenon of cult syncretism, *i.e.* a cult fusion,<sup>1</sup> observable from Noricum to Dacia, through Pannonia, Moesia and parts of Dalmatia and Thrace, exceptionally from Gaul, Italy and Britain.<sup>2</sup> Evidence of this cult is most of the time to be seen on marble and limestone monuments and especially on lead artefacts, far more rarely on copper alloy and silver plated objects or gems and ceramic artefacts.

Bearing in mind the chronic lack of stratigraphic context of the monuments attributed to this cult phenomenon, through almost 150 years of studying, scholars have based their researches on iconographical, typological, technological, occasionally epigraphical,<sup>3</sup> and by latest date spatial and statistical aspects. Therefore, this paper aims to briefly present all of these aspects, correlating them to each other, and additionally propose some new approaches aiming to the better and more complete understanding of this phenomenon.

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<sup>1</sup>Term “cult fusion” is used to emphasize multicultural and multireligious impacts in forming of the Danubian Horsemen Cult. Imamović 1977, 245.

<sup>2</sup>Tudor 1976, 52.

<sup>3</sup>For a few known exceptions with inscriptions see paragraph INSCRIPTIONS and the note 32.

### Iconography and nomenclature of the cult

First approaches dated to the late 19<sup>th</sup> and the beginnings of the 20<sup>th</sup> century were primarily focused on the iconography of the monuments. As almost all of the monuments then known were deprived of any archaeological context, iconography was solely parameter of the interpretation and understanding of the Cult. Therefore, iconography is inseparably related with the name of the Cult. Iconographical analysis assigned the dedication of monuments to either the cult of; Cabiry proposed by Antonescu in 1889, Dioscuri by Hampel in 1903, Dioscuri/Kabyri by Hoffiler in 1904. Around the mid-20<sup>th</sup> century the Cult was interpreted as the Cult of Danubian Horsemen by authors such as I. Iskra-Janošić in 1966, E. Ochsenschlager in 1971, D. Tudor in 1976. At the end of the 20<sup>th</sup> century Lj. Zotović proposes that the Cult should be related to lunar goddess.<sup>4</sup> The most recent iconography-based interpretations correlate the Cult with Hecate-Psyche,<sup>5</sup> Epona,<sup>6</sup> Dominus and Domna,<sup>7</sup> with a strive to revitalise the Roman Imperial Cult<sup>8</sup> or even negate the term of cult relating the phenomena with *mysteriae* in which lead plaques are only a material evidence of a commitment to the mysteries of a syncretistic goddess.<sup>9</sup> A. Jovanović suggests an interesting analogy with *antoniniani* minted in *Siscia*.<sup>10</sup> The reverse depicts a female figure, two waves can be seen (symbolizing the Kupa and Sava rivers flowing through *Siscia*) while next to her two male figures wearing Phrygian caps are seated. The female figure, spreading a scarf with rich harvest, is a personification of *Siscia*. Though this iconographic connection is indirect and it is hard to believe that the female figure on the Cult's plaques is a personification of a town far-distant from supposed manufacturing centres in vicinity of *Sirmium* and *Viminacium*, this nor any other iconography-based interpretation should be easily rejected as they all have some basis, sometimes even more than that in Roman iconography and complicated syncretistic belief systems. On the other hand, it is clear that sole iconographical analysis with

accompanied analogies does not offer unique determination of the central subject of the Cult. Therefore, in our opinion, it is advisable to combine iconographical approach with others.

Despite reaching a consensus that attribution of those plaques to the Danubian Horsemen Cult is unfounded from the iconographical point of view, considering the size and arrangement of the scenes on the cult objects, the colloquial title Danubian Horsemen Cult is accepted even in up-to-date literature.

### Central deity and surrounding narrative<sup>11</sup>

Bearing in mind the heterogeneous iconographical content merging elements of indigenous, pre-Roman traditions with oriental influences, Mithraism, the Cybele Cult and motives of official Roman religion into one ensemble, it is quite evident that the Danubian Horsemen Cult is about cult syncretism. The specific attribution of this Cult to one particular (syncretistic) deity or belief system remains nonetheless quite uncertain. All iconographical types presented on lead plaques are dominated by the central female figure, supernatural in size, wearing a long belted tunic, flanked by two horsemen approaching her and saluting her by a raised hand. This exact sequence in its variations is frequently and repeatedly displayed, regardless of the material and typology of the Cult object in question. A vast number of authors have interpreted the central scene, reaching a consensus that the central female deity should be the central figure of the Cult, rather than the flanking horsemen which are by their size and position submissive to the female figure. This opinion is widely accepted among scholars who, while trying to determine her role, suggested many of the aforementioned conjectures on the identity of the central goddess.

Other depicted elements vary. This can be seen on present or absent motives like: symbols of 4 elements after *principium vitae*, *i.e.* a rooster, a snake, a lion,

a tripod, an ox or a lamb, as well as oil lamps. Depending on the type of the monument, one also sees depictions of fishes, sky elements, scenes of rituals and initiations (*criobolium*, fish dining) related to oriental cults,<sup>12</sup> military cults<sup>13</sup> and Delphic symbolism<sup>14</sup>. Under horse's hooves are represented defeated, naked, crawling/swimming<sup>15</sup> enemies or a fish. Different deities depicted on different types of monuments include Mars, Victoria, then lighting fixtures like a candelabrum or oil lamps, as well as buns, theophany and personification of imperial symbols (eagle, Sol Invictus), and motives of the morning and evening star. Listed depictions on lead plaques monuments are by spatial organization divided into two, three or four horizontal zones on square tablets or roundels, depending on the type, size and style of the plaque. Though it is obvious that only the female goddess and the flanking horsemen are consistently present, I nonetheless have to stress some new thoughts on this topic, suggesting that it is the highest zone, the so-called sky-register, which contains the key-elements and the essence of the Cult. The fact is that plaques are constantly divided after horizontal zones. It is also the fact that the most upper zone (sky-register) is the superordinated one, depicting a representative of the official religion (or their metaphors): Sol in *quadriga*, busts of Sol and Luna, an eagle, or even an inscribed dedication.<sup>16</sup> Two or three subordinated zones follow sort of a narrative, a chronological flow which can be interpreted as a life cycle of an individual, raised out of the 4 elements depicted in the lowest zone. In middle zones initiation into a cult follows, then an individual is defeating his enemy worshiping the central goddess while the entire process is overseen by an eagle, Sol or Luna from superior position. It would thus appear, and we strongly support this hypothesis, that strictly from the point of view of iconography and organization of space, *i.e.* frequent and repeated spatial organization of depictions, the highest zone might be the dominant one.

### Typology

The lead plaques related to the Cult vary in their shape, size, organization of space and, subsequently, the content (Fig. 1). There are currently 4 typologies in the available scientific literature,<sup>17</sup> grouping lead plaques according to their form, according to the organisation of space in zones or *aediculae*, according to the depicted scenes or according both to their forms and depicted contents. Such divisions are based on the content itself, classifying identically shaped objects (roundels, rectangles, rectangles with pediments)<sup>18</sup> into different groups which is the content division rather than the pure typological alignment. Shape of the objects will be of no help in understanding the iconography of the Cult and its essence, but on the other hand, shape of the monuments can reveal their practical use which is an initial progress in understating their practical purpose. Taking into account existence of 4 different typologies overlapping content and shape criteria, does not ease an understanding of a utilization of these objects but rather causes cacophony between a form and content. Discrepancies could be avoided by selecting one of the existing typologies as the most relevant one or, alternatively, by devising a new typology which would amalgamate existing ones. Personally, I am inclined to use the typology by R. F. Ertl as the relevant one as Ertl's typology is deprived of content variants, details and spatial organization, being orientated mostly to plaque's shapes,<sup>19</sup> what, at the very beginning, is the definition of typology and, if nothing else, could at least suggest practical use of plaques according to their material form (wall applied icons, neck-worn amulets, pocket-worn amulets, *etc.*).<sup>20</sup>

### Spatial distribution of finds

Interpretation of spatial context and density of finds is a relatively new research approach when it comes

<sup>4</sup>Zotović 1998, *passim*.

<sup>5</sup>Bendžarević 2011, 91–93.

<sup>6</sup>Plečić 2013, 68–69.

<sup>7</sup>Szabó 2017, *passim*.

<sup>8</sup>Ochsenschlager 1971, 59–61.

<sup>9</sup>Tatcheva 2000, 244–245.

<sup>10</sup>A. Jovanović, 1998, 21–22 after: RIC V/2, 100, No. 766.

<sup>11</sup>For detailed iconographical analysis see: Popović 1992, 1078–1081.

<sup>12</sup>Fish dining is related to the cult of the Syrian goddess Atargatis, Plečić 2013, 60.

<sup>13</sup>Iskra-Janošić 1966, 59.

<sup>14</sup>Table in the 3<sup>rd</sup> register on some type of the monuments is interpreted as a rock. Pop-Lazić 2002, 12–13.

<sup>15</sup>For an interpretation of the position as swimming see: Szabó 2017, 83.

<sup>16</sup>See paragraph INCSRPTIONS below.

<sup>17</sup>Iskra-Janošić 1966, Ochsenschlager 1971, Tudor 1976, Ertl 1996.

<sup>18</sup>As an example compare 3 round shaped types; type Beograd I and type Popinci and Mačvanska Mitrovica B variant (Janošić 1966, 56–58), with sole roundel type H in Ertl's typology (Ertl 1996, 19) or type B f in Tudor's typology (Tudor 1976, 98).

<sup>19</sup>Ertl 1996, 19.

<sup>20</sup>Ochsenschlager 1971, 57; Tudor 1976, 74–75; Pavlović 2005, 99; Crnobrnja, Plečić 2015, 183–184, Vajzović 2015, 107.





Fig. 1 - Variants of lead plaques preserved in the Archaeological Museum in Zagreb, photos by and made by I. Krajcar (AMZ). 1) Inv. no. AMZ-A-16892, place of acquisition: Dalj, 2) Inv. no. AMZ-A-18507, place of acquisition: Rumski Petrovci 3) Inv. no. AMZ-A-13518, place of acquisition: Divoš, 4) Inv. no. AMZ-A-16831, place of acquisition: Vinkovci 5) Inv. no. AMZ-A-18494, place of acquisition: Mačvanska Mitrovica 6) Inv. no. AMZ-A-18492, place of acquisition: Popinci

to the Danubian Horsemen Cult. This investigation is based on provided data on locations of chance finds. Some scholars, A. Crnobrnja and B. Plemić in the first place, are correlating finding spots with the character of archaeological sites in the vicinity; be it a civilian settlement, military structure or a graveyard.<sup>21</sup> Their research has clearly indicated how the existence of the Cult should not necessarily be related to the military forces in Pannonia. On the contrary, only 6% lead plaques from SE Pannonia can be related to a military find context. This Spatial distribution analysis is of great significance, as it notably changes earlier interpretations<sup>22</sup> that the army, because of its heterogeneous ethnic composition suitable for the implementation of various forms of beliefs and traditions, was playing a major role in the practice of this Cult and its spreading. In my opinion, the described research methodology followed by subsequent statistical analysis could provide key-guidelines for detecting Cult worshipers.

#### Production and re-use

Technology wise, lead plaques are considered to be a serial product moulded in what must have been a ceramic matrix. According to the latest corpus of these finds, lead plaques mostly originate from both Pannoniae and Moesiae, far more rarely they appear in Dalmatia, Italy, Gaul and Dacia (Fig. 2). Density of lead plaques is highest down the Lower/Upper Pannonian and Lower Moesian Limes following the line *Teutoburgium – Sirmium – Viminacium*. Subsequently, the manufacture centres should be located in that area, around bigger urban centres located between rivers Drava and Sava and Dunav,<sup>23</sup> most likely in *Sirmium*<sup>24</sup> or its vicinity where the number of chance finds is the highest. New light on this hypothesis is brought by M. Lazić and M. Ružić who consider that plaques could have been secondly produced by hammering. This more affordable process of copying assumes the existence of a matrix made of material harder than lead, *i.e.* bronze or iron.<sup>25</sup> This interpretation would explain small differences in details on the plaques of the same type. Though this is just a hypothesis, I believe it should

Dacia Superior	1
Dacia Inferior	11
Moesia Superior	13
Moesia Inferior	6
Dalmatia	3
Pannonia Inferior	387
Pannonia Superior	22
Italia	1
Gallia	1
Unknown provenance	5
OVERALL:	450

Fig. 2 - Distribution of the lead plaques across the provinces, made by O. Domiter after Ertl 1996, 147–154.

be shared as a new and fresh idea on production and distribution of the plaques.

#### Stratigraphical context and dating

The most of known metal objects are deprived of any stratigraphic context as they are 19<sup>th</sup> - early 20<sup>th</sup> c. museum acquisitions, entities of private collections, results of illicit collecting, trafficking and metal-detecting which are broader social issues to be discussed separately.

Therefore, two finds are especially interesting. Both are from an archaeological context and made in alternative materials. The bronze plaque from Đelilovac (Fig. 3) was discovered during salvage excavations of a Roman *villa rustica* in Đelilovac, in the northern-eastern part of Roman Dalmatia. The plaque is house-shaped and divided into 3 framed zones. In the centre of the middle zone the goddess is depicted standing on a circle (probably a stylized throne). In her raised hands she holds two branches – an attribute rather typical for Diana than for the central deity of the Danubian Horsemen Cult – while approaching horsemen are saluting

<sup>21</sup>Crnobrnja, Plemić 2015, Fig. 4.

<sup>22</sup>Iskra-Janošić 1966, 59; Tudor 1976, 55–58.

<sup>23</sup>Boruzs, Szabó 2009, 73, Fig. 8.

<sup>24</sup>Popović 1986, 121.

<sup>25</sup>Lazić, Ružić 2015, 276–277.



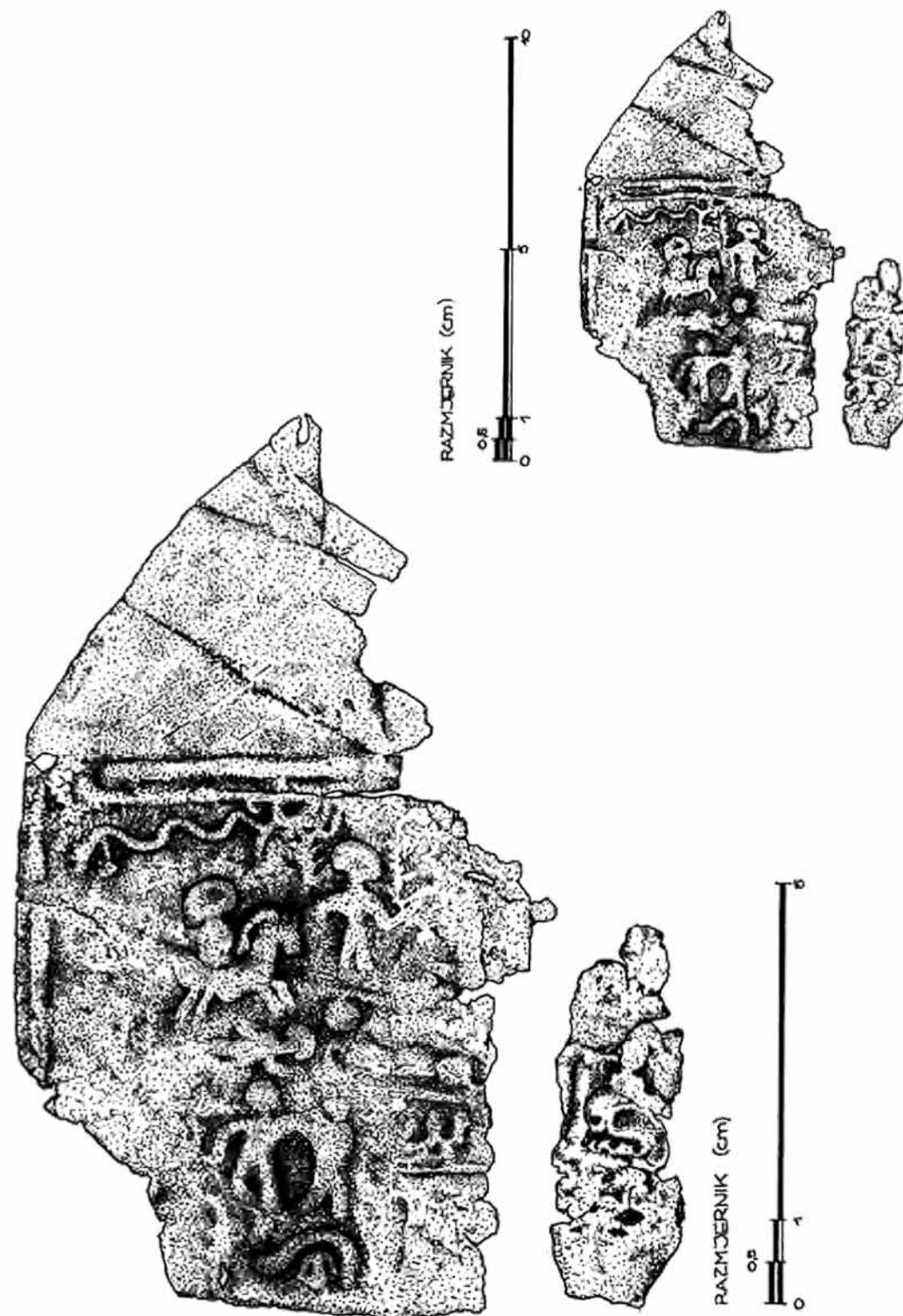


Fig. 3 - Bronze plaque from Delilovac, edited by I. Krajcar (AMZ) after D. Vajzović 2015, 106.

her. The plaque was moulded in bronze and due to its unsophisticated manufacture, as well as peculiar iconography, has no direct stylistic analogies.<sup>26</sup> According to the archaeological context, the plaque should be dated to the 2<sup>nd</sup> half of the 3<sup>rd</sup> c. AD.<sup>27</sup>

Another plaque, discovered in Merbes-le-Château in *Gallia Belgica*, is made in silver-plated copper alloy (Fig. 4). Partially preserved plaque has been divided in horizontal registers following the usual iconographical symbolism (divided horizontal zones are framed by snakes, central deity on oval pedestal is dressed in a tunic making an umbo, flanked by two horsemen, right horseman dressed in a tunic and a Phrygian cap holds a spear, both horses are standing on crawling bearded enemies, than in lower register a man wearing a ram mask is to be seen, than birds, tripod with three breads, a candelabrum, seated lion, snake). Interesting is the production technique and quality which demonstrate author's great sense for modelling. The general iconography was made by *repoussé*, from the back of the plate, allowing craftsman a carving work in positive to specify the shapes or to add decor elements. The plaque is made of a thin copper alloy where hallows are filled with silver hammered tin creating a silver black contrast.<sup>28</sup> The plaque was found inside a carefully deposited hoard alongside two cauldrons of copper alloy, as well as a casket containing two silver spoons, a purse of 122 silver *antoniniani*, a perfume phial and four worn *sestertii*.<sup>29</sup> The hoard, dated around 260 AD, is again related to a civilian settlement, deposited inside a domestic cult room of a Roman *villa rustica* and is very likely of votive or religious character.<sup>30</sup>

Bearing in mind some known iconographical analyses which show noticeable iconographical similarities of the central goddess with Severan women, e.g. *Iulia Domna*, *Iulia Maesa* and *Iulia Maema*,<sup>31</sup> additionally supported with context-based dating of above mentio-

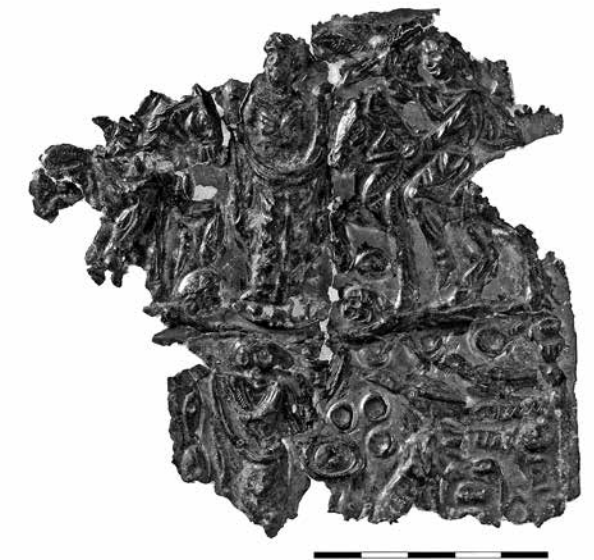


Fig. 4 - Silver-plated plaque from Merbes-le-Château, edited by I. Krajcar (AMZ) after N. Paridaens 2010, 414.

ned objects from Delilovac and Merbes-le-Château, the production of the lead plaques of the Danubian Horsemen Cult should not be dated prior to the first decades of the 3<sup>rd</sup> c. AD.

### Inscriptions

Inscribed monuments are rare exceptions, limited to engraved gems,<sup>32</sup> a couple of plaques with inscribed acclamations<sup>33</sup> and one lead icon with a moulded bas-relief inscription in convex capital letters *DOMINO* (dative of *Dominus*).<sup>34</sup> The latest, found during a metal-detecting survey in vicinity of *Quadrata* in *Pannonia Superior*, recently interpreted by A. Szabó and dated to the middle 3<sup>rd</sup> c. AD, puts a new light on this Cult. According to Szabó, dedication to Dominus should be associated with unknown pre-Roman deities from Illyricum, which were called by the names of *Dominus* and *Domina*. Therefore, in the opinion of A. Szabó, lead

<sup>26</sup>Vajzović 2015, Fig. 1, *passim*.

<sup>27</sup>*ibid.*, 109, 113.

<sup>28</sup>Paridaens 2010, 415–416.

<sup>29</sup>*ibid.*, Fig. 4.

<sup>30</sup>*ibid.*, 420.

<sup>31</sup>After: Popović 1992, 42; Crnobrnja, Plemić 2015, 178.

<sup>32</sup>Tudor 1969, cat. no. 188, 189, 191, 192, 194.

<sup>33</sup>Clauss 2006; Gordon 2017.

<sup>34</sup>Szabó 2017, Fig. 1.



plaques of the Danubian Horsemen Cult could be related to a belief system dedicated to those two deities.<sup>35</sup>

### Conclusion

Lead plaques are the most widespread and the most numerous objects related to the Cult. Therefore, I strongly believe that they should be in the prime focus of research as they might lead to the best possible understanding of this cult fusion phenomenon. The methodological tool I would suggest to start with is a revived and complete corpus of the finds,<sup>36</sup> based on one unifying, consensually reached typology with accompanying statistics.

First approaches were exclusively focused on iconography, while new investigations take in consideration the spatial distribution, the density of finds as well as the manufacturing technology supported by few precious finds from stratigraphic contexts.

The Roman army was often considered as the crucial factor which played a leading role in practicing and spreading the Cult. Though I do not *a priori* negate the possibility that the army played an important role in the spreading of the Cult, I am inclined to believe, supported by the spatial distribution hypothesis as the element which must be taken into a consideration, that soldiers were neither the sole nor the main practitioners of the Cult.

In this paper, my intent was to emphasize the necessity of correlating all previously mentioned scientific approaches, hypotheses and arguments. Though any of these approaches can't separately solve the mystery of this cult fusion phenomenon, I strongly believe that compiling all the data those approaches provide may lead towards a more complete understanding of these metal votive objects dated to the 3<sup>rd</sup> and 4<sup>th</sup> c. AD and, subsequently, the understanding of the essence of the Cult.

Knowing the exact number, location, density and spatial context should be clues towards the understanding of production, distribution and purpose of lead plaques,

eventually resulting in identifying worshipers of the Cult and comprehending the essential idea hidden behind these peculiar objects which spark the interest of academia for more than 150 years.

It is my belief that we will eventually fathom the essence of this cult and reach a consensus about its attribution and designation, after we take into account different aspects of the cult and apply a number of methodological approaches, as described in this paper. Nonetheless, in the meantime, I would stay rather eclectic as far as any firm attribution or appellation is concerned since our current state of research and understanding would make any rigid attitude in those matters a mere conjecture.

### List of abbreviations

#### CMRED

Corpus monumentorum religionis equitum Danuviorum

#### LIMC

Lexicon iconographicum mythologiae classicae

#### RIC

The Roman Imperial Coinage

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<sup>35</sup>*ibid.*, 51–54.

<sup>36</sup>Estimated number of known metal plaques is 1200 - 1300, see: Szabó 2017, 12. The latest unifying catalogue consists of 450 published plaques, see: Ertl 1996, 147–154.

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#### Sažetak

Rad predstavlja znane aspekte, metodološke pristupe  
i spoznaje o metalnim, ponajprije olovnim, pločicama  
Kulta podunavskih konjanika. Predstavljen je teorijski  
okvir te tehnološki, tipološki, prostorni i ikonograf-  
ski aspekti izučavanja ovog kulta s nekoliko novijih  
hipoteza, dva znana nalaza iz stratigrafskog kontek-  
sta i nalaz s epigrafskim svjedočanstvom *DOMINO*.  
Istaknuta je važnost dovođenja u svezu mjesta nalaza  
spomenika i prostornog karaktera nalazišta (vojna po-  
staja, civilno naselje, groblje), upravo onako kako je  
to učinjeno u radu A.Crnobrnje i B.Plemić iz 2015.  
godine. Predloženo je iznalaženje jedne objedinjujuće  
tipologije metalnih nalaza Kulta te je naglašena pot-  
reba za revizijom i dopunom posljednjeg korpusa  
nalaza iz 1996. godine kao temeljnim metodološkim  
alatom za daljnja istraživanja. Umjesto zaključka,  
predložena je korelacija teorijskih postavki i pred-  
stavljenih istraživačkih pristupa koji bi mogli upotp-  
niti spoznaje o ovom fenomenu kultnog sinkretizma  
karakterističnom za razdoblje 3. i 4. st. te proniknuti u  
esenciju samog kulta, njegove nositelje te, posljedično,  
definirati sam naziv ove pojavnosti.





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# What are we missing? On the invisibility of *Silvanus Orientalis*

## ABSTRACT

The aspect of *Silvanus* as the guardian of borders (*tutor finium* or *Orientalis*) is not recognizable from the votive inscriptions dedicated to him or from his figural representations. However, the distribution of the votive monuments dedicated to *Silvanus* may indicate that precisely this aspect of guardian of the borders was well known to his worshipers (soldiers and civilians). The intention of this paper is not to give the final and absolute answer to the question from the title, but to present the available information about *Silvanus Orientalis* and open the possibility of this aspect being carried and honoured by his worshippers. Based on a short overview of written sources as well as a general description of votive monuments from Pannonia, the aim is to establish the connection from the two categories (the placement of monuments and the aspect of *tutor finium*). Following the question from the title, we must ask ourselves: What else are we missing?

**KEY WORDS:** SILVANUS, SILVANUS ORIENTALIS, SILVANUS TUTOR FINIUM, GROMATICI VETERES, CARNUNTUM, AQUINCUM, PANNONIA, LIMES

The aspect of *Orientalis* (the guardian of the borders) in *Silvanus*' cult is not recognizable from the votive inscriptions and figural monuments representing him. However, the distribution of the votive monuments dedicated to *Silvanus* perhaps shows that the aspect of *Silvanus* as the guardian of the borders i.e. *Orientalis* could have been well known to his votaries (both soldiers and civilians). The intention of this paper is not to answer the question from its title, but merely to present all the available information on *Silvanus Orientalis*. A short overview on how written

sources described *Silvanus* will be given, as well as an overview of the votive monuments from Pannonia, with the aim of establishing and representing the correlation and comparison between the two. The question expands to: what else are we missing?

*Silvanus* is the Latin deity of forests and fields. He is also described as the divinity protecting the flocks of cattle, promoting their fertility, and warding off predators.<sup>1</sup> His name, translated, probably meant 'the one who manages the forest'. He is the god of the forests,

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<sup>1</sup>Nagy LIMC, 763.



but not of forests in their entirety, but in particular those areas which border clearings in regions still to be completely conquered. Therefore he is partially ‘civilized’ and partially wild, and as such he reflects the experiences of early settlers to Italy, whose descendants took him to the frontiers of the Empire. Silvanus has always been a friendly god who benevolently watched over immigrants in foreign lands.<sup>2</sup> Not only he did he reflect the experiences of the early inhabitants of Italy, but also certain aspects of religious assembly, or natural human response to the tamed and the untamed, the wild and the civilized. This subject was elaborately discussed in the article by M. Milićević Bradač, related to the relief of Silvanus and Diana from Čitluk (Aequum).<sup>3</sup>

The beginnings of the Silvanus cult were probably in the animistic phase, with Silvanus not yet conceptualized in human form. As Ovid says in *Metamorphosis*, in the passage where Jupiter assumes lordship over Silvanus embracing him into his circle, while threatening to destroy the human kind: “Mine are the demigods, the wild spirits, nymphs, fauns and satyrs, and Silvani of the hills. Since we have not yet thought them worth a place in heaven let us at least allow them to live in safety in the lands we have given them. Perhaps you gods believe they will be safe, even when Lycaon, known for his savagery, plays tricks against me, who holds the thunderbolt, and reigns over you.” (Ovid, *Metamorphosis*. I, 177-198).<sup>4</sup>

The development of his cult in the early Republican era still remains mysterious. Iconographically, he appears only in the Imperial period. Such scarcity of data from the Republican period, together with the fact that not one public monument was ever dedicated to Silvanus (prior to the Imperial period), no feast ever arranged, nor was his priesthood organized at a so called ‘state’ level, as far as we know, bears witness to the fact that throughout this period, rich, aristocratic classes were never attracted to Silvanus.<sup>5</sup> However he still remained a powerful deity whose strength is also reflected in the fact that he was celebrated during the later Imperial

period, moreover, he gained popularity at the same time as the old Roman public deities were losing their significance. The cult of Silvanus we recognize from the first three centuries AD serves only as a guide in any attempt to reconstruct his character and/or meaning in the early Republican period. Furthermore, Silvanus’ character, and/or his name, at the very beginnings of his cult could easily have differed from that of the Imperial period.<sup>6</sup> There is a possibility that the people of the late Republic and/or the early Empire simply forgot the basic meaning of his name, or his purpose changed, and that Silvanus was subsequently linked with the forest. Something similar happened with Mars who in the beginning was an agrarian deity and only later did he become the supreme god of war.<sup>6</sup>

Pannonian Silvanus is usually dressed in boots and a short tunic, with or without cloak (which does not necessarily hold fruit). In one hand he holds the *falx*, and in the other the tree branch, just as Italic Silvanus does. The vast majority of inscriptions and reliefs are dated to the time of Septimius Severus, whom some authors see as the great promoter of Silvanus. The number of inscriptions dedicated to Silvanus before the Severan dynasty is smaller, probably due to the fact that the Marcomanni wars destroyed the larger cities which (e.g. Aquincum, Brigetio and Carnuntum) and these cities have yielded the majority of inscriptions and reliefs.<sup>7</sup>

As already mentioned, Silvanus was not particularly worshipped by the aristocracy, although they probably respected his authenticity and age. Senators, knights and decurions make up less than 3% of the 1100 inscriptions dedicated to Silvanus.<sup>8</sup> The wide popularity of Silvanus among the lower classes reveals their independence from certain official religious models. Conditions of life for these men and women were different from those experienced by the people of the higher class, and it is only logical to assume that so were their spiritual needs. Before the popularity of Silvanus became widespread in the cities it is reason-

able to assume that peasants and farmers who were directly involved with the work on and around the land should turn to him for support, rather than the wealthy landowners. This is also probably the reason why Silvanus does not appear in the works of writers such as Varro and Columella<sup>9</sup>, whose readers were mostly landowners not involved in farming directly, but through the labour of their ‘employees’, i.e. *vilicus*.<sup>10</sup> Higher classes turned rather to Pales for the protection of their herds and flocks; to Faun and Pan as forest deities; and to Ceres, Liber, Jupiter, Venus, Flora, Pomona, Terra Mater and Priapus as patrons of agriculture. At the same time, these mentioned deities often appeared in Roman literature.<sup>11</sup> So the key as to why Silvanus was not revered by the aristocracy might also lie in the education that was accessible (and compulsory) to the upper classes, since they could not learn or read much about Silvanus. Silvanus found his place among the lower classes and the less educated, and what we can read about him today, came from the pens of the educated writers whose vision could have been distorted or biased. Finally, the fact that his votaries were mostly of the lower class remains unchanged, as the fact that Silvanus, in his essence, was the deity of nature, flocks, and both cultivated and uncultivated land.

Almost all the ancient writers do agree in one instance and that is Silvanus’ old age. Some of them also imagined him as scary and hairy. Evidently, all those main characteristics were demonstrated in Roman literature.<sup>12</sup> Horace wrote of him as the *horridi dumeta Silvani* – ‘the hirsute/terrible Silvanus’ (Horace, Ode III, 23). In another instance Horace described Silvanus as reigning over forests and flocks, praising men who still live remote from daily business, after the manner of the ancient race of mortals, who cultivates his paternal lands with his own oxen, disengaged from every kind of usury. So, when the autumn came, men were reaping what they sowed, at the glory of both Priapus and Silvanus, whom Horace named as *tutor finium* – the guardian of borders. (Horace, Epod. II, 22). Besides romanticising description of the ‘old ways of living’, we are also acquainted with the tool both Silvanus and

Priapus were using – the sickle. At the same time this tool, the sickle (*falx*), is the one with which he was most usually portrayed on the reliefs found in Pannonia. (Fig. 1 )

Horace was not the only one who praised the old way of living, and with it Silvanus. Virgil also expressed his admiration to the men who lived of the land, honouring the old rural gods like Pan, Silvanus, and his sister-nymphs. (*Georgics*, II, 494-508).

In addition to these, it was the absence of Silvanus from the forest that contributed to the state of fear and terror, as Lucan tell us in his *Farsalia* (3.402) while describing a grove which no hand of man ever touched, and in which not even master of groves Silvanus nor rural Pan had their place, but was ruled by the horrible barbaric rituals and ancient myths.

Silvanus’ old age and ancient origin was also recognized, again by Vergil, this time in *Aeneid*. In that respect he is mentioned as the god of flocks and fields, but in addition to that aspect of his, the whole context in which Silvanus is placed presents us with the information from which we learn that the sacred grove of Silvanus was the grove that limited and demarcated the encampment of Tuscans. Even though Vergil does not write about Silvanus as *tutor finium* in so many words, his sacred grove mentioned in the text is positioned at the very edge (or border) of the battlefield. (*Aeneid*, VIII, 585-607)

War and battlefield being pointed out, this is not the first time that Silvanus is mentioned in a somewhat war-like environment. Cato writes of the ritual in honour of Mars Silvanus. The general opinion or consensus is that Silvanus was not the epithet of Mars, and that the ritual was carried out to honour both gods<sup>13</sup>. (*De agricultura*, 83) From this ritual in honour of Mars and Silvanus we learn that women were not allowed to participate in it, but slaves and freedmen were both allowed and prompted to honour both gods. It can be assumed that at other times slaves were forbidden to

<sup>2</sup>Dorcey 1992, 7–13.

<sup>3</sup>Milićević Bradač 2008, 359–366.

<sup>4</sup>Dorcey 1992, 50–51.

<sup>5</sup>Meid 1957, 72; Klotz 1927, 18.

<sup>6</sup>Beard, North, Price 1998, 47–48.

<sup>7</sup>Fitz 1980, 163; Mocsy 1974, 251–252; Dorcey 1992, 73.

<sup>8</sup>Dorcey 1989, 1

<sup>9</sup>Dorcey 1992, 137

<sup>10</sup>I.e. Varro (*De re rustica*, 1.1.4.-7.), mentions twelve deities associated with agriculture: Jupiter, Telus, Sol, Luna, Ceres, Liber, Robigus, Flora, Minerva, Venus, Limpha and Bonus Eventus. His list does not include Silvanus.

<sup>11</sup>Perinić 2016, 57

<sup>12</sup>Perinić 2016, 1

<sup>13</sup>Dorcey 1992, 9





Fig. 1 - Budapest (Aquincum), Museum of Aquincum in Budapest. Silvanus in a tunic and with a cape. On his head is a Phrygian cap. In his left hand is a leafy branch, and a falx in his right hand. Behind him a dog. Date: the middle of the 2nd century AD. Lit: LIMC, 767, fig. 69; Perinić 2016, IV/16; picture taken from user Bjoertvedt. [https://commons.wikimedia.org/wiki/File:Aquincum\\_BHM\\_tablet\\_IMG\\_0605\\_silvanus.jpg](https://commons.wikimedia.org/wiki/File:Aquincum_BHM_tablet_IMG_0605_silvanus.jpg)

participate in rituals dedicated to Silvanus and/or Mars. But, in any event, it is clear that different social groups gravitated towards certain deities, partly by choice and partly because they were deliberately excluded.

When Juvenal wrote about women, he also mentioned that no women could participate in the rituals for Silvanus, and he probably draws his conclusion from the above mentioned Cato. But the passage from Juvenal's Satires is too captivating and rooted in contemporary political discourse not to be quoted in its entirety (Satires, VI, 446):

But most intolerable of all is the woman who as soon as she has sat down to dinner commends Virgil, pardons the dying Dido, and pits the poets against each other, putting Virgil in the one scale and Homer in the other. The grammarians make way before her; the rhetoricians give in; the whole crowd is silenced; no lawyer, no auctioneer will get a word in, no, nor any other woman; so torrential is her speech that you would think that all the pots and bells were being clashed together. Let no one more blow a trumpet or clash a cymbal; one woman will be able to bring succour to the labouring moon! She lays down definitions, and discourses on morals, like a philosopher; thirsting to be deemed both wise and eloquent, she ought to tuck up her skirts knee-high, sacrifice a pig to Silvanus, and take a penny bath. Let not the wife of your bosom possess a special style of her own; let her not hurl at you in whirling speech the crooked enthymeme! Let her not know all history; let there be some things in her reading which she does not understand. I hate a woman who is for ever consulting and poring over the "Grammar" of Palaemon, who observes all the rules and laws of language, who quotes from ancient poets that I never heard of, and corrects her unlettered female friends for slips of speech that no man need trouble about; let husbands at least be permitted to make slips in grammar!

Women were also supposed to fear Silvanus during childbirth, if what Augustine writes is correct. A ceremony to cast Silvanus from the house was performed by three men on the threshold during childbirth. Here Augustine quotes Varro (now lost), describing Silvanus as a cruel deity who would harm a woman and her new-

born during delivery. Furthermore, he states that Silvanus and Pan would together attack and sexually assault women at night. For now it is believed that here Augustine either incorrectly quotes Varro, or that he replaced Silvanus and Faun, but there is also the possibility that Augustine (i.e. Varro) was right.<sup>14</sup> (Augustine, De civitate Dei, VI-9). However, yet again, there is a border to be crossed, in this case it was a threshold of the house.

Such, at least dichotomous, personality, whether we are to be feared of Silvanus or not, especially if you are a woman, can possibly be explained with one of the first epithets mentioned here, the one that Horace gave him: *tutor finium*, the guardian of borders, overseer of the boundaries separating the farm from the woods, and perhaps, metaphorically, good and evil.

Moving onward with the *Gromatici Veteres* (in *Corpus Agrimensorum Romanorum*) that in particular represent Silvanus as a god of boundaries under the otherwise unheard-of epithet of *Orientalis*. Namely it was Dolabella, active in Illyricum during Tiberius' reign, who described Silvanus as a tripartite god, as can be read below. (*Gromatici veteres*, 302, 13-19).

Why does all property worship Silvanus? Because he was the first to lay a boundary marker on the ground. For all property has three Silvani. One is called Domestic (Domesticus), sacred to property (or home, we may add today). Another is called rustic (Agrestis), sacred to shepherds. A third is called Orientalis on whose border a sacred grove is placed, from which two or more boundaries begin. And so between two or more boundaries there is a sacred grove.<sup>15</sup>

From this short but indicative overview of the ancient sources we have seen that almost all the writers do agree on Silvanus' old age, as the first of gods, or even demi-gods, and some of the authors do mention his name in plural, as Dolabella accentuated in *Gromatici Veteres*. Furthermore, his character as the god of boundaries, *tutor finium* (Horace) or *Orientalis* (*Gromatici Veteres*), can also be discerned both from Vergil who limited the battlefield with the sacred grove of Silvanus, and from Augustine who emphasized the threshold of the house to be crossed.

<sup>14</sup>Dorcey 1992, 23-24

<sup>15</sup>Campbell 2000, 222, 10-14.



This dichotomy of his nature or character, is also visible in the fact that Silvanus' worshippers lived mostly in cities, although Silvanus is understood as a rustic deity of the countryside. Obvious as it is that his origin was not urban but rural, however, throughout the Imperial period his cult is almost non-existent in the countryside.<sup>16</sup> Votive monuments dedicated to Silvanus originate from the large cities, for example *Carnuntum* and *Aquincum*. It is presumed that early in his cult, the worshippers moved from rural to urban areas and they brought with them somewhat wilder Silvanus than the one we recognise from the Imperial period. It is logical that Silvanus would shed some of his rural characteristics after generations of his followers became city dwellers and had forgotten the ways of rural life that they probably romanticized and idealized. In this way, separated from his original pastoral environment, the nature of Silvanus evolved to meet the different needs of his followers in the city. He survived this process of transition, where one feature is changed in accordance with another (rural/urban life), by becoming a patron of home, family, and personal property.<sup>17</sup> Similar adjustment of features can be noticed on the votive monument from Dunabogdány (Cirpi) (Fig. 2)<sup>18</sup>, found in a civil settlement next to the camp. It was dedicated by the veteran Julius Secundinus in AD 249 when he enlarged and modified (*spatio templum minors (sic) ampliavit*), the god's existing sanctuary. Silvanus is shown in an aedicule, from which we can probably assume how the sanctuary looked. A special feature, previously unrecorded on Silvanus monuments from Pannonia is the pair of spears Silvanus holds in his right hand. A parallel for this monument was found in the monument at Dachsberg (Gaul) where Silvanus also holds a spear, but that relief is not followed by an inscription.<sup>19</sup> The spear in Silvanus' hand can be found on reliefs from Dacia, where it replaced the branch Silvanus usually held.<sup>20</sup>

Roman state religion was essentially a city phenomenon, closely connected with state political centres. Why, then, did the cult of Silvanus survive, and even

flourish, in the Imperial period when many other older deities, with established feasts and temples in the urban communities, become less important and finally disappeared completely? Two centuries previous to Silvanus' 'rise' Varro wrote of the similar oblivion that had befallen the traditional older gods. (Varro, *De lingua Latina* 6. 19; whereby the author complains that the Romans had never heard of the goddess Furrina, even though she had a flamen.) The rituals associated with Silvanus obviously still represented the core of the family cult. He was not narrowly specialized in the way *Robigus* was for example. His worship was not limited to one site and therefore moving from one location to another could not impair his powers or cause him to lose his importance. Silvanus, together with Lari, Penati, Vesta and Janus, remained at the heart of family rituals for centuries. The other deities associated with agriculture continued to be revered in towns and cities mostly because their agrarian aspect was not particularly emphasized: the feasts of Ceres and Pales continued to attract huge crowds. Silvanus gradually lost much of his original rural character, as did the other agricultural deities mentioned, once his adherents moved to reside in the cities. Part of his popularity among worshippers in urban metropolises, may be explained, with no doubt, by the distance and remoteness of the idealized villages they had left behind and exchanged for poor city living conditions. Silvanus was no longer invoked only as protector of animals and fields, but he also served as an outlet and release for the stresses of city life, as poorer inhabitants could not afford to own their own land or farm.<sup>21</sup> His shrines in Rome were mostly outside of the city and privately organised. One marble inscription from Rome (CIL VI, 10321) records the deed between the owner of the land Iulia Monime and her associates (it is not clear who her associates were, possibly other owners of the land property), with the consent of her tutor Caius Memius Orion, and *collegium Silvani*, or the club devoted to Silvanus. Usually such *collegia* were funerary associations, which assured proper burial and commemoration of its members. That piece of land stood between the 2<sup>nd</sup> and the 3<sup>rd</sup>



Fig. 2 - Silvanus with a Phrygian hat. In his right hand are spears, and in the left is a *falx*. To his left side is a dog. Date: 249. AD. Silvanuso Silvestro (sic!) / Aug(usto) Iul(ius) Secundi/nus vet(eranus) tem/plum spa/tio mino/ri (sic) amplia/vit / de s(uo) l(ibens) m(erito) / Aemilia/no et A/quillin/o co(n)s(ulibus). Lit: AE 1971, 323; RIU III, 832; Perinić 2016, IV/5. Picture taken from Szőke, M. 1971, Building Inscription of a Silvanus Sanctuary from Cirpi, *Acta Archaeologica Academiae Scientiarum Hungaricae*, Vol. 23, 221–224, Fig. 1.)

<sup>16</sup>Dorcey 1992, 50.

<sup>17</sup>Perinić 2016, 57–60.

<sup>18</sup>AE 1971, 323.; RIU III, 832 (from where the picture was taken); Perinić 2016, 111, II/5.

<sup>19</sup>Szőke 1971, 224.

<sup>20</sup>Dorcey 1992, 77–78.

<sup>21</sup>Dorcey 1992, 140–141



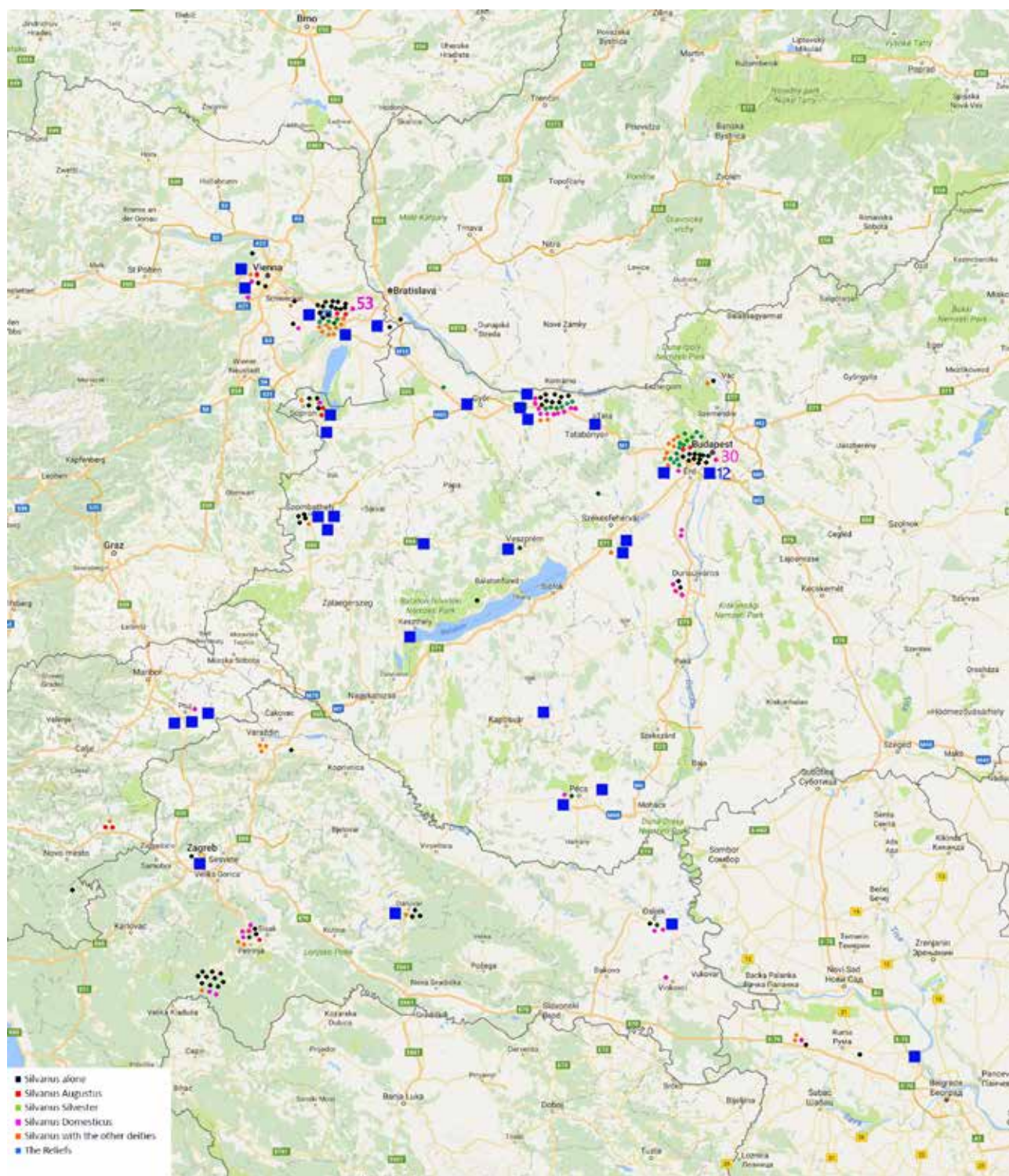


Fig. 3 - The map of the votive monuments dedicated to Silvanus. Picture taken from Perinić 2016, 122 “Pannonia-Map”

milestone of the Via Appia and a *schola* beneath a porticus was already built on it. The deed assured the users (*collegium Silvani*) that they are free to use the land for

celebration, ritual purposes, and similar, in exchange for a symbolic donation of one *sestercius* as long as the collegium existed.<sup>22</sup> In the light of the role of Silvanus

as *tutor finium*, the location of this grove too may not be incidental.

The same can probably be said for the fragmentary altar dedicated to Silvanus Domesticus by Flavius Ingenuus. It was excavated in *Cibale* (Vinkovci, Croatia) in 2007 and dated to the 2<sup>nd</sup>/3<sup>rd</sup> century AD. The house in which the inscription stood was situated at the very edge of the town, near the western part of the fortification system. The altar, in all probability, served as a token of respect for his aspect of the guardian of the frontier (*tutor finium*), and together with the epithet *Domesticus* it is clear that the protection of the house proper was also within his domain. The votive inscription was placed in the garden of the house, which equally corresponds to the original nature of the cult of Silvanus, that is, a forest divinity. Silvanus in Ingenuus' garden was supposed to protect his house or estate and thus contribute to the prosperity of the household and the well-being of the family, or, if Augustine is right, it should keep Silvanus from hurting Ingenuus' wife during childbirth, if that was the case.<sup>23</sup>

From the map (Fig. 3) of the stone votive monuments dedicated to Silvanus we can notice they are found mainly along the Danubian limes. The inscriptions and reliefs generally show no indigenous influences that might be interpreted either as *interpretatio Romana* or as evidence of a certain syncretism.<sup>24</sup> This ‘stratification’ or adjustment of Silvanus in Pannonia (as in the case when Silvanus holds the spears in his hand) can be recognized through his most common epithet, that of *Domesticus*. (Fig. 4) Of the 259 inscriptions, 110 were dedicated to Silvanus *Domesticus*. This also is the category that has the most women votaries, almost 10 %. Evidently, they were no longer excluded from his cult.<sup>25</sup> The location of the votive monuments dedicated to Silvanus along the border of the province supports the assumption that, although indistinguishable from the inscriptions or reliefs, Silvanus' nature as the protector of the borders was well acknowledged among his votaries. Similar situation was noticed in Salona (Solin, Dalmatia) but on micro-regional level.<sup>26</sup>

<sup>23</sup>Perinić Muratović, Vulić 2009, 174–179

<sup>24</sup>Mocsy 1974, 251–252; Dorsey 1992, 71–74

<sup>25</sup>In all probability, women were excluded only from the ritual mentioned above, and not from the cult as a whole.

<sup>26</sup>Cambi 2000, passim

<sup>27</sup>Perinić 2016, 53

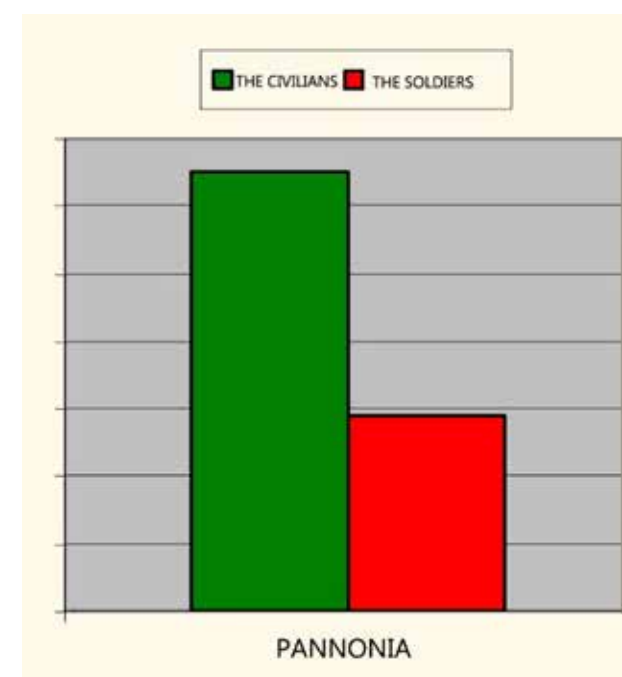


Fig. 4 - Silvanus' epithets.  
Picture taken from Perinić 2016, 59, T.2.)

The fact remains that Silvanus was the most popular god (after Jupiter) of the “Pannonians”, that is the ethnic communities in the province of Pannonia, especially with those communities in direct contact and under the direct influence of the military. Of the 259 inscriptions and 36 relief monuments dedicated to Silvanus in Pannonia 23% were erected by soldiers, and 52% by civilians (23% of the inscriptions fall into the category of undeterminable). Taking into account only those inscriptions where the dedicators (military or civilian) can be safely determined with absolute certainty, then 30.8% were set up by soldiers, so the assumption they had a significant role in the spread of the Silvanus cult in Pannonia is highly probable.<sup>27</sup> As Silvanus was relatively popular among the soldiers who invaded Dacia from the Pannonian military bases, it was most likely that it was those same soldiers who contributed to the spread of his cult both in Pannonia and Dacia. This Pannonian Silvanus was, in all his characteristics and forms of manifestations, Roman, if not purely Italic. Only on one monument (as far as we know today) has he been portrayed in anthropo-

<sup>22</sup>CIL VI, 10232; Evans Grubbs 2002, 33; Walser 1993, 118–119.



theriomorphic form, with a pedum in his left hand, and in his right a syrinx. The monument is dated to 218. AD, and in all probability it was erected by a Dalmatian immigrant.<sup>28</sup> Except for this anthropo-theriomorphic monument, there is also one uncommon epithet, *Viator*, which occurs only on portable personal item, such as rings and bullas in Pannonia. Most of the rings date to the 4th century AD, which E. Tóth has interpreted as indicative of the resistance of this ancient cult through its funereal aspect (*Viator*) to the increasing popularity of Christianity.<sup>29</sup> It is also possible to connect the consecrations of *pro salute et reditu*, and Silvanus' epithet *Viator*, with his rarest mentioned aspect – *Orientalis*. Those passengers travelling within the province certainly felt themselves protected to an extent by divine action, while those on the fringes of regional borders, or even crossing them, needed even better protection, and it is therefore possible that Silvanus' epithet *Viator* may well be perceived in that light, as falling under the care of Silvanus Orientalis, and not necessarily linked to a Christian perspective. Whether *Viator* or the Traveller was to accompany us to the other world, or only when travelling to foreign lands, is unsure.

The occurrence of the monuments in border area could also mean that Silvanus Orientalis, the guardian of borders (*tutor finium*), was especially respected and favoured, although he was never mentioned in that capacity in the known inscriptions. If this is the case, the dog usually represented with Silvanus can be interpreted as watchdog (or a shepherd's dog) and not as an aid in hunting. If there was a common knowledge about Silvanus Tutor Finium, or Silvanus Orientalis, which is indistinguishable to us today, either from votive inscriptions or relief monuments, the question is not only what else are we missing in Silvanus' cult, but also, where are the limits to our understanding of ancient cultures, religions, and cults.

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## Sažetak

Aspekt Silvana kao čuvara granica (tutor finium ili Orientalis) nije prepoznatljiv na zavjetnim natpisnim spomenicima, kao ni na figuralnim prikazima božanstva. Međutim, raspoređenost zavjetnih spomenika posvećenih Silvanu možda ukazuje na to da je njegov aspekt čuvara granica bio dobro poznat njegovim štovateljima (i vojnicima i civilima). Namjera ovog rada nije dati konačni odgovor na pitanje iz naslova, već predstaviti trenutno dostupne informacije o Silvanu Orijentalu, te otvoriti mogućnost da je taj vid Silvana štovateljima bio dovoljno poznat te da je to razlog zbog čega je većina Silvanovih spomenika pronađena upravo uz granicu. Na temelju kratkog pregleda pisanih antičkih izvora, kao i općeg pregleda

<sup>28</sup>Dorcey 1992, 72; Perinić 2016, 16.

<sup>29</sup>E. Tóth 1980, 96–97; for further information A. Szabo, Some notes on the rings with sacred inscriptions from Pannonia, Dissertationes Archaeologicae ex Instituto Archaeologico, Ser. 3. No. 2., Budapest, 2014, 157–171.

zavjetnih spomenika iz Panonije, utvrđuje se i prikazuje povezanost ovih dviju kategorija (raspored spomenika i aspekt Silvana kao čuvara granica). Pojava spomenika u graničnim područjima mogla bi, dakle, značiti da je *Silvanus Orientalis*, čuvar granica (tutor finium), bio osobito štovan, iako se u tom svojstvu nikada ne spominje. Ako je, prenošeno oralnom tradicijom, znanje o Silvanu čuvaru granica, kojega danas ne možemo razlikovati bilo iz zavjetnih natpisa ili iz reljefnih spomenika, bilo dijelom općepoznatog znanja, pitanje više nije što nam još nedostaje u Silvanovu kultu, nego i gdje su granice našeg razumijevanja drevnih kultura, religija i kultova.



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# *Instrumenta inscripta* from the *principia* of the Pomēt Hill Fort at *Porolissum* (Roman Dacia)

## ABSTRACT

The current paper examines a series of evidence categorized as *instrumenta inscripta*, namely a lead weight and two *litterae aureae* discovered in the early 1980s during the archaeological excavations carried out in the *principia* of the Pomēt hill fort at *Porolissum*/Moigrad (Romania), located in the north-western side of Roman Dacia. The newly analyzed artifacts shed new and exciting insights on the military life at *Porolissum*.

**KEY WORDS:** *POROLISSUM*, *PRINCIPIA*, ROMAN DACIA, LEAD WEIGHT, *LITTERAE AUREAE*

## Introductory remarks

*Porolissum* has been justifiably considered one of the most important provincial settlements of Dacia, located on its north-western frontier (Fig. 1).<sup>1</sup>

The current paper examines a series of previously unpublished *instrumenta inscripta* found in the *principia* of the Pomēt hill fort, which unfolds new data on military life at *Porolissum* (Fig. 2).<sup>2</sup>

<sup>1</sup>I would like to express my gratitude to Ligia Ruscu (UBB Cluj-Napoca, Romania) and Dan Dana (CNRS, Paris) for observations and corrections of the manuscript of this paper and also the latter for allowing me to use figure 1. All errors or misjudgments are, however, my own. See the latest research results at *Porolissum* in Opreanu, Lăzărescu 2016, *passim*, especially page 100, Fig. 59 with the *principia* type edifices found in the forts from north-western Dacia. See the latest thorough analysis of the *principia* edifice from the Pomēt hill fort at *Porolissum* in Marcu 2009, 89–91.

<sup>2</sup>For a selective bibliographic list on recent epigraphic discoveries or reinterpretations of previous ones from *Porolissum* since the publishing of ILD II in 2016 see: Deac 2015, 103, nos. 3–4 pls. I–II = AE 2015, 1144–1145 (graffiti); Piso 2015, 193–206 nos. 1–25 = AE 2015, 1136–1142 (honorific, votive or funerary monuments); Piso *et al.* 2015, 215–222 nos. 1–11 = AE 2015, 1126–1135 (funerary or votive monuments); Dana 2016, 105–109 nos. 11–12 = AE 2016, 1317–1318 (votive or funerary monuments); Piso, Deac 2016, *passim* (stamps and graffiti on bricks and tiles); Piso, Marcu 2016, *passim* (stamps and graffiti on bricks and tiles); Piso *et al.* 2016, 544–548 = AE 2016, 1319 (votive building plate); Zăgreanu 2016, 203–248 (votive altars and statue bases); AE 2016, 1311–1316; Dana, Deac 2018, 276–278 no. 2 (military diploma); Deac 2018, 268–272 (*tesserae militares*); Deac 2018a, 103–111 (magic gems, some inscribed); Deac 2018b, 147–159, 226–228 cat. nos. 74–80 (materiality of the cult of Silvanus, mostly epigraphic); Piso, Opreanu 2019, 295–296 (honorary monument).



Fig. 1 - Map of Dacia Porolissensis (© Dan Dana, modified by the author). In inset: Map of Roman Dacia (© limes-romania.ro)

### 1. A lead uncial weight.

The weight is slightly corroded and has the following dimensions: height = 5.5 cm; length = 5.5 cm; width = 0.6 cm; weight = 102.932 grams; height of letters = 0.7 cm (Figs. 3a-b and 4 a-b).<sup>3</sup> It has been found in front of the apse edifice located in the south-western corner of the principia of the Pomet hill fort (so-called U chamber, south of the *aedes principiorum*), in section C 31/8, 2-3/4-5, at a depth of 0.7 m, on August 26<sup>th</sup> 1981.<sup>4</sup>

On the exterior surface the following capital letters are arranged on either side of the image which depicts the horn of plenty: *tau* and *epsilon* on the first line on

either side of the image; on the second line *tau* and *rho* are positioned on the left side while *omicron* is on the right side; on line four *upsilon* and *nu* are positioned on either side of the image. In the last line the division is different, the *kappa* being rendered on the left, while the last three letters, *iota*, *omicron* and *nu* are located on the right side of the figure. On the interior surface a *delta* and an *iota* are positioned in the top corners. A poorly visible *kappa* and an *alpha* are positioned on either side of the image. An *iota* can be observed on the left side, next to the base of the image, while on its right side the *omicron* and the *nu* had to follow, but due to corrosion one can only guess the letters. On the interior side the *pondus* from *Porolissum* has an image

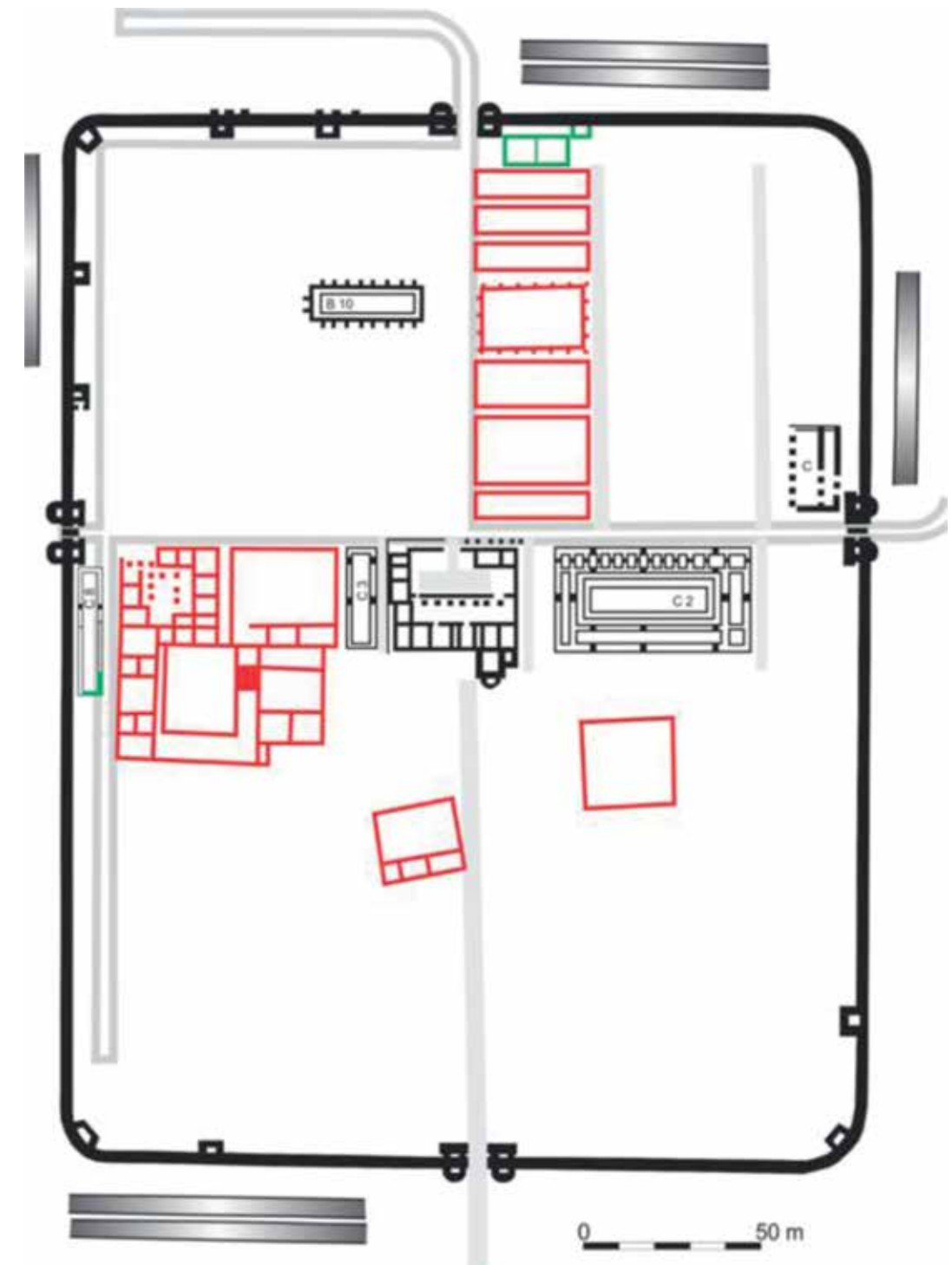


Fig. 2 - Plan of the Roman fort located on the Pomet hill at Porolissum/Moigrad (after Opreanu, Lăzărescu 2016, 78 Fig. 33-right)

which in the case of *Tomis* had been lately interpreted as *"ciste à serpents et fleurs"*.<sup>5</sup> Moreover, the weight

<sup>3</sup>History and Art County Museum, Zalău, inv. no. CC 180/1983.

<sup>4</sup>See for the plan of the archaeological trenches Gudea *et al.* 1983, 122–124, 142–143 Figs. 2-3 and Landes-Gyemant, Gudea 1983, Fig. 2, for a detailed plan of the excavation. See also Piso 2015, 194 Fig. 1.

<sup>5</sup>ISM VI P81-82 = Avram 2018, 205–206, P81-82, with previous bibliographic references. P. Weiss mentions *"undeutlicher Gegenstand"* for the depiction on the interior side (Weiss 2005, 413), quoting Moisil 1957, 291, no. 58 pl. VIII/3 (photo) who considered the rendering as a possible depiction of an altar. Another possibility is that the depicted image was a balance scale as in True, Hamma 1994, 279 no. 142 (photo). For an on-line illustration see <https://pondera.uclouvain.be/artifact/553/>.



Fig. 3a - Lead *pondus* - exterior side - photo (© Dan Deac)Fig. 3b - Lead *pondus* - interior side - photo (© Dan Deac)

and the same image on the exterior side as two weights from *Tomis*.<sup>6</sup>

The text goes as follows:

Exterior side: τ-ε/τρ-ο/ῥ-ν/κ-ι-ο-ν  
Interior side: δ-ῥ/κ-α/τ-[ο-ν]

The text thus reveals that we are dealing with a *pondus examinatum* type of weight, valued at one *triens* (τετρούνκιον in Greek), which was a verified weight, identical to the ones from *Tomis*.

The actual weight of the *pondus* is slightly lower valued than the standard *triens*, namely 102.93 instead of 109.15 grams.<sup>7</sup> To the east of *Porolissum*, at *Arcobara* (modern-day Ilișua), an inscribed verified lead weight (*pondus examinatum*) with the value of three ounces (one *quadrans*, namely 88.86 grams) was discovered in

the *basilica principiorum*, more precisely in the debris of the rooms E and F, to the left of the *aedes*.<sup>8</sup> The value of the weight from *Arcobara* was a little lower than the standard one, namely 75.633 grams.<sup>9</sup> It should be stated that a difference up to 9% in comparison with the standard was accepted.<sup>10</sup>

Otherwise, in the military milieu of Dacia Porolissensis, at least three *pondera examinata* from *Potaissa* (modern-day Turda) were found inside the *principia*, while other such *pondera* are stray finds from the same area.<sup>11</sup>

In the auxiliary military milieu of Roman Dacia alone other *pondera* were found mostly in barracks of the auxiliary forts at *Porolissum*, *Samum*, *Micia*, Slăveni, possibly at Săpata de Jos<sup>12</sup> and *Arcobara*.<sup>13</sup> An inscribed cup-weight found in 2007 at *Porolissum* had a value of one *quadrans* (81.86 grams), way below

<sup>6</sup>Weiss 2005, 413–414; ISM VI P81–82. For a statistical analysis of the uncial weights from *Tomis* see Ocheșeanu 1989, 89–103.

<sup>7</sup>See further Hultsch 1882, 706 table XIII A.

<sup>8</sup>Ruscu 2010, 205 for further details.

<sup>9</sup>Ruscu 2010, 205–210 (photos) = AE 2010, 1363 = ILD II 1022 = Gaiu 2016–2017, 60 no. 5, 69 pl. V/3a–b (photos). The paper discusses the issue of such weights and is accompanied with a complete bibliographic list, thus, a new discussion here is superfluous.

<sup>10</sup>Ruscu 2010, 206–207. The author argues for the same origin of the shores of the Black Sea region for the weight from *Arcobara*, highlighting the close connections between this settlement and the Greek cities from the area mentioned above.

<sup>11</sup>Bărbulescu 1991, 235–246; Bărbulescu 2012, 236–247 nos. 48–52 (photos and drawings) = AE 2012, 1227–1228 with previous bibliographic references and the detailed discussion of the *pondera examinata* from *Potaissa*. As highlighted by the author (Bărbulescu 1991, 237–239; Bărbulescu 2012, 246–247) these were *pondera castrenses* different from the ones from the auxiliary milieu. See also Piso 2016, 555–559 Figs. 1–3 (photos and drawing) = AE 2016, 1333 dealing with a *sextarium* from *Potaissa*. See as well IDR III/1, 28 = CIGD 59.

<sup>12</sup>See Alicu 2004, 25 with further bibliographic references. The lead *pondus* weighing two *librae* from Slăveni was inscribed with number two, mentioning its weight (Tudor 1968, 336 no. 14).

<sup>13</sup>Gaiu 2016–2017, 58–60 with the catalogue and further bibliographic references.

Fig. 4a - Lead *pondus* - exterior side - RTI analysis (© Dan Deac)Fig. 4b - Lead *pondus* - interior side - RTI analysis (© Dan Deac)

the inscribed value with four dots, which corresponds to the weight of one *triens* (109.15 grams).<sup>14</sup> It had been discovered in the area conventionally named by modern scholars as the "Terrace of the Sanctuaries", an area with a known substantial commercial activity, located in the northern periphery of the settlement, facing the frontier.<sup>15</sup> In the provincial urban milieu a weight valued at thirty *librae* and inscribed accordingly with the number thirty<sup>16</sup> and another lead conic one, weighing one *triens*, were found at *Sarmizegetusa*.<sup>17</sup> Furthermore, a lead weight valued at one ounce was discovered at *Romula*.<sup>18</sup>

## 2. Litterae aureae.

Two letters were found in the *principia* of the Pomet hill fort, not far from the location of the weight mentioned above. The first one is a bronze letter "O", having the following dimensions: height = 9.5 cm; length = 9 cm; width = 0.3 cm; weight = 42.685 grams (Fig. 5). The letter has four fastening orifices (0.5 x 0.5 cm),

arranged unequally. It is broken in two pieces and on its surfaces one can observe traces of gold. The second one is made of silver and renders the letter "V". The dimensions are: height = 6.6 cm; length = 4 cm; width = 0.2 cm; weight = 14.159 grams (Fig. 6). The right *hasta* is broken in the top half. An orifice was pierced in the superior part of the fully preserved *hasta* for its fastening. Both letters were found in the area of the south-eastern corner of the *principia*, in section C 31/2, 4/2, at a depth of 0.5 m, on August 8<sup>th</sup> 1980.<sup>19</sup>

Based on dimensions and material, the two letters originate from two distinct inscriptions. Unfortunately, no evidence supports a close dating, however, judging by the archaeological context from where both these letters were retrieved from, one might suggest a dating in the 3<sup>rd</sup> century CE, possibly even Severan. Such epigraphic evidence is quite scarcely encountered in Roman Dacia. For instance, in a dwelling from a Barbarian settlement located *extra provinciam* to the north-west of *Porolissum*, in the modern-day town of Zalău, ano-

<sup>14</sup>Găzdac, Wright 2009, 183–190 Fig. 2 (photo and drawing) = AE 2010, 1366 = ILD II 993 (drawing).

<sup>15</sup>See the recent discussion on the area in Opreanu, Lăzărescu 2015, 17–20 and Piso *et al.* 2016, 544–548. The possibility that the weight belonged to the inventory of a sanctuary should not be ruled out as it is known that commercial activities were being performed in such sanctuaries (for the sanctuaries of Roman Dacia see Szabó 2018). For the sanctuaries located here see also Deac 2018b, 152–153.

<sup>16</sup>Alicu 2004, 25–27 Figs. 1–2 (drawing and photo).

<sup>17</sup>Alicu *et al.* 1994, 115, no. 800 pl. 51/800 (drawing); Alicu 2004, 26. See as well IDR III/2, 14 for a *statera publica* mentioned in the Latin text of a monument discovered here.

<sup>18</sup>Ocheșeanu 1989, 92, no. 27 = ISM VI P60. For the weights from neighboring Moesia Superior see the latest thorough discussion in Mirković 2005, especially page 298 (with previous bibliographic references); it seems that the auxiliary units had their weights verified by the legionary, given the example of a measuring cup discovered at *Transdierna: coh(ortis) V G(allorum) (hemina) exacta at leg(ionem) VII Cl(audiam) re(cognita)* (latest Mirković 2015, 80–81, no. 24; Rothenhöfer 2016, 120).

<sup>19</sup>History and Art County Museum, Zalău, inv. no. CC 53/1981 (same inventory number). See also Landes-Gyemant, Gudea 1983, Fig. 2 for the detailed plan of the excavation.



Fig. 5 - Littera aurea - R – photo (© Dan Deac)



t 6 - Littera aurea - V – photo (© Dan Deac)

ther letter was found ("R"), presumed to have been taken from *Porolissum*.<sup>20</sup> However, the best parallel derives from *Arcobara*, where, again in the *principia* of the auxiliary fort, twelve letters were discovered, compacted in four groups.<sup>21</sup> At Bucova, near *Sarmizegetusa*, two *litterae aureae* were found in 1908 ("A" and "E"), now preserved in the National Hungarian Museum of Budapest.<sup>22</sup>

Dan Dana and Corneliu Gaiu, after gathering all the known examples from Roman Dacia, have concluded that these letters were attached to wooden or limestone boards or on the walls of buildings themselves.<sup>23</sup> Undoubtedly, as in the case of *Arcobara* or other similar cases where such letters were found in the headquarters of forts,<sup>24</sup> one can point to the existence of monumental building inscriptions, very likely honorific in nature and/or mentioning the functionality of the edifices part of the *principia*.<sup>25</sup>

### Conclusions

Although few in number, the *instrumenta inscripta* analyzed in this paper reveal crucial pieces of information for the military life at *Porolissum*. The *litterae aureae* gilding the inscriptions decorating the *basilica principiorum* must have made a powerful impression for the military encamped on the Pomet hill, as it must have been happening also in *Arcobara*. Perhaps, as Zs. Mráv suggested, at least some of these inscriptions were set up in advance of Caracalla's visit in the region given the Severan context in which these were found.<sup>26</sup> Moreover, in regard of the *pondus examinatum*, the increasing number of such finds in Roman Dacia reveals that all of the ones accompanied by an archaeological context, were discovered so far in the precinct of the *principia* of the forts.<sup>27</sup>

<sup>20</sup>Matei, Stanciu 2000, 92, 520 pl. 339/1 (drawing). The letter was made of bronze and has the following dimensions, according to the authors: height = 10 cm; length = 1.3 cm; width = 0.1 cm.

<sup>21</sup>Dana, Gaiu 2014, 157–159 no. 2 Fig. 1 with the location of discovery and Fig. 3-5 (photos and drawing).

<sup>22</sup>Mráv 2003-2004, 61–80.

<sup>23</sup>Dana, Gaiu 2014, 158–159 quoting Mráv 2003-2004, 67–68 for similar examples scattered throughout the empire.

<sup>24</sup>See for instance the *litterae aureae* found in the *principia* of the fort from Aalen (ILGIL 423; Dana, Gaiu 2014, 158), Böbingen, Eining, Großkrotzenburg, Pfünz or Weißenburg (ILGIL 427, 428, 432, 448, 463).

<sup>25</sup>Dana, Gaiu 2014, 159.

<sup>26</sup>Mráv 2003-2004, 68. For Caracalla's visit in Dacia see most recently Piso, Deac 2018, 756–762.

<sup>27</sup>As in the case of *Arcobara* the connections between the western Black Sea region and the northern frontier of Dacia in (at least) the 3<sup>rd</sup> century CE are highlighted through this find. As for the functionality of *pondus examinatum*, it is perhaps conceivable to ask whether the verifying process of weighing in the military milieu took place, in some occurrences at least, in some *tabularia* part of the headquarters of the forts (see further discussions on the topic at note 11 and Alicu 2004, 25–27).

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#### Zusammenfassung

Der vorliegende Aufsatz behandelt einige Fundstücke, die der Gruppe der *instrumenta inscripta* zuzurechnen sind. Es handelt sich hierbei um ein Bleigewicht und zwei *litterae aureae*, die in den frühen 1980er Jahren bei archäologischen Ausgrabungen in den *principia* des Lagers auf dem Pomet-Berg in *Porolissum*/Moiograd (Rumänien), im Nordosten der römische Provinz Dakien, gefunden wurden und deren Analyse neue und interessante Einblicke in das Militärleben in *Porolissum* liefert.





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# **The Archeological monuments of Silvanus and his cultural cult communities (Mars, Diana, nymphs and forest deities) in the area of the Danube Limes in Serbia**

## **ABSTRACT**

This work is about the archeological monuments connected with the Roman god Silvanus and his cult communities (Mars, Diana, nymphs, forest deities) which have been discovered in the Danube limes area in today's Serbia. These archeological finds prove the significance and cult worshipping of the cult communities in the area which furthermore represents the topic of this work. The existence of numerous findings has been stated, within which we mention the monuments (relief, epigraphic, relief and epigraphic) bronze figurines, marble sculptures, oil lamps, sceptres and numerous objects which can be described as the examples of applied art. The finds originate from the Banoštor locality, Novi Banovci, Beograd (including Zemun and Ritopek), *Viminacium* (Kostolac), Smederevo, Dušanovac (Negotin), *Margum* (Dubravica) and *Pontes* (Kostol). We also mention the toponym *Statio Cataractarum Diana* (Karataš).

**KEY WORDS: SILVANUS, LIMES, DANUBE, SERBIA, MARS, DIANA, NYMPHS, THE ARCHEOLOGICAL FINDS**

**T**he name of the Roman god Silvanus is usually mentioned at the end of a long list of deities which were worshiped during the Ancient period. As opposed to that there is a corpus of over a thousand votive monuments dedicated to this Roman deity, the protector of agriculture, forests, hunting and borders.

A great number of votive monuments and their geographical spreading confirm that Silvanus was one of

the most respected deities in the entire territory of the Roman Empire. The monuments which were dedicated to him surpass in their number the dedications to oriental deities such as Mitra, Jupiter Dolichenus, Serapis and Isis. Moreover, if we take into consideration the traditional Roman deities, only the monuments dedicated to Jupiter Optimus Maximus, Hercules, Fortune and Mercury outnumber the Silvanus in the archeological and epigraphic material.<sup>1</sup>

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<sup>1</sup>Deurcey 1992, 1

In some regions the cult of Silvanus is of the greatest importance, such as the city of itself and the provinces *Dacia* and *Pannonia*, where we can find the monuments dedicated to Silvanus outnumbering all the other monuments except the Jupiter ones. A. Jovanović has mentioned that in the western and northern parts of *Pannonia* province, the monuments dedicated to Silvanus surpass the monuments dedicated to Jupiter himself.<sup>2</sup>

Being outside the public cult, Silvanus took a special place in the Roman polytheistic religious system. The temples, festivals and holidays had never been dedicated to him. He had never been associated with the political and civil life. However, Silvanus had an important role in a family life.

His “unofficial” status does not define his place in the hearts of Roman people, the official appreciation and imperial patronage can hardly be the exclusive measure of the popularity of some deity.

As each rule had some exceptions, it was possible that the cult of Silvanus in Roman *Pannonia* surpassed the “private frames” and was in a way, becoming the symbol of this province.<sup>3</sup>

The given presumption has an additional significance in this work since it also includes the part of the Danube limes in the province of *Pannonia*.

This work is dedicated to the findings regarding the cult of Silvanus and the deities which together with him formed the cult community (Mars, Diana, nymphs, forest deities), discovered in the part of the Danube limes, in today's Serbia.

We could directly connect the finds of nine votive monuments (six epigraphic, one relief-epigraphic and two relief monuments) and one bronze figurine directly with the cult of Silvanus.

The most western votive monument dedicated to cult of Silvanus originates from Banoštor (*Malata Bononia*). It is an unfinished monument, in secondary use (building material, built into the bridge)

The text of the notice says:

Silvano | Comi(nius) | O[-----]

The monument is from 2nd century.<sup>4</sup>

The profiled votive monument made of limestone was found in Beograd (Vračar) in 1866. Silvan had a name Silvester on this monument.

The text of the notice says:

Silvano | Silvestr[i] | Iul(ius) Se<p>tu | mus  
v(otum) p(osuit).<sup>5</sup>

During the systematic excavations of the Donji grad in Beograd, under the medieval layer, the remains of Roman architecture were discovered. There is a duct in the rock, connected with the Roman buildings, which partially goes under the foundation of today's fortress. The votive monument was discovered among the numerous findings and it was dedicated to Silvanus. M. Popović thinks that it used to be a sanctuary there, dedicated to Silvanus.<sup>6</sup>

The fragment of the relief-epigraphic marble monument, with the scripture and relief scene from Dionysus circle, was found in 1891 in Zemun. The monument was a part of the Dionysus sanctuary. It originates from 2nd century.

The remaining text says:

(Libero Sa)c(rum) Marcanus  
(votum solvit libens) m(erito)

The relief on the monument shows a part of Liber image (legs of the deity, preserved to the waist), of bigger dimensions. Silvanus on goat legs is playing the

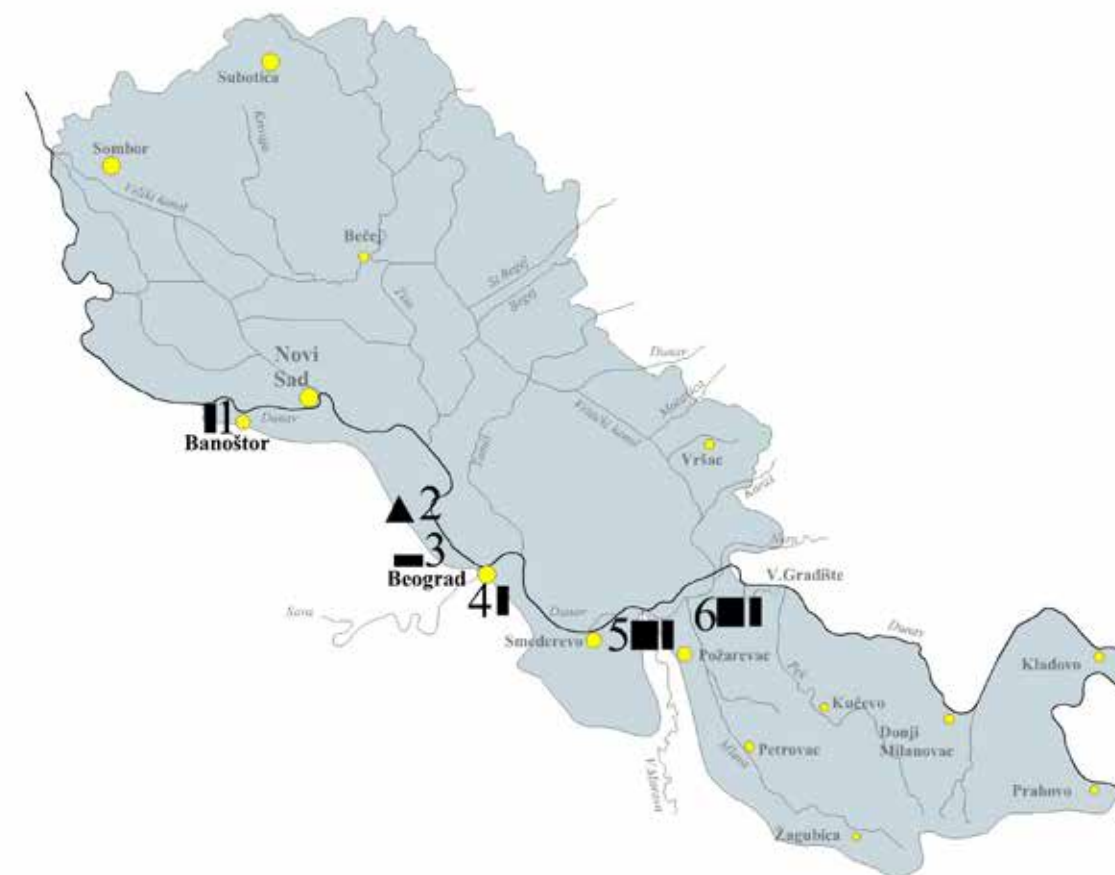


Fig. 1 - Map of monuments dedicated to the cult of the Silvanus (drawing: Nataša Miladinović).  
SILVAN 1. Banoštor 2. Novi Banovci 3. Zemun 4. Beograd 5. Smederevo 6. *Viminacium* (■ epigraphic monument, ■ relief, — relief and epigraphic monument, ▲ figurine)

flute (syringa), and teaching Daphnyd, who is sitting next to him, are on the right side of the monument. At the end of the right side, there is also a dressed female figure, probably Menade. Under this female figure there is a conventional snake representation while near Liber's feet there is a barely visible panther.<sup>7</sup>

There are four votive monuments from *Viminacium*, three of them are epigraphic and one is relief.

The first monument is dedicated to Silvanus Domesticus and was discovered in the locality of Kalište. The text says:

Sil(vano) | Sac(rum) | Dom(estico)<sup>8</sup>

From the same locality of Kalište there is a monument in which Silvanus was worshiped together with the similar deities. The text on the notice says:

IDAVNI ? | Appolon(i) | Q. S Dian | a(e) Silvano  
| Ael(ius) Vale | ntinus II vir col(oniae) | v(otum)  
l(ibens) p(osuit)

The meaning of the beginning of the scripture, IDAVNI, cannot be accurately understood. It was probably a dedication. The possible text meaning in the second and third line could be:

Apollin(i)q(ue) S(ancto) Diana(e) или S(oli)  
(et) Diana(e)

<sup>2</sup>Jovanović 2000, 20

<sup>3</sup>*Ibid.*

<sup>4</sup>Dautova Ruševljan 2012, 22–24

<sup>5</sup>Вулић 1931, 7–8

<sup>6</sup>Popović 1997, 7

<sup>7</sup>Dautova Ruševljan 1983, 89

<sup>8</sup>Вулић 1909, 143



The suggested solutions indicate the possibility that Diana was also called Sancta and that the monument was dedicated to Sol.<sup>9</sup>

We add the monument on the Čair locality to the corpus. The text says:

Deabus Silv | estris (!) Achil | leus ex v | oto  
l(ibens) p(osuit)

The “forest deities” are mentioned in the monument to whom it was also dedicated. N. Vulić identified the deity as Silvanus Silvester. This opinion can be accepted with the addition that the monument was dedicated to Silvanus in a cult community with nymphs and maybe even Diana.<sup>10</sup>

A fragment of marble table with relief was discovered in *Viminacium*. It has been interpreted in various ways. According to the description of N. Vulić, the table represents a woman who is under a large cloak. The woman is turned towards the spectator, she has a kalatos on her head. Her hair surrounds her face. She has a horn of splendor in her left hand and a sacrifice dish in the right hand. There is an object above the right hand that resembles the scarf.

A. Jovanović explains that it is the representation of Genius of Roman knighthood – *Genius ordinis equestris*. The same author gives another significant conclusion, which is important for the topic of this work and it is connected with the horn of splendor. The torso of a young man arises from the splendor of the horn, with the *pedum* in the young man’s left hand.

The image of the young man with the *pedum* resembles the image of Eros with the same attribute emerging from the flower, moreover it resembles the images of Pan and Silvanus who both have the *pedum* as their usual attribute. Perhaps we should think about Silvanus and his role as a protector of the borders and boundaries.<sup>11</sup>

The two votive monuments – epigraphic and relief, originate from Smederevo.

Epigraphic monument made of limestone has a dedication to Silvanus Domestico. There are images of acroters with a decoration between them which cannot be easily identified. The text says:

Silva(no) | Dom(estico) | ECNIM

The abbreviation ECNIM is unclear.<sup>12</sup>

The votive relief made from grey limestone dedicated to Jupiter, Mars and Silvanus is built in the first tower of the Eastern wall of Smederevo fortress. It originates from the second half of the 2<sup>nd</sup> century. The figurines of all three deities are in standing position.

Jupiter is in the middle, with a scepter in his left hand and most probably with the image of eagle beside his feet. There is a Corinthian semi-pillar on the left side of the relief. There is a great possibility that the same image was on the right side of relief.

The image on the right represents the nude male deity, with his right hand lowered, most likely holding some attribute. His left hand was holding a round shield or cloak. It is most likely the representation of Mars.

On Jupiter’s left side there is Silvanus with an axe in his right hand, and a branch with leaves in his left hand. Silvanus is shown as an elderly bearded man. He is wearing a long sleeved tunic, there are boots on his feet and he has a Phrygian cap on his head. It is an iconographical presentation, in literature described as Pannonian type (most likely Silvanus Domestico) originating from Italic Silvanus.

There are various presumptions on the place of the origin of this relief (Smederevo itself, i.e. Ancient *Vincea*, *Margum*, *Aureus Mons*), however the most acceptable possibility is that the monument originates from *Viminacium*.<sup>13</sup>

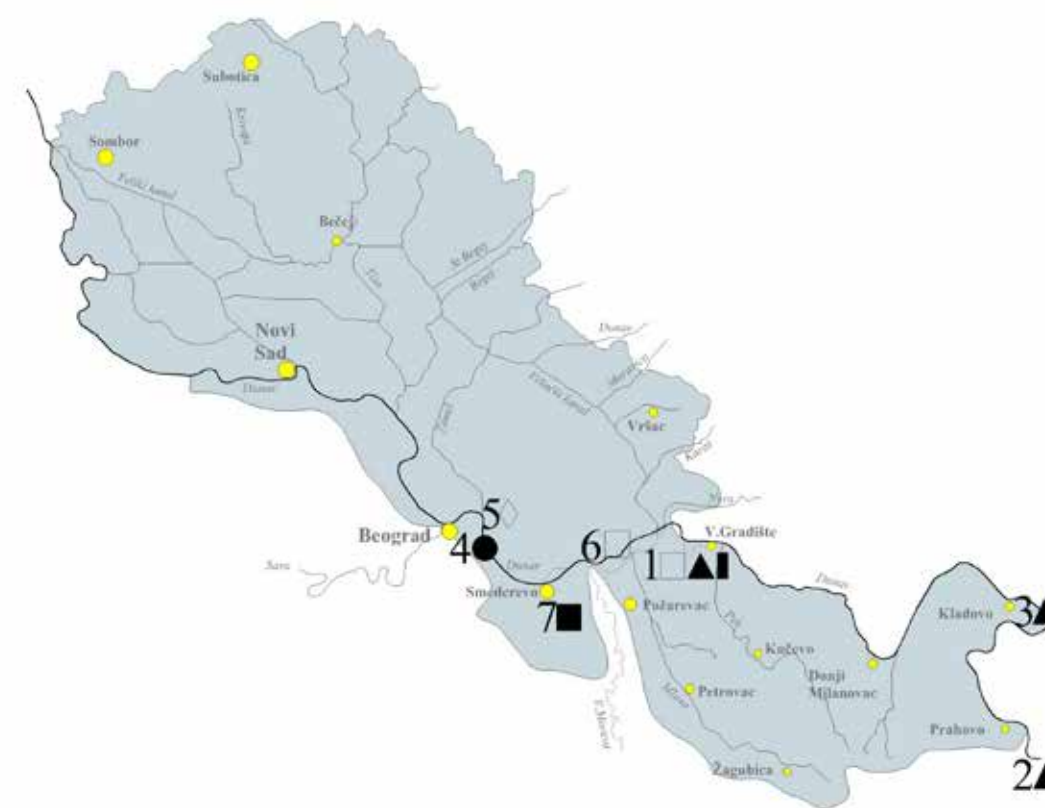


Fig. 2 - Map of monuments dedicated to the cult of the Mars (drawing: Nataša Miladinović).  
MARS 1. *Viminacium* 2. Dušanovac 3. *Pontes* 4. Beograd 5. Ritopek 6. *Margum* 7. Smederevo (□ sceptre, ▲ figurine, ■ relief, ▣ epigraphic monument, ◇ the parade armour, ● ring)

The figurine of Silvanus, made from bronze with silver coating, was discovered in Novi Banovci. This figurine represents Silvanus as a nude young man in a standing position. The figurine is placed on a rack panel. He is wearing some kind of shoes on his feet. There is a chlamis on his right shoulder, with the apples in its plies. In his right raised arm, he is holding three apples. Lj. Tadin believes that this image resembles the artwork of Gaelic workshops.<sup>14</sup>

Mars represents the deity which is often connected with Silvanus. The relief monument from Smederevo is most likely representing the testimony of worship of the cult community of Silvanus and Mars in the area of the Danube limes in Serbia. It is the single known marble monument with the relief presentation of Mars

in that area. The following pages will present the finds connected to the cult of Mars, which originate from the areas which are the topic of this work. The findings include two votive monuments (already described relief from Smederevo and one epigraphic monument), five bronze figurines, a golden ring, a decorative armour and two sceptre.

The votive monument from *Viminacium* was registered. It was discovered in the locality of Kalište. The text says:

Mart(i) | Sac(rum) | T. F(lavius) Sapi(ens) | ex  
viso (!)  
N. Vulić has suggested the solution to the cognomen as Sapi(ens).<sup>15</sup>

<sup>9</sup>Mirković 1986, 196–197

<sup>10</sup>Вулић 1905, 82–83

<sup>11</sup>Јовановић 2007, 51

<sup>12</sup>Вулић 1931, 242

<sup>13</sup>Цветковић 2009, 35

<sup>14</sup>Tadin 1979, 25

<sup>15</sup>Вулић 1909, 143

It was also mentioned that the discovered five bronze figurines represent Mars.

Two figurines originate from *Viminacium*. The first statuette represents dressed Mars in standing position. Mars is wearing military equipment - armour with the relief of Medusa's head and a helmet. It is the province artefact from the 2<sup>nd</sup> or 3<sup>rd</sup> century.<sup>16</sup>

The other figurine from *Viminacium* represents a nude young deity in standing position. The deity is covered by a short cloak. There is a small round shield in his left hand and in the right arm which is lifted there is an attribute (a spear or the trophy). The deity is wearing a helmet with feathered crest on his head. M. Veličković believes that it is an image of a legion soldier. The presumption of A. Jovanović is more acceptable – that it is Mars Equitum. The statuette is originated from the 2<sup>nd</sup> or 3<sup>rd</sup> century.<sup>17</sup>

The bronze figurine of Mars Ultor is discovered in village Dušanovac near Negotin. The dressed deity is in standing position. In his right arm he has probably held a spear. Left hand was holding a shield. Thick hair, moustaches and beard frame the face. There is a helmet on the head with a large triple feathered crest. Mars is dressed in short sleeved tunic, with a strap over his right shoulder and a short blade. He is wearing protectors on his legs. The figurine represents a solid province artwork. The experts have recognized the features of Marcus Aurelius. The figurine originates from the 2<sup>nd</sup> century.<sup>18</sup>

The find of a figurine from Kostol near Kladovo (*Pontes*) is interesting. The head is not preserved, which has made the deity identification more difficult. It represents a high quality work. Apart from the head, both feet are missing, the right hand and the object which was in the left hand. The right arm is slightly bent in the elbow and removed from the body, as if it represents a movement of swinging.

The first elucidation on the statuette was given by Lj. Zotović, who considered that it was a nude image of

Mars with a spear in his left hand, with a helmet on his head. The same author thinks that the statuette had arrived to *Pontes* from *Asia Minor* provinces between the period of year 106 and 130. This presumption was additionally supported by the fact that the colonists from *Asia Minor* used to live in *Pontes* during the Traian's reign.

The significant suggestions were given by A. Jovanović regarding the reconstruction of the statuette, who accepted the mentioned identification of the figurine. However he offered new reconstruction of the attribute the deity was holding in his hand and the new explanation of the bar. The same author has an opinion that the deity could have more likely held a trophy, which Mars carried on his shoulder as a symbol of victory and eternal remembering. The figurine might have had a laurel or an olive branch in his right hand, or even a spear. The author further states that the specific bar in question carried by the deity, could be connected to the triumphant festivities in Mars fields in Rome. The presumption of Lj. Zotović on the time of statue's originating was accepted by A. Jovanović, with the additional precision by connecting Traian's victory over the Dacian's king Decebelus.<sup>19</sup>

The figurine of Mars also originates from the Danube limes. However, the locality where it was found could not be precisely determined. It is the image of adult Mars in military equipment. He is presented in standing position. He has a Corinthian helmet on his head. This deity is portrayed with rich beard and hair framing his face. There is an armour on Mars' chest, which is embellished with the relief image of Medusa's head. He had gaiters on his legs and a cloak over his body. The attributes which were obviously existing (the spear and the shield) are not preserved.

The figurine shows a widely spread type of representation of Mars Ultor, which could be chronologically connected with the later phase of emperor Septimius Severus rule. This conclusion imposes from the facial features of the deity, which are similar to the later portraits of the emperor Septimius. Chronology thus put,

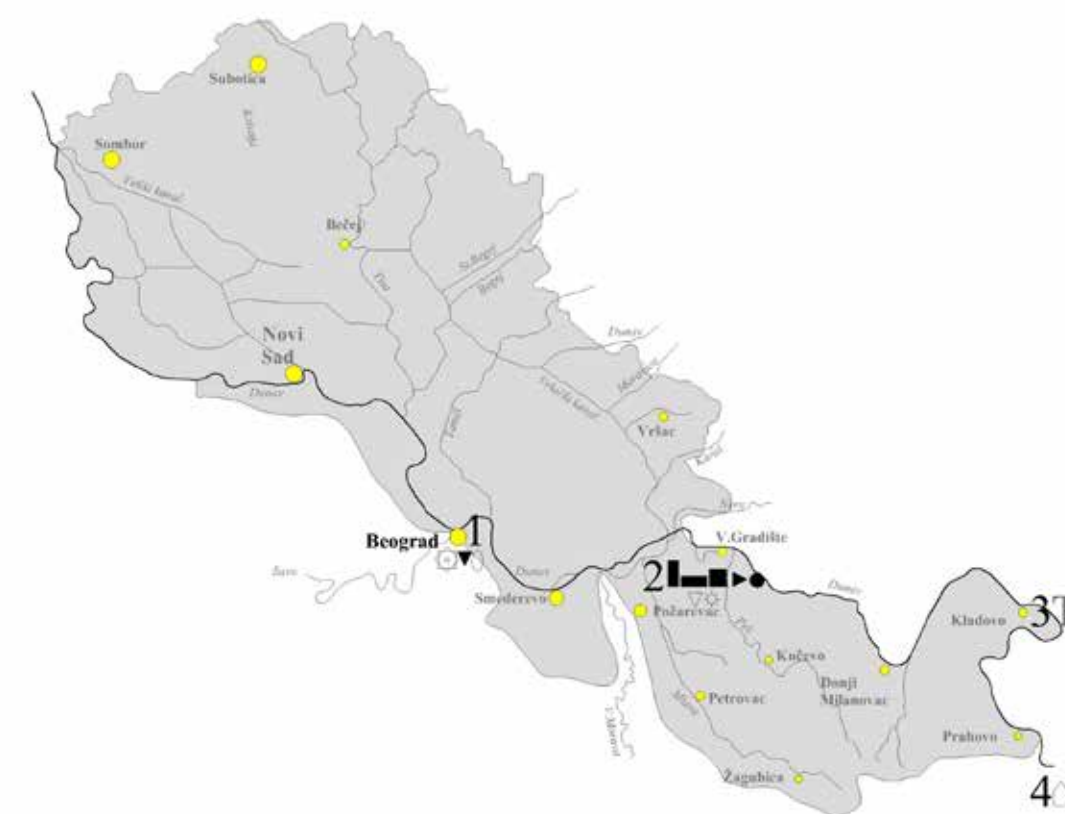


Fig. 3 - Map of monuments dedicated to the cult of the Diana (drawing: Nataša Miladinović).  
DIANA 1. Beograd 2. *Viminacium* 3. Karataš 4. Dušanovac (T toponym, ■ epigraphic monument, — relief and epigraphic monument, ▲ sculpture, ● crustulum, ▼ patera, ✨ gem, □ spoon, 0 signum, ☼ lamp)

enables the narrowing of the probable number of localities from which the statuette could originate.

The period of Severus dynasty does not represent a significant reconstruction of fortifications in Serbian part of the Danube limes. However, A. Jovanović has stated that some fortifications (Čezava, Karataš, Kostol...) had visible interventions done in that period, so it could be that the statuette originates from one of the mentioned localities. Kostol may have the advantage among them since from this locality, during the two world wars, the greatest number of the discovered finds came to the National museum in Beograd, originating from this limes.<sup>20</sup>

The golden ring from Beograd, parade armour from Ritopek and scepters from *Viminacium* and *Margum* could be connected to the cult of Mars and furthermore, these finds could also be considered as work of applied arts.

The golden ring with gem from the agate originates from Beograd. It was discovered in the locality in Majke Jevrosime street, number 47. The ring is formed by round quoit and flat golden head with a gem from achate in grey-blue and dark blue colour. The representation of Mars walking to the left direction, can be seen on this gem. He is holding a trophy in his bent right hand with a spear in his left hand. There is a cloth over his right arm.

<sup>16</sup>Васильевич 2009, 200

<sup>17</sup>Veličković 1969, 104; Jovanović 2007, 210

<sup>18</sup>Зотовић Жунковић 1959, 211

<sup>19</sup>Зотовић 1961, 140; Јовановић 2007, 212

<sup>20</sup>Јовановић 2007, 207–208



The ring was discovered in a basement of an old building, where thirteen Roman tombs were found. The find originates from the tomb number 13 which was not looted. A female skeleton was found in this tomb with several items of golden jewelry. The ring was on the right hand. It originates from the second half of the 3<sup>rd</sup> century.<sup>21</sup>

The pectoral plate from Ritopek (*Castra Tricornia*) represented a chest part of the Roman parade armour. It was a coincidental find, discovered on the locality "Playground". The armour consists of two parts, in the trapezoid shape, with a round décolletage. It was decorated with the images in high relief. The images are placed in separate fields.

The motifs on the surface of the armour are made by cutting, with the use of the high relief technique, having a military character. The relief image of Mars is placed in the central part of the plate, with the spear and the shield on his left and right side.

The closest analogy for the armour from Ritopek, which I. Popović gives origin from the 60s of the 3<sup>rd</sup> century, could be found in *Carnuntum* and *Aquincum*. The images on the armour from Ritopek have drawn attention of numerous researches, who have given various interpretations of several motifs.<sup>22</sup>

The scepters with the image of Mars are found in *Viminacium* and *Margum*.

The pilaster silver ring, with begilded scepter remained from the *Viminacium* scepter. It was made by casting and cutting technique. The decorative frieze on the scepter consists of miniature images of the deities (Dioscuri, Hercules, Mercury, Apollo). The image of Mars in the armour is significant for our topic.

The deity holds a spear in his right hand, holding a shield with his left hand. The image of Mars is between Dioscuri who are holding horses in heraldic way. This image originates from the beginning of 3<sup>rd</sup> century.<sup>23</sup>

The other scepter find comes from Dubravica (*Margum*). It was made in casting and cutting techniques. It originates from 2<sup>nd</sup> or 3<sup>rd</sup> century. The preserved part of scepter staff, made from olive tree gradually narrows towards the lower end. There is a cylindrical decorative ring from begilded silver on which there is a line of miniature figures in high relief. The frieze signifies the victory of the Roman legions.

There is an image of military deities: Minerva with Sol and Jupiter Capitolinus between two eagles. The most interesting for us is Mars Ultor in the resting position, to whom from the left approaches Victoria, flying on a globe, bringing him the laurel for his head. There is a trophy behind Victoria, and a figure sitting on the throne, relying on a spear with the lifted arm (goddess Roma or the emperor - maybe Caracalla).

The type of the relief shows that it belongs to the Antonine period and the quality of the work shows that it was made in Toreutic workshops from Italy. It is very possible that sceptre from *Margum* and *Viminacium* also came from the same workshop.<sup>24</sup>

The cult of goddess Diana existed in Danube limes. One toponym and five votive monuments (three epigraphic, one relief-epigraphic and one relief), two marble sculptures, an oil lamp, a *crustulum*, three pateras, gem, *signum* and one silver spoon witness the worship this goddess had.

One fortification in the limes – *Statio Cataractarum Diana* takes the names after the goddess and it was located on today's Karatas. This identification was confirmed by the epigraphic monument finds.<sup>25</sup>

Five votive monuments connected to the cult of Diana, were discovered in *Viminacium*. Two of the mentioned monuments (the cult community of Silvanus and Apollo and dedication to the forest deities) have been described in the previous pages.

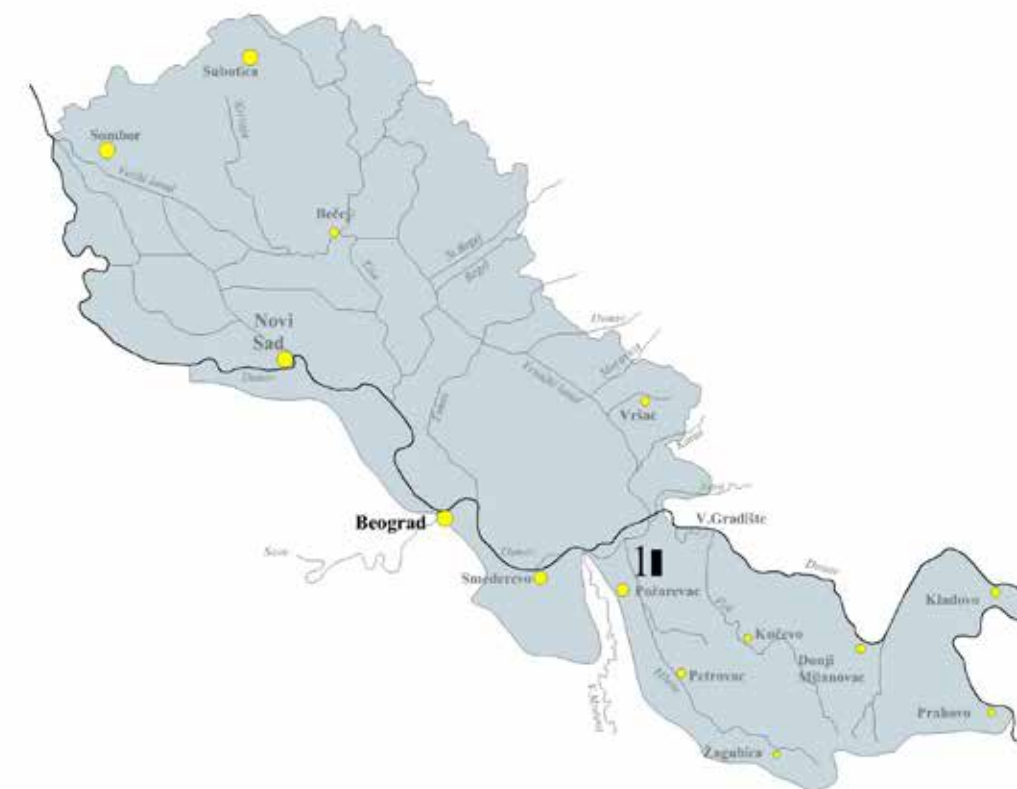


Fig. 4 - Map of monuments dedicated to the cult of the nymphs (drawing: Nataša Miladinović).  
NYMPHS 1. Viminacium (■ epigraphic monument)

The votive monument made of marble, with a dedication to Diana was discovered in 1888. The text says:

Dianae | M. Laelius | Maximu[s] | legatus  
leg(ionis) | VII Cl(audiae) | p(iae) f(idelis)

The name of the dedicant is given in the list of dismissed soldiers from the VII legion Claudius in the year 195 AD.<sup>26</sup>

At the end of 19<sup>th</sup> century, the monument from Kostolac with a partially preserved presentation and fragmented inscription, was discovered. The image of nude female deity in a kneeling position, with a covering in the back. It is likely the iconographic type of Diana image, having a bath, according to the myth on Achteon.

The preserved part of the text does not directly mention Diana and it says:

Deae Ne[ - - ] | suis

The originally given solution to the beginning of the text was Deae Nemesis. Perhaps the reconstruction of the text as Deae Nemorensis was more probable, which would apply to Diana Nemorensis, a goddess worshiped in the holly garden in Aricia.<sup>27</sup>

The fragment of votive relief in marble from *Viminacium* could be also be connected to the cult of Diana. It can be seen in the National museum of Požarevac. The part of the relief representing a fawn with a partially

<sup>21</sup>Bojović 1981, 27

<sup>22</sup>Поповић 1993; Vujović 2002, 255–264

<sup>23</sup>Мано-Зиси 1954, 3

<sup>24</sup>Мано-Зиси 1958, 51–61

<sup>25</sup>Kondić 1987, 43–47

<sup>26</sup>Петровић 1975, 145–146

<sup>27</sup>Mirković 1986, 77

preserved image of a woman. It is probably a work of a local workshop. It originates from 2<sup>nd</sup> or 3<sup>rd</sup> century.<sup>28</sup>

Two fragments of marble sculpture represent Diana in hunting, also originate from *Viminacium*. The first sculpture, in standing position, is preserved only in part of the body from chest to knees. She is dressed in chiton, as a standard goddess Diana hunting clothing. The marble from which it was made originates from *Asia Minor*, so it is possible that it was an imported one. It originates from 3<sup>rd</sup> century.<sup>29</sup>

The other sculpture was found in locality of Čair. The sculpture is in standing position, preserved in part of the body from shoulders to knees. There is a chiton over a left shoulder and a quiver hanging from the right one. It is an iconographic type of Diana in the moment of taking the arrow from the quiver. This sculpture was also made in *Asia Minor*. It originates from 3<sup>rd</sup> century.<sup>30</sup>

There are finds which we could characterize as the works of the applied art, amongst which we mention oil lamp from Beograd, *crustulum* from *Viminacium*, three handles of ceramic patera (Beograd and *Viminacium*), the *signum* from Beograd, the spoon from Dušanovac and the gem from *Viminacium*.

A ceramic oil lamp was found in Knez Mihajlova street in Beograd. The disc of the lamp was embellished with a relief image of a doe, representing one of the sacred animals in connection to the cult of Diana. The lamp originates from the 2<sup>nd</sup> or 3<sup>rd</sup> century.<sup>31</sup>

The ceramic *crustulum*, mold for cake decorating, was discovered in *Viminacium*. The relief of a female figure dressed in a tunic dominates in the central part of the *crustulum*. Her hair is in a bun, and she has a crescent on the front part of her head. In her lift up right arm she has a cutlass and a whip, while the left one is placed on the altar. The male figure on the right brings a torch to the altar. B. Plemić thinks it is an illustration of syncretism

of deities Diana and Nemesis.<sup>32</sup>

The handles of ceramic patera are sometimes decorated with the motifs which could be connected with the cult of Diana. Two of such examples can be found in *Viminacium* and one in Beograd. The iconographic type on the pateras shows a female bust dressed in a tunic and a robe, with her hair likely to be forming a crescent. B. Plemić connects the identification with the mentioned goddess with the spreading of the cult of Silvanus, whose female equivalent would be Diana (Luna).<sup>33</sup>

The bronze *signum* with a complex iconographic image was discovered in Beograd. It consists of a cone hollow quiver, which serves as a support to the staff. There are two branches from the quiver, the right one is in the shape of letter S ending with a rosette and the other one on the left has a scene of a dog hunting a rabbit.

The entire image associates the female figure. It is possible that this composition is connected with the goddess Diana Masalia, occurring on Roman coins produced in honour of Caesar's victory in Galicia. The *signum* originates from 3<sup>rd</sup> century.<sup>34</sup>

The allegorical presentation which is connected with the cult of Diana could also occur on the silver spoon from the locality of Rovina, Dušanovac near Negotin.

On this recipient, the image of a rabbit or a dormouse is made by techniques of carving and gildening. Since silver represents the metal which is directly connected to the goddess, and rabbit and dormouse are the animals under her protection, we can associate this object with the cult of Diana. It originates from the 4<sup>th</sup> century.<sup>35</sup>

The story of the finds connected with the cult of Diana will be rounded up with the gem made of white and blue agate, with the image of a female bust from the sideface. She has a belt over her shoulder, which is likely

holding a quiver. Her hair and sleeveless dress indicate this is the iconographic image of goddess Diana. It is a work done rustically, probably in a local workshop. It originates from the 2<sup>nd</sup>, or 3<sup>rd</sup> century.<sup>36</sup>

The nymphs represent the divine creatures closely connected with the cult of Silvanus. There are two epigraphic finds in the Danube limes in Serbia, connected to this cult. Both of them originate from *Viminacium*. The first one represents already described monument with the dedication to the “forest deities”.

The other find, discovered in the area between the amphitheatre and the northern city wall. Having in mind that a great number of figurines made from clay, and oil lamps, were found in the vicinity of the monument, we might accept the possibility of a sanctuary existing in that area. The text says:

Nymphas | Aug(ustas) (!) P. An( ) | MARCE-  
LEO | v(eteranus ?) AT leg(ionis) VII Cl(audiae)  
v(otum) s(olvit)

The respect given to the nymphs is clear, since they were called by the name Augustae. The presumption can be made that the dedicant was of a Greek origin, and there is a possibility he could have dedicated one or more statues or statuettes to the nymphs. This possible presumption is additionally supported by the probability of a sanctuary dedicated to the nymphs, existing in this area.<sup>37</sup>

The given review of the finds shows that Silvanus, together with his cult community, was worshipped during the Ancient period in the area of the Danube limes in today's Serbia. The importance of this cult is witnessed by the existence of numerous and various archeological finds. Future research will definitely bring new material testimony on the worshipping of the cults of Silvanus, Diana, Mars and the nymphs. Moreover, it will broaden our views on the essence of believing in these deities as well as on the religious importance which was paid to these deities by the people of the Ancient times.

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<sup>28</sup>Томовић 1990, 104; Племић 2017, 85

<sup>29</sup>Племић 2017, 81

<sup>30</sup>Племић 2017, 82

<sup>31</sup>Krunić 2005, 59

<sup>32</sup>Gavrilović 2011, 191–203; Племић 2011, 119

<sup>33</sup>Племић 2011, 117–118

<sup>34</sup>Јовановић 2007, 32–34

<sup>35</sup>Јовановић 2007, 34–36

<sup>36</sup>Поповић 1989, 20

<sup>37</sup>Ferjančić, Korać, Riel 2017, 237



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**Zusammenfassung**

**Archeologische Denkmäler des Gottes Silvanus und seiner Kultgemeinschaft (Mars, Diana, Nymphen, „Waldgottheit“) im Teil vom Donaulimes in Serbien**

Bis nun auf dem Gebiet von Serbien bekannte Denkmäler, die dem Gott Silvanus und seiner Kultgemeinschaft (Mars, Diana, Nymphen, „Waldgottheit“) gewidmet wurden, zeugen von einer sehr geehrten Gottheit auf diesen Gebieten. Die diesem Kult gewidmeten Denkmäler wurden den Teil vom Donaulimes entlang entdeckt, der heute als der Teil von Serbien vorgestellt wird.

Die dem Gott Silvanus gewidmeten Altare wurden in Banoštor, Beograd (Vračar, Kalemegdan, Zemun), *Viminacium* (4 Denkmäler – auf einem von denen ist die Darstellung von Silvanus, der mit Apollo und Diana geehrt wurde. Ein Denkmal wurde der Waldgottheit gewidmet) und in Smederevo entdeckt. Auf einem in die Festung von Smederevo eingemauerten Denkmal gibt es das Relief mit den Darstellungen von Jupiter, Silvanus und Mars. Die Figurine von Silvanus wurde in Novi Banovci gefunden. Es gibt die Möglichkeit, dass es in der Unterstadt auf dem Kalemegdan die dem Gott Silvanus gewidmete Kultstätte gab.

Die dem Gott Mars gewidmeten Denkmäler sind aus *Viminacium* und Smederevo bekannt. Die Statuetten dieses Gottes kommen aus der Unterstadt in Beograd, *Viminacium* (2 Stücke), Dušanovac bei Negotin, *Pontes* und von einer unbekannten Lokalität an der Donau. Die Reliefdarstellungen von Mars befinden sich im Goldring aus Beograd, im Paradenpanzer aus Ritopek und auf den Skiptrimen (Stäben) aus *Viminacium* und *Margum*.

Bei Karataš an der Donau befand sich die Befestigung, die den Namen der Göttin Diana trug. (*Statio Cataractum Diana*). Die der Göttin gewidmeten Altare wurden in *Viminacium* gefunden (5 Stücke). In demselben Raum wurden auch zwei Marmorskulpturen gefunden. Es gibt auch die Funde mit symbolischen Darstellungen, die man mit dem Kult von Diana verbinden kann. Von der Verehrung des Kultes von Nymphen zeugen zwei Altare aus *Viminacium*.

Archeologische Funde zeugen von der bedeutenden Verehrung des Gottes Silvanus und seiner Kultgemeinschaften den Donaulimes entlang auf dem Gebiet vom heutigen Serbien.





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# **Votum solvit! Weihungen von Militärangehörigen und ein zentraler Kultbezirk im römischen Nida (Frankfurt am Main-Heddernheim)**

## **ABSTRACT**

The urban settlement Nida (Frankfurt am Main-Heddernheim) was the capital of the Civitas (Ulpia?) Taunensium to which belonged the hinterland of the limes north of river Main. Since the beginning of the 2<sup>nd</sup> century AD, the town grew to the administrative, economic and cultural center of the region. Numerous sanctifications also point to the importance of the city as a religious center. So far, however, there were no sanctuaries apart from four mithraic temples that would have been assigned to the deities handed down through inscriptions. Among the dedicators of the altars and votives are numerous members of the Roman army: soldiers of the legions as well as men of the auxiliary units represented at the Limes. In the years 2016-2018 excavations in the center of Nida revealed a walled sacred area with several aediculae and two large stone buildings, probably to be interpreted as temples. The sanctuary was built at the beginning of the 2<sup>nd</sup> century AD and used until the middle of the 3<sup>rd</sup> century AD. In addition, more than 100 pits and about 60 small ovens were laid out on the site. The structures may have been related to offerings or cultic acts. Also striking are the findings of three human skeletons, two of which can be addressed as special burials. The structures and extensive find material, especially the numerous brooches and coins, give unusually detailed insights into the organization, structure and cult practices of an urban sanctuary in the northwestern provinces of the Roman Empire.

**KEY WORDS: LIMES IN UPPER GERMANY, NIDA, ROMAN MILITARY, RELIGION AND CULT, EXCAVATIONS, DEDICATIONS, SANCTUARY, JUPITER DOLICHENUS**

**D**ie römische Reichsgrenze ist auf ihren rund 5000 km Länge ein komplexes System, für dessen Verständnis neben dem Vorfeld vor allem das Hinterland eingehender betrachtet werden muss. Aktuelle Aus-

grabungen im römischen Nida (Frankfurt am Main-Heddernheim, Hessen/D) ermöglichen nun einen neuen differenzierten Blick auf die Bedeutung dieser







Abb. 2 - Silbervotive und Kultstandarte (Bronze) für Jupiter Dolichenus aus Nida (Kopien). (Foto: AMF/U. Dettmar).

Habel kartiert<sup>23</sup>. Demnach wurde das Stück im Bereich des postulierten Forums Nidas geborgen; einem Areal, das in den vergangenen über 150 Jahren Forschung am Ort nur in kleinen Ausschnitten untersucht werden konnte<sup>24</sup>.

Dies änderte sich im Frühjahr 2016, als Neubaumaßnahmen Untersuchungen des Denkmalamtes der Stadt Frankfurt erforderte (Abb. 3)<sup>25</sup>. Die Grabung erbrachte herausragende Erkenntnisse zur Siedlungsgeschichte und –topographie Nidas: Sie führten zur Aufdeckung eines ummauerten Kultbezirks im Herzen der antiken Stadt, der als einer der am besten dokumentierten und am vollständigsten ergrabenen Sakralanlagen in den germanischen Provinzen gelten kann. Zur Zeit entsteht in Kooperation des Archäologischen Museums

Frankfurt mit dem Institut für Archäologische Wissenschaften der Goethe-Universität Frankfurt a. M. (Prof. A. Klöckner / Prof. M. Scholz / Dr. A. Stobbe), dem Denkmalamt der Stadt Frankfurt (Dr. A. Hampel), dem IPNA der Universität Basel (PD Dr. S. Deschler-Erb) sowie der Römisch-Germanischen Kommission des Deutschen Archäologischen Institutes (Dr. K. Hofmann / Dr. G. Rasbach / Dr. Chr. Rummel) ein Antrag für ein interdisziplinäres Projekt, um die Befunde und Funde aufzuarbeiten. Dieser Beitrag bildet einen Vorbericht<sup>26</sup>.

Die älteste Nutzung am Ort markieren ein Spitzgraben, vorgelagerte Grabenstücke (Annäherungshindernisse?) sowie Backöfen eines temporär genutzten Militärlagers. Vermutlich handelt es sich dabei um eines

der (früh-)flavischen Lager, die westlich des später in Stein ausgebauten Alenkastells nachgewiesen werden konnten<sup>27</sup>. An dessen Stelle errichtete man an herausgehobener Position zu Beginn des 2. Jahrhunderts n. Chr. einen heiligen Bezirk (Abb. 4). Die Anlage in Nida nimmt damit in mehrfacher Hinsicht eine Sonderstellung im Limesraum ein. Aus dem rheinischen Limesgebiet kennt man bis heute als Sakralbauten fast ausschließlich Mithräen<sup>28</sup>; komplexere Anlagen sind bisher nur in Ausschnitten erschlossen; ihr architektonischer Aufbau, die Struktur, chronologische Entwicklung und die vor Ort ausgeübten Kultpraktiken weitgehend unbekannt<sup>29</sup>. Mit Ausnahme des Apollo Grannus-Heiligtums in Neuenstadt am Kocher liegen die Heiligtümer am Rand der Siedlungen. In Nida dagegen entspricht seine zentrale Lage den „Kapitolen“ städtischer Siedlungen, die wie im Fall von Augusta Raurica (Augst) jedoch über eine andere rechtliche Stellung verfügten als Nida<sup>30</sup>. Auffällig im Falle Nidas ist im Gegensatz zu diesen Anlagen, dass der heilige Bezirk vom Forumsbereich nicht offen zugänglich, sondern durch eine Temenos-Mauer abgegrenzt war. Diese ist auf ihrer gesamten Länge im Osten und Süden nachgewiesen, im Norden und Westen zumindest über große Abschnitte. Die Mauer schloss ein über 3500 m<sup>2</sup> großes Areal ein, auf dem mindestens drei Holz- und zehn Steinbauten nachgewiesen werden konnten. Die Mauern sind in Folge des in Nida seit dem späten Mittelalter üblichen Steinraubs bis in die Fundamentbereiche ausgebrochen (vgl. Abb. 3)<sup>31</sup>. Im Tempelbezirk können dennoch zumindest zwei Holz- und mehrere Steinbauphasen unterschieden werden. Vor allem der Nachweis der Holzbauphasen ist für Anlagen dieser Art ungewöhnlich. Aus Nida fehlen allerdings Hinweise auf die Existenz früher „gallo-römischer“ Umgangstempel, wie sie von anderen Fundorten bekannt sind. Man hat den Eindruck, dass der Anlage kein einheitliches planerisches Konzept zu Grunde lag. Die auf dem westlichen Hofareal errichteten vier Aediculae schneiden ältere Kultgruben, werden andererseits aber von späteren Eingrabungen überlagert (Abb. 3). Der jüngste Bau, ein komplexer Steinbau im Osten der

Anlage mit über 800 m<sup>2</sup> Innenfläche und massiven Außenmauern (Fundamentbreite knapp 1,20 m), wurde zumindest ein Mal umgebaut: Im Ausbruchgraben einer Mauer fanden sich mehrere Tausend Fragmente bemalten Wandputzes, der offensichtlich während eines in römischer Zeit durchgeführten Umbaus abgeschlagen wurden.

Die Funktion der Steingebäude ist bislang keineswegs geklärt, da vergleichbare Grundrisse aus Heiligtümern aus dem nördlichen Limesgebiet nahezu unbekannt sind. Charakteristisch für das Heiligtum von Nida sind Kult- oder Opfergruben sowie offenbar zugehörige Öfen. Diese Befunde konzentrieren sich im Westen (Hofareal) und im Zentrum der Anlage, meist in regelrechten Gruppen. Grundsätzlich lassen sich bei den Gruben zwei Typen anhand der Verfüllung unterscheiden. Ein Großteil der 70 nahezu quadratischen Schächte enthielt auf der Sohle eine mit Holzkohle und Asche angereicherte Schicht; darüber waren die Befunde nahezu steril mit dem ursprünglichen Grubenaushub verfüllt (Abb. 5). Die untere Verfüllschicht enthielt neben Tierknochen und pflanzlichen Reste oft ein bis zwei (Trink-)Gefäße aus Glas oder Keramik. Daneben gibt es eine kleinere Gruppe von Schächten, die mehrere, fundreiche Einfüllungen enthalten (Abb. 6). Erste Untersuchungen legen den Schluss nahe, dass die letztgenannte Gruppe in der Spätzeit des Kultbezirks im 2. Viertel des 3. Jahrhunderts n. Chr. entstand. Ob dies auf einen Wechsel in der am Ort gepflegten Kultbeziehungsweise Deponierungspraxis zurückgeführt werden kann, müssen weitere Untersuchungen zeigen. Zu den jüngsten Befunden innerhalb des Heiligtums gehören zudem mehrere große Grubenkomplexe, die zahlreiche ältere Strukturen überlagern. Noch ist nicht geklärt, welche Funktion ihnen zukam.

Zumindest ein Teil der rund 60 kleinen Öfen bestand gleichzeitig mit den Opferschächten. Denkbar ist, dass sie im Rahmen kultischer Handlungen (Kultmahlzeiten?) genutzt wurden<sup>32</sup>. Vergleichbare Befunde sind nur aus wenigen Heiligtümern in den Nordwestpro-

<sup>23</sup>Habel 1827, Taf. 4, r; Taf. 7, 8 a.b. Eine erste Besprechung der Funde durch Habel findet sich in Nass. Ann. 3, 3, 1844, 176 ff. Demnach sind jüngere Angaben zum Fundort u. a. bei Schwertheim 1974 falsch!

<sup>24</sup>Zur Forschungsgeschichte zuletzt Fasold 2017, 11 ff. Vgl. auch Wenzel 2017.

<sup>25</sup>Zum Folgenden Flügen, Hampel, Wenzel 2017 und Hampel, Scholz 2018.

<sup>26</sup>Neben den veröffentlichten Beiträgen wurden an den Universitäten Basel und Frankfurt studentische Abschlussarbeiten zu ausgewählten Themen verfasst, die das Potential des geplanten Projekts aufzeigen. Zudem liegen erste naturwissenschaftliche Untersuchungen zu einzelnen Funden sowie zu den pflanzlichen Großresten und Holzkohlen vor.

<sup>27</sup>Vermutlich handelt es sich um „Lager G“. Zu den frühen Militäranlagen zuletzt Fasold 2017, 30 ff.; s. a. Fasold 1991, 90 ff.

<sup>28</sup>Zuletzt zusammengefasst bei Klenner 2019.

<sup>29</sup>Rottenburg: Gairhos 2008, bes. 120 ff.; Neuenstadt a. Kocher: Kortüm 2014 (mit älterer Lit.); Butzbach: Dürr, König, Lindenthal 2017.

<sup>30</sup>Zur rechtlichen Stellung Nidas vgl. Wenzel 2000, bes. 78 f. Zum Kapitolstempel von Augst und vergleichbaren Anlagen s. Trunck 1991, bes. 34 ff.

<sup>31</sup>Vgl. Fasold 2017, 11 ff.; Wenzel 2000, 12 ff.

<sup>32</sup>Zur Rolle von Tieren im Kult allgemein s. Deschler-Erb 2015.





Abb. 3 - Ausgrabungen im Kultbezirk im Jahr 2016. Im Vordergrund kleine edicula mit Apsis  
(Foto: Denkmalamt Stadt Frankfurt a. M.)



Abb. 5 - Kultschacht (Stelle 1021) im Profil. (Foto: Denkmalamt Stadt Frankfurt a. M.).



Abb. 4 - Provisorischer Gesamtplan des Kultbezirkes von Nida. (Denkmalamt Stadt Frankfurt a. M.).



Abb. 6 - Profil eines Kultschachts mit mehreren Einfüllschichten. (Foto: Denkmalamt Stadt Frankfurt a. M.).



vinzen bekannt. Nicht nur aufgrund der geografischen Nähe erscheint dabei das Heiligtum für Isis und Magna Mater als enge Parallele zu Nida<sup>33</sup>.

Für das Verständnis der im Heiligtum von Nida praktizierten Kult- und Opferhandlungen ist die antiquarische Analyse des umfangreichen Fundmaterials unabdingbar. Dabei kommt den Fibeln und Münzen eine besondere Bedeutung zu, da sie vielerorts in den Nordwestprovinzen als Weihe- und Votivgaben gut belegt sind. Auffälligkeiten zeigen sich in Nida auch bei diesen Fundgruppen: Die über 70 aus dem Heiligtum bekannten Fibeln unterscheiden sich von dem bisher aus dem Stadtgebiet bekannten Material. Im Typenspektrum finden sich hochwertige Stücke und bisher kaum belegte Sonderformen. Gemein ist ihnen nahezu allen, dass sie vollständig erhalten und die Nadeln geschlossen sind.

Unter den 253 Münzen dominieren Prägungen aus Silber, die meisten davon sind in der Regel in einem guten Zustand. Vieles spricht dafür, dass man gezielt hochwertige Münzen auswählte und im Heiligtum deponierte. Ein Umstand, der in den Nordwestprovinzen eher ungewöhnlich ist<sup>34</sup>. Zudem kommen Manipulationen der Münzen, wie sie im rituellen Kontext häufig belegt sind, nicht vor.

Auffällig sind darüber hinaus in Nida Miniaturen von Waffen aus Bronze sowie mehrere eiserner Lanzenschuhe, die sich teilweise noch in situ im Boden fanden. Man wird nicht fehl gehen, eine Verwendung der Standarten im kultischen Bereich anzunehmen. Eine weitere Besonderheit stellen die Funde von drei menschlichen Skeletten innerhalb des Heiligtums dar. Zumindest bei zweien von ihnen erscheint ein direkter Bezug zu den Steingebäuden wahrscheinlich. So lag ein Skelett in einer Grube unmittelbar vor einem rechteckigen Gussmörtelfundament in der Front des westlichen der beiden großen Steinbauten. Dem Mann

hatte man offensichtlich mit einem spitzen Gegenstand (Messer?) die Kehle durchschnitten (Abb. 7). Das zweite Skelett war unter den Mauern des Baus in der südwestlichen Ecke der Temenosmauer niedergelegt. In beiden Fällen muss man an Sonderbestattungen oder gar Menschenopfer denken – eine Praxis, die freilich römischem Recht widerspräche. Teile eines weiteren Skelettes stammen aus einem Brunnen, der gegen Ende der Nutzung des Heiligtumes verfüllt wurde. Vergleichbare Befunde aus dem fortgeschrittenen 3. Jahrhundert n. Chr. sind aus dem Limesgebiet, gar aus Nida selbst, bekannt<sup>35</sup>.

Dieser Brunnen enthielt neben menschlichen und tierischen Skeletteilen sowie Keramik zwei besondere Objekte aus Bronze: Eine Statuette der Göttin Diana und den Sockel einer Statue des Merkur. Dieser trägt die konsulierte Weihinschrift eines duplicarius der 22. Legion, die am 9. September 246 n. Chr. ausgefertigt wurde (Abb. 8)<sup>36</sup>. Sie belegt das Bestehen des Heiligtums von Nida bis in die Mitte des 3. Jahrhunderts n. Chr. Präziser lässt sich das Ende des Kultbezirkes derzeit nicht bestimmen. Es zeichnet sich jedoch ab, dass es im Lauf des 3. Jahrhunderts n. Chr. zu Änderungen in der Baustruktur sowie den am Ort ausgeübten Kultpraktiken gekommen ist. Über die Hintergründe kann man derzeit nur spekulieren<sup>37</sup>. Möglicherweise bestand das Heiligtum noch im 3. Viertel des 3. Jahrhunderts n. Chr. Ein Zerstörungshorizont zeichnet sich in den Grabungen nicht ab. Vielmehr hat man den Eindruck, als sei – ähnlich wie in anderen Teilen des Stadtgebietes von Nida – der Kultbezirk planmäßig geräumt worden<sup>38</sup>. Für die nach wie vor diskutierte Frage nach der Enddatierung der Siedlungstätigkeit in Nida könnte hier ein Schlüsselbefund vorliegen<sup>39</sup>.

Architektur, Struktur des Heiligtums sowie die ersten Einblicke in die am Ort geübten Kultpraktiken geben wenige Hinweise auf die im Sakralbezirk verehrten Gottheiten. Epigraphisch nachgewiesen sind bislang

<sup>33</sup>Zum Mainzer Heiligtum s. Witteyer 2013.

<sup>34</sup>Vgl. den Martberg, Pommern: C. Nickel, M. Thoma, D. Wigg-Wolf 2008, bes. 605 ff.

<sup>35</sup>Zu Nida: Fasold 2015 mit weiterer Literatur.

<sup>36</sup>Hampel, Scholz 2018.

<sup>37</sup>Beim Kult des Jupiter Dolichenus könnten Verbindungen zur Zerstörung von Heiligtümern an Rhein und Donau unter Maximus Thrax (235-238 n. Chr.) oder zur Verwüstung des Hauptheiligtums in Doliche im Jahr 253 n. Chr. durch die Perser bestehen.

<sup>38</sup>Die rituelle Zerstörung von Heiligtümern wird derzeit diskutiert: van Andringa 2014; Lepetz, Bourgois 2018.

<sup>39</sup>Ein Weiterbestehen bzw. eine Wiederbelebung der Siedlungstätigkeit am Ort nach 260 n. Chr. erscheint wahrscheinlich, ist aber noch nicht zweifelsfrei zu belegen. S. dazu Fasold 2017, 121 ff.; Reis 2010, bes. 265 ff.



Abb. 7 - Sonderbestattung eines Mannes im Vorfeld eines Steingebäudes (Foto: Denkmalamt Stadt Frankfurt a. M.).



Abb. 8 - Sockel (Bronze) einer Statuette für Merkur mit Weihinschrift. (Foto: AMF).



Jupiter Dolichenus und Merkur; über Statuetten und Reliefs sind zudem Jupiter, Diana und Epona belegt (Abb. 9). Von besonderer Bedeutung für die Forschung am Ort ist der Nachweis der Verehrung von Jupiter Dolichenus. Der Neufund eines Votivs aus Eisen (Abb. 10) sowie der Nachweis von (Kult-)Standarten, die für den Kult belegt sind, lässt daran wenig Zweifel. In Verbindung mit den Altfunden aus dem 19. Jahrhundert spricht vieles dafür, in einem der Gebäude ein Heiligtum für Jupiter Dolichenus zu sehen, über dessen Kult bis heute vergleichsweise wenig bekannt ist<sup>40</sup>.

Die Lage des heiligen Bezirkes im Zentrum Nidas sowie die komplexe Bebauung des Areals lassen vermuten, dass dort verschiedene Kulte nebeneinander existierten und ausgeübt wurden. Nicht zuletzt deshalb darf man davon ausgehen, dass es sich bei dem 2016 entdeckten Kultbezirk um das Zentralheiligtum der Stadt handelt. Ob es darüber hinaus auch als zentrales Heiligtum der civitas taunensium, deren Hauptort Nida war, angesehen werden kann, wird im Laufe des geplanten Projekts untersucht werden. Auch wenn vergleichende Untersuchungen bisher nahezu vollständig fehlen, so könnte die eingangs beschriebene Anwesenheit Angehöriger der am Limes und in den Legionsstandorten stationierten Truppen ein Hinweis auf die herausragende regionale Bedeutung des Kultbezirkes sein. In jedem Fall zeichnet sich immer deutlicher der Umstand ab, dass das nordmainische Limesgebiet ohne das regionale Zentrum nicht verstanden werden kann. Nida war der zentrale Dreh- und Angelpunkt im Hinterland des Taunus- und Wetteraulimes.



Abb. 9 - Bronzestatuetten der Diana. (Foto: AMF).

<sup>40</sup>Vgl. dazu die umfassende Zusammenstellung bei Blömer, Winter 2012.



Abb. 10 - Votiv (Eisen) in Form einer tabula ansata mit Weihung für Jupiter Dolichenus. (Foto: AMF).

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**Summary**

Recent excavations in the Roman Nida (Frankfurt am Main-Heddernheim, D) allow a new differentiated look at the importance of this urban settlement for the region in the hinterland of the Roman limes in Taunus and Wetterau.

Ancient Nida developed from the military vicus of a fort built around 75 AD. After the withdrawal by the military around 110/115 AD, Nida became the capital of the Civitas (Ulpia?) Taunensium, which comprised almost the entire Limes hinterland north of river Main. Since the 2<sup>nd</sup> century AD, Nida has been the administrative, economic and cultural center of the region. Its importance as a religious center so far occupied mainly the remains of four sanctuaries of Mithra and numerous dedications. Among these are several foundations of members of the Roman military. A compilation of inscriptions provides evidence for eleven members of the military on duty and two veterans. In addition to milites there are also a decurion and four centuriones. Some of the men may have donated these dedications

during their service in Nida. The rest come from units based in the Limes area and may have come to the city specifically to visit sanctuaries.

Excavations in the center of Nida in the years 2016-2018 yielded outstanding insights into Nida's history of settlement and topography: it led to the discovery of a walled cult area in the heart of the ancient city. The well documented excavations and the extensive find material will now be worked on in an interdisciplinary project in cooperation of several partners. This article is a preliminary report.

Centrally located within the city, a cult area was built at the beginning of the 2<sup>nd</sup> century AD. The plant occupies a special position in the limes region. From there they are still known as sacred buildings almost exclusively sanctuaries of Mithra, more complex plants are largely unknown. In Nida, the central location corresponds to the „capitals“ of urban settlements such as Augusta Raurica (Augst). Conspicuous in contrast is that the sacred precinct was separated from the forum area by a temenos wall. This included an area of more than 3500 m<sup>2</sup>, on which at least three timber and ten stone buildings could be detected. Several construction phases can be distinguished. Above all, the proof of the wooden constructions is unusual for plants of this kind, but lacking in Nida evidence of the existence of a „gallo-roman“-type temple. Numerous overlaps between the structures give the impression that everything was not based on a uniform planning concept. The function of the stone buildings is not yet clarified, since comparable ground plans from sanctuaries from the northern Limes area are almost unknown.

Characteristic of the sanctuary of Nida are cult or sacrificial pits and apparently associated stoves. These findings are concentrated in the west (court area) and in the center. It is conceivable that they were used in the context of cultic acts (cult meals?) and for the „disposal“ of the offerings.

In the evaluation of the find material, more than 70 brooches and 253 coins are of particular importance. Their use as an offering was apparently based on a targeted selection. Another special feature are three human skeletons within the sanctuary. At least two of them can be addressed as special burials.

A dedication dating on 9<sup>th</sup> of September 246 AD found in a well confirms the existence of the sanctuary of Nida until the middle of the 3<sup>rd</sup> century AD. The sanctuary may well have existed beyond the middle of the 3<sup>rd</sup> century AD. A destruction horizon has not been proven. Apparently, the cult district was cleared according to plan.

So far proven in Nida is the worship of Jupiter, Jupiter Dolichenus, Mercury; Diana and Epona. This circumstance, the location of the holy district in the center of Nida and the development of the area suggest that there were various cults practiced side by side. Not least because of this, one may assume that the cult district is the central sanctuary of the city. Whether it can also be considered as the central sanctuary of *civitas taunensium* must be investigated. The presence of members of the troops stationed at the Limes and legion sites may be an indication of the region's outstanding regional significance. In any case, it is clear that the Limes area north of the Main can't be understood without Nida as a regional center.



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# Lived religion and its materiality in Roman Dacia

## ABSTRACT

Dacia was part of the Roman Empire for less than 170 years. In this short period, the various groups arrived in the province produced a significant amount of archaeological material – named in this article as materiality of religion – used in religious communication, between divine and human agents. The paper tries to answer the question, if Roman religious communication, lived religion, religious appropriation and embodiment can be understood through the materiality of religion? Presenting the major sources of archaeology of religion from Dacia, the paper will focus on the notion of lived ancient religion and its limits in the edge of the Roman Empire.

**KEY WORDS: LIVED ANCIENT RELIGION, ROMAN DACIA, MATERIALITY OF RELIGION, SPACE SACRALISATION, ROMAN SANCTUARIES, ARCHAEOLOGY OF RELIGION**

Studying Roman religion is not an easy task. The notion itself is problematic and it has several connotation and various dimensions, which cannot be understood outside of a cultural-historical perspective, where religion(s) are interpreted as a dialogue between divine and human agents in constant transformation<sup>1</sup>. The history of Roman religious studies from Wissowa to Rüpke is a topic which is not yet analyzed in details,

however our paper has no aim to do so. Recent historiographic accounts<sup>2</sup> highlight the major shift in research from state-religion and polis-religion<sup>3</sup> to the religion of the individual<sup>4</sup>, the relationship between the self and its religious aspects<sup>5</sup> and the materiality of religion<sup>6</sup>. This tendency introduced numerous new aspects in Roman religious studies and deconstructed some old notions and historiographic dogmas, such as the separate study

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<sup>1</sup>On various definitions of Roman religion and its historiographical perspectives see: Scheid 2003, Scheid 2015, XI-XIII. See also: Rives 2010, Rüpke 2007, Rüpke, Woolf 2021.

<sup>2</sup>Philips 2007, Rives 2010, Szabó 2017a.

<sup>3</sup>On the notion of polis-religion see: Scheid 2015, 5–22. See also: Woolf 1997, Rüpke 2012.

<sup>4</sup>Rüpke 2013, Fuchs *et al.* 2019.

<sup>5</sup>Rüpke, Woolf 2013.

<sup>6</sup>Raja, Rüpke 2015.

of the so called Oriental cults<sup>7</sup>, the ignored and marginalized study of ancient Graeco-Roman magic and the historical and religious contextualization of Judaism and early Christianity within the religious market of the Roman Empire<sup>8</sup>. This new tendency and renewal of Roman religious studies in the last two decades resulted in several important projects focusing on Roman religion, the most influential being, the Lived Ancient Religion approach, which seems to dominate now the Western scholarship with few exceptions and old school approaches in Germany and France, but with less impact in Italy and Central- East Europe, where studies on Roman religion are still focusing mostly on the state and polis-religious aspects.

### The Lived Ancient Religion approach: new perspectives in research

The notion of Lived Religion derives from the American anthropological school of religious studies and became a new approach after the influential work of Meredith McGuire<sup>9</sup>. Instead of institutionalized religion, monopolization of religious communication by well organized groups of specialists (priests), McGuire's approach was focusing on religious appropriation, individualization and embodiment. These notions were not unknown for Roman religious studies before, but the research was focusing mostly on the varieties of state religious manifestations and institutionalized religious matters. Roman religion was conceived as a religion of rituals, contracts and sacrifices<sup>10</sup>, competing new religious movements with the traditional religious forms<sup>11</sup> or psychological, cognitive aspects were highlighted by some scholars<sup>12</sup>. The Lived Ancient Religion

approach arrives in 2012 as a result of a longer evolution of German *Altertumswissenschaft*<sup>13</sup>, influenced by the contemporary American religious studies on ritual, religious experience and lived religion<sup>14</sup>. The new approach of Lived Ancient Religion project financed by the European Research Council as an Advanced Grant lead by Jörg Rüpke attracted dozens of scholars in the field of Roman religion, archaeology, early Christianity, classics and Jewish studies too<sup>15</sup>. The starting point of the approach is, that religion is a form of communication between divine and human agents, which changes in historical-cultural perspectives. Texts, objects and spaces (and also the process of space sacralisation) are tools or rarely, agents in the maintenance of this constant communication, which – due to its long-term historical aspects – produced numerous forms of religious appropriation, individualization and competence too<sup>16</sup>. The novelty of the approach is, that it is highly inclusive and incorporates all those fields of Roman religious studies, which till then, co-existed, but rarely communicated, such as epigraphy of Roman religion<sup>17</sup>, archaeology of sanctuaries<sup>18</sup> and the individual forms of religious art and experience often named as 'provincial Roman religions'. These traditional categories are abandoned by this approach and included as one of the facets of Roman religious communication between human and divine agents. Although the approach was recently criticized, that falls in the extremity of ignoring political, economic and historic aspects of institutionalized religion and polis-religion<sup>19</sup> and divine agents (gods) are marginalized too<sup>20</sup>, it still the most complex theoretical approach in recent Roman religious studies, which gained popularity also the analysis of the once called 'provincial Roman religion' in Africa

and the Danubian provinces<sup>21</sup>. While this approach was focusing mostly on the case study of Rome, Italy and the highly Romanized provinces of the Roman Empire, where literary and archaeological sources are also available, the provocation of the project is to test this approach on case studies from the periphery of the empire, where the only sources we have comes from various periods of field archaeological research. A good test for the Lived Ancient Religion approach is the case study of Roman Dacia.

### Religion in Roman Dacia. History of research and the sources

In less, than 170 years (106-271 AD), Romans living in the province of Dacia produced a significant quantity of materiality of "Romanness" (Romanisation 2.0)<sup>22</sup>. A large part of this – around 1400 votive inscriptions and the same amount of figurative monuments<sup>23</sup> - were produced and used in 54 archaeologically excavated, 19 epigraphically attested and at least 67 presumed sanctuaries (Fig. 1)<sup>24</sup>. This quantity of materiality of Roman religious communication is significant even on an empire scale, although the real number of objects used in religious dialogue between divine and human agents in this area of the province should be much larger: beside the 10 urban settlements and at least 77 forts and fortresses<sup>25</sup>, Roman Dacia had hundreds of Roman villas and rural settlements too, most of them unfortunately barely documented<sup>26</sup>. Space sacralisation was surely more wide spread in Roman Dacia as the archaeological evidence can show for us: religious communication in domestic places and in natural environments (forests, mines, lakes, mountains) are rarely attested, due to the traditional focus of Romanian ar-

chaeological trends, which emphasized in the last century the urban and military settlements.

The study of the material evidence of Roman religion in Dacia begun in the 18<sup>th</sup> century, after the major urban constructions in Transylvania<sup>27</sup>. Till the end of the 19<sup>th</sup> century, the early researchers were focusing mostly on antiquarianism and collectionarism, an exceptional case being the rich Mithraic material of Apulum, which was researched more intensively by local and international scholars<sup>28</sup>. The first systematic excavations of sanctuaries occurred also in this period, mostly in the capital of the province, colonia Sarmizegetusa<sup>29</sup>. Most of the sanctuaries were discovered during the 20<sup>th</sup> century, most of them without being systematically researched or published. Among the few exceptions we can mention the sanctuary of Liber Pater from Apulum, the Dolichenum from Porolissum and the Dolichenum from Mehadia<sup>30</sup>. Recently, excavations focused more on the process of space sacralisation and the human activity within sanctuaries<sup>31</sup> and there were numerous important studies on the theoretical aspects of Roman religious studies, focusing on religious interferences and syncretisms<sup>32</sup>. The first attempt, for the interpretation of the materiality of Roman religion from Dacia through the lance of the Lived Ancient Religion approach was recently published<sup>33</sup>.

### Lived ancient religion in Dacia through materiality of religion

Most of the material evidence of Roman religious communication from Dacia is the result a mass production (votive altars, with simplistic and schematic forms of texts), mostly provincial and rarely imported materi-

<sup>7</sup>On the problematic notion of Oriental religions or cults, see: Verluys 2014, Alvar 2017, Szabó 2018a, 466.

<sup>8</sup>On recent studies of ancient Graeco-Roman magic see: Gordon, Simón 2010, Boschung, Bremmer 2015, Parker, McKie 2018. On Judaism and early Christianity as part of the religious market of the Roman Empire: Maier 2018.

<sup>9</sup>McGuire 2008.

<sup>10</sup>See especially the series of the ANRW books on Roman religion.

<sup>11</sup>Especially the EPRO series initiated by M. J. Vermaseren.

<sup>12</sup>Versnel 1981.

<sup>13</sup>Cancik 1986, as one of the most important predecessors of this project. See also: Cancik, Rüpke 1997.

<sup>14</sup>Bell 1992, McGuire 2008, Taves 2009, Bell 2009.

<sup>15</sup>Some of the most relevant publications of the project: Albrecht *et al.* 2018, Rüpke 2018. See also: Gasparini *et al.* 2020.

<sup>16</sup>See the introduction of Rüpke 2018 on the major facets of Roman religious communication.

<sup>17</sup>Scheid 2012.

<sup>18</sup>Scheid, Polignac 2010.

<sup>19</sup>Scheid 2015.

<sup>20</sup>Bremmer 2018.

<sup>21</sup>On the project of Lived Ancient Religion in Africa see the LARNA project of V. Gasparini. On the Lived Ancient Religion in the Danubian provinces see: [www.danubianreligion.com](http://www.danubianreligion.com). Last accessed: 16.07.2023.

<sup>22</sup>Woolf 2014. See also: Van Oyen-Pitts 2017.

<sup>23</sup>Szabó 2018b, 175.

<sup>24</sup>Idem, 180–190.

<sup>25</sup>Marcu 2009. See also: [www.limesromania.ro](http://www.limesromania.ro). Last accessed: 25.08.2019.

<sup>26</sup>For an overview of the rural settlements see: Gudea 2009. For the villa-settlements see: Oltean 2007.

<sup>27</sup>On the history of research and histories of archaeology in the region see: Szabó 2014, Szabó 2017b.

<sup>28</sup>Szabó 2015a.

<sup>29</sup>Boda 2014.

<sup>30</sup>Szabó 2018b, 78–86 and 128–141.

<sup>31</sup>On the sanctuary of Mithras discovered in 2008 in Apulum see: Egri *et al.* 2018.

<sup>32</sup>The first such, paradigmatic work was published in 1985 by M. Bărbulescu and by S. Nemeti in 2005: Bărbulescu 1985, Nemeti 2005.

<sup>33</sup>Szabó 2018b.



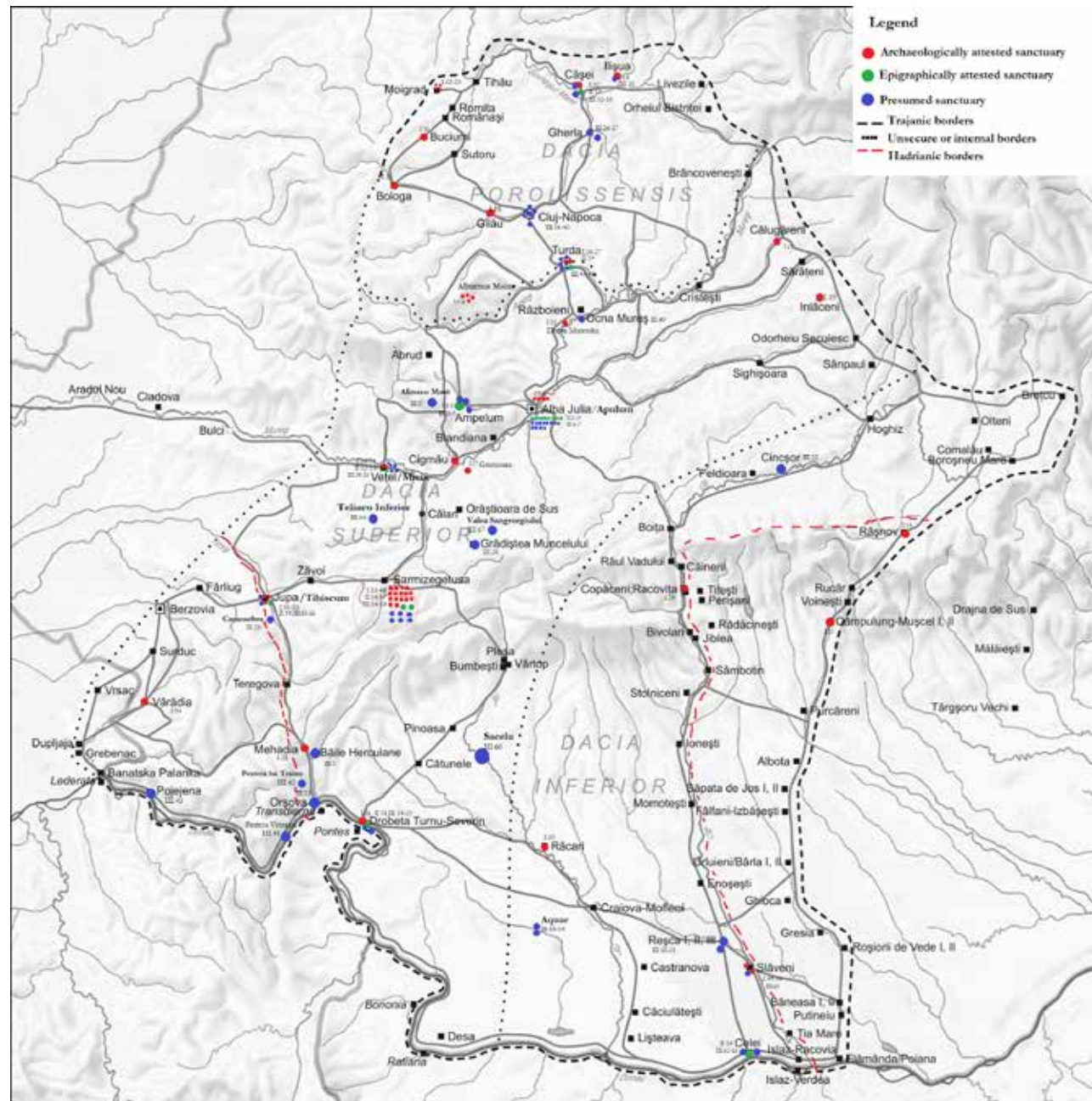


Fig. 1 - Sanctuaries of Roman Dacia (after Szabó 2018b, 9 fig.4.)

al<sup>34</sup>. Most of the epigraphic material mentions the name of the dedicant, the name of the divinity (the two actors in religious communication) and rarely, the social status of the worshipper, ending in a classical form. These documents can be valuable to identify the places of space sacralisation, onomastic studies, their social status and to “recreate” artificially the “pantheon” of urban communities and provinces<sup>35</sup>. Recently, new ap-

proaches introduced also the social life of Roman art and the agency role of objects, which extended much more the possibilities and messages one can read from a stone altar, a statue base and especially the figurative monuments, as parts of a larger visual narrative and architectural atmosphere<sup>36</sup>. None of these sources and approaches can really speak about the lived religious experience of the ancient people, which in most of the

<sup>34</sup>Especially statuary material, marble objects from Greece and Asia Minor.

<sup>35</sup>On the limits of epigraphic sources in Roman religious studies see: Scheid 2012.

<sup>36</sup>Stewart 2008, Busch, Schäfer 2014. See also: Maschek 2017.

cases, remains unknown in Roman provincial context, where the materiality of religion is reduced and mass-production and there are no literary sources related directly to them. In few cases however – especially, well excavated and documented materials or longer, narrative inscriptions and representations – can show us glimpses of lived ancient religion in Dacia. In the following, I will present some case studies of religious individualization, local appropriation and religious experience and embodiment – some of the key notions of the Lived Ancient Religion approach.

The dedication of Olus Terentius Pudens Uttedianus<sup>37</sup> is worth mentioning because of its individual aspect and as a case study for certain types of religious individualizations (Fig. 2)<sup>38</sup>:

*Caelesti Augustae / et Aesculapio Au/gusto  
et Genio / Carthaginis et / Genio Daciarum /  
Olus(!) Terentius / Pudens Uttedi/anus leg(atu)s  
Augg(ustorum) / leg(ionis) XIII gem(inae)  
leg(atu)s / Augg(ustorum) pro praet(ore) / [p]  
rovinciae R(a)e/tiae*

Originated probably from Carthage, with Punic origins, he became *legatus Augusti pro praetoriae* of Raetia during the age of Septimius Severus<sup>39</sup> and, after 198, *legatus legionis XIII Geminae* in Apulum, where he lived for some years in the first decade of the 3<sup>rd</sup> century A.D. The statue base<sup>40</sup> has no exact topography, probably Ariosti itself found it already in a secondary position. The more personal and individualised nature of the inscription could suggest that it was erected in the Praetorium or the Principia of the fortress<sup>41</sup>. He dedicated the monument – one of the biggest found in the territory of the fort – for Caelestis Augusta, Aesculapius Augustus, Genius Carthaginis and Genius Daciarum. Under the name of Caelestis Augusta and Aesculapius Augustus he venerated the Romanised versions of Caelestis Tanit and Eshmun. The epithet of Caelestis Augusta appears



Fig. 2 - Statue base or altar of Olu<sup>s</sup> Terentius Pudens Uttedianus (photo: Ortolf Harl - lupa 6737)

numerous times in Africa but also in other provinces, especially from the beginning of the 3<sup>rd</sup> century A.D., attributed mostly to the personal favour of Septimius Severus<sup>42</sup>. Her association with Aesculapius-Eshmun is very common in Africa, reflecting also a partially mentioned, local triad but can suggest an apothropaic aspect of the divinity too<sup>43</sup>. The presence of the Genius Carthaginis is a rarity, which emphasises the *origo* of the dedicant and his powerful local identity, as a Punic. If the monument was erected in the *Praetorium*, it was accessible and visible for a reduced and more intimate,

<sup>37</sup>On his carrier see: PIR<sup>1</sup> T 65, Piso 1993a, 251–252.

<sup>38</sup>Szabó 2018b, 31–32.

<sup>39</sup>Farkas 2015.

<sup>40</sup>Piso defines it as „altar or statue base”, however, the form and size of the corona suggest that it was a pedestal.

<sup>41</sup>The location of the Praetorium is not established, however, Heidenreich attributed to this building numerous inscriptions: Heidenreich 2013, 105–106.

<sup>42</sup>About the evolution and interpretation of Caelestis-Tanit, see: Cadotte 2007, 83–84.

<sup>43</sup>Idem, 92–93, 99, Wittenberg 2014. See also: Tertullianus, *Apologetic*, 23.6. It could be also related to the general tendencies of popularity of salutiferous divinities in the time of Caracalla.





Fig. 3 - Statue of Cautes with bucranium from Apulum (photo: author)

personal group, namely the family and administrative staff of the *legatus*, many of them being probably also of Punic origin<sup>44</sup>. The inscription is first of all, an act of personal and highly individualised piety of the *legatus* itself, as a private worshiper of his *dii patrii*<sup>45</sup>. Due to his official title and important role as military leader and official representative of Rome and the imperial power,

he intentionally hurries to mention next to his indigenous gods also the Genius Daciarum, spirit and divine personification of the province where he served. The association of Caelestis-Aesculapius-Genius Daciarum represents practically the itinerary of his divine protection and “carrier”, from Africa to Dacia and reflects also a general tendency for the popularity of *Dii Patrii* from

<sup>44</sup>On the presence of the African groups and militaries in Dacia, see: Piso 1993b.

<sup>45</sup>The exact reason of the dedication – as in the majority of votive inscriptions - is not mentioned or revealed by the text. The inscription doesn't have a closing formula. The dating of the inscription suggests a quite peaceful period, the association of Aesculapius-Caelestis-Genius Daciarum represents here more an act of official service, his “divine” carrier and protection from his home to the furthest lands. For an analogy of African divinities worshiped in Potaissa, see: Bărbulescu 2003, 203–204.

North Africa in the time of Septimius Severus, as an act for faith and loyalty for the imperial house<sup>46</sup>.

Local appropriation in religious communication is another important aspect of lived religion<sup>47</sup>. Based on the theory of M. de Certeau, appropriation means individual tactics used by human agency to interpret and adopt social constructions, traditions, canons and mass culture<sup>48</sup>. Shaping materiality of religion as a tactic in de Certeau's notion is reflected in the great variety of iconographic innovations and local appropriations in Dacia. There are numerous case studies for local religious appropriation and the individual interpretation of religious visual narratives, the most interesting one is probably the representation of Cautes with the bucranium (Fig. 3)<sup>49</sup>. The origins of this iconographic narrative seems to be in Italy, later moved in Dacia and Germania due to the rich economic and religious networks and mobilities between these provinces<sup>50</sup>. The case of Cautes with bucranium in Roman Dacia shows, that in Roman religion, visual narratives are not a fixed, dogmatic rules as a Christian-centred scholarship suggested in the last century and local appropriations suggest a great variety of religious competence, innovation and the constant change and transformation of religious narratives (myths). This process can be named also as religious glocalisation (Van Alten 2017). In Dacia these transformations are well attested, because the province was formed in a period, when Roman religious market was already extremely rich in visual and textual narratives.

The hardest theme to identify through the materiality of religion – without falling in so called, intellectual imaginations and archaeological imaginaries<sup>51</sup> - is religious

experience in antiquity. A problematic notion which is not yet defined by scholarship<sup>52</sup>, religious experience is the ultimate topic in religious studies: it unites religious individualisation, innovation, historical-cultural approaches and also, the cognitive approach<sup>53</sup>. In Roman Dacia, religious experiences can be attested only in well excavated sanctuaries (especially the case study of the Liber Pater shrine from Apulum<sup>54</sup>) or based on some exceptional, narrative inscriptions, such as a hymn for the Nymphs from Germisara (AE 2015, 1186)<sup>55</sup>. While in the case of the Liber Pater shrine, the well attested archaeological context helped to reconstruct some non-repetitive, unique religious rituals which might indicate also the religious experiences one can live during such events, in the case of the narrative hymn dedicated to the local Nymphs of Germisara, the epigraphic text itself with its archaeological context gives us a minor detail of possible religious experiences (fig.4.).

## Conclusions

Tracing lived religion exclusively through the materiality of religion in the periphery of the Roman Empire during the Principate is a challenging task, which tests contemporary methodological approaches, but unites the often parallel narratives of classical archaeology and religious studies. Analyzing lived religion in Roman Dacia can aim therefore to trace the particular case studies of space sacralisation (creation, maintaining and destruction of sacralised spaces, know as sanctuaries in public, secondary and private spaces), local religious appropriation in visual narratives and architectural atmosphere and perhaps, rarely, the unique traces of religious experience. From the rich materiality of Roman religion from Dacia

<sup>46</sup>On the religious tendencies and the official religious ideology of Septimius Severus see: Dal Covolo, Rinaldi 1999, 187–272, Swain *et al.* 2007, 401–502, Ando 2012, 122–146, Mráv 2013, 205–241. About the religious life of the senators in this time: Várhegyi 2010, 143.

<sup>47</sup>Rüpke 2018, 5–11.

<sup>48</sup>Certeau 1980.

<sup>49</sup>A more detailed analysis: Szabó 2015b.

<sup>50</sup>On the mobilities of Mithraic groups between Italy and Dacia see: Szabó 2015a.

<sup>51</sup>Maier, Tillesen 2014.

<sup>52</sup>The latest and probably, the most detailed account: Taves 2009.

<sup>53</sup>On the limits of cognitive approach in ancient religious studies see: Geertz 2017.

<sup>54</sup>Szabó 2018b, 78–86.

<sup>55</sup>Piso 2015, Szabó 2018b, 151–153.





Fig.4 - The natural cavity and Roman bath of Germisara (after Szabó 2018b, 148, fig. 68.)

(around 1400 inscriptions, 140 sacralised spaces and more than 1000 figurative monuments)<sup>56</sup>, through this innovative approach, we can understand the complex process of space sacralisation, the religious networks of small group religions, their appropriation and also, the limits of epigraphic approach in religious studies. Dacia however is an intriguing case study of religious market and competitive religious actors, agents too: the presence of various types of divinities (dii patrii, dii consentes, mystery-religions, healing divinities, short lived religious movements – the Glykon cult), the missing of early Christian and pre-Roman material makes it a special space within the macro-spaces of the Publicum Portorium Illyrici, or the Danubian provinces. While trying to identify the traces of lived ancient religion in Dacia, I observed also the methodological limits one can face for such an endeavor. A more intriguing approach can be however, to interpret the materiality of Religion as a result of complex mobilities and religious networks, where larger space-clusters

(macro-spaces) plays also an important role in space sacralisation and religious communication<sup>57</sup>.

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<sup>56</sup>In comparison: there are less, than 250-300 votive inscriptions in Raetia (numbers differs in EDH and the Clauss-Slaby Database, the last one includes in the category of the tituli sacri also the honorary inscriptions of the emperors), less than the votive inscriptions discovered only in Apulum. Dacia with its 1400 votive inscriptions, has 3,5 times more votive inscriptions, than Moesia Superior or Inferior. The total number of votive inscriptions in the 7 other Danubian provinces (Raetia, Noricum, Dalmatia, Pannonia Superior, Pannonia Inferior, Moesia Superior, Moesia Inferior) is around 5500.

<sup>57</sup>For such an approach see: [www.danubianreligion.com](http://www.danubianreligion.com). Last accessed: 16.07.2023.



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#### Összefoglaló

Dacia kevesebb, mint 170 éven át volt a Római Birodalom része. Ebben a rövid időszakban a provinciába érkező nagy számú és változatos csoportok jelentős mennyiségű régészeti anyagot hagytak hátra, amelyek egy részét az emberi és isteni világ közötti valláskommunikációban használták fel. A tanulmány azt a kérdést járja körül, hogy megismerhető-e az élő vallás és vallásélmény a valláskommunikáció tárgyiasult emlékein keresztül? A provincia vallásrégészeti anyagán keresztül a tanulmány igyekszik rávilágítani az ókori élő vallás fogalmára és a módszer határait a Római Birodalom periferiáján.

**Kulcsszavak:** Élő Ókori Vallás, Római Dacia, vallásrégészet, térszakralizáció, római szentélyek



# LIMES XXIII

## Session 12

### Christianity at the Frontiers



## INTRODUCTION

Session organisers / Chairpersons:

Orsolya Heinrich-Tamáska (GWZO, Leipzig, Germany)

Dominic Moreau (Université de Lille–SHS, France)

Churches and artifacts with Christian meanings on the frontier and its hinterland

Episcopacy and its impact on the urban fabric

Monasticism and its occupation of the landscape

Christian testimonies in the army

Christianity beyond the borders of the Empire

There is an old myth, still recounted in some of the historiography on Late Antiquity, according to which the Roman army was directly or indirectly involved in the spread of Christianity, usually shortly after the conversion of Constantine. Proponents of that position generally rely on two points: 1- the testimony of the Church Fathers, who are constantly insisting on the receptivity of the soldiers to Christianity, at least from the time of Tertullian; 2- the fact that the Roman army promoted the spread of all kinds of oriental cults, which also implies Christianity.

By this logic, we should be able to observe a degree of Christianisation in the provinces of the Empire which would be proportional to their level of militarisation, at least after Constantine. The “limes” being theoretically the most militarised area in Late Antiquity, it should then be the most Christianised. Should we therefore see evidence of the military outposts as units of Christian propaganda around the Empire? Does the highly militarised “limes” constitute a “weapon of mass conversion”?

It is true that most of the episcopal sees of this part of the Roman world were founded in military camps. Compared to the importance of the militarisation of these territories, the episcopal network was, however, very modest even up to the middle/end of the 6<sup>th</sup> century, so that the contribution of the army to the spread of Christianity does not seem as obvious is sometimes assumed.

In order to propose elements of answers to that research question, presentations on all archaeological and historical aspects of Christianity on the border areas of the Roman Empire are welcome in this session. These papers can focus on new discoveries, as well as on the re-evaluation of material already studied, which dates, for most of it, from the 4<sup>th</sup> to 7<sup>th</sup> centuries AD. Among the themes that would be interesting to be discussed, we can mention (but not exclusively):





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# **Pilgrims from the province of Scythia in Ephesus**

## **ABSTRACT**

The phenomenon of Christian pilgrimage in Antiquity has been studied from theological, historical and archaeological perspectives, but also from art history perspective and from the point of view of its socio-economic implications. The pilgrims who traveled to the holy places or the martyrs' sanctuaries returned home, carrying sanctified water, blessed oil, or earth (*manna*) from the holy places visited in small vessels called ampoules. The origin of these objects, included in the category of *eulogiae*, could be identified according to their form, the material from which they were made, and also on the iconography.

The subject of this paper is an ampoule of the Micro-Asiatic type, discovered in relatively good conditions, and which has on both sides represented two characters of the Christian pantheon. The find originates from the systematic archaeological research in the Late Roman fortress of Ibida, Scythia province (Slava Rusă, Tulcea County, Romania) during the campaign in 2016. The discovered *ampulla* has few analogies in the Lower Danube area but is unique in terms of iconography. Its shape, fabric and its analogies identified in the Asia Minor region make it possible to establish its origin in the Ephesus region. It is quite possible that it was purchased from the Basilica of St. John the Evangelist, a famous pilgrimage site during Late Antiquity.

Moreover, the Ibida archaeological complex is dotted with numerous other finds testifying for a very active religious life, especially in the second half of 6<sup>th</sup> century, when the present piece is dated. This is argued for also by the monastic complex near the fortress, but also the intra-mural basilica from which only architectural fragments are preserved. The ampoule analyzed here confirms that the inhabitants of the fortress had an active Christian life and demonstrated their faith also by traveling to the holy places of Christendom.

**KEY WORDS: IBIDA, PILGRIMAGE, AMPULLA, EPHEBUS, CHRISTIANITY**



## Introduction

The fortress of Ibida, built at the beginning of the 4<sup>th</sup> century in the center of Scythia province, is an imposing and mysterious late Roman fortification in the Lower Danube area.<sup>1</sup> With a stretch of 24 ha for the big walled compound and another two hectares for the fort located on the nearby hill, it is one of the largest fortified complexes in the region.<sup>2</sup> (Fig. 1) Systematic archaeological research began in 2001, although there were other interventions, more or less scientific in previous decades.<sup>3</sup>

The subject of our paper is based on an interesting discovery made during the 2016 campaign in the “Curtain X” sector, which the author has been coordinating since 2007.<sup>4</sup> Up to now, the urban life of this sector of Ibida has been documented since the half of 4<sup>th</sup> century AD, with successive rebuilds in the 5<sup>th</sup> century, and a lively building activity in the 6<sup>th</sup> century and as late as the beginning of 7<sup>th</sup> century.

## Technical description

The artifact we would like to refer here was found within this sector, where we recorded the existence of one of the granaries of Ibida fortress, with eight *dolia* identified in the field and several buildings that functioned mainly during the 6<sup>th</sup> century. (Fig. 2)

It is a small terracotta *ampulla* that has been discovered in a layer of demolition rubble laying on top of the end of 6<sup>th</sup> century level. Relevant to the accuracy of the chronological classification of that piece is the identification of other objects, of which there is an almost

whole Kuzmanov 15 type amphora<sup>5</sup> but, above all, a *tremissis* from Justinian I.<sup>6</sup> (Fig. 3)

Unfortunately, our piece lacks the bottom of the vessel, but the iconographic representations of two characters are preserved quite well. (Fig. 4) It is made of reddish, fine clay, with fine mica sand in the fabric.<sup>7</sup> The piece was produced, as documented for other similar artifacts, by pressing in each half in its single-leaf mold, and the halves were then stuck together. In fact, on one of the two halves, there are two fingerprints inside.<sup>8</sup> (Fig. 5) One could see that a layer of very fine clay, probably meant as sealant, was applied to the interior before drying. For the sake of efficiency, we also note the application of a red slip which is observable in several portions of the *ampulla*.

Its shape is ovoid, with a cylindrical neck, a circular rim with two holes provided in place of the handles typical for this category of containers.

The dimensions of the find are as follows: fragment height – 58.5 mm, height of the reconstructed piece – approx. 73 mm, maximum width – 46.5 mm, height of the neck – 18.40 mm, maximum diameter of the neck – 20 mm, lip thickness – 3.6 mm, hanger holes diameter – 4.9 mm.

## Pilgrims's eulogiae

The manners in which this piece arrived in Ibida, in the middle of Scythia province, may be many, but the most plausible is the hypothesis that this object was acquired by a pilgrim who visited one of the holy places of Christianity.<sup>9</sup> Whether this hypothetical pilgrim traveled by land, southwards on the ancient road to

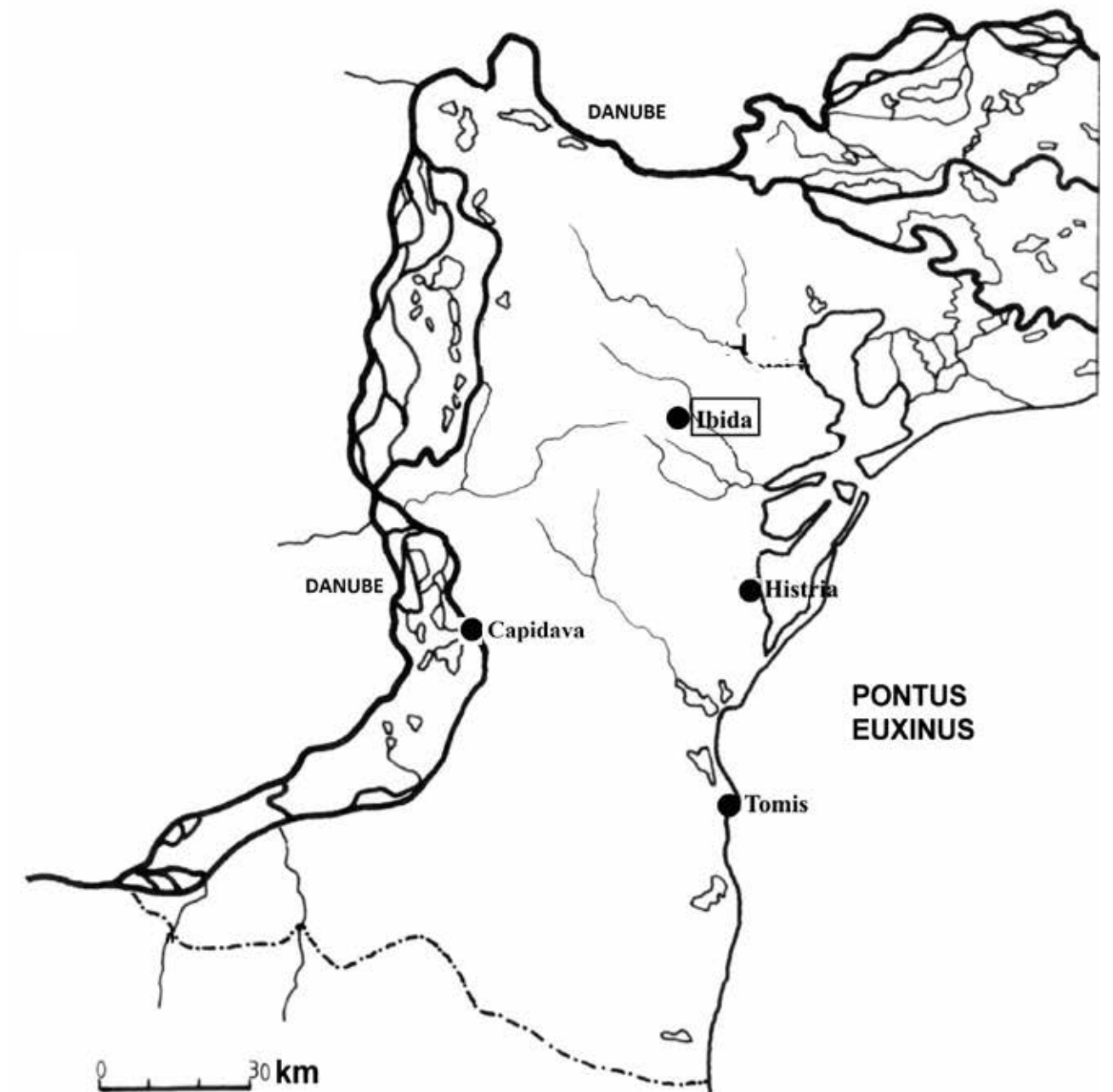


Fig. 1 - Map of Scythia province with the localisation of Ibida fortress.

Constantinople, whether he traveled by Black Sea, he or she brought as a souvenir to his/her city this object which had a holy content.<sup>10</sup> The *ampullae* were objects that expressed the pride of being a pilgrim to the holy places; a kind of sign of the pilgrim identity.<sup>11</sup>

The small items of this type pertain to the category of objects used by pilgrims to take blessings in the form of holy water, blessed oil or even health-giving earth that came in contact with the saint(s) of the pilgrimage places. With various shapes but similar functions, *am-*

<sup>1</sup>Proc., *Aedif.*, IV, 7.

<sup>2</sup>There are, though, certain incertitude relating to its name (Aricescu 1973, 548–549; Doruțiu Boilă 1979, 149), the legal status of the Roman settlement over which it was built (Aparaschivei 2017, 38), as well as the status it had during its heyday, in Late Antiquity.

<sup>3</sup>Aparaschivei 2009, 167–168 and notes 4–13.

<sup>4</sup>Aparaschivei 2009, 168–169.

<sup>5</sup>I express the gratitude to my colleague Dorel Paraschiv for the identification.

<sup>6</sup>I express my gratitude to my colleagues Mihaela Iacob and Lucian Munteanu for the additional data that kindly provided: *D N IVSTI- NI-ANVS [P P AVI]*, pearl diademed, draped, cuirassed bust right / *VICTO[R]IA AVGVSTORV[M]*, Victory standing right, head left, holding wreath and cross on globe, star to right, mintmark CONOB. DOC I 19; MIB I 19; Inv. 65490.

<sup>7</sup>Fabric color: Munsell -10 R 5/8.

<sup>8</sup>Cummins 1942, 468–481; Králík, Nejman 2007, 4–15.

<sup>9</sup>Starting with 4<sup>th</sup> century *Itinerarium Burdigalense* (the earliest written source on Christian pilgrimage activity at the Holy Places, in fact a pilgrim guide) such travels are often mentioned on sources. See also *Ad Silviam peregrinationem*.

<sup>10</sup>The assertion „by sea one sailed with Christ, by land one rode with Christ” is quite revealing: Vikan 1991, 84–85; Vikan 1995, 377–388.

<sup>11</sup>Brazinski 2014, 55.





Fig. 2 - Curtain X sector – general view.

*pullae* were bought or offered by the clergy and could be made of ceramic, various metals, stone or glass.<sup>12</sup>

Such souvenirs, included in the category of *eulogiae* or blessings, had to have, first of all, a healing role for their owners. However, these certainly influenced the believers as much as psychologically, by being able to reproduce at great distances the blessedness and atmosphere of the holy places where it was purchased.<sup>13</sup> Vikan identified three meanings for artifacts of this type that pilgrims acquired when they went to holy places: votive, devotional and amuletic.<sup>14</sup>

These objects were produced in local workshops, perhaps even directly by the church, for the spiritual needs of the faithful, but also for the purposes of marketing.

In the specific literature these were recognized as a separate ceramic type as early as the nineteenth century.<sup>15</sup> However, it was only until the end of the twentieth century that special attention was given.<sup>16</sup>

A distinction between various types of *ampullae* was made, first of all, according to the place of origin, which is the strongest criterion for the shape of the pieces as well.

The Christian Holy places of Palestine, with the Holy Sepulchre, were the main pilgrimage destination.<sup>17</sup> The so-called Monza flasks, made of silver, have been produced here during the 6<sup>th</sup> century.<sup>18</sup> Moreover, the same origin can be attributed to the finds of St. Columbanus in Bobbio.<sup>19</sup> There are finds of this specific type of vessel documented also in Palestine-Israel region, of ceramic, glass, or other materials.<sup>20</sup>

St. Menas flasks are the most numerous artifacts documenting pilgrimage activity in the late Roman period.<sup>21</sup> From the 5<sup>th</sup> century onwards, the pilgrimage to Abu Menas Shrine has reached impressive numbers.<sup>22</sup> The *ampullae* produced here were manufactured during the 5<sup>th</sup> -7<sup>th</sup> century. These are noted for having the handles spanning the body and the neck, with specific iconography, of a saint wearing military attire.<sup>23</sup> The few dozen pieces discovered at Kom-el-Dikka in Alexandria lead to the hypothesis that, apart from long-distance pilgrims,<sup>24</sup> there was also a pilgrimage of the inhabitants of the area.<sup>25</sup>

<sup>12</sup>Metzger 1981, 5.

<sup>13</sup>Hahn 1990, 85–86. See the analysis in Elsner 1997, as well as Hunter-Crowley 2012, 149–151, where a possible connection between the material of the vessel and content of the vessel is considered.

<sup>14</sup>Vikan 1995, 381.

<sup>15</sup>Michon 1899, 285–332.

<sup>16</sup>Metzger 1981; Brazinski 2014.

<sup>17</sup>Hunt 1982.

<sup>18</sup>It discusses 16 *ampullae* from the Holy Places: Grabar 1958, 15–31; Metzger 1981, 5.

<sup>19</sup>Grabar 1958, 32–44.

<sup>20</sup>Anderson 2004, 81; Arad 2007, 59–74, Fig. 1a, 1b. One should consider also the hypothesis of Hayes 1971, 243–248 regarding a new type of such vessels, with the possible point of origin also in the area of Palestine. For examples in the western Black Sea region, see Минчев 1992, 127–136.

<sup>21</sup>The St Menas's place of cult is located at 45 km southwest of Alexandria. The literature on this subject is particularly large. See only the recent publications: Anderson 2007; Brazinski 2014, 18–19, notes 60–62.

<sup>22</sup>Kiss 1989, 9–10.

<sup>23</sup>Metzger 1981, 9–16; Anderson 2007, 225.

<sup>24</sup>For the spatial distribution of such finds, see Sodini 2011, 91–92. Such artefacts were also found in Britannia, more than 3500 km from St. Mina shrine in Alexandria: Thompson 1956, 48–49; Anderson 2007, 235.

<sup>25</sup>Kiss 1989, 14 – 18 with the Catalogue, 19–50; add Anderson 2004, 81.



Fig. 3a - Kuzmanov 15 type amphora;



Fig. 3b - Tremissis from Justinian I.

The smallest such containers originate in Asia Minor.<sup>26</sup> These were made of ceramic, oval in shape, with two applied symmetrical holes instead of handles, so that they could be worn or suspended. These latter vials have a much wider range of decorative motifs, consisting of book-bearing saints or evangelists, on one or both sides, knights, crosses, arches, or other archi-

tectural elements, animal, vegetal or geometric motifs. Obviously, these representations are, in fact, symbols of Christian life, characteristics of the place where the pilgrimage went, and where the pilgrim acquired the item. However, some elements may have had a purely decorative role, designed to attract the eye in accordance with the half-mercantile role that such items

<sup>26</sup>For details on the towns and holy places in Asia Minor, see Kőroğlu 2015, 156.





Fig. 4 - The *ampulla* of Ibida (photos) - a. side A; b. side B.

have gained even in the first centuries of Christian consolidation.<sup>27</sup>

### Iconography and typology

As for the Ibida vessel, we are certainly dealing with an “Asia Minor” *ampulla* type with double representation of Christian characters. (Fig. 6)

The decoration of these artefacts often includes two characters, one on each side, most often interpreted as persons with connections to the Christian religion. The variety of representations makes it very difficult to identify them safely. The place of origin of such artefacts is not easily identifiable.

On one side is a bearded man with a cloak, who holds a slightly round object on his left side with both hands in a natural position. He has fairly regular features, with a slightly elongated face, perfectly round and slightly oversized eyes. His head is uncovered, and the hair is suggested by loops arranged on a row. He seems to be a rather elderly character. There are two rows of

zigzag-shaped lines at the neck of the vessel, forming angles, exactly in the middle. It is, by comparison with other similar pieces, the representation of an evangelist under an arch, or a generic architectural element that involves two columns of support and a decoration made by several horizontally arranged lines, which support an arch decorated with an array of 9 or 10 circles. The arch is an architectural feature often used in the Late Antiquity, even as late as the 4<sup>th</sup> century, and symbolizes the importance and dignity of the depicted personage.<sup>28</sup> The architectural elements represented symbolically and schematically reproduce, most probably, Christian architectural works of the period: sanctuaries, churches, funerary complexes, etc.

On the other side of the vessel one can study the second character. He is beardless, with a cloak characteristic to both saints and the pilgrims. He holds a rectangular object with rounded corners, decorated with dotted circles, of which only two can be clearly seen. It's probably a book, held on his left side. This seems to be a younger man, with hair represented also by loops arranged on rows and a triangular face.



Fig. 5 - The fingerprints inside the *ampulla*.

Comparing the complexity of depictions, one should consider that it suggested that one side of the vessel was the main one. On the main face is depicted a glorified character, old and wise. The other side was the secondary one, bearing the depiction of another saint, certainly connected to the one on the main face, but hierarchically inferior. The images most likely copied representations of the church wall painting, mosaic or sculptural figures.<sup>29</sup>

All decoration is in relief and goes from the neck base of the vessel to, most probably, its lower part.

In the Lower Danube region, Asia Minor *ampullae* were identified in a few places. From West to East, there are published the finds of Caričin Grad<sup>30</sup> in Serbia, Sliven<sup>31</sup> and Voyvoda<sup>32</sup> in Bulgaria, but also in Callatis<sup>33</sup> and Capidava<sup>34</sup> in Romania. In addition, there are other Egyptian *ampullae*, from the Abu Menas Shrine, in Scythia, of Tomis<sup>35</sup> and Capidava,<sup>36</sup> as well as outside of the Empire, of Dierna<sup>37</sup> and Porrolisum.<sup>38</sup>

<sup>27</sup>About the economic implications of pilgrimages, implicitly on the consequences for the opulence of churches, see Hunt 1982, 128–154.

<sup>28</sup>Metzger 1981, 19.

<sup>29</sup>See also some other hypotheses in Grabar 1958, 47, regarding particularly the *ampullae* of Palestine.

<sup>30</sup>Metzger 1984, 158–160, Fig. 169, 171; Ilić 2006, 131, Fig. 4a-b; Sodini 2011, 114, 122.

<sup>31</sup>Shtereva 1999, 85–88, Fig. 1.1-2; 2.1-2; 3,4.

<sup>32</sup>Дамьянов 1976, 24, Fig. VI.7.

<sup>33</sup>Ionescu, Opriș 1998, 167–168, Fig. 1.a-b; Opriș 2004, 266–267, Fig. 17; Opaiț 2004, 82–83.

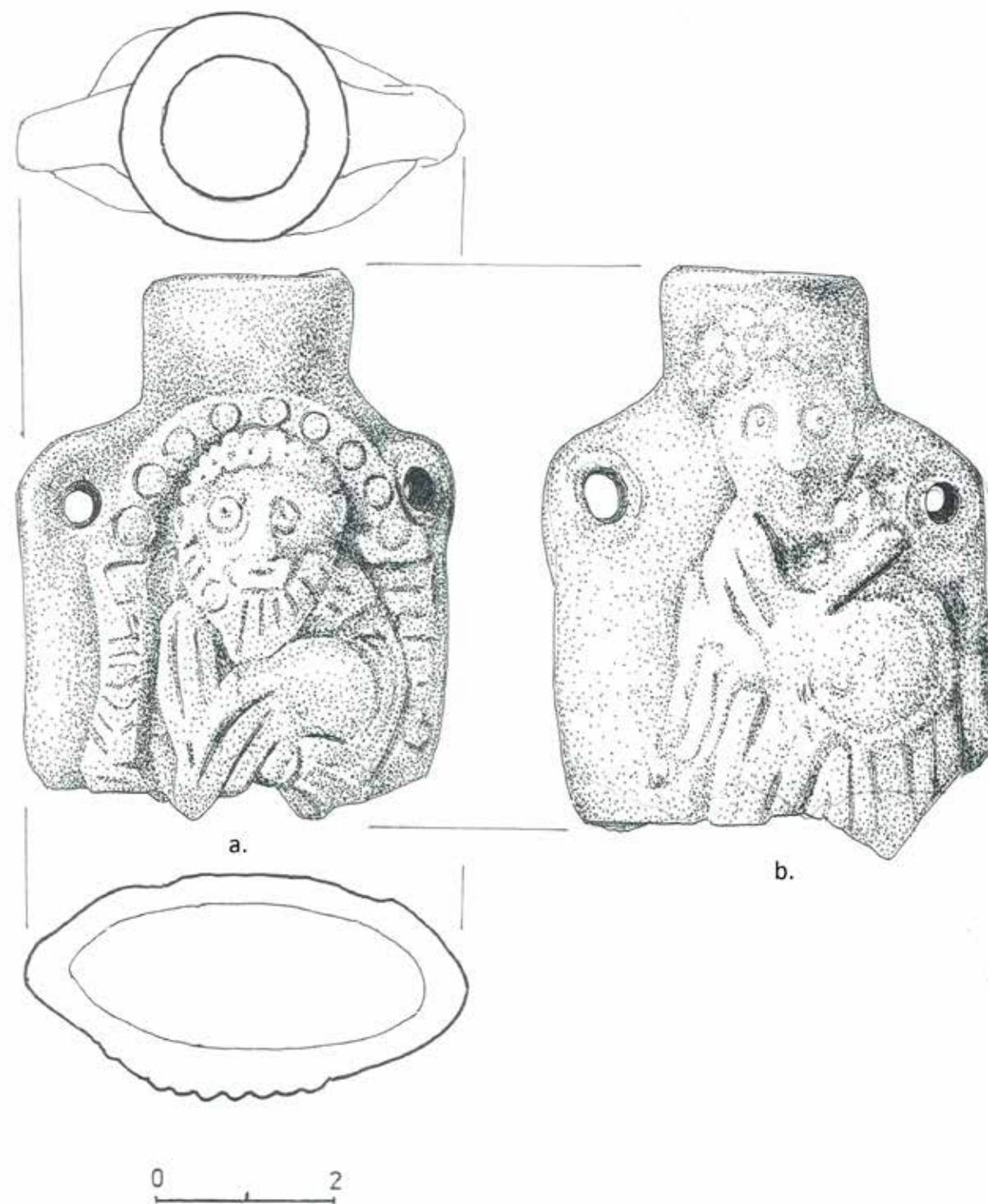
<sup>34</sup>Opriș 2004, 266, Fig. 15-16; Opaiț 2004, 82–83.

<sup>35</sup>Barnea 1977, 232–234, Fig. 90.1; Barnea 1995, 509–511, pl. 61.a.

<sup>36</sup>Opriș 2004, 266, Fig. 13-14.

<sup>37</sup>Barnea 1995, 511–512, pl. 61.b.

<sup>38</sup>Barnea 1995, 512, pl. 61.c.

Fig. 6 - The *ampulla* of Ibida (drawings) - a. side A; b. side B.

Recently a fragmentary piece discovered in Istria, on the western Black Sea region, was published.<sup>39</sup>

As a general typology, based on iconography, this Ibida *ampulla* can fit into the type 2b of the Metzger typology<sup>40</sup>, the 2<sup>nd</sup> group, Early Ampulla 2, of the Brazinski typology,<sup>41</sup> as well as in type 1A, „St. John the Evangelist of Ephesus”, of Köroğlu classification.<sup>42</sup>

### Discussions and interpretations

The characters found on such pieces are often interpreted as persons with connections to Christian religion: different saints, evangelists, Jesus Christ, the Holy Virgin, etc. There are also some hypotheses that assert that the depictions of the saints were deliberately non-specific and only at a later date these were particularized by means of inscriptions.<sup>43</sup> In our opinion, in ancient times as well as in the present times, people felt the need to be close to a certain saint, with certain particularities. Moreover, we believe that when buying such sacred objects, they were looking for those holy personages who were the most appropriate to their immediate needs. Therefore, the customers were well aware of who these saint were. And the lack of inscriptions in most cases must have been linked precisely to the fact that people already knew who was represented on these artifacts.

On the other hand, the precise identification of these personages is, however, very difficult, due to the absence of any inscription, and to a rather schematic representation resulting from the production process.

Even under these conditions, based on analogies with iconographic representations on similar objects, one could establish links to certain pilgrimage centers. Thus, the bearded character under the arch is an image that appears very often in other *ampullae* from Smyrna-Ephesus-Sardis region.<sup>44</sup> (Fig. 7) Moreover, some fabric analysis has shown that this type of *ampulla* originates in this area, i.e. in Ephesus, as do certain decorative elements, which appear also on local lamps dated in the 5<sup>th</sup> - 7<sup>th</sup> centuries AD.<sup>45</sup>

However, in the case of *ampulla* from Ibida we believe that was produced in Ephesus or for this Christian center, very active in the 4<sup>th</sup> – 7<sup>th</sup> century.<sup>46</sup> In this context, the Basilica of St. John is the most likely place from which this piece might have traveled to Scythia.

As with other saints, St. John was credited with miracles, especially by touching and using the *manna* (holy dust) that was produced at his grave and which the pilgrims and the local faithful collected and employed as *sacramenta*.<sup>47</sup> According to the apocryphal *Acta Ioanni*, John did not die but was just asleep in his grave, and his breath raised the holy dust, and then collected by the faithful.<sup>48</sup> Gregory of Tours confirms that this *manna* had medical powers.<sup>49</sup> Thus, the role of healer and miracle-maker played by St. John made his church in Ephesus one of the most popular places of pilgrimage in the 6<sup>th</sup> century AD.

Regarding the saints depicted on the vessels, Andreas Pülz, in his work on the pilgrimage to Ephesus, is essentially right when doubting the definite assignment of a character on an ampoule without the existence

<sup>39</sup>Achim, Dabica 2018, 322–326, Fig. 7-12.

<sup>40</sup>Accurate references in Metzger 1981, 19, nos. 104–112.

<sup>41</sup>Brazinski 2014, 30.

<sup>42</sup>Köroğlu 2015, 159.

<sup>43</sup>Pülz 2012, 235.

<sup>44</sup>Metzger 1981, 19, cat. nos. 104–112, with several variations in the representation on face B; Zimmermann, Ladstätter 2010, Fig. 395; Aydın 2013, 497–498, cat. no. 2, Fig. 2; Köroğlu 2015, 159, cat. no. 1.

<sup>45</sup>Ladstätter 2010, 507; Pülz 2012, 233.

<sup>46</sup>The nun Egeria provides the earliest evidence for a pilgrimage shrine dedicated to St. John in Ephesus, at the end of 4<sup>th</sup> century: Wilkinson 1981, 22. For other famous pilgrims in Ephesus, see Duncan Flowers 1990, 127.

<sup>47</sup>St. John the Evangelist settled in Ephesus after the year 70, and he led the church of Ephesus. He had a *martyrium* raised on his grave right since the time of his death in the second century. Around 300 AD, on his tomb was erected a small memorial in the form of a *tetrapylon*, which was extended much in the 5<sup>th</sup> century. The importance and strength of this construction made it possible to be used during the Third Ecumenical Council of Ephesus in AD 431: Duncan-Flowers 1990, 125–127; Pülz 2012, 230.

<sup>48</sup>Pülz 2012, 230–231 and note 26 with bibliography.

<sup>49</sup>Greg. *Tur. mart.* I.30.





Fig. 7 - Evangelist type *ampulla* of Smyrna (after Köroğlu 2015, 159, cat. no. 1).



Fig. 8 - The *ampulla* with Saint John the Baptist of Sardis (after Greenewalt, Rautman 1998, 486, fig. 13).

of a clear inscription.<sup>50</sup> However, the location of the production site in the Ephesus area makes more and more likely the hypothesis of the identification of one of the two saints, namely the one under the arch, with St. John the Evangelist.<sup>51</sup> Alternatively, on a Sardis *ampulla* appears a male bearded character, under an arch, holding a book or a rectangular object on his left side. On the edge appears the inscription. ATHIE IOANNH BA(IITICTA) "St. John the Baptist". (Fig 8) This analogy does not exclude the hypothesis of the depiction of St. John the Baptist, even though the group represented on the other side quite separates iconographical the Sardis find from our artifact.<sup>52</sup>

Logically, the other character is in some way connected with the first one, perhaps a spiritual relationship or even a hierarchical relationship. On the other side of the Ibida *ampulla* the character is also standing, obviously younger and in a simpler depiction. It could be the scribe Prochorus, who served and accompanied St. John.<sup>53</sup> In Byzantine portraiture, Prochorus appears beardless, young but most often he is represented at John's feet.<sup>54</sup> He died, according to Christian tradition, as a martyr at the end of 1<sup>st</sup> century AD. However, the representation of the Evangelist under the arch, in an imposing, obviously superior attitude, may suggest precisely this hierarchy.

Without being certain of a definitive interpretation of iconography on the *ampulla*, in the absence of an inscription, the discovery of such artifact in the province of Scythia is indeed a remarkable find.

### Conclusions

It is certain that the *ampulla* found in Ibida is, however, unique in the area, in terms of its iconography and provides a useful addition to a wider framework of Christian activity in this center of Scythia province.

Ibida fortress is provides numerous other finds that testify for a very active religious life, especially in the 6<sup>th</sup>

century. The most important archaeological complex is the Paleo-Christian monastery discovered 2.5 km from the fortress.<sup>55</sup> This is the first archaeological evidence for the monastic tradition in Scythia. It consists of two single-nave basilicas, a chapel with apse and various ancillary buildings surrounded by an enclosure wall, which functioned between the end of 4<sup>th</sup> century and the early years of 7<sup>th</sup> century.<sup>56</sup>

In 1917, some non-scientific excavations within the fortress, led to the unearthing of a three-aisled basilica with apses, marble columns and polychrome floor mosaics dated in the second half of 6<sup>th</sup> century.<sup>57</sup> Nowadays we have only a plan of this church and some fragments of capitels and columns.<sup>58</sup> This basilica proves that Ibida was an important ecclesiastical center in the province of Scythia, at least in the 6<sup>th</sup> century.<sup>59</sup>

In this context, that person who brought here a holy testimony of his journey into a very popular pilgrimage center in the second part of 6<sup>th</sup> century came back into a fortress with an intense Christian life. The piece itself is a testimony to the popularity of the pilgrimage phenomenon in the Micro-Asiatic area, including among the Christians of the western Black Sea region.

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<sup>50</sup>For such type of *ampullae* bearing inscriptions, see Pülz 2012, 234–235 and Figs. 4a-b.

<sup>51</sup>Pülz 2012, 237–238 is more restrained in providing such attributions.

<sup>52</sup>On the other side there is a group formed of a female character holding a child, which suggests that it is the Virgin Mary with the baby Jesus. This side also bears an inscription, BOEIOE T(O)YC EEN(O)YC ("have mercy on the foreigners"): Greenewalt, Rautman 1998, 486, fig. 13. For other Sardis *ampullae*, with various representations, see Hanfmann 1985, Figs. 1-4.

<sup>53</sup>For the hypothesis of depicting Prochorus on the *ampullae* together with St John, see Залеская 1986, 184.

<sup>54</sup>Details on other depictions of St. Prochorus see in Duncan Flowers 1990, 134.

<sup>55</sup>Opaî, Opaî, Bănică 1992, 113–122.

<sup>56</sup>The monastery was restored and extended after the invasion of 586, and survived until the final destruction of the city, in 614. As exceptional archaeological finds, one should mention a lustral vessel, a votive light hook, as well as a hoard of 8 *solidi*: Opaî, Opaî, Bănică 1990, 18–28.

<sup>57</sup>Netzhammer 1918, 154–156; Barnea 1945–1947, 227, 233; Vulpe, Barnea 1968, 476; Barnea 1977, 178, Fig. 61.1.

<sup>58</sup>Barnea 1977, Fig. 80; Paraschiv, Iațcu 2013, 239–252; Teatini 2019.

<sup>59</sup>It is quite possible that it was included among the episcopal basilicas of Scythia province: Madgearu 2010, 146.

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## **Résumé**

### **Pèlerins de la province de Scythie à Ephèse**

Le phénomène du pèlerinage Chrétien antique a été étudié de la perspective théologique, historique-archéologique, mais aussi dans la vue de l'histoire des arts et des implications socio-économiques. Les pèlerins voyageant aux lieux saints ou aux sanctuaires des martyrs prenaient à la maison, dans de petits récipients appelés ampoules, de l'eau bénite, de l'huile béni ou de la terre des lieux saints visités. L'origine de ces objets, inclus dans la catégorie *eulogiae*, a pu être identifiée

selon leur forme, le matériel dont ils ont été faits, mais aussi selon l'iconographie.

Dans ce matériel, nous analysons une *ampulla* micrasiatique, découverte dans relativement des bons états et qui a représentés des deux côtés deux personnages du panthéon Chrétien. La pièce provient des recherches archéologiques systématiques effectuées dans Ibida, la province de Scythie (Slava Rusă, le département de Tulcea, Roumanie) pendant la campagne 2016. L'ampoule découverte a peu d'analogies dans la région du Danube Inférieur et est unique par la iconographie. Sa forme, l'argile dont elle a été faite, mais aussi les analogies identifiées dans la région de l'Asie Mineure permettent d'établir son origine de l'Ephèse. Il est très probable qu'elle a été acquise de la Basilique de Saint Jean l'Évangéliste, un lieu consacré de pèlerinage pendant l'Antiquité Tardive.

De plus, le complexe archéologique Ibida est connu pour de nombreuses d'autres preuves prouvant une vie religieuse très active, particulièrement dans la deuxième partie du 6<sup>ème</sup> siècle, depuis qu'il date aussi cette pièce. C'est à dire le complexe monastique qui se trouve tout près de la ville, mais aussi la basilique *intramuros* dont seulement des fragments architecturaux y sont préservés. L'ampoule examinée vient ici confirmer que les habitants de la ville avaient une vie Chrétienne active, même en voyageant aux lieux saints de la Chrétienté.

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# Christian symbols on the weapons and equipment of Roman soldiers

## ABSTRACT

The following paper focuses on the striking difference between the high frequency of depictions of symbols of pagan gods used as protective symbols between the 1<sup>st</sup> to 3<sup>rd</sup> centuries and the almost complete absence of similar depictions of Christian symbols in 4<sup>th</sup> to 5<sup>th</sup> centuries. The historical sources prove that Christians formed a sizeable minority in the 3<sup>rd</sup> century A.D. and were also represented in the army and administration of the Empire up to the highest level. After Constantine's conversion, more and more soldiers became Christians during the 4<sup>th</sup> and 5<sup>th</sup> centuries, which is why the use of Christian protective signs on the equipment of these soldiers would have been expected. An explanation for their relative scarceness could lie in the diversity of the Christian churches and their competition with each other in this period. Moreover, certain Christian symbols, such as the Chi-Rho, apparently were used as a sort of symbol of loyalty to the Emperor and were therefore not just Christian in connotation.

**KEY WORDS:** ROMAN ARMY, MILITARY EQUIPMENT, CHRISTIAN SOLDIERS, CROSS, CHI-RHO, CROSSBOW BROOCH.

## Decorations on military equipment of the 1<sup>st</sup>-3<sup>rd</sup> centuries AD

Since the creation of an army of professional soldiers during the civil wars of the Roman Republic and the formalisation of this status by Augustus, the weapons and equipment of Roman soldiers had been highly decorated. Roman soldiers owned their equipment, which implies among other things that the choice of

decorations on these items was their own.<sup>1</sup> There was no “central command” in Rome ordering the soldiers to use a certain set of decorations, as the implementation of such orders was both logistically impossible and would have had unwanted side-effects, such as the soldiers losing the possibility to be recognizable on the battlefield, which was considered to be one of the most important motivators for soldiers.<sup>2</sup> It has by now become clear that these decorations were a matter of

\*The following paper is at the intersection of Roman military equipment studies and the archaeology of Late Antiquity and is meant as a contribution to the on-going discussion on Christian symbols on military equipment.

<sup>1</sup>Breeze *et al.* 1976; Bishop, Coulston 2006, 92; Fischer 2012, 82.

<sup>2</sup>Hoss 2016, 115–116; Hoss 2017a.



personal taste, guided – as personal taste is in every age – by fashion. The fashions guiding the decorations on military equipment in the Roman army were probably ‘regulated’ by the soldiers as a group – not by force, but by the simple exertion of peer pressure (probably mostly through mocking).<sup>3</sup> Similar mechanisms have been described by the Social Sciences for many different groups and societies.<sup>4</sup>

According to Jennifer Schamper, who has recorded the frequencies of the various motifs on decorated arms and armour, the most common depictions are eagles or thunderbolts as symbols of Jupiter, the main state deity and protector of Roman soldiers in battle (see Fig. 1).<sup>5</sup> These are followed by symbols of victory like wreaths of laurel or oak leaves. The third most frequent group are depictions of gods, which show a preference for gods connected to war like Mars, Victory and Minerva, but are not limited to them. Expressions of loyalty to specific emperors only occur during the Julio-Claudian dynasty.

From the mid-2<sup>nd</sup> century onwards, the number of depictions of gods on military equipment increases dramatically, with some pieces seemingly displaying a *horror vacui*. Moreover, the group of gods depicted on the equipment widens and now also includes deities that are less central to Roman state religion, such as the Sol and Luna, depicted together with other gods representing the days of the week on the Ritopek breastplate closure (Panzerverschlussblech) of a mail or scale armour (see Fig. 2).<sup>6</sup> Another form of ensuring divine protection that was used with markedly higher frequency from the mid-second century onwards is magic, manifest in the use of various apotropaic symbols. Examples are depictions of snakes on helmets, as snakes are apotropaic animals that can avert misfortune (see Fig. 3).<sup>7</sup> Another apotropaic symbol is the *pelta*,

which is very common on belt mounts, chapes, horse gear and many other items of military equipment.<sup>8</sup> Situated somewhere in between the depictions of gods and *apotropaia* may have been the use of written invocations to good fortune, as in the *Utere felix* belt sets (see Fig. 4), or to Jupiter, as in the *Numerum Omnium balteus* sets.<sup>9</sup>

These increasing amounts of decoration on military equipment are certainly connected to the fact that during the 2<sup>nd</sup> and 3<sup>rd</sup> centuries, the pay of the soldiers rose immensely; they could thus afford more and more expensive equipment.<sup>10</sup> But the growing number of depictions connected to divine protection is probably also related to the increasingly perilous situation of the Roman army of that time. While Roman soldiers must have experienced the army of the 1st century as victorious on the whole, this became more and more difficult during the 2<sup>nd</sup> century. By the 3<sup>rd</sup> century, it would seem understandable that the soldiers felt they needed all the protection they could get on the battlefield.

Shields are a class of military equipment that is only preserved in very rare cases and they are different from the rest of the equipment because, as the written sources tell us, the design of their outer side was regulated by the unit and used as a method of recognizing units from afar.<sup>11</sup> However, the depictions of shields and the few examples that both bear decorations and have been preserved seem to fit well within the development sketched above. As Boris Burandt has recently demonstrated, the bodies of first century shields were decorated with three-dimensional thunderbolts and lighting (the attributes of Jupiter) made from thin sheet metal.<sup>12</sup> Shield bosses of the 1<sup>st</sup> and 2<sup>nd</sup> centuries were either plain or decorated with gods and other subjects that we also find on the rest of the military equipment, as the examples from Vindonissa (CH, 1st. c.), Halmeag (RO,

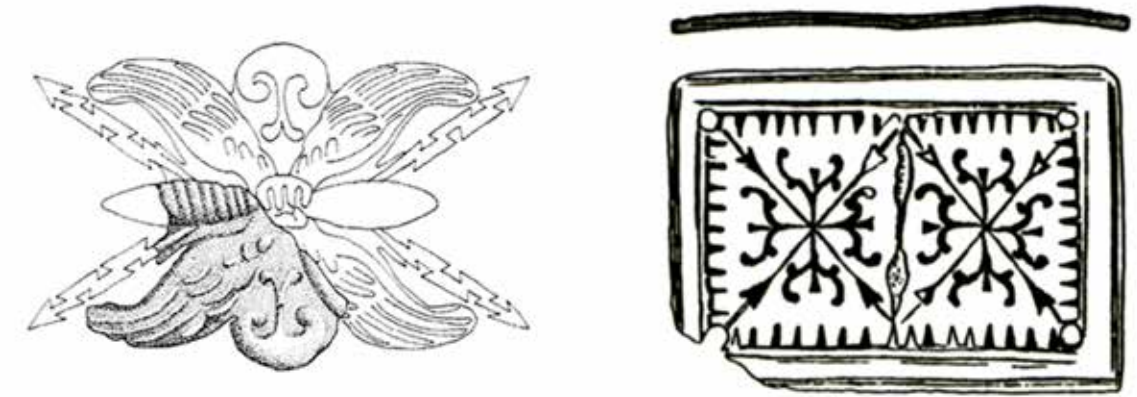


Fig. 1 - Belt mounts with more or less stylized thunderbolts and lighting from Burghöfe, D and Baden, CH (after Hoss 2014, Katalog Metallfunde Kat. Nr. B.740a, B.316).

2nd c.) and Mainz (D, 3rd c., see Fig. 5) show.<sup>13</sup> While this is still true for the 3rd century *scutum* from Dura Europos, other shields from Dura depict scenes of a battle with Amazons and a large figure supposed to be a military god in a manner reminiscent of contemporary wall paintings.<sup>14</sup>

### Christians in the Roman army

There are a multitude of difficulties in gauging the spread of Christianity in the Roman Empire between the 2nd and 6th centuries AD: what constitutes a conversion, how does one define a Christian, which of the different churches are counted as Christian – all much hampered by the Christian authors’ free use of hyperbole.<sup>15</sup> The actual number of Christians is thus almost impossible to correctly guess (at least at the moment), and this is of course far more difficult for smaller groups within wider Roman society, such as the army. However, there are a number of things we can be reasonably sure about: by the end of the 2nd century AD, Christianity had spread widely – but possibly thinly and

certainly unevenly – in the whole of the Roman Empire, with a higher density of Christians in the Southern and Eastern parts than in the West and North.<sup>16</sup> And by the 3rd century, Christians were present in all social strata, up to the highest circles at the Imperial Court as well as in the Roman army and administration.<sup>17</sup> The latter two cannot be separated in the Roman period, as they both were seen as branches of *militia* in the service of the emperor. Both branches wore the military dress of tunic and cloak fasted with crossbow brooches on the right shoulder and the *cingulum militare*, the most symbolic element signifying their service for the Emperor.<sup>18</sup>

While Christians could be handed over to a judge and punished for their religion from at least the early 2nd century AD onwards, actions against Christians were mostly sporadic and localized.<sup>19</sup> It seems that in most cases, the Roman authorities found it more practicable to leave them be, even if they were soldiers and administrators, unless a conflict between their religion and their service in the *militia* arose.<sup>20</sup> The end of this policy of ‘don’t ask, don’t tell’ came with the perse-

<sup>3</sup>Hoss 2017b, 96.

<sup>4</sup>Sommer 1992; Sommer 2012, 258–9.

<sup>5</sup>The following after Schamper 2015, 92–157.

<sup>6</sup>Schamper 2015, 219, Kat. Nr. C1–5.

<sup>7</sup>Bongertz 2013, 66–67.

<sup>8</sup>Hoss 2015, 203–204, Fig. 6.

<sup>9</sup>Hoss 2015, 202–203, Figs. 4 and 5.

<sup>10</sup>Speidel 2000.

<sup>11</sup>Nabbefeld 2008, 33. See also Vegetius, 2, 18, 1–2.

<sup>12</sup>Burandt 2018.

<sup>13</sup>Vindonissa: Nabbefeld 2008, 248, Kat. Nr. 622, Taf. 88; Halmeag: Nabbefeld 2008, 246–247, Kat. Nr. 617, Taf. 87; Mainz: Nabbefeld 2008, 197, Kat. Nr. 391, Taf. 39.

<sup>14</sup>James 2004, 163–166, 176–186, pl. 6–10; Nabbefeld 2008, 257–266, Kat. Nr. 672–685, Taf. 97–102.

<sup>15</sup>See Cameron 2015.

<sup>16</sup>Brenneke 2007b, 74–75.

<sup>17</sup>Brenneke 2007a, Brenneke 2007b, 95–97, Shean 2010, 178–215.

<sup>18</sup>Speidel 2006, 4–6; Swift 2009, 159; Hoss 2014, 288–292.

<sup>19</sup>Pliny the Younger. *Epistulae* 10.96–97; Corcoran 2015, 71.

<sup>20</sup>Brenneke 2007b, 96.





Fig. 2. - Chain or scale mail breastplate closure from Ritopek, RS depicting the seven gods of the week, *signa* and a fighting scene (photo: M. A. Wijnhoven).

cutions under Decius, Valerian and finally Diocletian, which forced many Christians to choose between their faith and punishment – even if there are indications that the Christian sources exaggerate both the amount

of Christians persecuted and the severity of the punishments.<sup>21</sup> In any case, these edicts prove that Christians were by now well represented in both administration and army, and especially in the higher ranks.<sup>22</sup>

<sup>21</sup>For a short summary of the persecutions and their uneven nature see Selinger 2002, 68–72; Corcoran 2015, 71–75.

<sup>22</sup>Corcoran 2015, 73.



Fig. 3 - Back of a helmet decorated with a snake from Vechten, NL (photo: Rijksmuseum van Oudheden, Leiden).

According to Eusebius and Lactans, the AD 305 battle on the Milvian Bridge marked the beginning of Constantine's conversion to Christianity. Whatever the truth of this story, it is important to remember that without the support of at least the higher officers of his army and a sizable number of soldiers, the Emperor might well not have survived his conversion to Christianity. Seen in this light, the conversion looks more like a shrewd political move than a heartfelt attempt at redemption.

Nevertheless, from a legal point of view the toleration and decriminalisation of Christian worship expressed in the edicts of Serdica and Milan in AD 311 and 312 must have been more important for Christians. In the space of a long lifetime (77 years), Christianity went

from its most severe persecution under Diocletian in AD 303-305 to becoming the state religion of the Roman Empire with the AD 380 edict of Thessalonica. But even then, there was a great diversity of Christian churches one could adhere to, all of them fighting each other, and there are indications that paganism continued long into the 5th and 6th centuries, and especially so in the North-Western provinces.<sup>23</sup>

### Christian symbols

While the three Christograms (Chi-Rho, Iota-Chi, Iota-Eta), the taurogram (Tau-Rho) and the various forms of the cross are seen as univocally Christian symbols today, they symbolized a variety of things in antiquity. Almost all of these early Christian graphic symbols had not been invented *ex novo*, but had been adapt-

<sup>23</sup>Cameron 2015, 11, 15–16.



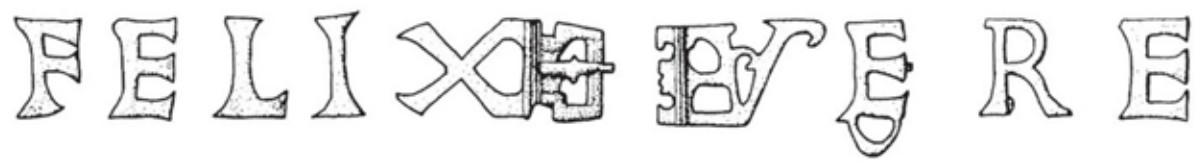


Fig. 4 - Utere Felix belt set from Lyon, F (after Bishop - Coulston 2006, fig. 101).

ed from mundane usage in writings with no religious connotation.<sup>24</sup> Hurtado stresses, that in their early use, these symbols were reliant on the knowledge of their viewers to be understood as expressions of Christian faith rather than their more humdrum uses as scribal devices.<sup>25</sup>

While the taurogram seems to have been used in a Christian sense only by the Constantinian period, the Chi-Rho was already used on the gems of signet rings by the third quarter of the 3<sup>rd</sup> century AD.<sup>26</sup> The first imperial use of both the Chi Rho and the cross was by Constantine: while the first known use of the cross (in the form of the labrum) was the colossal seated statue of Constantine in the basilica of Maxentius (dated to AD 315), the Chi-Rho first appears on the helmet of the famous silver medallion of Tincinum, also dated to AD 315 and depicting the armored Constantine (see Fig. 7).<sup>27</sup> In the following years, the Chi-Rho is found on several imperial milestone inscriptions in Africa and when Sol Invictus disappears from the Imperial coinage in the mid-320ies, the Chi-Rho becomes the “principal symbol of victorious imperial authority”.<sup>28</sup> In the second half of the 4<sup>th</sup> and in the 5<sup>th</sup> century, the Chi-Rho was regularly placed on objects connected to the Imperial government in the Western provinces, such as seals, ingots and signet rings probably used by officials.<sup>29</sup> Another proof of the Chi-Rho’s connection to the Imperial rather than the religious sphere is a patronal tablet from Paestum dated to AD 347. The tablet is decorated with a garland, which has a Chi Rho at the centre, but the inscription on it mentions that the father

of the man named patron here had been a *flamen* of the imperial cult.<sup>30</sup> By the 5<sup>th</sup> century, the Chi-Rho in a laurel wreath had become one of the main symbols of Christian emperorship.<sup>31</sup>

The cross was apparently first used in a Christian sense in tombs, both in 4<sup>th</sup> century Palestine and Rome, but was at first more common in the East, where it also appeared on rings.<sup>32</sup> The cross only really gained in importance as a Christian symbol with the establishment of the cult of the Holy Cross in Jerusalem during the mid-4<sup>th</sup> century.<sup>33</sup>

#### Decorations on military equipment of the 4<sup>th</sup>-5<sup>th</sup> centuries AD

As we have seen above, by the 3<sup>rd</sup> century, Christians had become a sizable minority in the army up to the very top of the command structure. But while Roman soldiers had had a long tradition of putting symbols of divine protection on their arms and armour, the military equipment of the 4<sup>th</sup> and 5<sup>th</sup> centuries is remarkable for the rarity of such protective symbols, either pagan or Christian.

In some cases, this is due to the development of the equipment: metal body armour seems to have become increasingly rare from the 4<sup>th</sup> century onwards, and the construction of those types that were still produced, namely chain and scale mail, reverted to a model that was without a breastplate closure (Panzerver-

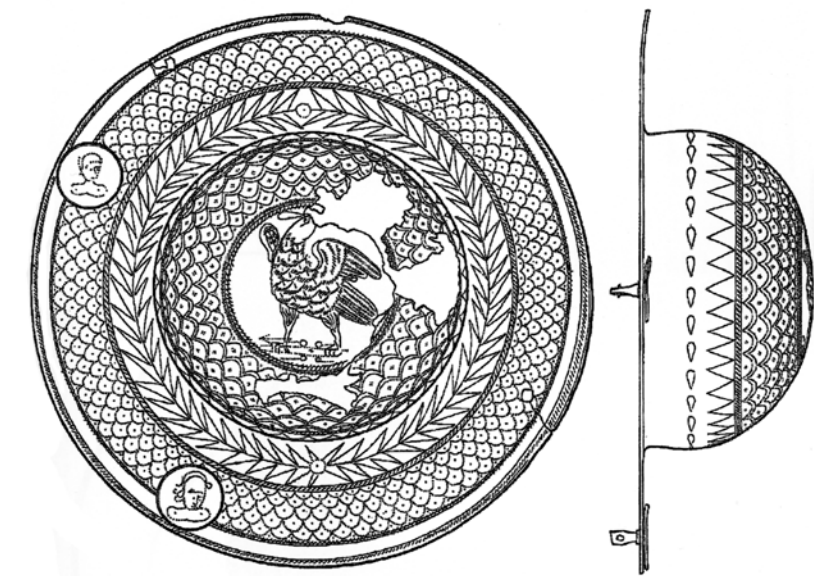


Fig. 5 - Shield boss from Mainz, D, depicting an eagle (after Nabbefeld 2008, Taf. 39).

schlussblech), thus eliminating possible surface areas that could be decorated.

We are thus left with only four groups of military equipment that could have been decorated, namely shields, helmets, crossbow brooches and belt mounts of the *cingulum militare*.

#### Shields

No finds of shields from the 4<sup>th</sup> and 5<sup>th</sup> century survive with enough material intact to discern their overall decoration. While some shield bosses were found, they usually are undecorated. The representations of shields on coins, silver plates and monumental triumphal art, which invariably depict them as bearing a large Chi-Rho, can all be termed ‘propaganda art’, as their contexts and dates, in conjunction with the legitimisation of Christian Emperorship through the legend of the battle on the Milvian bridge make it unlikely that they depict existing unit emblems.<sup>34</sup> However, there is a caveat to this: ceremonial shields with the Chi-Rho

may have existed, and may have been (occasionally) used by the Emperor and his direct entourage.

The *Notitia Dignitatum* depicts many shield emblems, but their reliability has been severely doubted by Grigg, who concluded that the emblems depicted might not represent the units they are supposed to represent and that most of them may have been invented.<sup>35</sup> This harsh verdict may now have to be amended, as is demonstrated by Jelusić’s comparison of the emblems in the *Notitia Dignitatum* with a wall painting in a catacomb in Syracuse that pictures a soldier with a shield next to his tomb inscription.<sup>36</sup> Both the shield emblem depicted as well as the inscription in the catacomb only differ in detail from the ones depicted for the *Mattiarum iuniores* and *seniores*, two units named in all the versions of the *Notitia Dignitatum*. These units both were part of the eastern *legions palatinae*, elite foot soldier units.<sup>37</sup> However, while the emblems of these units in the *Notitia Dignitatum* (among other things) show a cross on top of a crescent lying on its back, Jelusić states that the single vertical bar shown on top of the crescent in the wall painting could not have been part

<sup>24</sup>Hurtado 2017, 39–40; Garipzanov 2018, 29.

<sup>25</sup>Hurtado 2017, 39–40.

<sup>26</sup>Spier 2006, 30–31, Cat. Nr. 112-139.

<sup>27</sup>Cross: Heid 2006, col. 1123–24; ChiRho: Garipzanov 2018, 56.

<sup>28</sup>Garipzanov 2018, 57.

<sup>29</sup>Garipzanov 2018, 65.

<sup>30</sup>Brown 2012, 63; Cooley 2012, 244–245.

<sup>31</sup>Garipzanov 2018, 73.

<sup>32</sup>Garipzanov 2018, 83–85; Rings: Spier 2006, 23–24, Cat. Nr. 45, 47, 63.

<sup>33</sup>Garipzanov 2018, 87.

<sup>34</sup>For the term ‘propaganda art’ see Bishop, Coulston 2006, 2.

<sup>35</sup>Grigg 1983.

<sup>36</sup>Jelusić 2017.

<sup>37</sup>Jelusić 2017, 524.



Fig. 6 - Ridge from a ridge helmet, with a Chi-Rho at the front, from an unknown findplace (photo: author).

of a cross, an assessment confirmed by figure 4 of his paper.<sup>38</sup> This casts doubt on the small number of depictions of the cross in the *Notitia Dignitatum* (there are none with the Chi-Rho). It seems possible that the Christian copyists of the manuscripts added these to the illustrations. It thus seems unlikely that Christian symbols generally appeared on shields (other than perhaps ceremonial ones used by the Emperor and his entourage).

### Helmet

There are three types of 4<sup>th</sup>-5<sup>th</sup> century helmets that may be decorated with Christian symbols. The first are ridge helmets (German: Kammhelme), whose eponymous ridge runs along the crest of the helmet from front to back. On the front of the ridge above the forehead, these helmets can have a propeller-shaped decoration made from gilded bronze and depicting a Chi-Rho in a round frame (see Fig. 6).<sup>39</sup> Only one of these decorations was found together with the helmet, this comes from the Meuse near Kessel-Hout (prov. Limburg, NL) and was found together with 10 gold solidi covering

the period from Valens (AD 364-378) to Constantine III (AD 407-411).<sup>40</sup>

A Chi-Rho shown in the same position on a ridge helmet worn by Emperor Constantine is depicted on the famous silver medallion of Tincinum (see Fig. 7), dated to AD 315 and another one is worn by the personification of Roma on the diptych of Basilus, dated to AD 480.<sup>41</sup> In his 2013 publication of Chi-Rho elements for helmets, Laszlo Kocsis collected 21 pieces of this type and dated them with the help of their find circumstances into the late 4<sup>th</sup> and early 5<sup>th</sup> century AD.<sup>42</sup>

Another decoration with a Chi-Rho belongs to a different type of helmet, the Deurne-Berkasovo II type. Here, the decoration had been stamped into a thin metal sheet of gilded silver, which was attached to the nasale of the helmet. This decoration is also dated by Kocsis between the last third of the 4<sup>th</sup> and the first quarter of the 5<sup>th</sup> century AD.<sup>43</sup>

So-called Spangenhelme of the Baldenheim type, dating from the mid-5<sup>th</sup> to the late 6<sup>th</sup> century also can



Fig. 7 - Silver medallion from Pavia (*Tincinum*, I) with Constantine wearing a ridge helmet with Chi-Rho (after Fischer 2012, fig. 190.3, drawing A. Smadi, Arch. Inst. Uni. Köln).

have decorations with Christian themes. The most famous example is probably the golden helmet from the princely tomb of Apvar, found at Krefeld-Gellep.<sup>44</sup> The decorations are generally found on the lower rim/ring or the 'spangen' (metal strips), which form the framework of the helmet. These parts were decorated with thin metal sheets with punched designs.<sup>45</sup> While some of these helmets depict crosses on the rim/ring directly above the wearer's nose, other depictions with Christian themes sit elsewhere on the helmets and include Daniel in the Lion's den, medallions with Christian invocations, and other symbols.

Nevertheless, we have to keep in mind that most contemporary helmets were decorated differently. In one type of decoration, semi-precious stones were set onto the bowl, as in the Berkasovo I helmet or the helmet found in the Danube near the Late Antique fort of *Contra Aquincum* at Budapest (see Fig. 8).<sup>46</sup> Another

type of decoration present on helmets of this period is stamped designs, as on the helmet from Deurne, NL (see fig. 9).<sup>47</sup> The decoration on that helmet is composed of ornaments that are either 'neutral' (such as bands of small flowers, crescents and classicising figural motives) or symbols that were used both by Christians and pagans, such as anchors and vines. The anchor is a good example of the transformation process by which a rather vaguely positive symbol used in the pagan religion as a metaphor for reaching a safe harbour at the end of life's journey is adopted by the Christians very early on. Its meaning remains similar, but is now Christianized with the 'safe harbour' interpreted as the Christian heaven. This symbol is one of the first to appear in Christian grave inscriptions.<sup>48</sup> The vine, in the pagan world a symbol of the good life, is used by Christians in a similar manner and appears very often on Christian mosaics.

### Crossbow brooches

While most brooches had no express connection to the Roman army, crossbow brooches are directly linked to service in the *militia*, which, as mentioned above, included both the soldiers and the civil administrators of a province.<sup>49</sup> At least the more valuable silvered, gilded or gold ones seem to have been given to their wearers on behalf of the Emperor as signs of authority. It is because of this fact that most crossbow brooches with Christian symbols cannot be indications of the Christianity of the wearer.<sup>50</sup>

The Chi-Rho, taurogram or Alpha and Omega appear on onion-headed crossbow brooches from the mid-4<sup>th</sup> century onwards, mainly on those of type Keller-Prödtel 5, dating from the mid-4<sup>th</sup> to the mid-5<sup>th</sup> century.<sup>51</sup> But even on this type, only about 13% of the brooches are decorated with Christian symbols, as Eger could demonstrate. This indicates that these brooches must

<sup>38</sup>Jelusić 2017, 521, Fig. 4 (517).

<sup>39</sup>The following after Kocsis 2013.

<sup>40</sup>Prins 2000.

<sup>41</sup>Kocsis 2013, Fig. 3.

<sup>42</sup>Kocsis 2013, 124-128, Figs. 10-12.

<sup>43</sup>Kocsis 2013, 124.

<sup>44</sup>Pirling 1964.

<sup>45</sup>The following after Vogt 2006, 109-137.

<sup>46</sup>Berkasovo I (RS) helmet: Manojlović-Marijanski 1973; Budapest (HU) helmet: Thomas 1973.

<sup>47</sup>Braat 1973.

<sup>48</sup>Cooley 2012, 232.

<sup>49</sup>For recent overviews on crossbow brooches see Steuer 2007, 605-623; Swift 2009, 159-162; Paul 2011, 34-39. For a recent summary on Late Antique brooches with Christian graphic symbols, see Eger 2017. Eger also discusses the rare finds of brooches of other types with a Chi-Rho, which probably had a similar meaning: 301-303, 311-314.

<sup>50</sup>Eger 2017, 288. An exception are brooches, where the Chi-Rho was added later, see 300-301.

<sup>51</sup>The following after Eger 2017, 290-297.





Fig. 8 - Copy of a helmet found in the Danube near the Late Antique Fort Contra Aquincum, Budapest, HU (photo: P. F. J. Franzen).

have been given to a small group of people. The symbols are generally picked out in Niello and are found on the bow or the foot of the brooch and sometimes on the triangular end of the socket enclosing the end of the pin. However, they are not large enough to be seen when not standing very close to the wearer. Some of these crossbow brooches are also decorated with medallions with male busts wearing the *sagum/chlamys*

with a round brooch and thus the typical dress of men in the *militia*. These were often interpreted as depicting either the Christian emperors or saints, but are more likely to have been seen as vague, but auspicious allegories.<sup>52</sup>

Interestingly, some crossbow brooches of the type 7 (mid-5<sup>th</sup> to early 6<sup>th</sup> century AD) carry a Latin cross on



Fig. 9 - Helmet from the Helenaveen bog near Deurne, NL (photo: Rijksmuseum van Oudheden, Leiden).

the whole length of their foot, which must have been well visible even from a (slight) distance.<sup>53</sup> Brooches of the types 6 and 7 are more rare than earlier types and Eger speculates that this may be due to a narrowing of the circle of persons being given crossbow brooches, while the brooches themselves become more precious, pointing at the high social standing of the those that received them – crossbow brooches thus become more exclusive over time.<sup>54</sup>

The three common denominators of crossbow brooches with Christian symbols are that they all belong to late variants of the type, are all highly decorated and are all made from costly materials. It seems safe to say that they must all have belonged to very high-ranking individuals, either members of the *militia* or the Impe-

rial court or rulers of allied peoples, like Childerich, in whose grave at Tournai a crossbow brooch of type 7 was found.

#### Belt buckles and mounts

In the tradition of the earlier military belts, the belt buckles and mounts of the late 3<sup>rd</sup> to 5<sup>th</sup> century *cingulum* in the Northwestern provinces were highly decorated, but not with Christian symbols. The chip-carved belts almost ubiquitous in the Northwestern provinces during the 4<sup>th</sup> to 5<sup>th</sup> centuries are predominantly decorated with geometrical designs, often forming circles or flowers with four ovoid petals. A number of buckle frames are decorated with two animals, whose heads meet at the buckle tongue's point; with others, the ani-

<sup>52</sup>Kaufmann-Heinimann 2003, 154–160, Fundliste 307–311; Steuer 2007, 609–611; Eger 2017, 297.

<sup>53</sup>Eger 2017, 304–308.

<sup>54</sup>Eger 2017, 308–311.

mals are placed where the frame meets the plate (some buckle frames have both).<sup>55</sup> In addition, the buckle tongue can have two arms projecting right and left, which may be formed as (the heads of) animals. Similar to the crossbow brooches, some belt mounts also bear medallions depicting busts or full human figures in a classicising manner, probably also personifications.<sup>56</sup> However, to my knowledge, no belt buckles or mounts of this period in the Northwestern provinces are decorated with either a cross or a Chi-Rho.

This is different in the Mediterranean, where belt mounts belonging to buckles of the types Schulze-Dörlamm B12-14, C5, C13, C16-17, D1, D6-7, D22-26 and decorative belt mounts of the type C8, all dating from the mid-5<sup>th</sup> to the 7<sup>th</sup> century are decorated with various forms of crosses (but not with a Chi-Rho).<sup>57</sup>

## Conclusions

We can thus summarize that from the four possible classes of equipment with Christian symbols, three can be verified: helmets, brooches and Mediterranean belt mounts. The various types of helmet and crossbow brooches have in common that not all objects of the types are decorated with either a cross or a Chi-Rho, while in Schulze-Dörlamm's typology, the belts are assigned to various types according to their decoration and the relevant types thus must have a cross. However, types similar in all other elements, but with a different decoration and dating to the same period do exist.

The helmets and crossbow brooches all belong to a class of equipment that is very costly and must have been owned by individuals in the upper echelons of the *militia* of the late antique Empire. Decorations on other items of both of similar and lesser quality are more neutral in subject. These luxurious items of military equipment are likely to have been gifted by the Emperor or his representatives and thus say more about the giver than the receivers, who may or may not have been Christians. In addition, it seems that the Christian symbols on the military equipment are more directly connected to the Emperor and used as proclamations

of loyalty rather than proclaiming the Christianity of their owners.

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<sup>55</sup>See Swift 2000, 186–188, Table D: Sommer Sorte 1 Form A Typ C; Sorte 1 Form C Typ D, E, F (with variations 1a-d, 2, 3, 4); Sorte 1 Form E, Typ D; Sorte 2, Form A Typ A, C; Sorte 2 Form D; Sorte 3 Typ F.

<sup>56</sup>See Swift 2000, 186–188, Table D: Sommer Sorte 1 Form C Typ F variation 1a.

<sup>57</sup>Schulze-Dörlamm 2009, Vol. 1, 64–68, 95–97, 104, 115–119, 129–134, 146–151, 159–162, 193–195.



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#### Zusammenfassung

Der Aufsatz zeigt den markanten Unterschied in der Häufigkeit der Darstellungen von Symbolen heidnischer Götter als Schutzzeichen auf Militaria des 1.-3. Jh. n. Chr. und den Darstellungen christlicher Symbole auf Militaria des 4. und 5. Jh. n. Chr. auf. Die historischen Quellen belegen, dass Christen bereits im 3. Jh. n. Chr. eine starke Minderheit formten und auch in der Armee und Administration des Imperiums bis in die höchsten Ränge vertreten waren. Nach der Konversion Konstantins wurden im 4. und 5. Jh. stets mehr Soldaten Christen weswegen eine Nutzung christlicher Schutzzeichen auf der Ausrüstung dieser Soldaten eigentlich zu erwarten gewesen wäre. Eine Erklärung für ihre relative Seltenheit könnte in der Vielfalt der christlichen Kirchen und ihrer Konkurrenz zueinander in dieser Periode liegen. Zudem wurde das Christogramm offenbar eher als Zeichen der Loyalität zum Kaiser genutzt und war daher nicht nur rein christlich konnotiert.

# LIMES XXIII

## Session 14

From East to West Our Legions  
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# Trajan, legio XI and Caius Iulius Quadratus Bassus - the last legatus legionis of *Vindonissa* (Windisch/Switzerland)

## ABSTRACT

During the last years, countless rescue excavations have taken place at the site of the Roman legionary fortress of *Vindonissa* (modern-day: Windisch, Canton Aargau, Switzerland). Inside the fortress, several features indicate that the *Legio XI Claudia Pia Fidelis* abandoned the site around 101 AD in a systematic manner. In the settlements and cemeteries outside the fortress, the quantity of structures and small finds declines considerably with the beginning of the 2<sup>nd</sup> cent. AD.

The aim of this paper is to link the abandonment of the fortress and other local archaeological features to a well-known historical event along with the two persons involved: The withdrawal of *legio XI* from *Vindonissa* at the beginning of the Dacian wars, the emperor *Marcus Ulpius Traianus* and one of his comrades, *Caius Iulius Quadratus Bassus*.

Moreover, the final abandonment of the legionary garrison at *Vindonissa* probably refers to a sort of ranking of Roman legions within the two Germanies, with *Vetera* and *Mogontiacum* on the top and *Vindonissa* at its very end. A brief overview of the known *legati legionis* at *Vindonissa* seems to reinforce this assumption.

**KEY WORDS:** VINDONISSA, LEGIONARY FORTRESS, LEGIO XI, LEGIONARY COMMAND, WITHDRAWAL OF LEGIONS, RANKING OF LEGION, TRAJAN, TRAJAN'S COLUMN, DACIAN WARS, CAIUS IULIUS QUADRATUS BASSUS



### The legionary fortress of *Vindonissa*

*Vindonissa* (Windisch CH), with its legionary fortress dating to the 1<sup>st</sup> cent. AD, the surrounding civil settlements, cemeteries, aqueducts and late antique fortifications, has been a focal point of provincial Roman research in Switzerland for decades<sup>1</sup>. The origins of Roman *Vindonissa* (Fig. 1) go back to a fortified Celtic settlement. Located at the crossroads of important land and waterways, *Vindonissa* entered the sphere of influence of Roman expansion policy in the late 1<sup>st</sup> century BC. During the first years of Tiberius' reign, a permanent fortress for the *Legio XIII Gemina* was erected here, about 15 km south of the Rhine. The fortress, covering around 20 ha, was continuously rebuilt and extended; from around 47 by the *Legio XXI Rapax* and from about 70/71 by the *Legio XI Claudia Pia Fidelis*. In three zones *ante portas* the civil settlement areas of the *canabae legionis* spread outside of the camp. To the north of the camp, instead of a civil settlement, a huge waste dump, the "Schutthügel" of *Vindonissa* was located<sup>2</sup>.

### An imperial visit...

When emperor Nerva died on 28 January 98 AD, Marcus Ulpius Trajanus, who shortly before had been adopted by Nerva, became sole ruler and supreme commander. Trajan, who had been *legatus augusti pro praetore* in *Germania Superior* since the summer of 97 already knew this province from a campaign of 88/89 AD, which had led him from Spain to the Rhine. The newly appointed emperor, however, did not go to Rome initially, choosing rather to inspect the cities, regions and troops along the important military frontier zone of the Rhine and Danube. This journey also led to the development of the regional infrastructure, as a series of milestones along the Rhine zone attest. One of these is a stone erected in the autumn of 99 and discovered immediately to the east of *Vindonissa* (Fig. 2)<sup>3</sup>. Its setting up may also have been an address of

loyalty to the new emperor who was present on site. It can therefore be assumed that Trajan also personally inspected the *castra Vindonissensia*<sup>4</sup> during his tour in the spring of 98<sup>5</sup>.

### ...and its consequences

Trajan's visit to *Vindonissa* may have given rise to considerations about the future of this military complex, as it devoured more than 1.5 million denarii a year. During the 1<sup>st</sup> cent. AD, the strategic situation on the Upper Rhine had changed fundamentally. The troops initially stationed on the river contributed significantly to the shifting of the military frontier further and further to the northeast. During the stationing of the 11th Legion this zone had moved more than 70 Roman miles away from *Vindonissa*. With the establishment of a vexillation fort in *Arae Flaviae* (Rottweil) at the beginning of the 70's of the 1<sup>st</sup> cent. AD, the military significance of *Vindonissa* had decreased even further, as detachments of the 11th Legion were now stationed in *Arae Flaviae*<sup>6</sup>. Thus, the former frontier fortress of *Vindonissa* had gradually transformed into a settlement within the pacified hinterland of *Germania Superior*.

This development could hardly have gone unnoticed by Trajan during his time in *Germania Superior*. It was probably such considerations, gained from personal experience that prompted him shortly after being proclaimed emperor to order the withdrawal of the *Legio XI Claudia Pia Fidelis* from *Vindonissa* without replacement. It should be remembered that at that time *Vindonissa* was the legionary site located closest to Rome – at least by land.

Although this scenario seems plausible in retrospect, it is – due to the lack of written sources – still debatable which exact considerations led to the abandonment of a legionary fortress. In addition to troop movements as a result of conflicts on the frontiers, crises within already "pacified" provinces may have also triggered



Fig. 1 - *Vindonissa*. Reconstruction of the situation at the end of the 1<sup>st</sup> cent. AD. (Kantonsarchäologie Aargau / ikonaut, GmbH, Brugg).

redeployments<sup>7</sup>. In research, the motives behind the movements of troops tend to be evaluated differently and the far-reaching consequences for the respective garrisons only become apparent in retrospect. Depending on one's point of view<sup>8</sup>, the final abandonment of a legionary camp can be seen as a planned, proactive decision taken by a committee after a careful assessment of the situation, in the sense of a "grand strategy". Another view is a more skeptical assessment of Roman administrative practice, according to which even far-reaching decisions were mostly taken by the emperor alone, often as an immediate reaction to situationally perceived events.

The connection between the emperor's visit to a province – the presence of the supreme commander –, troop disposition and frontier policy can be demonstrated not only by the example of *Vindonissa* and Trajan. For example, a visit by Hadrian in 121/122 AD had far-reaching military consequences for the northern

frontiers of *Germania Superior* and *Britannia* and, as the "Limes Palisade" and "Hadrian's Wall" attest respectively<sup>9</sup>.

### Traces of the troop withdrawal

The order to withdraw must have come as a surprise for the troops in *Vindonissa*, as only shortly before parts of the camp had been rebuilt and redeveloped<sup>10</sup>. Shortly afterwards, the plastered mudbrick walls of the *contubernia* were systematically dismantled, the construction timber removed, and the loamy demolition material levelled out or backfilled into the fortresses' defensive ditches (Fig. 3)<sup>11</sup>. These processes can be dated by stratified coins coming from various excavations of the youngest demolition layers of the legionary fortress. In these contexts, issues dating to the reign of Nerva or barely worn examples of Trajan minted between 98 and 101/102 AD are regularly documented as final coins<sup>12</sup> (Fig. 4).

<sup>1</sup>The state of research: Trumm 2015. In addition to the "Jahresberichte der Gesellschaft Pro Vindonissa" published since 1906, 24 extensive "Veröffentlichungen der Gesellschaft pro Vindonissa" on findings and finds from Windisch and its environs have been published since 1946.

<sup>2</sup>Trumm 2018a

<sup>3</sup>CIL XIII 9075 = CIL XVII/2 595. See also Herzig 2006, 82.

<sup>4</sup>This is the term used in a contract dated to 24 August, 94 AD and recorded on a wooden writing tablet. See Speidel 1996, 102–105 Nr. 3.

<sup>5</sup>For a summary see Frei-Stolba, Trumm 2007.

<sup>6</sup>On the forts of Rottweil see Kortüm, Lauber 2009.

<sup>7</sup>See for example the establishment of the legionary fortress at Mirebeau (F) after the turmoils in the *civitas* of the Lingones during the year of the four emperors 68/69 AD. After only one generation, the *castra* of the *legio VIII Augusta* was relinquished without replacement in favour of the site of *Argentorate* (Strasbourg F) on the Rhine. See Kuhnle 2018.

<sup>8</sup>See the various contributions in Haensch, Heinrichs 2007.

<sup>9</sup>Graafstal 2018.

<sup>10</sup>Trumm, Flück 2013, 332 showing the example of freshly minted sestertius of Nerva dating to 96 AD and found in a newly laid mortar floor of the centurion's quarters.

<sup>11</sup>For syntheses see Trumm, Flück 2013, 234–245; Trumm, Flück 2016.

<sup>12</sup>Individual records mentioned in Trumm 2018b.





Fig. 2a - The copy of a milestone of Turgi AG east of Vindonissa dating to 99 AD (photo Kantonsarchäologie Aargau).

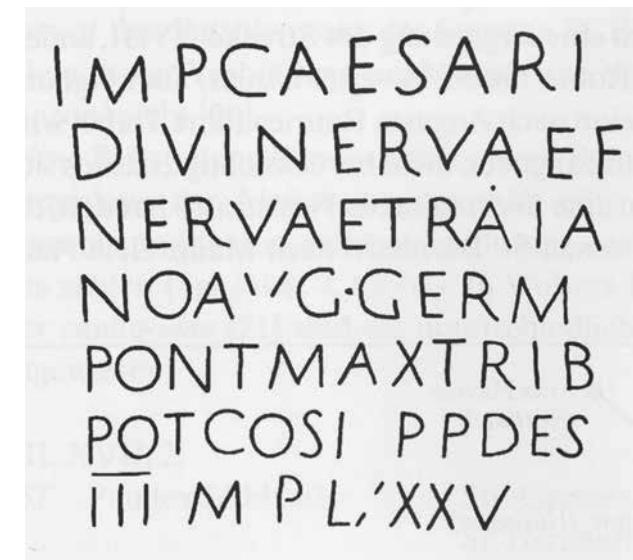


Fig. 2b - The milestone of Turgi AG east of Vindonissa dating to 99 AD and a transcription of its inscription (transcription after Herzig 2006).

The coin series from the "Schutthügel" also ends with five coins of Emperor Trajan<sup>13</sup>, the most recent issues can be dated to 99/100 AD, both of which are hardly worn.

Furthermore, in the civil settlements around the legionary fortress the abandonment of the *castra* led to a marked decline in archaeologically identifiable activities and their associated finds. Studies of recent excavations in the extensive civil settlement to the west of the fortress confirm this picture; even if in the areas along the important axes, it cannot be assumed that settlement activity came to a complete standstill<sup>14</sup>. As opposed to the settlement zones outside the former legionary fortress (*canabae legionis*), areas within the abandoned *castra* were gradually resettled; thus, a *vicus* developed on both sides of the former *via principalis*<sup>15</sup>.

The military strategic position of *Vindonissa* was altered by the final withdrawal of the 11th Legion but its trait as a topographically favourable site remained. In the 2<sup>nd</sup> and 3<sup>rd</sup> centuries, people and goods came by this traffic junction between the Alps and the High Rhine. The roads and the sacred sites situated on them continued to be frequented accordingly<sup>16</sup>.

### The way to the Danube

The abandonment of the *Vindonissa* legionary fortress can therefore be dated with almost certainty using archaeological methods. The most probable date for a gradual withdrawal of troops is spring 101 at the latest, as on 25 March 101 Trajan left Rome for the direction of the Dacian theater of war<sup>17</sup>. However, due to the lack of written sources, the precise processes leading to the abandonment of the fortress, the chain of commands followed, and the preparations made for the departure remain open to debate<sup>18</sup>. It also remains questionable, whether the *Legio I Minervia*, stationed at that time in *Bonna* (Bonn D), moved into the abandoned fortress immediately after the withdrawal of *Legio XI* from *Vindonissa*, as K. Strobel has put forward<sup>19</sup>.

Presumably, the 11th Legion departed *Vindonissa* through the south gate, the *porta praetoria* (Fig. 5). The journey, measuring almost 1,000 km, led the troops from the south of the *Germania Superior*, first on foot to the upper Danube to the fort at Mengen (D), then probably by ship to the middle Danube, towards the immediate vicinity of the Dacian theater of war (Fig. 6)<sup>20</sup>. This route, which can be conceived as a combined land and river undertaking of at least 15, but probably of over 50 days, ended at *Brigetio* (Komárom/Szöny HU) in the then still undivided province of *Pannonia*<sup>21</sup>. Here, the 11th Legion – possibly with a vexillation in the fortress of *Aquincum* (Budapest HU) – was suppo-

<sup>13</sup>Trumm, Flück 2013, 241 Fig. 215; Trumm 2018b.

<sup>14</sup>Flück 2017, 413–420 with an end coin minted in 106/107 at the earliest for this zone of the former *canabae legionis*.

<sup>15</sup>Trumm, Flück 2016, esp. 111–115.

<sup>16</sup>Lawrence 2018.

<sup>17</sup>For the dates and events of Dacian wars see Strobel 1984.

<sup>18</sup>See Herz 2002, 46 for the operational process of the deployment of larger troop units.

<sup>19</sup>Strobel 1984, 86 f. Contra: Hartmann, Speidel 1991, 5 ; 19; Speidel 1996, 43.

<sup>20</sup>For the reconstruction of route and time needed see Trumm 2008.

<sup>21</sup>Borhy 2012. Although many tile stamps are of the 11th Legion are registered here, no inscriptions have been found which suggests a short period of stationing at this Pannonian site.





Fig. 3 - Vindonissa legionary fortress, excavations 2003-2006 at the south gate. A thick yellow-brownish clay layer lies on top of the youngest fortress-period structures: the remains of demolished mudbrick buildings from the withdrawal of the 11th Legion. (photo Kantonsarchäologie Aargau)



Fig. 4 - Freshly minted as of Trajan, minted 101/102, from the demolition layers of the 11th Legion. (photo Kantonsarchäologie Aargau, Inv. Nr. V.003.1/389.1).

sed to take over securing of the middle Danube as flank protection in the nascent war against the Dacians.

### The further way

The majority of researchers currently assume that the 11th Legion left *Brigetio* or *Aquincum* as early as autumn 101 AD in order to intervene directly in the battles on the Lower Danube against the invading Dacians.<sup>22</sup> The deployment of troops on or along the river benefited from the recently completed construction of the passage through the "Iron Gates", which until then had been very difficult to navigate<sup>23</sup>. During the battles in the final phase of the First Dacian War, the *Legio XI* or one of its vexillations probably moved to the fortress at *Oescus* (Gigen BG) and then during the Second Dacian War or shortly thereafter it progressed further down the Danube to *Durostorum* (Silistra BG). It is also conceivable that the 11th Legion advanced in

<sup>22</sup>See Strobel 1984, 93–95; Strobel 1988; Wilkes 2000.

<sup>23</sup>CIL III 1699: (...) *Traianus* (...) *montibus excisis anconibus sublati viam refecit*. See also the inscription Année Epigraphique 1973, 475: *Traianus* (...) *ob periculum cataractarum derivato flumine tutam Danuvi navigationem fecit*. – See also Mirković 1996.



Fig. 5 - The southern gate of the legionary camp Vindonissa in a digital visualization. Did the 11th Legion pass through this gate on its way the Danube? (Kantonsarchäologie Aargau / D. Rothacher, Freiburg i.Br.).

several vexillations, thus moving to different locations simultaneously. This would explain why in the legionary fortresses of the middle and lower Danube – *Brigetio*, *Aquincum*, *Oescus*, *Novae*, *Durostorum*, *Troesmis* – along with other sites of this region, tiles of the 11th Legion are registered with stamps that are not known from *Vindonissa*<sup>24</sup>. In any case, *Durostorum* would have become the fortress of the *Legio XI Claudia Pia Fidelis* in 116 AD at the latest.<sup>25</sup> The 11th Legion remained stationed there until Late Antiquity.

### The last legionary commander in Vindonissa

Found in 1931, an honorific inscription written in Greek from the sanctuary of Asclepius in Pergamon

reveals the name of the last legionary legate of Legio XI in *Vindonissa*: *Caius Iulius Quadratus Bassus* (Fig. 7). Despite being published in 1934 and 1969 in extensive readings and included in prosopographical overviews<sup>26</sup>, research in *Vindonissa* has only recently become aware of this important inscription<sup>27</sup>. It mentions that *Bassus*, who came from a distinguished family in Asia Minor, had taken over the command of the *Legio XI* after his praetorship. It was there, where the roughly 35-year-old senator could have expected to end his military career. *Vindonissa*, as a fortress in the pacified hinterland, was hardly a good platform for building a career to become one of the *viri militares* of the empire.

<sup>24</sup>Syntheses on brick stamps of the 11th legion from the Danube: Lörincz 2000; Gudea 2005, 335 f.; 434 ff.; Ivanov 2006. See also now the finds from *Troesmis*: Alexandrescu *et al.* 2016, 247; 406 BK 22. On the brick stamps of the 11th legion from *Vindonissa* see Jahn 1909; his type plates are reprinted in Giacomini 2005, 58–60.

<sup>25</sup>Zahariade 1999.

<sup>26</sup>Von Premerstein 1934; Habicht 1969, 43–53 Nr. 21. Amongst others *Quadratus Bassus* is mentioned in the following prosopographical compilations: Halfmann 1979, 119 f. Nr. 26; Strobel 1984, 64–66; Eck 1985, 247 Nr. 37; Franke 1991, 211–217 Nr. 91; Campbell 2000, 63 f. Nr. 112.

<sup>27</sup>For a summary and further literature: Frei-Stolba 2008.



Time period of legion command	Legion	Legate name	Reference to inscription in Vindonissa	Prosographical reference
between ca. 40 and 70?	Legio XXI ?	<i>Aulus Vettius Priscus</i>	Année Épigraphique 1953, Nr. 250b – Nesselhauf - Lieb 1959, Nr. 74	Alföldy 1967 Nr. 29
47 and further years?	Legio XXI	<i>Marcus Licinius Senecio</i>	CIL XIII 11514	Alföldy 1967 Nr. 7 – Franke 1991 Nr. 117
51 or 53/54	Legio XXI	Ignotus	CIL XIII 11515	Alföldy 1967 Nr. 7a – Franke 1991 Nr. 118
70-73 ?	Legio XI	<i>Caius Saloni- us Patruinus</i>	CIL XIII 5199 = 11519	Frei-Stolba 2013
between 91-96	Legio XI	<i>Lucius Iulius Marinus Caecilius Simplex</i>	-	Alföldy 1967 Nr. 27 – Franke 1991 Nr. 94
96-99 ?	Legio XI	<i>Lucius Munatius Gallus</i>	CIL XIII 11500	Alföldy 1967 Nr. 28 – Franke 1991 Nr. 35
99-101 ?	Legio XI	<i>Caius Iulius Quadratus Bassus</i>	-	Franke 1991 Nr. 91 – Frei-Stolba 2008

Tab. 1 - List of epigraphically attested legionary legates from Vindonissa. (compilation J. Trumm / R. Frei-Stolba).

*Bassus Quadratus*, however, seemingly fulfilled the organizationally demanding task of transferring a legion so well that he was immediately assigned to another special mission once his legateship had ended: commanding three legionary vexillations in the First

Dacian War. He also solved this task with flying colours, and in the summer of 105 the former legionary legate of *Vindonissa* was appointed suffect consul. Now ascended into the highest circles of the *virī milites*, *Bassus Quadratus* followed Emperor Trajan as a



Fig. 6 - Reconstructed route of the *Legio XI* on land (red) and on water (blue) from Vindonissa to Brigetio and on to Durostorum. The vignettes show a typical brick stamp from each respective station. (Kantonsarchäologie Aargau, R. Bellettati after template J. Trumm).

*comes* in the Second Dacian War 105/106 and then received the *ornamenta triumphalia* together with other generals after its victorious conclusion. After further prestigious governorships, *Bassus* died around 117/118 during a campaign in *Dacia*. His body was transferred to his hometown Pergamon by order of Emperor Hadrian, where he was given an honorary burial.

**Depicted on Trajan’s Column?**

It is possible that *Quadratus Bassus* can be equated with one of those men who repeatedly appear on certain scenes of Trajan’s Column as followers of the emperor. In important scenes – e.g. during speeches or religious ceremonies – up to seven men, who are also bareheaded and mostly depicted with a *thorax*, can be seen as *comites* alongside the emperor, who himself is also always depicted bareheaded. Since the fundamental work of C. Cichorius<sup>28</sup>, the two most frequently depicted men with individually worked out facial fea-

<sup>28</sup>Cichorius 1896, esp. 277 (for scene LXI); 345 (for scene LXXIII); 359 (for scene LXXV).





Fig. 7 - Pergamon (Bergama TR). Honorary inscription for Caius Iulius Quadratus Bassus from the Asklepios Sanctuary. (photo Deutsches Archäologisches Institut, Istanbul).

tures have generally been identified as *Licinius Sura*, the "chief advisor", and with the "chief of staff", the Praetorian prefect *Claudius Livianus*<sup>29</sup>. In addition to these two, it is possible to identify the other men depicted on the column along with the emperor with other historical personalities<sup>30</sup>. It would thus be conceivable that *Quadratus Bassus* is immortalized on one of the scenes of Trajan's column, even though this cannot be completely ascertained (Fig. 8).

### Legionary legate in *Vindonissa* – the end of a career ?

If we assume the period between approx. 17 and approx. 101 AD for the duration of the legionary fortress of *Vindonissa* and a respective service duration of approx. 2-3 years for the legionary commanders, then we can expect a minimum of 28 and a maximum of 42 legionary legates for this site. However, of the current state of research in *Vindonissa*, only seven legates, i.e. about 15-25 % of the former group of individuals, are known



Fig. 8 - Detail from scene LXVIII of the Trajan column. Can the individual behind Emperor Trajan and next to *Licinius Sura* (far left) and *Claudius Livianus* (far right) be identified as *Quadratus Bassus*? (after Gauer 1977, plate 21 d)

by name with any likelihood (see Tab. 1). This rate of archaeological transmission is somewhat better than the state of knowledge of 50 years ago<sup>31</sup>.

*C. Iulius Quadratus Bassus* and his predecessor, *L. Munatius Gallus*, are the last two legates of the *Legio XI* in *Vindonissa*. The brilliant career of *Quadratus Bassus* has been mentioned; after his position in *Vindonissa*, *Munatius Gallus* took over the command of the *Legio III Augusta* in Numidia. There, he was not only legionary legate, but also the governor of the province<sup>32</sup>. Is it coincidence that from the small number of epigraphically attested legionary legates from *Vindonissa*, the further career steps are only known for the last two commanders?

In 1967, A. Alföldy postulated worse career chances for legates from *Argentorate* and *Vindonissa*, especially when compared to legionary commanders from *Germania Inferior*<sup>33</sup>.

In a similar fashion and based on larger source material, Th. Franke later assessed the limited career opportunities for legionary legates in *Vindonissa*<sup>34</sup>. According to him, the emperors transferred the command of this legion situated "in the hinterland" of Upper Germany to rather less competent and ambitious senators, who were then promoted to the (Suffect-) consulate but did not receive any higher consecrations afterwards. In 1986, Maria Szilágyi already postulated a possible "hierarchy" of the legions on the Rhine. She regarded the legions stationed in *Vindonissa* as the "lower ranked" of the *Germania Superior*; in the same vein, the

<sup>29</sup>Gauer 1977, 60–65; Schäfer 1989, 283–317. Strobel amongst others has followed their attributions, i.e. Strobel 2010, 242.

<sup>30</sup>For skeptical viewpoints on the attribution/identification: Lehmann-Hartleben 1925; Lehmann-Hartleben 1926.

<sup>31</sup>Alföldy 1967, 2 has calculated a survival rate of 10-11% for the legionary legates of the 1<sup>st</sup> cent. AD known by name.

<sup>32</sup>Frei-Stolba 2018.

<sup>33</sup>Alföldy 1967, 98–101: «Es war wohl eine allgemeine Tendenz (...) nach Vindonissa und (...) nach Argentorate keine ausgesprochenen viri militares zu schicken, weil diese beiden Legionslager (...) militärisch kaum gefährdet waren. (...) Die Legionslager Vetera, Bonna und Mogontiacum (...) waren immer gefährdet. Als Kommandeure (...) in diesen Lagern brauchte man im allgemeinen tüchtige Offiziere.»

<sup>34</sup>Franke 1991, 429: «Wahrscheinlich hielten die principes es nicht für erforderlich, die legio XI Claudia dem Kommando von fähigen und tüchtigen Offizieren zu unterstellen, denn sie lag (...) in Vindonissa (...) weit hinter der Reichsgrenze.»



legions in the double-legionary fortress of *Mogontiacum* (Mainz D), also the governor's seat, would then be most important legions of the Germanies<sup>35</sup>.

The hypothesis that the legionary command of *Vindonissa* meant the end of a praetorian's career for an above-average number of times compared to his colleagues in the other Rhine fortresses should therefore also be taken into consideration when discussing future epigraphic finds<sup>36</sup>.

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<sup>35</sup>Szilágyi 1986. In her observations, double-legionary fortresses are her point of departure, localizing the highest-ranking legion of the province at these sites.

<sup>36</sup>I would like to thank Regula Frei-Stolba (Aarau) and Regine Fellmann (Brugg) for discussions and advices. Thanks also to Andrew Lawrence (Berne/Amsterdam) for translating my text into English.



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#### **Zusammenfassung**

Innerhalb und ausserhalb des römischen Legionslagers von *Vindonissa* (heute: Windisch, Kanton Aargau, Schweiz) haben in den letzten Jahren zahlreiche grossflächige Rettungsgrabungen stattgefunden. Im Lager selbst deuten verschiedene Indizien darauf hin, dass die 11. Legion Claudia Pia Fidelis ihren Standort um das Jahr 101 n. Chr. planmässig räumte. In den umliegenden Zivilsiedlungen und Nekropolen ist ab dem frühen 2. Jh. ein merklicher quantitativer Rückgang bei Funden und Befunden feststellbar.

Der vorliegende Aufsatz verknüpft diese archäologischen Beobachtungen mit einem historischen Ereignis und zwei darin involvierten Personen: Der Abzug der *legio XI* aus *Vindonissa* zu Beginn der Dakerkriege, der Kaiser *Marcus Ulpius Traianus* und einer seiner Mitstreiter, *Caius Iulius Quadratus Bassus*. Darüber hinaus wird diskutiert, ob der endgültige Abzug der Legionsbesatzung aus *Vindonissa* möglicherweise eine Rangordnung der Legionen in den beiden Germanien widerspiegelt, mit *Vetera* und *Mogontiacum* an der Spitze und mit *Vindonissa* ganz an deren Ende. Ein kurzer Blick auf die bislang für *Vindonissa* bezeugten *legati legionis* könnte diese These stützen.

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# **The campaign of Cestius Gallus and the XII Legion to Jerusalem in 66 CE and its strategic and political outcome - a re-appraisal\***

## **ABSTRACT**

In 66 CE the consular governor of Roman Syria, Gaius Cestius Gallus, led a war campaign from Antioch to Jerusalem in an attempt to quell the Jewish insurgencies in Judea. In the historical research of the Jewish War, this 'war campaign' is also known as the 'Cestius Gallus war journey' (below: 'Gallus's campaign'). This war journey (and the Jewish uprisings) was the first stage in a large-scale war that became known by the Jews as 'the Great Revolt' and by the Romans as *Bellum Judaicum* (66-73 CE).

Despite its historical importance and significant impact on the military-political confrontation between Judea and Rome, the Cestius Gallus war journey usually does not merit a central place in research or wide discussion, aside from mentioning the fact that the Romans could not quell the rebellion, and the war campaign failed.

Therefore, this very influential episode deserves re-examination. For example, the failure of the war campaign led to the spread and strengthening of the 'Great Jewish revolt', to the point of a major war, posing a serious threat to Roman rule in Judea. Additionally, the Jewish victory over Gallus' army, whether he was complete or not, tipped the balance in Jewish society's internal debate, in favor of those who supported the increase of violent military actions against Rome, with all the later consequences that followed.

Providing an alternative military and political analysis and interpretation of Gallus' war campaign, this article updates our geographical-historical and military-strategic aspects of this event and tries to clarify the two major questions of this campaign: what was its military purpose to begin with? and the reasons for its withdrawal and failure, as well as its political-strategic repercussions.

## **KEY WORDS:**

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\*I would like to thank Prof. Zeev Safrai of the Department of Land of Israel Studies and Archaeology at Bar Ilan University for his willingness to read, comment, and contribute of his great knowledge to this article.

This article is dedicated to the memory of my beloved parents, Shoshana and Theodor Ortner, on the five and tenth anniversary of their passing. May they rest in peace.





Fig.1: A coin with the portrait of Emperor Nero, who ruled the Roman Empire at the time of the 'Great Jewish Revolt' and was murdered in 68 CE (after Meshorer 1997)

## Preface

In 1981 the late Professor Mordechai Gichon who was a devoted member of the 'Roman Frontier Studies' community (Limes Congress) published in the Palestine Exploration Quarterly (PEQ-121). His extensive and in-depth article, 'Cestius Gallus's campaign in Judea'.

That article drew my attention many years ago and inspired my research on the subject. There has been little new information added to it in the last 42 years since it was first published. It appears that this subject needs to be reevaluated and updated, while covering a broad range of aspects, in particular geographical-historical, political, and tactical-military.

It is the author's hope that the readers will find this article insightful, and could benefit from the progress being made in this interesting research subject.

This could be accomplished by bringing back to awareness Gichon's paper and paying homage to his research work while getting updated by the new ideas presented in this reappraisal paper.

## Foreword

From the strategical aspect, it seems that the Romans' basic strategic approach behind Gallus's journey was to reach swiftly the Jewish capital - Jerusalem and to gain control quickly. Understanding that's where most of the Jewish moral and fighting force is concentrated.

From Flavius Josephus, we know that it took Gallus a relatively long time to fully understand the severity of the political and military situation caused by the Jewish rebellious actions in Judea.

As a result of that, the Roman reaction was delayed. The campaign began in October of 66 CE which is the beginning of winter in Judea. (below: 'winter factor')

Yet it is known when allowed to choose, the Romans clearly preferred not to conduct campaigns in winter conditions.<sup>1</sup>

In other words, in front of us is a rare and unusual case, of a Roman military campaign in winter conditions that must have influenced Romans' decision-making, by adding a 'time pressure' element, to complete the campaign before winter culmination.

At the same time, the Romans encountered an increasingly strong Resistance as they were getting closer to Jerusalem. That led to their decision to withdraw without taking the city, most probably due to their assessment they could not accomplish their mission under the limited time they had and due to the surprising strength of resistance demonstrated by the Jews during the last stages of the campaign, which was not anticipated by the Romans.

The Roman decision to withdraw which has been seen till now as a kind of mystery can be explained for the first time by a heavy set of political pressures, that was lying over Cestius Gallus's head. Its Source originated from the infamous image of the head of the Roman

<sup>1</sup> The Roman tacticians recommended refraining from waging war in winter conditions. See for example Vegetius (Epitome) 3, 1. „Soldiers should not be permitted to carrying out campaigns in harsh winters, in frost or snow, or to be exposed to a shortage of trees and clothing“ (3, 5-9) ... „The periods of shortage (of food and equipment) cause more harm to the army than the battle. In some cases, the problem can be solved with the help of opportunity. But when it comes to animal feed and food, there is no remedy for the problem if they were not prepared in advance.“

political system - Emperor Nero. This emperor was known for his bad, fickle, and unexpected temper towards his subordinates. (see below)

The only remaining historical source that describes Gallus's journey, is Flavius Josephus's essay, 'De Bello Iudaico'. Despite common criticisms among scholars regarding the problem of reliability of his accounts in general (below), in the specific case being dealt with here, a few observations indicate that for the most part, his 'Gallus's campaign' account is to be seen as reliable.

Based on the fact that Josephus lived in Jerusalem during those events, it is likely that he personally experienced those actual events described so realistically and, in such detail, as he mentioned in his autobiographical account 'The Life of Joseph'.

In addition, Josephus gave a pretty good geographical and topographical description of the battles that took place along the Beth-Horon ascent and the Jerusalem highland northwest of the city. which is possible proof of personal knowledge and self-experience with the different battlefields He described and related to.

Additional important information could be found in his rare and detailed account regarding the Roman armies, and the way they mobilized and deployed for battle. Based on this description we learn the composition of Gallus's Army (below), with the different Eastern kings' military units, and auxiliary units, managed to get to Jerusalem in a relatively fast movement, considering the period, composition and complexity of his army.

However, it is possible to identify between the lines of Josephus's description, the uncoordinated military operations, and his interpretable comments as part of the reasons that led to the failure of the campaign.

This paper presents an updated geographical-historical identification of Josephus's 'Gallus' journey' account. While considering the geopolitical and topographical changes that were made in the land where the journey passed through. This is done by focusing on the cru-

cial and nearly final section before Jerusalem, Beth-Horon's ascent - Gibeon.

In addition, a geographical historical and tactical military analysis will be suggested for the 'battle of Gibeon', which is the major battle of the journey. The analysis and interpretation would differ from those suggested by Mordechai Gichon and the late Israel Shatzman in their previous research.

One aspect of the re-appraisal (below) suggests the possibility that in front of us, is an exceptional and unprecedented Jewish achievement of confronting head-to-head and stopping (though temporarily) a Roman army that included a standard Legion (Legio XII Fulminata) and other auxiliary and foreign military units. This was all done in 'Set Battle' conditions, which are considered to be Roman's primary military expertise.

There has been little written about Gallus's campaign. The article by Mordechai Gichon is virtually the only in-depth analysis and therefore forms the major basis for today's discussion. His insights, which were based on military field experience and personal familiarity with the areas where the campaign was waged, rightfully should be considered a significant advantage.

However, it should be remembered that, in many of his assumptions and diagnoses, among them, his statement: "the basic principles of warfare have not changed since antiquity" and therefore, "cautious application of modern military thinking to an ancient campaign may well be instructive", Stood his military past as a basis for his unique analytical methods.<sup>2</sup> Those analytical methods are also known as the 'modernist approach'.

In other words, analysis of events and ancient sources, by interpreting and comparing to modern era fighting and strategies.

This approach led not once, to judge the ancient military history, character, mood, and decision-making of C. Gallus as a senior military commander, based on modern military standards of our times. Being based on the modernism of the Roman Imperial Army, this

<sup>2</sup> The comprehensive article by Mordechai Gichon (1981, 283-319) in Hebrew. for the English version see Gichon 1981a, 39-62, 40.

approach would sometimes provide a problematic and controversial analysis. Therefore, it would sometimes receive much criticism.<sup>3</sup> This is where the need for a reexamination arises from several aspects and points of view, including Gichon's and others. One of them will try to describe and reconstruct Roman's point of view, first and foremost of the commander and chief of the campaign – Gaius Cestius Gallus.

As most of the major events and crucial actions of the journey took place along the axle of ascent to Jerusalem and withdrawal (Antipatris – Beth-Horon ascent – Gibeon – Jerusalem), the re-examination of the Gallus campaign focused mainly on this section. While doing so I have made some topographical observations and archaeological surveys<sup>4</sup> of the major ruins and sites from the Roman period along this section. An exploration of different interpretations and identification suggestions of the sites and battlefields mentioned in Josephus was conducted and reexamined to determine how well they match up with the land and terrain. In cases where difficulties were encountered in interpretations,

text, identification suggestions, and level of match to the text or terrain, alternative, and new suggestions were introduced.

### **The reliability of Flavius Josephus: A preliminary discussion**

The main and almost sole source for the description of the C. Gallus war campaign<sup>5</sup> is of course De Bello Iudaico by Flavius Josephus<sup>6</sup>, Book II, Chapters 18-19 (henceforth 'Josephus'). The question of his reliability, in general, is a broad and vibrant field of research that has yet to be resolved as there are opposing views. The following reasons suggest that, in this case, we should consider him very reliable (especially in technical details and move descriptions).<sup>7</sup> Josephus apparently experienced directly or indirectly the Gallus campaign events (and possibly even had firsthand and concrete information).<sup>8</sup> Josephus knew and was in contact with many members of the Jewish religious-social and military leadership, mainly in Jerusalem, where he lived at the time of the campaign.

From Josephus' geographical description of the battle course in the Beth-Horon area on the way to Jerusalem, Gichon concluded that he was very familiar with the topography of the battle zone and of the various battlefields (possibly even had firsthand information).

Judging by Josephus' description, we can assume that he was well-versed in both Jewish and Roman military affairs. Some scholars believe Josephus often relied on official Roman documents (known as 'Commentaries') and military field reports of senior Roman commanders ('Hypomenmata'), to which he somehow obtained access. It's even possible that he was personally exposed to authentic Roman battle reports.<sup>9</sup>

At the beginning of the journey description, Josephus (BJ II, xiv,3 [484]) does not seem to express a negative attitude towards C. Gallus, but he is consistently negative about Gessius Florus, the procurator (64-66 CE) of Judea at the outbreak of the revolt, who is described as an evil and corrupt man who was responsible for the political and military deterioration.

On the other hand, Gallus' goodwill and moderation are favourably noted by Josephus. But later in the description of the campaign, Josephus accused Gallus of the overall responsibility for the campaign's failure (along with Florus as the "main guilty party") Josephus expresses a liking for the veteran leaders and a negative opinion of groups of Jewish extremists, whom he called "the evil ones." According to Gichon (1981a, 39), his description reflected reality as far as he knew it.<sup>10</sup> He also believed Josephus made an effort early in his book to win his readers' trust by meticulously providing reliable

information so that when he came to the later and more problematic stages of the battle, his description would be accepted in as sympathetic light as possible.<sup>11</sup>

However, it should be noted that regarding the 'big question' raised by the Gallus campaign: What were the Roman general's real reasons for calling off the siege against Jerusalem and ordering a major retreat? Josephus (BJ II, xix, 7 [496]) ignored and gave partial and vague information, sometimes even distinctly measured and with great interest.<sup>12</sup> This is one of the most significant issues, which will be addressed below.

Josephus' description of the journey to Jerusalem and particularly the 'Battle of Gibeon' (discussed below in detail) is another good example of that. Here Josephus ignored and deliberately omitted the unavoidable conclusion that at the start of the battle the Jews delivered a serious blow to the Romans and for a time even halted their progress towards their main destination - Jerusalem.

Having said that, it can be concluded that Josephus' descriptions in general, as well as his account of the Gallus campaign, must not be relied upon entirely, and that, although for the most part, he is a more or less reliable source, he is clearly influenced by his patrons, the Flavian emperors, due to his special interests and obligations towards them.

However, we can also accept Gichon's (1981a, 39) conclusion: which is aware of doubts regarding Josephus' reliability, but specifically, in the Gallus campaign, he asserted that "the narrative seems to be reasonably objective and trustworthy".<sup>13</sup>

3 E. N. Luttwak (1982); updated version (2016). Edward Luttwak, like Mordechai Gichon, comes from the modern military field to historical-military analysis, and made a great significant contribution in his exceptional work: *The Grand Strategy of the Roman Empire*, where he made similar use of the same principles and analytical tools mentioned above. Luttwak is considered to lead the approach of 'modernism of the Roman army and Empire'. This analytic method (and Luttwak in particular) is harshly criticised. For example, Y. Shatzman (Shatzman 1983, 292-293, notes 81-83, 283-299, 393-394), claimed that these "combined" interpretations built mainly on modern concepts of strategy and combat, which are familiar to the writer (Luttwak, and Gichon to some extent) are problematic and are not based sufficiently on historical and archaeological evidence. B. Isaac had a similar opinion (1990, 373-376, 377-379, 380-410): A. Goldsworthy referred (1996, 84, note 15) to Gichon's article: "A former soldier himself, some of his thinking is inclined to be too modern." To summarise, the 'modernism' approach applied to the ancient Roman army has supporters and opponents, advantages and disadvantages. Nevertheless, regarding the specific historical-military analysis of the Gallus campaign, it seems that the advantages of Gichon's approach supersede its shortcomings: His acquaintance and personal experience with the area of campaign under discussion (as part of the Israeli-Arab military conflict in the 20th century) gave him a unique advantage in retrospect in assessing the movements and tactics of the two warring parties. The disadvantage: Gichon as a military man and a 'modernist' historian asserted that Gallus's considerations and aims in operating his ancient army were similar or identical to those of a modern high command. However, there are considerable differences between ancient and modern armies despite the general similarities Gichon claims. Particularly in terms of machinery, communication and operation. The gap is far too wide to allow reliance on comparison and conclusions between armies and periods. In addition, many of the decisions and operative actions related by Gichon to commander Gallus, were conjectures and hypotheses that are difficult to accept as objective facts. Despite this, we should look at the distinct research approaches of Gichon and Luttwak as original points of view that inspire thought. I should mention that in the past I had the honor to discuss personally with Prof. Gichon his approaches and insights.

4 Mainly based on, Fischer, Isaac, Roll 1996.

5 Tacitus considered a reliable and important historical source, usually parallel to Josephus in every discussion about the history of the Jewish revolt in the fifth book of his *Historiae*. He discusses the outbreak of the revolt; the Gallus campaign is almost entirely absent except for a short reference to the outcome (Book 5, par. 10). As a matter of fact, the Gallus campaign was only fully preserved by Josephus. Therefore, it can be said that he is the only source of this campaign.

6 Flavius Josephus, (1978) *The Jewish War*, Whiston, W. (trs.), Michigan (henceforth, 'BJ'). In addition, a more recent translation was used as well; by L. Ulman (in Hebrew) 2009. When this translation is used, it mentions; "Ulman trs." and line number is mentioned in [--].

7 For the Gallus' campaign see: Gichon 1981, 283-288; Bar Kokhba 1978, 2-21; for overall reliability see: Leviathan 2016, 142; Broshi 1982, 25, note 16; Isaac 1990, 376-379; Rapaport 1982; Howell and Rodgers 2016 and many more.

8 *The Life of Josephus*, 4-6, 65; Gichon 1981, 284. he mentioned in his autobiography the fact that he was a resident of the city at the time.

9 Gichon 1981a, 39; Broshi 1982, 25, note 1. Josephus' descriptions of the Roman army have been recognized as authentic, and their reliability confirmed by research. (For example, BJ III, i-vii, Ibid VI, ii; and Compare V, ii, 1-7). It is commonly assumed that Josephus' realistic descriptions of the Roman army were drawn from documents and field reports written by Roman commanders throughout the empire. These reports were sent to the emperor and the Senate in Rome. Josephus had access to these documents and other archives belonging to the Flavian emperors in Rome. Regarding Josephus' geographical-topographical report, see Bar Kokhba 1978, 19. Bar Kokhba said that Josephus' description of the Beth-Horon ascent, for example, was precise and certainly based on experience and the writer's personal knowledge of the route. But Mason (Mason 2016, 300) disagreed with this statement.

10 For example, BJ II, xvii, 1,3,4,5 ff (490); xx,3; IV, v, 2 (534) ff. Throughout his work the Jewish extremists are presented as mainly to blame, as in BJ I, I, 1 (429) and later on, as well. But Martin Goodman (1988, 23) Completely disagree with this opinion and believed Josephus had personal interest and involvement in the events that brought the breakout of the revolt. his high aristocrat status contributed as well to the deterioration of the situation. therefore, we should absolutely not rely on his trendy reports.

11 Gichon (1981a, 39) raised another argument for Josephus' reliability – the fact that while he was writing, the main figures mentioned in the events, or relatives, still lived in Rome, and were aware of the details in the text. This required adopting a balanced and cautious approach similar to the true description of the events, at least for the Roman side.

12 Mason 2016, 284-285.

13 By the Hebrew version (Gichon 1981, 285): „an objective and reliable description,“ which can be accepted and relied on with certainty.





Fig. 2: A Josephus portrait? A statuette that was identified by several scholars as a possible portrait of Josephus, but with no certainty (after Levinson 1958).

### Lines to Cestius Gallus' character

There is not much information about Gaius Cestius Gallus' career or his progress through the ranks and the various government positions he filled before attaining his lofty position of Legatus Imperatoris, and provincial consular governor of Syria.

A position that had great strategic importance in the Roman imperial layout, was the fact that the province of Syria held a strategic position backed by a big legion force (total of four) as part of its role in protecting and guarding the sensitive borderline with the Partian kingdom.

From the little that is known, it appears that his main achievements were in civil administration. He was a member of the Roman Senate from 21 CE. as a legal quaestor in the time of Tiberius. He may have been elect-

ed to praetor position in 32 CE. In year 35 he won the distinguished honourable consul position from Tiberius and by year 42 served for the third time as consul. He may have won that year under Claudius the distinguished title of consul suffectus after his father served as consul seven years earlier. Gallus' appointment in Syria occurred in 66 when the high military Commander with the special 'Imperium' for Syria, Gnaeus Domitius Corbulo was summoned to emperor Nero as he visited Greece where he ended his career. Then Gallus, who until then had served as the civilian ruler in Syria, was promoted to replace Corbulo as military ruler.<sup>14</sup>

But there is no question that he assumed the military command of the Roman forces in Syria only after Corbulo succeeded in his campaign in 63 in bending the Parthian kingdom to the will of Rome on the issue of Armenia.<sup>15</sup>

### The deployment of the Roman military force and the course of the campaign

When in the middle of year 66 CE.<sup>16</sup> the Roman government realized that there was rioting in Judea and that the local garrison was unable to control the situation, Cestius Gallus decided, after delays, to begin a swift military campaign in order to put down the revolt.

The campaign set out from Antioch, Syria on August 29, of year 66, and about a month later Gallus' army had al-

<sup>14</sup> According to Martin Goodman (personal communication), Gallus' journey (which he defined as a „strange journey“) was an attempt to emerge from the shadow cast by his predecessor in office Corbulo and to establish himself as a military commander. Goodman (2007, 425, 436; 2012, 66, 114) defined Corbulo as the „greatest Roman general of all times with superior abilities and powers than any other.“ Gallus could not have operated in Armenia as Corbulo did or fought and commanded an army of similar size. Therefore, he turned to Judea and the Jews, a case within the confines of his restricted operating mandate. By embarking on a journey Gallus used the Jewish case as a scapegoat. He quickly seized the opportunity provided by the Jews to emerge from Corbulo's shadow. He also needed to keep the army he commanded busy and meet his high expectations. Goodman says all those considerations led Gallus to get entangled in a journey that exceeded his size. This was as he tried to establish his position as a newly appointed governor. For a different view on the Corbulo and Gallus power equation, see Mason 2016, 310.

<sup>15</sup> Regarding Armenia see Gichon 1981a, 44, 60; Mason, 163-164. More about the career path of Cestius Gallus in: Gichon 1981a, 60, note 98. Regarding the nature of his appointment and civilian-military powers see discussion in Mason (2016, 312-314; 321-324; 327). Mason (2016, 321) Claims, it is plausible that Gallus had some military experience before his appointment in year 63. that he was a person of a significant position with impressive political and survival skills, particularly in the light of his assessment that during the journey, Gallus was 69 to 70 years old.

<sup>16</sup> For the method of timetable calculation, see Gichon 1981a, 42. Notes 15-16, 61-62. Apparently Gessius Florus, the Procurator of Judea, and the Jewish King Agrippa II, didn't hasten to update the governor superior to them about the gravity of the situation, each for his own reasons: The former, who already had a reputation as an overly tough and strict procurator, feared that he would be disgraced for causing a deterioration of the situation to the point of rioting (as both Tacitus and Josephus claimed). Agrippa II feared serious rioting would lead to his appointment rejection over all of Judea. He would also be blamed by the emperor and his court. Both delayed the dispatch of the news until the end of Av.

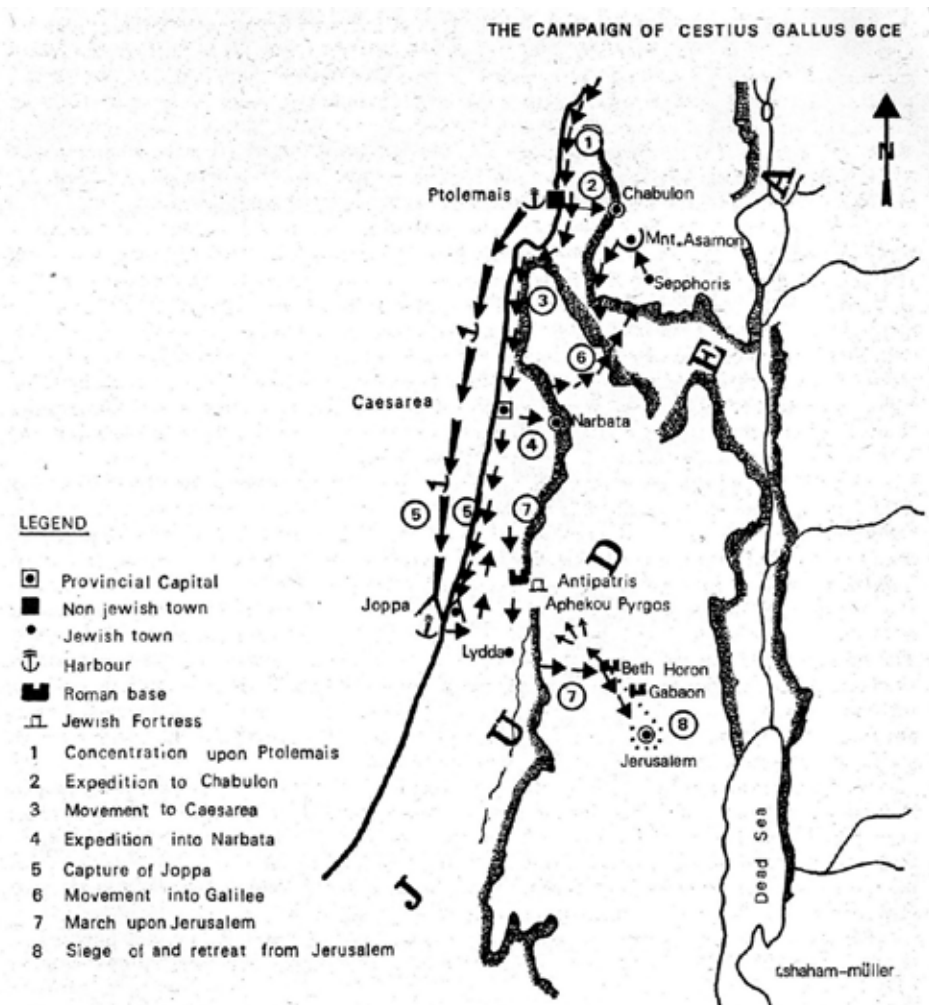


Fig. 3: An overall course of C. Gallus' campaign (after Gichon 1981a, 43, fig. 1)

#	Force	Numbers	Remarks
1.	The XII ( <i>duodecima</i> ) Roman Legion - <i>Fulminata</i> <sup>1</sup>	As well as an additional 2,000 soldiers (apparently from the other three legions camping in Syria)	Total 12,000
2	6 infantry cohorts and 4 <i>alae</i> of cavalry		Total 6,000
3	army of Antiochus IV	King of Comagene, all archers (2,000 cavalry + 3,000 infantry)	Total 5,000
4	The army of King Soemus of Emesa	(Mainly archers, 1/3 of the cavalry force)	Total 4,000
5	The army of King Agrippa II	3,000 infantry and less than 2,000 cavalries	Total 5,000
6	Militia forces from the cities	(Syria, Judea)	About 4,000

\*In total these forces numbered - 36,000 soldiers

Tab. 1

<sup>1</sup> *Legio duodecima fulminata* was a legion with a combat heritage, established in the time of Julius Caesar, in the province of Gaul. Its name meant: Thunderbolt (lighting hurler). Because it was an old legion originated from the western part of the empire, Webster (1994, 111-112) claimed it was considered to have a high combat level. For an opposite opinion see Goldsworthy 1996, 87-88; below 49, note 89.

ready reached Lydda<sup>17</sup> Within a month Gallus succeeded in recruiting an army and staffing various national military forces of Eastern kings subject to Rome. Following is the composition of the expeditionary force:<sup>18\*</sup>

In addition, there were units of the auxiliary force which camped in Judea and could number a minimum of up to 3,000 men<sup>19</sup>, for a total of 39,000 soldiers who are divided as follows:

12,000 – heavy infantry

8,500 – light infantry

7,500 – cavalry

10,000 – archers, 3,300 of them mounted bowmen (cavalry)

38,000<sup>20</sup>

### The stages and order of the journey

Josephus' description of the Gallus campaign, provides the order of the activities and the main stages of the campaign: assembling the Roman army in Acre-Ptolemais, apparently began marching from the area of the city of Antioch in Syria.

First contact with the Jewish enemy occurred in Galilee, and ended with the conquest and destruction of Kabul, as well as other villages in the Lower Galilee, while leaving a local garrison at the site.

I. The continued advance of the military column southward towards Caesarea.

II. The conquest and destruction of Jaffa by a task force from Caesarea, while at the same time, a military force was sent to Galilee due to a resumption of the fighting by Galileans on the Roman rear array.

III. The advance of all the forces from Caesarea, on the way to the strategic crossing and the settlement of Antipatris.

IV. Continuing the War Journey from Antipatris to Lydda.

V. From Lydda the ancient road Beth-Horon ascent towards Gibeon was chosen.

VI. A Jewish attack against the head of the Roman army column at the point of the assembly in Gibeon near Jerusalem, and against the rear and the supply convoy that was progressing at the lower edge of the Beth-Horon ascent.

VII. Reorganization of the Roman army in the Gibeon area, embarking on a counterattack towards Jerusalem, arrival and setting up camp on Mount Scopus.

VIII. Imposing a siege on Jerusalem.

IX. Ending the siege and retreat while suffering losses to the camp on Mount Scopus. Retreat towards Gibeon from the Jerusalem area, with heavy losses.

X. Continuing the retreat from the Gibeon plateau on the Beth-Horon slope, the Romans continued to suffer heavy losses.

XI. Transition to a swift 'disorderly retreat' down to Antipatris, while abandoning the artillery and siege machines, a small force of soldiers and continuing to suffer losses – the campaign ends in failure.

### Characteristics of the Jewish Rebel Forces, 66 CE

In general, The Jewish insurgents suffered from inferiority in training, experience, arms, organization, and military discipline.

When the Roman-Jewish conflict escalated, the Jews found it very difficult to establish a regular organized army. Later during the Great Revolt, they even failed to do so, not to mention the self-destruction that spread among the factions of the Jewish fighters.

These two characteristics later seem to have greatly affected the results of the Roman-Jewish conflict and contributed to the Jews' defeat. Under these circumstances, the Jewish forces could not adopt methods of combat based on training, deployment in tactical formations,

obedience to orders, and coordinated activity, which were considered a clear Hallmark of the Roman armies.

A typical example of the Jewish army's lack of tactical organization can be found in Josephus' description of the major failed attack by the rebels on Ashkelon, shortly after the defeat of C. Gallus' army: (BJ III, ii, 2-3)

"Now the Jews were unskillful in war, but were to fight with those who were skillful therein; they were footmen to fight with horsemen; they were in disorder, to fight those that were united together; they were poorly armed, to fight those that were completely so; they were to fight more by their rage than by sober counsel, and were exposed to soldiers that were exactly obedient, and did everything they were bidden upon the least intimation. So, they were easily beaten."

The result of the battle, according to Josephus: One cavalry unit backed by a single infantry cohort (about 1,000 to 1,500 soldiers), succeeded in halting and repelling a far larger attack by the Jewish rebels while causing many losses and deaths to the attackers. The battle of Ashkelon clearly illustrated the differences and the significant tactical disparities between the army of the Jewish rebels and the Roman auxiliary cohorts, not to mention the legions themselves. In addition, the description emphasized the tactical advantage of the Roman army on an open battlefield and their ability to activate the cavalry. On the other hand, Jewish society at the time had no room for cavalry growth.

The Jewish armament was inferior. Assault and defensive weapons based on metalwork (helmets, shields, chest armour) were considered rare and difficult to obtain. The Jews' main assault weapons were usually rocks, sling stones, bayonets, sticks, daggers, and to some degree – bows. There is no mention in Josephus of a logistical system for feeding the army.

The Jewish capability and fighting nature can be described as popular combat, in other words, a one-time mobilization for a defensive war or a short military campaign using simple weapons, mainly "hurling instruments."

An important question regarding the composition of the Jewish army on the eve of the revolt: Is it possible that inspired by the Herodian armies and the Roman army itself, the Jews, at the start of the revolt in 66, were able to form a real 'Jewish army' with ability and experience?

It is known that all the Herodian kings, without exception, kept armies of mercenaries of various sizes. Therefore, it was suggested that the Jews may have acquired military experience while serving in auxiliary units or in the Roman army itself, and now deserted to join the ad hoc Jewish rebels.

Josephus mentions several Jewish commanders (BJ II, xix, 2), who "excelled in their heroism." Apparently, these professional soldiers and other experts from Parthia and Babylon contributed to and reinforced the Jewish army.

Hence, it may be that in certain situations and places, professional Jewish soldiers and commanders deserted the army of Agrippa II to the rebel forces, thereby improving the Jews' planning ability and combat level at certain points during the Great Revolt, mainly at the beginning.

There were also private militias in Judea, each of which probably numbered dozens to hundreds of fighters. As we continue to analyze the campaign, we will encounter one such militia commanded by Simon Bar-Giora.

However, it cannot estimate the scope of this phenomenon, nor its influence on the combat ability of the rebel forces, as it appeared to be limited and local. A probable assumption is that there was no well-organized 'Jewish army' with tradition, operational capability, and tactics.

Overall, it seems that this influence, insofar as it existed, did not benefit the 'Jewish army' for long, and from the moment that Vespasian's large army, which adhered to orderly rules of combat, arrived at the scene of battle, there was a clear regression in fighting by the Jewish army in the open battlefield.

The Jews adopted a strategy of assembling in fortified communities and subterranean offensive-defensive networks. In effect, from that stage, there is almost no activity by a 'Jewish army' against the Roman enemy in open battlefields where two armies fight opposite one another ('Set battle').

In summary of this discussion, it is more likely to talk about Jewish rebels getting organized in different fighting gangs (sometimes rivalry with each other), that protect local regions. After the failure of Gallus' journey, they became stationary in fortified settlements

<sup>17</sup> For the method of timetable calculation see Shatzman 1983a, 304; Gichon 1981a, 42 notes 15-16, detailed timetable appendix, 61-62. For a different timetable see Mason 2016, 301-303.

<sup>18</sup> Shatzman 1983a, 304-305; Gichon 1981a, 41-42 note 15. Both are based on Josephus, *BJ* II, xviii, 9 494-495 (Ulman tran. [500-502]).

<sup>19</sup> Isaac 1990, 105. Isaac claims, the two auxiliary units that camped in Judea until 67 were 'Cohor Italica' and 'Cohor Augusta'; compare Shatzman 1983a, 301-302.

<sup>20</sup> For a discussion of the problem of overall numbers of Gallus' army, see Shatzman 1983a, 305, note 43. According to Shatzman (1983 a, 310, note 65), the Roman procurator had almost 40,000 soldiers at his disposal. In general, the estimates of the size of the army range from 33,000 to 40,000. Bar Kokhba (1978, 18) estimates the number at 25,000-30,000, he believed that Gallus left some of his



turning this conflict into a siege campaign where the Romans attacked each defended settlement separately.

### The scope of the strength of the Jews

The size of the Jewish forces confronting Gallus' army is not known. However, according to estimates, except for several thousand organized and armed extremists scattered in small groups throughout Judea, we know of no regular and organized Jewish army units, and apparently, these were units of negligible strategic importance.

One of the armed Jewish groups was the Sicarii. There is considerable difficulty in estimating their numbers before and during the revolt. Josephus reported, about 960 'Sicarii', including women and children in Masada fort - apparently most of this faction as of 74 CE.

Hence, the main source of strength was the masses of Jews who joined the revolt. This was particularly true of the Jerusalemites, who assumed an active and leading role in the confrontations and shows of hostility towards the Roman rule, before and during the Gallus' campaign. This population, which is estimated in research at 60,000 to 90,000 at the time of the outbreak of the revolt, was doubled and perhaps even tripled by thousands of pilgrims who, following Jewish custom, convened in Jerusalem during the three pilgrimage festivals (Pesah, Shavuot, and Sukkot). The same was true at the Sukkot festival in 66 CE.

### Gallus' strategic moves

At first glance, it seems that the original "war plan" of Gallus and his high command staff was based on a swift operation with the following objectives:

One - oppressing and frightening the Jews in the outlying areas near the non-Jewish Hellenist cities (a secondary goal was to plunder the Jewish population to enrich his army).

### Two - conquering Jerusalem from the rebels

The second objective surprised some scholars, mainly because instead of advancing immediately and swiftly towards Jerusalem, as circumstances required, Gallus interrupted his advance several times. He then penetrated the Judean Hills on his way to the revolt center - Jerusalem. Gichon (1981a, 46) believed,

that from the moment he was about to reach the dangerous area controlled by a Jewish majority, he was overcome by a sense of caution due to his limited forces. Furthermore, assuming Cestius and his adviser's plan, relied on a swift advance to Jerusalem, as the plan's implementation began, the situation changed as a result of the difficult conditions in the field. This forced Cestius to take measures to secure his logistical rearguard along the coast of Judea and Syria. If so, there was either a planning error or a hesitation in implementing the plan.

When re-examining the claims regarding the rate of advance and Gallus' tactical actions, by comparison to the campaign of Vespasian, Gallus' replacement, it appears Gallus' campaign was conducted at a relatively fast pace. All the 'delays' mentioned were caused due to crucial tactical reasons, such as a recurrence of a rebellion in the Galilee, to which Gallus responded by sending the XII Legion, serious difficulties in Jaffa, and acts of Jewish piracy that threatened immediate Roman interests of the campaign: supply lines, securing his rearguard, as well as broader imperial interests, reaching as far as Egypt, such as possible disruption of the grain supply to Rome due to acts of looting and sea piracy by Jews on the Jaffa coast.

However, Gichon's claim (1981a, 46) about Gallus' limited strength, can be accepted as an explanation for what he defined, as 'hesitant conduct'. Re-examination of the extent of the military forces of Gallus and Vespasian reveals that Gallus' military power was significantly smaller than that of the Flavian generals who were assisted by three and even four legions.

After capturing the Jewish village of Kabul, the rest of the army advanced southward from Acre. The auxiliary force and Syrian residents who remained behind in Kabul were attacked by Jewish residents of the region who returned suddenly and overcame the Phoenician auxiliary force and according to Josephus (BJ II, xviii,9[494]) killed about 2,000 soldiers from the local garrison left in Kabul and engaged in looting and taking spoils. which proves the Romans failed in securing their base of operations in Acre. And that free Jewish rebel forces remained in the Galilee, later giving rise to a renewed rebellion in the Galilee.

Apparently, Gallus tried to do two things at once: he attempted a surprise attack against the Jewish residents of Galilee while heading south to Judea, but without eliminating their military bases and villages. He there-

by caused the Jews to be ready for war and was unable to totally quell their resistance and fighting ability, which became problematic for the Romans later in their journey. Mainly by a constant threat to land and Marine supply lines around Acre and Western Galilee.

Until now, there had been no significant Jewish resistance while the Romans advanced undisturbed along the Judean coast. Based on that, it was theorized that at this point the Romans had a sense of victory and euphoria due to the ease of the combat and achieving their goals. In the only battle in the Galilee at Mt. Atzmon, the Romans won, despite the inferior starting point. The Romans, therefore, believed that their ability to overcome the Jewish fighters was not in doubt, even under inferior topographical conditions (as in Mt. Atzmon). Shatzman (1983a, 309) described this feeling as "a situation of exaggerated self-confidence, disdain for the enemy, and worse, a lack of caution and neglect of the basic rules of Roman discipline and doctrine." Gichon (1981a, 46-47) expressed a similar view as well.

The army travelled southward until reaching Caesarea, the provincial capital, from which a secondary force left to attack the port city of Jaffa. The city was captured quickly and unexpectedly when the Roman offensive approached Jaffa in a combined manoeuvre, part via land and part via the sea.

An examination in hindsight of Gallus' decision to attack Jaffa (an action that caused another delay in reaching Jerusalem) raises a possibility of similarity to Kabul and Acre. That is a preventive action designed to prevent the creation of attack bases on the Roman rearguard and the supply lines on the way to the Judean Hills and Jerusalem.

The prevailing theory is that the main reason for the attack against Jaffa was the growing concern of the Roman authorities about possible Jewish interference with the diverse Roman shipping lines in the eastern Mediterranean and cooperation with non-Jewish seafaring cities (especially Phoenicia and Sidon). And mainly the fear of harm to grain supply lines along the coasts from Alexandria to Rome.

Accordingly, Cestius decided to capture Jaffa and neutralize the maritime threat represented by the city controlled by Jewish rebels. This step could be considered a type of strategic planning.

Parallel to the capture and destruction of Jaffa, a cavalry force from Caesarea travelled eastward towards the Jewish town of Nabata (BJ II, xviii,10 [495]). The topography and geographical connection of Nabata relative to Caesarea are very similar to those of Kabul and Western Galilee hills relative to Acre. In this case, too, it is assumed that the decision to capture Nabata derived from a strategic plan to defend the provincial capital and its forward maritime base - Caesarea.

Even after the capture of Jaffa, Nabata, and its environs, Cestius' army was unable to continue, because now there was a rebellion attack on the Roman rear lines - in Galilee.

It is the paucity of information about that in Josephus' concise report that should arouse a suspicion that he is attempting to minimize the importance of the issue (a renewal of Jewish fighting and rebellion on the Roman home front) in order to portray the Romans in a positive light. In addition, As has already been claimed, Josephus wanted to downplay as much as possible the conclusion arising from the description of the Atzmon battle (below); for the first time since Gallus' army began its campaign, the Jews managed to repel skilled legionnaires.

Gallus' response to the reports, may indicate that he attributed great strategic importance to controlling the Galilean hills. In that case, why didn't the Romans deal with this problem when they first travelled from Acre via Galilee, and continue only afterwards to invade Judea?

A reasonable possibility is a lack of updated intelligence on the eve of embarking on the campaign. This is combined with the failure to make a correct "reading" of the battle map by Cestius and his staff. The desire to advance to Jerusalem as quickly as possible on the one hand, and the very limited size of his army relative to the size of the mission on the other, prevented Gallus from properly and fully dealing with the multiple challenges presented by the Jews, including by conquering the entire Galilee. In any case, the task force commanded by Caesennius Gallus, the commander of the XII Legion, retraced its steps and was sent back to Galilee to quell the renewed uprising.

Since the XII Legion constituted a central axis of power in Gallus' expeditionary force, the tactical significance of the short report about send-

ing the legion and the cavalry to Galilee meant, to halt any advance of the campaign towards Jerusalem, and confining the Legion to the Galilee, in the opposite direction of the campaign's destination.

The military operation in Galilee could attest to the mobility and fast movement of a Roman army (as did the conquest of Jaffa). However, according to Shatzman (1983a, 309), Gallus and his army were unable to do a "thorough job," in the sense of taking over control of Galilee.

In the major and only battle (so far) on Mt. Atzmon (BJ II, xviii,11) the Jews were on a high topographical outpost, apparently on one of the extensions around Mt. Atzmon and succeeding in repelling a frontal Roman attack. The Roman commander of the operation, Caesennius Gallus, attacked them frontally but was unsuccessful and was repelled by his forces, sustaining over 200 dead, according to Josephus. The Romans renewed the attack while changing tactics. This operation finally achieved its goal and led to the capture and killing of thousands of rebels on the slope of the hill.

To sum up this battle: The initial Roman defeat became a military victory that led to the dispersal of the threatening assembly and the defeat of the Jewish rebels.

Based on Gallus' moves and tactical responses during the first phase of the campaign,

Until now, it may have appeared that Roman information and assessments of the Jewish enemy made the Romans perceive them as a relatively insignificant force.

Hence it was assumed (Shatzman 1983a, 309; Gichon 1981a, 52-53), that Perhaps their quick and easy victories, the absence of significant Jewish resistance, caused overconfidence that led to Gallus' lack of caution and failure to implement basic rules of Roman combat theory, mainly during his army's ascent to Jerusalem via Beth-Horon ascent (below).

After the events in the Galilee, Caesennius returned to Caesarea at the head of the XII Legion and joined the auxiliary units and the armies of the Eastern kings, and now, on about the 15th of Hypermberetaios, 32 days after leaving Antioch, Gallus' entire army began to move towards the hills

leading to Judea on the way to Jerusalem - the focal point of the Jewish revolt.

### **The journey from the coastal plain to Jerusalem**

Gallus' first-way station on the way to Jerusalem was the Herodian fortress of Antipatris, which guarded an important strategic pass about five kilometres wide, in the area between the Yarkon River in the west and the hills at the foot of the Judea and Samaria Mountain ridge in the east.

At precisely this point, on the eastern side of the pass, stands another fortress, 'Migdal Afek'. Josephus Described (BJ II, xix,1 [495]):

"Here was a great body of Jewish forces gotten together in a certain tower called Aphek ... but this party dispersed the Jews by affrighting them, before it came to a battle: so they [the Romans] came, and finding their camp deserted, they burnt it, as well as the villages that lay about it."

Josephus notes that the Jews tried to organize militarily for a confrontation or to block Cestius' army at Antipatris pass, but, in this topographical location, near the foothills, the Romans enjoyed a tactical advantage, and their limited but efficient force was able to defeat the Jewish masses in a formation battle in the flat and open area.

As the Romans approached, the Jewish fighters dispersed. Cestius and his army continued undisturbed on their way to Lydda. According to Josephus, his forces found it almost empty, as the inhabitants were practising the custom of the "three pilgrimage festivals" when Jews were commanded to ascend to Jerusalem during the Feast of Tabernacles. On Gallus's orders, the city was torched.

### **The journey passes through Beth-Horon ascent**

From Lydda, the army continued toward Jerusalem via the Beth-Horon ascent. The forces marched from the bottom of the ascent towards Gibeon, on the mountain (which is the uppermost and highest end of the ascent) near Jerusalem (BJ II, xix, 1-2). Gallus chose to lead his army via the Beth-Horon pass, which is the most accessible, especially for a military campaign with baggage and heavy equipment.

### **The characteristics of the Beth-Horon Pass route**

The section that is difficult and dangerous for the passage of armies, supply convoys, and logistics is the section from lower to Upper Beth-Horon (today on the Tel Sheikh Abu-Shosha hill in the jurisdiction of the village of Beth Ur al-Fauqa) (Figs 4-5).

The topographical feature of this section is a steep ascent to a height of about 225 meters, about 2.8 kilometers as the crow flies. The back of this extension is the narrowest in this part, with steep and deep inclines on both sides. Furthermore, in this section the road twists in a large number of sharp turns, and the hills next to the road loom in such a way that sometimes they not only overlook the road but also conceal its continuation after the turn. This makes it easy to block the road or to place an ambush at those points.

A Jewish military force could easily block traffic on the road in this section, especially during the climb towards Jerusalem. (Fig. 4, left) The next section of the road continues from upper Beth-Horon for about six kilometer to the east to Hirbet a-Latin, where one can see vestiges of a Roman road stronghold near the ninth milestone from Jerusalem.

At this point, the road joins the wide plateau of the hills that extend north of Jerusalem.

The continuation of the ascent in the last section is one continuous steep climb leading to the hill southeast of upper Beth-Horon (height 665 m., local coordinates [G.R] 163.7/143.1 near present-day Beth-Horon). Once reaching the line of the ridge, progress is usually convenient in topographical terms, but later in the last section of this ascent, there are three narrow passes between steep and deep inclines, mainly northeast of the road. The main one is 'Rujum Um Hashabe' (height 678 m., coordinates [G.R]163.2/141.9), which has been identified by its researchers as a Roman control and crossing point on the ancient road to Jerusalem (Fig 6, left).

In topographical terms, in the Beth-Horon passage, there were fewer straits and problematic passages for an army than in some of the other ascents to Jerusalem. In its lower sections, there are even broad areas that enable the deployment of military forces on the roadsides. This was a major tactical advantage, considering the fact that the

armies in ancient times moved in blocs or columns that were deployed and took up a great deal of space.

Another topographical advantage is the fact that part of the pass passes along the top of the ridgeline, enabling a peripheral view that benefits the force moving on it, making it difficult to block or ambush the force in the lower parts, at the foot of the mountain, and the upper parts on the "mountain plateau". (Fig. 5)

Gichon (1981a, 49-51) estimated that due to the frequent use of the ascent, it had a convenient physical infrastructure for transferring large and heavy loads. The Roman armies were known for transporting such ammunition, supplies, and heavy-duty logistics baggage. Therefore, it can be assumed that Cestius' army, was no different and carried transporting baggage including logistics equipment, siege machines, and heavy artillery, all of which were transported on wagons and pulled by pack animals.

Gallus and his army travelled unopposed to the beginning of the narrow mountain passage and even passed the problematic narrow section (Beth-Horon–Upper Bait-Horon), and in the late afternoon had already reached Gibeon ('Geva/Giva'a', near the present Arab village of El Jaba, Hight 770 m. coordinate [G.R] 167.6/139.6) in the center of the plateau in the heart of the Jewish area, only about 10 km north of Jerusalem. Immediately upon arriving at Gibeon, they began to organize as customary in a Roman war journey, by setting up a protected night camp for the Tropps (BJ II, xix,1).

### **The Battle of Gibeon**

At this point, we should discuss the situation of the Jews while Gallus' army was advancing towards Jerusalem: An internecine war and internal power struggles raged among the various factions of Jewish insurgents. When they learned that a large Roman army was approaching Jerusalem, these rebels, joined by the masses and the many pilgrims (BJ II, xix,2) hastily organized into fighting groups and left the city in a northwest direction in order to attack the Roman column. The encounter took place in Gibeon Heights. According to Josephus, the "huge and angry" Jewish masses far outnumbered the Romans. If true, this is an exceptional situation in the 'Jewish Revolts', since the Romans' main tactic was to maintain numerical superiority. It may be the only "open flat terrain battle" (mostly referring to



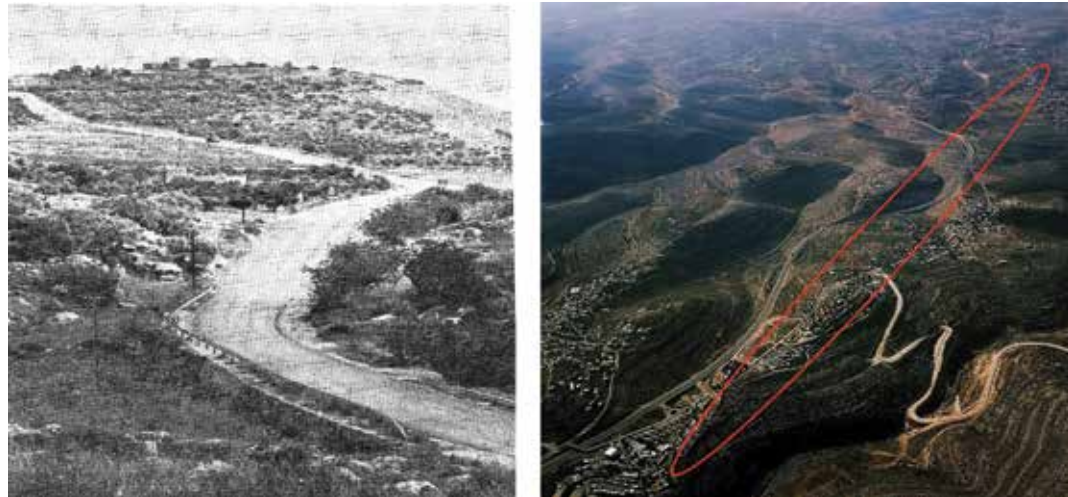


Fig. 4 - On the right: A photograph of the Bait-Horon ascent that demonstrates the steepness and the twists and turns today. The section marked in red emphasizes the precise topographical route of the ancient Roman road that passed along the extensions (above and parallel to the modern highway) (Y. Gefen, 2015). On the left: A photograph of part of the difficult pass on the ascent (the Tel Sheikh Abu Shosha hill), where we can see the forward homes of the village of Upper Bait-Horon (in the top part of the photo) - the steepest and most difficult section of the ascent is east of the hill. The road twists to the right at a sharp angle (to the northeast) while skirting the hill of the tell, while from the other side that is not visible in the photo, it turns towards a steep abyss that creates a very narrow section of the road (Bar Kochba, 1988, 177).

the concentration of many forces) in all the years of the insurgency when the Jews avoided such battles, which they considered a “lost cause.” In addition, it was the only time the Jews went on the offensive.

Hence the question arises: Is it possible that despite Josephus’ description, the Jewish leaders planned a surprise attack on Gallus’ forces at Gibeon Heights?

I believe there are indicative signs for a positive answer, based on a critical reading of Josephus, which indicates that he systematically described Roman victories and military achievements meticulously and in detail (while downplaying his patrons’ less glorious situations). A possible example is the resumption of the insurgency in Galilee and Mt. Atzmon. Despite the absence of a written detailed description, it would seem that Josephus’ description of a disorganized and ad hoc battle by the Jews of Jerusalem cannot be faithful to the actual events.

It is more probable that on the contrary, the Jews were well aware of Gallus’ army activity in the area and his intention to attack their city. But more than that, they could have prepared accordingly by planting an ambush for Cestius’ forces, which is actually the tough battle that developed in Gibeon (henceforth: ‘Battle of Gibeon’).

This ambush was a result of preliminary preparation and precise planning by the Jews, and possibly based

on vital military information about the splitting of the Roman forces on the Beth-Horon ascent. While doing so, The Jews demonstrated ability of control and command. At the base of This statement is a different analysis of Josephus’ description of the battle. (below)

Jewish forces who came from Jerusalem prepared for a battle in a section of the road from Gibeon to Jerusalem and waited for the right time to ambush the advancing Roman column. When the time came the Jews began with a strong surprise attack, for which Cestius’ soldiers were unprepared. Josephus provides a dramatic description: (BJ II, xix, 1-2 [Ulman tr. 457-469])

...”And so marched forwards; and ascending by Bethoron, he pitched his camp at a certain place called Gabao,” ...”but as for the Jews, when they saw the war approaching to their metropolis, they left the feast, and betook themselves to their arms; and taking courage greatly from their multitude, went in disorderly manner to the fight, with a great noise... ;but that rage which made them forget the religious observation [of the Sabbath] made them too hard for their enemies in the fight;”... “With such violence therefore, did they fall upon the Romans, as to break into their ranks, and to march through the midst of them, making a great slaughter as they went, insomuch that unless the horsemen, and such part of the footman as were not yet tired in the action, had wheeled round, and succoured that

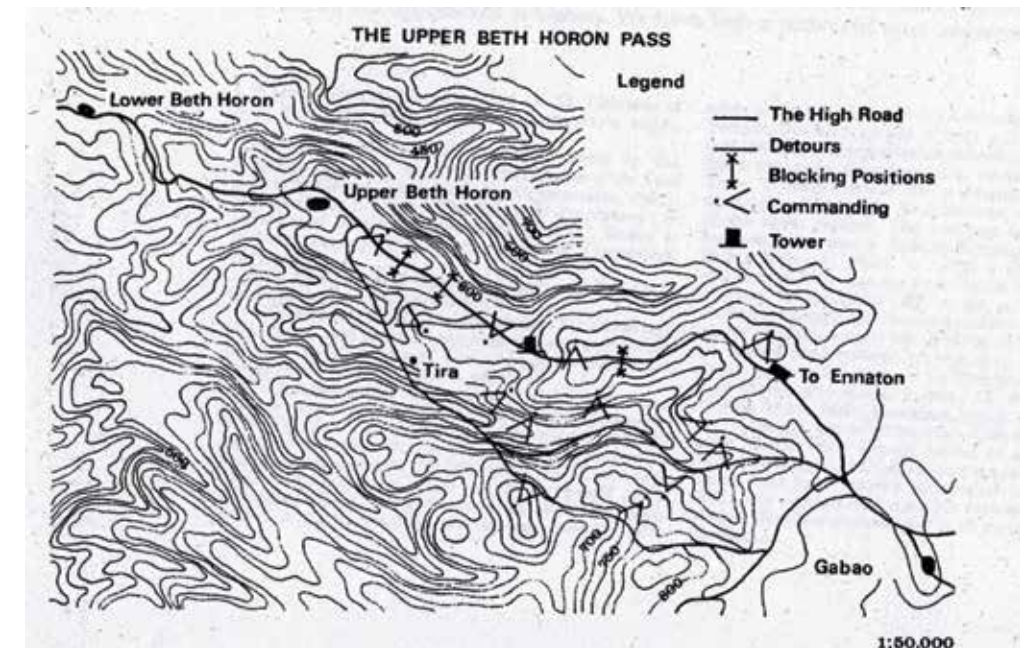


Fig. 5: Describing the topographical structure and surface of the Beth-Horon ascent, and Gichon’s suggestion for identifying the site of the Jewish ambush set by Simon Bar-Giora, parallel to the first battle in Gibeon. These data also apply to the description of the second ambush of Cestius’ army when he retreated after the second battle of Gibeon towards Antipatris via the Beth-Horon pass (after Gichon 1981a, 50).

part of the army which was not broken, Cestius, with his all army, had been in danger.”

According to Josephus, it was a powerful and concentrated attack directed against the main body of the Roman column from the flank, and apparently not against the front of the column, but instead breaking into the rear part of the front ranks of the Roman column. The Romans were not routed but they suffered heavy losses: 400 infantry and 115 cavalries. The Jews lost only 22 men.

The Romans’ surprise may also have stemmed from their tactical situation at the beginning of the battle. According to Gichon’s interpretation of Josephus (Gichon 1981a, 53; BJ 2, xix, 2-3), the linguistic meaning of the description, using the word: (τῶν ῥωμαίων), the Romans had not yet entered combat formation, meaning that the Jews attacked while they were still switching from ‘marching order’ and ‘column formation’ to full tactical battle formation (according to the accepted Roman custom). Whether we assume that part or all of the army was not prepared for battle or whether the cause for their surprise and lack of preparedness was due to the difficulty of the Romans’ journey before the offensive. According to Josephus, the results of the attack: “five hundred and fifteen fell of the Romans were slain, out of which number four hundred were footman and the

rest horseman”. In addition, “when the front of the Jewish army had been cut off, the Jews retired into the city; Simon, the son of Giora, fell upon the backs of the Romans, as they were ascending up Bethhoron, and put the hindmost of the army into disorder, and carried off many of the beasts that carried the weapons of war, and led them into the city.” (BJ II, xix, 2)

The number of losses and casualties to the Romans, which actually may have been higher than the loss numbers given by Josephus, attests to the strength and effectiveness of the Jewish offensive.

At the same time, another force commanded by Simon Bar-Giora (BJ II, xix, 2) set out to attack the supply baggage train at the rear of the Roman column from Gofna in the north.

Such a pincer movement attests to planning by the Jews, as opposed to Josephus’ description and Gichon’s opinion (1981a, 53).

The possibility that the Jews had vital military information about the splitting of the Roman forces, was mentioned above. If that was the case, it could mean a preliminary preparation and planned ambush. doing so demonstrates the ability to control and command. From a tactical aspect, the double action attack should





Fig. 6: On the right: A graduated section carved in the Beth-Horon Road, today in the jurisdiction of the village of Beth Ur al Fauqa (photo: Y. Gefen, 2015). On the left: Remains of the road fortress and the watchtower – Rujum Abu Hashabe, on the background of the homes of the present-day community of Bait-Horon. The road passed from the homes of the settlement to the Roman guard station in the photo. (photo: the author during a field survey)

be seen as a kind of Prevent attack and giving a preliminary blow against the Roman enemy.

#### When did the attack at Gibeon and Beth-Horon begin?

Since Josephus does not specifically note when and at what stage of the army's march the Jewish offensive began, it is hard to determine the timing and manner of the attack.

Gichon and Shatzman believed (1981a, 53, 51-52; 1983a, 310), that it was no later than the early morning hours of the second day of Gallus' army's entry to the hills. And that the Jews chose to attack the central part of the column rather than the front, which is stronger and harder to attack (due to its reinforced composition). Hence, it can reasonably be assumed the Jews tried to attack the section they identified as a weak point – Such a section was the flank (rather than the head) of the moving column.

On the other hand, it should be noted that until now the analysis of the "Battle of Gibeon" was overly reliant on Josephus' measured and tendentious description, which is its main weakness. Therefore, there is a need to offer a new alternative description, whose main advantage is that it is not based only on Josephus's account as is.

Based on the same data in the description, it can be suggested that the offensive took place a day earlier in

the late afternoon hours when the Romans were setting up their night camp in Gibeon or marching toward it. As mentioned above, it happened after an exceptionally long marching day which led to exhaustion and a decline in combat readiness.

I believe it was a frontal attack against the vanguard and the head of the column while it was busy setting up the camp, some of the soldiers walked around the area fearlessly and non-vigilant, while engaged in camping preparation and construction.

The frontal attack against the head of the column Was made possible Due to lack of alertness of its troops and because other parts of the Roman column were still marching and had yet to reach the assembly point in Gibeon where the attack took place.

So, while part of the Jewish force attacked the main part of the Roman column while the camp was being set up, it is possible to have a better understanding of Josephus' description, regarding the cavalry and infantry forces maneuver from the head of the Roman column, and perhaps also from the baggage train at the rear, rushed to help those under attack.

The timing was perfect for the Jews, who exploited it to the maximum and caused serious damage to the Romans.

Assuming that the Roman army's actions and destination were known to the Jerusalemites, the surprising

thing is why the Jews didn't attack the Roman column earlier while it ascended the mountainous road. In hindsight, clearly, the most suitable place was on the narrow mountain passes and particularly the problematic (steep and tortuous) section characteristic of the Beth-Horon ascent, where the temporary Roman camp was attacked during the Roman retreat (Fig. 5). Based on reasonable tactical logic, even in ancient times, that's what the Jews should have done. However, considering the abovementioned circumstances, that's not what happened.

The reason may have stemmed from the internal quarrels and the exceptional divisiveness that paralyzed the Jewish camp. Perhaps the reason was the Jews' decision to attack near their center of power - Jerusalem. Another possibility is that the head of the Roman column was actually prepared for such an attack during the climb on the Beth-Horon ascent. The Jews realized that and postponed the attack until the Romans arrived at the level mountain plateau (Which served as a convenient space for gathering forces from all the settlements in the Jerusalem area). When the main force completed its ascent through Beth-Horon ascent, no vigilance and preparation were maintained to advance the attack.

This lack of preparedness enabled the Jews to attack in Gibeon and upper Beth-Horon ascent, while it gave them a significant advantage: refraining from a battle against the full strength of the Roman battle formation.

In hindsight, it turns out that by deciding to split his army and place the baggage train at the rear, Gallus exposed his army to great danger and deviated from the accepted and familiar methods of warfare.

Moreover, from the description of Josephus' (who didn't mention this), it is unclear whether the accepted practice of security and seizing mountainous passes (straits) and dominant points and deploying scouts ahead was followed. It seems such dominant sites were not seized by advance forces on the flanks of the column in the Beth-Horon ascent and the road from Gibeon to Jerusalem. Such actions were often mentioned in the ancient Roman 'combat theory' literature as a basic cautionary activity and as the duty of a Roman general (Vegetius, III, 3). In that case, why and how did this situation arise?

The answer to that question is complex: Firstly, the three mistakes mentioned above (separating from the baggage, failing to secure the ascent, and failing to conduct intelligence-gathering observations about the

enemy) in conducting the journey through the Healy section of Beth-Horon Pass were significant and cost the Romans dearly.

Second, it is possible that the decision to make the entire journey from Lydda to Gibeon in 'one take' was also a serious mistake in planning. The road is 33 km long, including a steep 500-meter ascent for a length of 20 km. They could have started from Emmaus, thereby shortening the one-day march by 15 km, and significantly easing the most difficult journey section. This difficulty is likely to have caused the Romans to be unprepared at upper Beth-Horon ascent and in Gibeon when attacked.

Thirdly, the physical conditions of Beth-Horon's ascent must be taken into account. Especially in the narrow and graded section, which was actually a bottleneck, which prevented any possibility of conducting the army column along the ascent as required (placing the equipment and baggage in the center of the column).

The column of the Roman military force, which numbered about 33,000 soldiers, stretched over several kilometers all along the ascent.

A baggage train with hundreds of pack animals and heavy logistical equipment, in the center of the column several kilometers long, which ascended in the narrow and stepped section, would cause a great blockage and delay of the cavalry infantry and the rearguard trailing behind it. A delay that must have lasted long hours into the night - an impossible and extremely dangerous situation for the Romans. It is not inconceivable that Gallus probably did not anticipate great danger, and consciously chose to avoid this by placing the baggage convoy at the end of the column thus allowing most of the fighting force to reach Gibeon first.

It is possible that before us, an implicit description that Gallus consciously or subconsciously, had decided to split his army into two, in order to hasten his arrival at the main battlefield – Jerusalem. even at the price of deviating from the Roman journey and security procedures and taking a risk regarding the unguarded baggage. At the end in practice: the rearguard of the Roman column, which included the baggage and logistics train, was on the narrow section of the Beth-Horon ascent, while the main body of the army was near the Gibeon camp. Meaning, that for long hours the rearguard and the bag-



gage train were travelling on their own and cut off (about 3 km. west of Gibeon) from the main army.

It seems that at the end of the first military confrontation, The Romans suffered significant and severe damage, (below) but survived.

It can be assumed that the main reason for their survival is related mainly to the level of combat readiness, training, and arms, which enabled the Romans to withstand the attack of the Jewish masses under difficult battle conditions. But Gichon (1981a, 53) believed that the Jewish attack in Gibeon suffered from a lack of coordination, order, and organization which may be why it did not reach its full damaging potential.

On the tactical level, the Jews exploited their advantage as lightweight soldiers who could move easily and maneuver well on the mountain passes where they were more familiar with the topographical conditions. as in the case of the parallel attack against the baggage train on the Beth-Horon ascent.

The Romans however, succeeded in demonstrating initiative and executed a tactical maneuver of crucial importance: A force from the advance unit and infantry from the front of the column, aided by cavalry, extricated themselves from the attack and wheeled around to hasten to the aid of the central part of the column under attack, which had meanwhile managed to close the gaps and halt the Jewish attack.

The cavalry helped to complete this move when within a short time they surrounded and outflanked the Jews all around and from the back while distracting and harassing them. Thus, the Jewish attack was finally halted. Apparently, using familiar tactical moves that were thoroughly practiced in advance and combined fighting by the infantry and cavalry, saved the situation for the Romans in the end.

The ancient writers considered the danger of scattering an army's marching columns and ranks of soldiers under pressure from the enemy as one of the worst and most dangerous results of a hostile offensive. One maneuver mentioned by Vegetius (I, 27) as a standard practice for the apparent situation at Gibeon is 'the circle' or 'the bow' (formation), "in which the force trains to stand opposite an enemy that has breached the battle forma-

tion." Compare Frontinus in his work *Stratagmata*: "If the enemy attacks the column of the campaign from the flank it is capable of breaching it easily ..." And later, a detailed list of the means to be used against that.

However, as opposed to the outcome of the battle of Atzmon early in Gallus' campaign, in the 'Battle of Gibeon' the Romans suffered heavy losses, far greater than those on the Jewish side (BJ II, xix,2). Furthermore, it appears the attack caused the Romans to stop completely their advance and set up their camp in the area between Gibeon and the Upper Beth-Horon vicinity. There it took them three days to reorganize and recover.

Another surprising detail is the fact that although the terrain conditions and topography of the 'Gibeon stage' where the battle took place, are an open battlefield that was supposed to give an advantage to the Roman side, it was the Jewish side that won an initial tactical victory. This success of the Jewish fighters in an open battlefield ('Battle of Gibeon'), against Roman legionnaires, even for a limited time, was a rare event compared to the later campaigns and battles during the Jewish first revolt. Given the fact that the Roman armies' main advantage was thought to be their tactical superiority in combat formations and 'Set Battles' in open spaces. While the Jews generally avoided a frontal confrontation in an open area with the Romans it testified that they recognized their inferiority in this area.

Therefore, the tactical success of the Jews at the 'Battle of Gibeon' should be considered an unprecedented achievement in halting an advancing Roman army. While causing significant losses and strategic damage - in the sense of strategic logistical weapons as a result of the parallel attack by Simon Bar-Giora (below) on the Roman baggage convoy in Beth-Horon. An attack which in effect caused destruction and the plundering of the artillery, war and siege engines. Without them, it was impossible to breach and capture the walls of Jerusalem. which is why they were so important and can be described as 'strategic weapons.' This was repeated a second time in the retreat phase down the Beth-Horon ascent (below note 102). Based on the concise information provided by Josephus regarding the damage caused to the baggage train, it can be assumed that this damage was considerably greater than that provided by him. Hence, it constituted a considerable and significant obstacle to Gallus and his army. Especially in light of the unpredictable reality that was revealed to

them later, The challenge of the siege over Jerusalem. A heavy shadow was cast over their ability to achieve the main goals of the war campaign: the conquest of the city and the submission of the Jewish rebels.

A careful examination of Josephus' data (BJ II, xix,2) and what he does not record reveals that, despite the speedy reaction and skilled tactics of the Roman cavalry and vanguard in response to the initial blow, the Romans were still defeated.

Regarding the question of the location of the Roman camp after the battle of Gibeon, it is hard to make a definite identification. The research of Gichon and Shatzman suggests (BJ II, xix,2; 1981a, 53-54; 1983a, 310) a link to the settlement of Gibeon mentioned by Josephus. They also discussed the site of the battle (below). Both placed the Roman camp in Gibeon around the village of El-Jib (Tel Giv'on) near the present 'Giv'on interchange'.

On the other hand, a different interpretation can be offered: The Roman's advance was completely halted for at least three days as mentioned by Josephus (BJ II, xix,2) If not more than that, Since the Jewish attack forced them to reorganize and perhaps even retreat. The logic in the consideration behind this tactical step is the possibility of linking up to the battered rearguard forces and baggage train, which survived the attack by Simon Bar Giora, which without Cestius would have lost his logistical ability to continue the campaign and the possibility to conduct 'damage control' and a general situation assessment.

Josephus was unwilling to provide any "incriminating" information, and as mentioned above, he did it for propaganda reasons. Even though he described the battle in dramatic terms, it is clear that the Jewish attack had exceptional momentum and power. Despite the Roman maneuvers, they were repelled from the Gibeon plateau to its western margins, towards Upper Beth-Horon. And there the camp location should be identified.

This discussion calls for a re-examination of the prevailing perception in research that Jews' fighting was inferior and unequal to Roman fighting. It is a perception that does not match the above analysis, particularly the Gibeon battle outcomes. Due to Roman failure at Gibeon, Gallus' army may not have been able to conquer Jerusalem, its main strategic goal.

### The geographical-historical location of the 'Battle of Gibeon'

There is no certainty as to the location of the Battle of Gibeon. As it had a major impact on the entire Gallus campaign, this issue needs to be re-examined and identified.

According to Gichon's proposed (1981, 308; 1981a, 54) identification, there are two possibilities:

If Cestius' army continued, from Gibeon, along the main road from Beth-Horon to Jerusalem (below Fig. 7, 'Alternative A', Pic. 2-3a, 6), a narrow passage exists between the ridges (at 169.000/135.900) not far from the settlement of Beth-Hanina on the east and the Ramot neighbourhood and the northern section of the Sorek stream channel to the west of the pass. Actually, it is a long and narrow valley (Wadi), with steep hills on both sides (Fig. 7, Pic. 2-3a, 6). Gichon (1981a, 54) believed that this valley suited Josephus' description of the battle and the deployment of the ambush.

According to him, it explains how the vanguard and the advance units wheeled around and hastened to the aid of the central part of the Roman column under attack, which was still in the narrow mountainous pass (Pic. 3-4).

At the same time, there was another known route to Jerusalem that passed not far from the battle scene, via Wadi Hanina (below Fig.7, 'Alternative B'), south-southeast of Gibeon (Pic. 2, 4-6). In this section of the road, near today's Beth-Hanina, the ridges surround the path on both sides and control it for a long section (Fig. 7, pic. 4-6). The topographical features of this path could also fit into the battle description.

The newly updated proposed identification: it was proposed above, to identify the location and timing of the 'Battle of Gibeon' with the stage of setting up the camp in Gibeon and at the same location. In his account, Josephus refers to the camp in Gibeon as follows: "He pitched his camp at a certain place called Gabao (or Gibeon)".

One of the meanings of the word "camped" in Greek is "setting up". In other words, setting up camp. Hence, the battle should be placed nearby the supposed camp's location as stated, on the Gibeon plateau near Tel Gibeon. Additionally, the relatively flat terrain typical of Gibeon Heights was particularly suited to Roman requirements for a temporary marching camp (the minimum area required is 250x250 meters, and the maximum is 500x300 meters).



Cestius even seems to have refrained from situating this camp on a high and protected hill, as there are many on the Gibeon plateau, according to the assumption that Gallus and his commanders overestimated their strength and that the Jews had been passive and nonbelligerent until then.

Since it became clear that the Jewish forces that had severed contact after the battle of Gibeon had seized the sites and passes overlooking the main access routes from Gibeon to Jerusalem, Gallus resumed his advance. Although the Jews were prepared for the battle, they were unable to block the movement of the unified army that exited the topographical strait (Pic. 2-6) and continued cautiously and determinedly, advancing towards Jerusalem in a relatively open area.

The Roman forces advanced quickly towards the walls of Jerusalem and successfully completed the final part of the route. The topographical area in question is relatively comfortable. Although it is not certain which road they chose from Gibeon they were able to advance. Josephus says (BJ II, xix,4) that Cestius' next camp was built on Mt. Scopus or its slope. Its precise location is unknown and still open to assumptions.<sup>21</sup>

After three days of collecting wheat and supplies from the surrounding villages, on the 30th of Hyperberetaeus, Gallus' forces began the siege of Jerusalem.

Thus far, Josephus does not report any significant Jewish resistance and attempts to fight, except for the battle of Gibeon. The impression is that the Jews were relatively passive and perhaps exhausted their resistance potential until this stage. A possible explanation is that after the blows suffered by Cestius' army in Gibeon lessons were learned, and due to their caution, the following movements of the army and its fast appearance opposite Jerusalem's walls were implemented in a manner that did not enable the Jews to attack it.

According to Josephus (BJ II, xix,4-5), there were three opportunities to take control of the city: The first was immediately after the Roman column arrived. While it was organized opposite the city walls a siege camp was set up opposite the upper city and Herod's palace. This

was after the Romans penetrated there via the Beth-Zeita neighbourhood (Fig. 8), which was abandoned by its residents shortly before the Romans' arrival. In addition, a Roman force was deployed along the so-called "second wall" (Fig. 8).

From Beth-Zeita the Romans turned west, along the natural slope descending towards Herod's palace, near today's Jaffa Gate, where the "first wall" and the "second wall" joined (Fig. 8 number 12). But according to Josephus (BJ II, xix,4-5), instead of attacking the wall immediately, Cestius convened a "war council" that advised him to refrain from continuing the attack. Josephus saw it as "bad advice". Josephus attributed (BJ II, xix,4) the "bad advice" to Turranius Priscus, the chief of Gallus' military staff and commander of the VI ferrata legion, and to most of the commanders of the cavalry. They took a bribe from the failed procurator with vested interests, Gessius Florus. But we should keep in mind that this is a tendentious claim, which does not reflect historical truth, but rather political slander. As mentioned, Josephus already from the start expressed an opinion that Governor Florus was the complete villain and corruptor in the Roman camp. This may have been true, but it almost certainly greatly distorted his objective judgment.

In addition, the accusation and defamation of the Prefect Priscus of accepting bribes by Josephus were both very exceptional and convenient. For, as a rule, such accusations are very difficult to prove. But when later in the account, it was reported that the same Priscus was killed during the retreat from the city, proof of guilt or defence against it became completely impossible... Therefore, it is probable that Priscus' impartial advice (as responsible for the siege preparations) was: to lay a siege at this time and under the abovementioned conditions, is unwise and expedient. Mason (2016, 299,309) believed that from the beginning Gallus did not plan or any of his army staff a major attack on the walls of Jerusalem and the whole discussion on the question of the imposition of a siege was created only after they were surprised to find that the city was closed and locked in front of them. Also, Gichon (1981a, 55) believed that the reason for the advice was the belief that storming Jerusalem's strong walls was useless. He suggested that the commanders of the cavalry battalions and Gessius Florus opposed fight-

<sup>21</sup> Gichon 1981a, 55, note 68. The first camp was apparently on the norther slope of Mount Scopus and the second, according to Josephus (BJ II, xix,4) opposite the Hasmonian palace. See map in, Bahat 1989, 32, 50; Fig 7, Pic. 6.

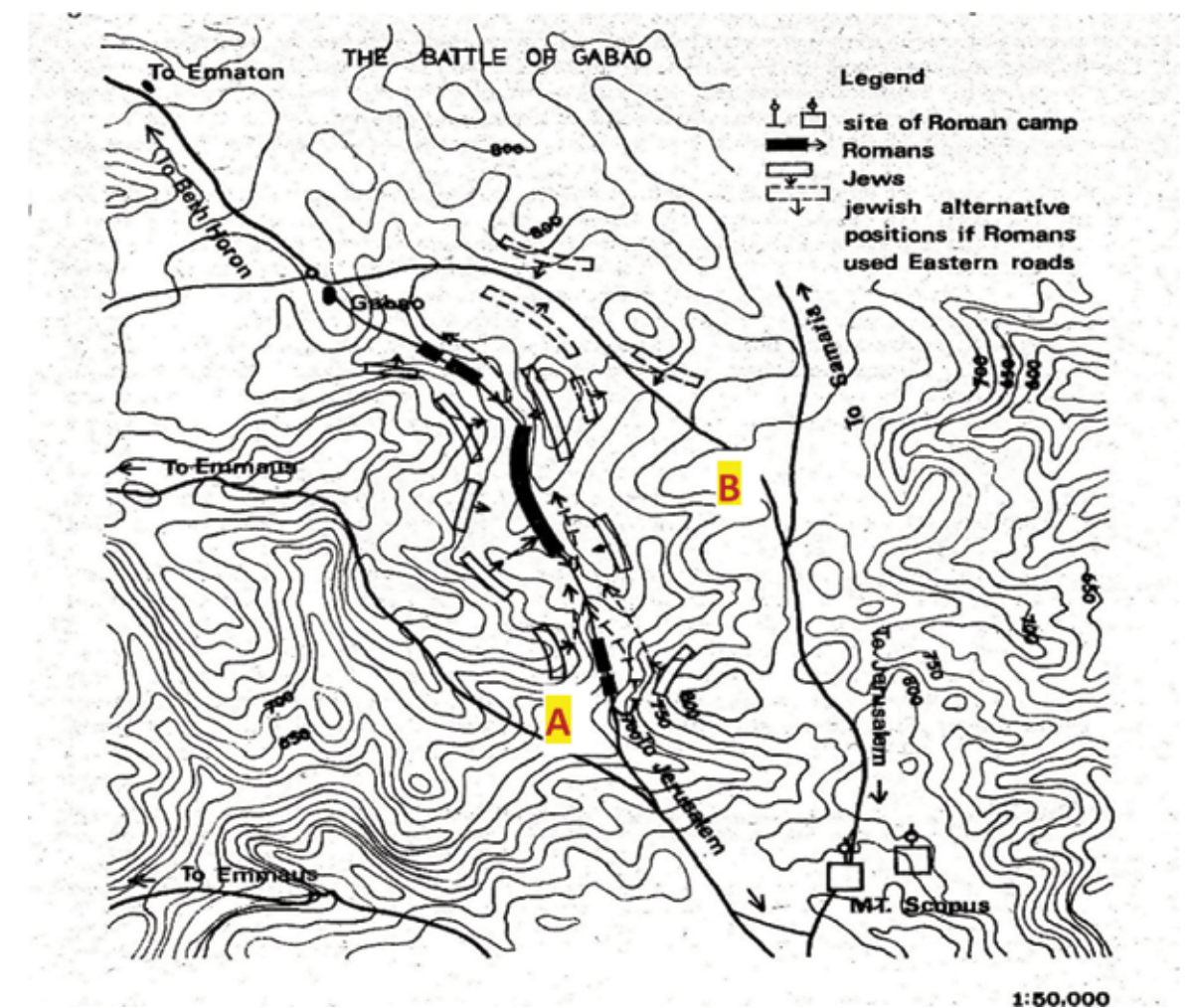


Fig. 7: describes the surface layout of the battle of Gibeon. Gichon suggested two possible travel arteries (below western (A) and eastern (B) alternatives) from Gibeon to Jerusalem, on which Cestius' army was advancing when it was attacked by the Jewish rebels on one of the narrow sections of the road, which was surrounded by hills, south-east to Tel Gibeon (after Gichon 1981a, 52 with alterations by the author).

ing in a built-up area, based on events that happened at the outbreak of the revolt when Florus personally experienced the Jews' alacrity in turning Jerusalem's narrow alleys into a convenient massacre area.<sup>22</sup> However, Stern (Stern 1982, 278) assumed, that the Romans preferred to postpone the attack on the city walls as long as the city's defenders maintained their desire to rebel meanwhile creating a 'psychological warfare' effect.<sup>23</sup>

To sum up, there was no "bad advice", but it transpires that rather than bad advice it was cautious and prag-

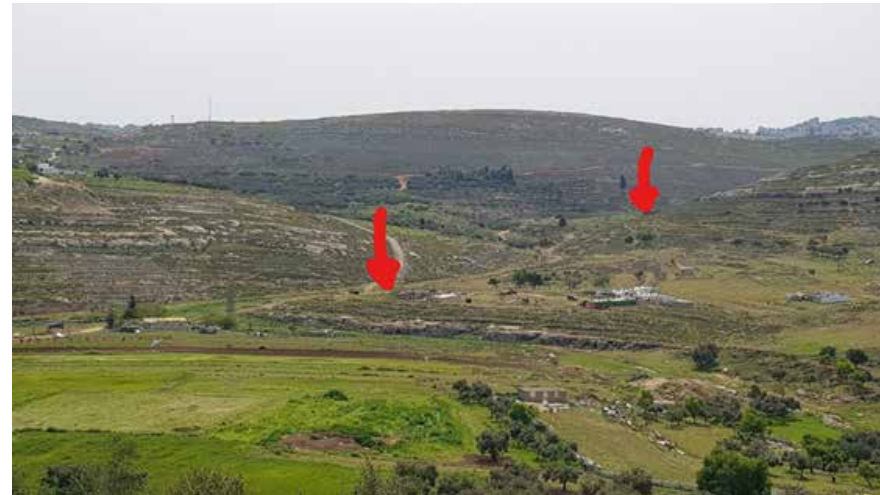
matic planning by the Romans. It seems clear that the real reason for postponing the attack stemmed from some unknown operational problem, one among the assumptions and explanations mentioned above and below. Indeed, Gallus heeded the advice of his senior officers and his cavalry commanders.

The second opportunity, according to Josephus, came when Cestius, for an unknown reason, refrained from accepting the proposal of Hanan Ben Yehonatan, the representative of the moderates and other Jerusalem

<sup>22</sup> Gichon 1981a, 55. Regarding the aspect of „combat in a built-up area“ and the great danger it held for the Roman legionnaires see: Safrai & Ortner 2018, 43-45; Safrai & Ortner 2021.

<sup>23</sup> Vespasian and other generals adopted this approach when they imposed a siege on Yodfat, Gamla, Michvar and to a degree on Masada too. See: BJ II, xix, 4; „For three days he did not storm the city, and perhaps he believed that its residents would hand it over to him“ ... and later: „he put his army into war array to attack the city.“ At least in the case of Michvar the Romans were able to bring about the voluntary surrender of the rebels. In Yodfat, Josephus testified that this happened to himself.

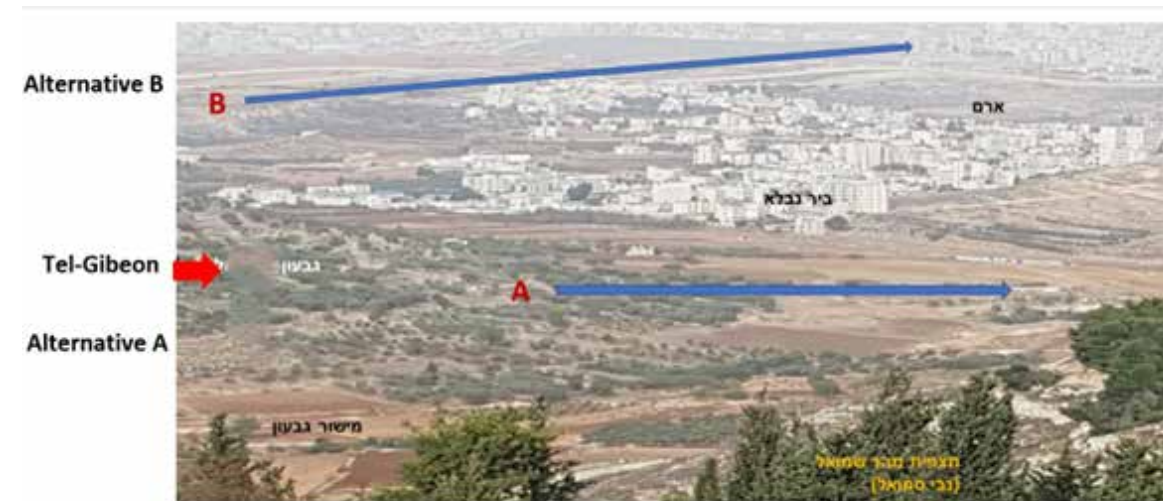




Pic. 1: The ancient Tel Gibeon (marked by the arrow, looking from west to east). At the top of the mound (to the left) are the homes of Al-Jib. In the background is the Gibeon plateau. According to the author's above suggestion, the Jewish offensive took place here, on the open battlefield in a set battle manner (Pictures 1-6 were taken by the author during a field survey).



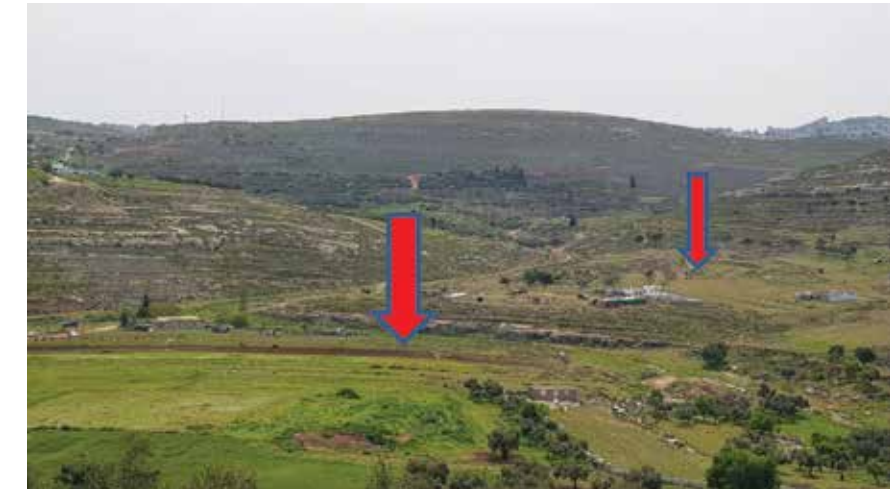
Pic. 1a. Shows the hill of Tel Gibeon and its surroundings. At its foot in front are the flat areas where the battle took place.



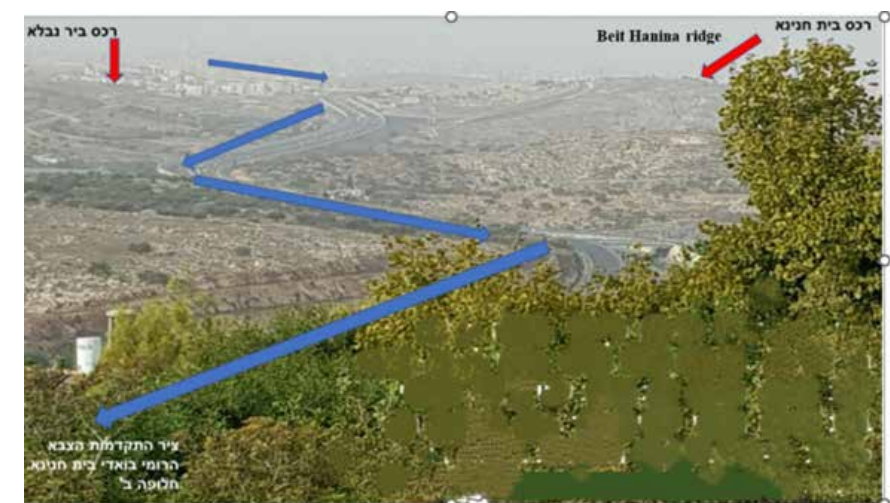
Pic. 2: The marking of the two possible routes: the upper one (in the map of Fig-7) is the eastern route B ['Alternative B'] (Via Wadi Hanina and the modern Highway 443/50), and the lower one is the western route A ['Alternative A'] (To the head of the Sorek stream on the route of the ancient King's Road), where Gallus' army moved from Gibeon and before the battle began. Pic. 1-6 are relative to Gichon's map of 'the battle of Gabao'. Above in Fig. 7.



Pic. 3: The route marked in blue shows the continuation of the western route ['Alternative A'] from the Gibeon camp (second red arrow to the left) on the King's Road. The bottom blue arrow marks the start of the hilly strait and the entrance to the wadi. This is where according to Gichon, the attack was on the flank of Cestius' column. This is the place where forces from the front of the column rushed to their aid.



Pic. 3a: Close up of the western route-A ['Alternative A'] from Gibeon on the 'King's Highway'. The arrows mark the ancient road-route between the hills. The photo is taken from Tel Gibeon facing the east.



Pic. 4: The eastern route B [alternative B in Fig 7 above] is via Wadi Hanina and modern highway 443. Note the hills and ridges on both sides of the modern highway. Below it lies the ancient road. On the ridges of the hills, the Jews could ambush and attack the Romans moving along the road (blue arrow).





Pic. 5: The beginning of Wadi Soreq and today's Emek Ha'arazim (Gichon's route A). The estimated location of the Roman column head (marked in red).



Pic. 6: Gallus' column head was located in the center of Nahal Soreq Valley (marked to the left). To the right, Mt. Scopus, and Jerusalem (right red marking).

dignitaries, to open the city gates to him. Perhaps he did not trust the peace proposals of the moderate Jewish factions anymore.

The third opportunity came on the sixth day of the siege when Cestius halted the attack against the walls by personal order. The attack began on the northern side of the Temple, the only place to reach the walls on level ground. Undercover the marksmen, the archers and the other missiles hurler from the nearby hills, which led to the removal of the Jews from the walls, According to Josephus (BJ II, xix, 5), the Romans were able to overcome the Jews' means of defence and neutralize them.<sup>24</sup> One of the tactical means mentioned by Josephus is the Testudo (tortoise) formation, a tactical war formation implemented by the fighters holding their shields above their heads in such a way that the shields overlap horizontally.

That made it possible to reach the foundations of the wall and to begin infiltrating via the wall. Since the area of the Antonia Fortress and the northern wall have changed almost beyond recognition and today few vestiges remain, the question arose as to where precisely the Romans tried to break through to the Temple Mount. It is assumed that the breakthrough attempt and the assault took place at a spot along today's 'Via Dolorosa' street, in the section between Lion's Gate and the Ecce Homo arch near the Omria school (Fig. 8 number 2, 14), as far as possible from the Antonia Fortress, which was held by the insurgents.

In addition, Gihon (1981a, 56) pointed out, that in Josephus' description of the attack, "there is no mention of heavy siege artillery, breaching apparatus or even scaling ladders". He, therefore, concluded that at this stage Cestius' army no longer had those siege instru-

ments that were considered regulation equipment, particularly when the main target was well fortified with immense massive walls. While in his later description of the siege campaigns conducted by generals Vespasian and Titus, Josephus explains in great detail how the Romans used siege devices, artillery machines, scaling devices, siege techniques, and so on. In Gichon's view, the most reasonable explanation for this would be the offensive in Gibeon and the attack on Beth-Horon against the baggage that transported the heavy equipment and machines. Although Josephus describes war machines of various kinds several times during the Gallus journey, he explicitly refers to siege machines only in the section of Beth-Horon-Shefela after the decision to withdraw from Jerusalem. (BJ II, xix, 9, Ulman trs. [553])

Here is the place to discuss and examine this claim. On the face of it, it seems that a great deal of logic can be found in Gihon's comment. This is even a major explanation for the siege failure and the Roman decision to withdraw. But the question is whether it was reasonable in the first place that the Romans planned to transport heavy machinery and siege towers from Syria. This was along a distance of 490 km including steep hills to Jerusalem. And in general how many cases are known in which the Romans carried heavy siege machines on journeys to such distances?

Scholars' determination (Gichon 1981a, 56: Shatzman 1983a, 311 note 69); that the Jews captured the siege machines of Gallus' army may be another case of over-reliance on Josephus' words that constitutes an exaggeration of the achievement of the Jews and Bar Giora, who allegedly captured the "siege machines". That may have been at most some other heavy-firing machines. From this, it can be concluded that from the beginning the Romans did not bring heavy siege machines with them because they did not anticipate or plan a siege, but rather a quick takeover and/or cooperation of the moderate elements among the Jews, who were supposed to obey and open the city gates to the senior Roman commissioner and army Coming to their city to rule law and order.<sup>25</sup>

Another possible conclusion is that the case before us is a 'punitive campaign' and a short-term demonstration

of control, not a long-term conquest campaign based on a siege and backed by a variety of logistical means, as in the later Flavian Commanders' campaigns during the continuation of the revolt. By accepting this conclusion, we can also gain an understanding of how the Roman authorities perceived the Jewish military threat as nothing more than a small-scale rebellion that could be dealt with by an intimidation and forced order campaign.<sup>26</sup>

These conclusions once again raise a broader question - what was the military purpose of the journey in the first place?

Mason (2016, 299, 301) examined this question by the circumstances Gallus and his army were facing at the walls of Jerusalem. "There was no chance of a successful siege no reason to suppose that Cestius imagine such a thing. he expected to be admitted in the usual way, with the city leaders pouring out to greet him - on Scopus if not earlier. When that did not happen, he waited and incrementally raised the level of intimidation until his glittering army was just meters away from the population" ... his aggressive posture could not be sustained" ... Because he had not prepared for a siege, that would not be long. When he was not admitted after a week, the sensible option was to leave and plan a very different kind of operation for the spring."

Based on this, Mason (2016, 311) concluded that Cestius Gallus' journey was intended more for "policing" than a "war campaign" or a major attack on the rebels in Jerusalem.

In Goodman's view (personal communication), Gallus set out with a very large army mainly for an intimidation campaign, in anticipation of an easy journey. Having encountered the difficulties and unexpected complications later, he chose to return because he had not planned more than a journey aimed at intimidation and robbery.

To substantiate his claim, he questioned the idea that the Romans had brought heavy siege machines from Syria and dragged them up the mountains to Jerusalem for such a long distance, just as he doubted Josephus' accuracy in this matter.<sup>27</sup> Hence for his approach, the

<sup>24</sup> Gichon 1981a, 55-56.

<sup>25</sup> I would like to thank Nicholas Purcell for this comment and insight given in personal communication.

<sup>26</sup> I would like to thank Martin Goodman for describing this important insight given in personal communication.

<sup>27</sup> note 87; Regarding Josephus' reliability, see Goodman 1988, 23.



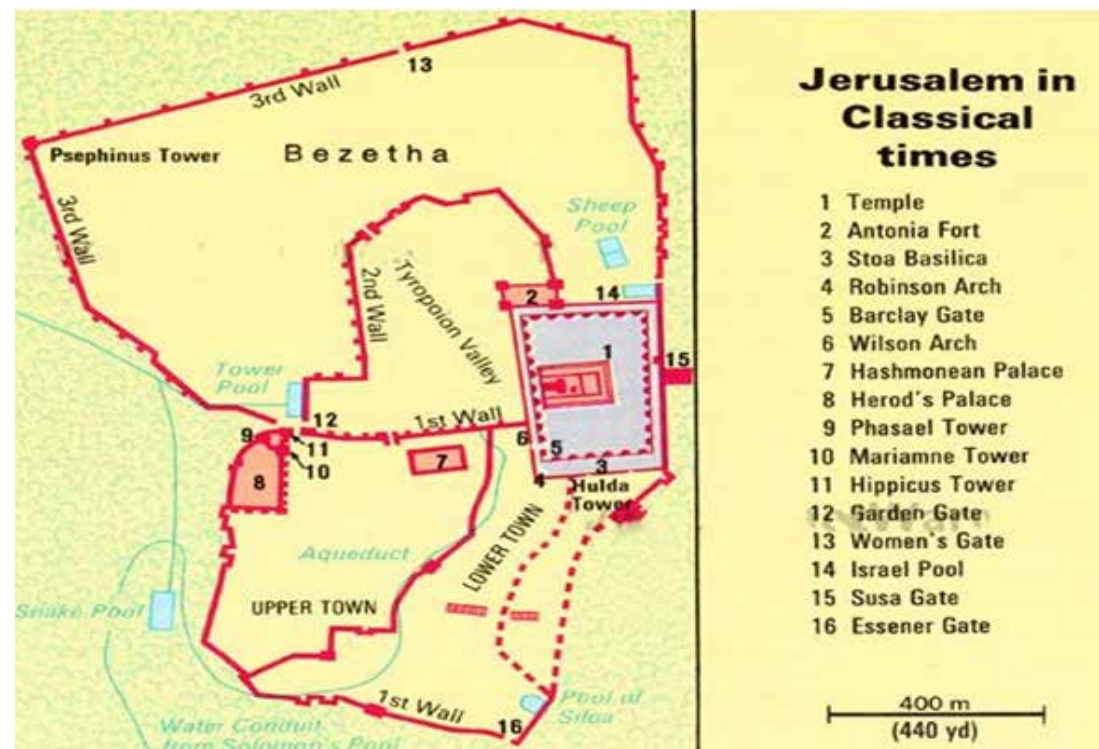


Fig. 8: Map of the city of Jerusalem and its walls during the Second Temple period (source: planetware.com website).

purpose of the campaign was intimidation, perhaps a quick conquest, ultimately negotiating from a position of power, but not a siege war.

Goldsworthy (1996, 88-89) came to a similar conclusion, it was nothing more than a campaign of intimidation and a display of force aimed at threatening the rebels and potential rebels and convincing them that Rome was invincible. But reasoned it by strategic and logistical-military aspects: transporting an army equipped and prepared for a prolonged battle and siege would have taken a long time (during this time the revolt would have intensified). Quick response and sending available force, though unprepared for large-scale warfare and without significant combat capability, could have succeeded in threatening and deterring the rebels before they gained momentum, relying solely on a 'display of force'.

The same 'combat ability' according to Goldsworthy (1996, 87-88), was later discovered to be a major problem, due to what he described as the low fighting capacity of the XII Legion and the unprofessional troops who accompanied it.

In other words, it is possible that Cestius Gallus felt that his army was incompetent and incapable, and therefore it was better not to challenge him to the great challenge of his virtues - the conquest of the city.

To support his claim, Goldsworthy stressed that the Legion lost its eagle (either in retreat or at the Battle of Gibeon) and some of the Roman forces got split and fled or disengaged from the enemy during the attack on the assembly and baggage convoy in Beth-Horon.

In addition, he mentioned the failure of the XII Legion, earlier under the command of Lucius Caesennius Paetus in Armenia in 62 CE against the Parthians.<sup>28</sup>

<sup>28</sup> According to Goldsworthy (1996, 87-88), the XII Legion may not have recovered from that defeat or that they did not address the weak and failed chain of command that led to its failure until the outbreak of the Jewish revolt. In summary, of his reference: „we should assume that the units of the Roman army were of uniformly high quality. Added to this were the bodies of irregular volunteers recruited in the many cities hostile to the Jews. These had little or no military training and were more inclined to loot the fight. Their main value may have been to make this Cestius' Army appear larger. the use of such troops emphasizes the ill-preparedness of the Syrian garrison... for full immediate, full-scale war.“

Purcell examined the issue of the military purpose of the journey,<sup>29</sup> focusing on the political-state aspect. Nero was concerned about the rising power of generals and governors in general, and Corbulo in particular. Therefore, he did not approve of Gallus' large-scale war campaign. Major military actions required the emperor's approval or consent. Regarding Judea's situation, it is unknown what approval or mandate Gallus received. The Romans used to consider what was the appropriate and measured response to different kinds of rebellion while calculating the extent and intensity of the revolt, and the intensity of the response they had to give to achieve the most appropriate and desirable response and effect for them. Thus, Purcell believes,<sup>30</sup> Gallus chose a not particularly great action in these circumstances and within the context of the political-state constraints applied to him, which served mainly the purpose of threatening and deterring the Jews by marching a relatively large army, which would cause them to surrender and voluntarily open the city gates without the need for a siege. At least that's what the Romans hoped and planned. Since that did not happen they were forced to retreat because a journey that included a full siege was not planned from the beginning.

Back to Josephus's account sequence (BJ II, xix, 6), later on, when the Romans were already about to torch the Temple gates the attack was called off, to the astonishment of the besieged, and instead of renewing it, Cestius unexpectedly decided on a general retreat of all his forces towards the remote Mount Scopus camp.

Josephus described Cestius' decision as "unexpected," he chose the word *παράλογα*, which in Greek can also be defined as "miscalculated" or "illogical." That is, contrary to logic.<sup>31</sup> In other words, an unexplained or understandable retreat.

If we are to believe Josephus's report (BJ II, xix, 5-6) 32 regarding the situation inside the city, the last Jewish defenders were pervaded by despair, and the Jewish army fell apart. the city would certainly have fallen soon had the Roman efforts continued.

### The unexpected withdrawal from Jerusalem - a discussion

It is here that we should interrupt the description of Gallus' assault on the city and discuss possible reasons for his 'unexplained' / 'illogical' decision to withdraw. A decision Josephus described as personal (this view was often accepted in research as well). Hence, this discussion focuses on Gallus' personality and skills as a commander (to the extent they can be identified) concerning the campaign in general and his decision to withdraw in particular.

in retrospect, It turns out, that what initially appeared to be simple military decisions concerning a negligible uprising, made before Gallus embarked on his journey, and the withdrawal decision made now, when he was about to achieve a resounding victory, were, in fact, strategic decisions with long-term implications for the first stage of the conflict which was later known as the 'Great Jewish Revolt'.

According to common research, Gallus failed as a general and military commander mainly due to failure to adhere to the goal. He also abandoned the rules of Roman combat theory.<sup>33</sup> Shatzman (1983a, 311) found the use of the word *παράλογα*, as a hint and evidence that Gallus "acted hesitantly and without daring, and that he lacked the decisiveness and steadfastness that could have led to a victory in the battle under these conditions" ... his decision to stop the final

<sup>29</sup> See above, note 86.

<sup>30</sup> See above, note 86.

<sup>31</sup> Gichon 1981a, 56 compare: Shatzman 1983a, 311.

<sup>32</sup> It should be noted that Josephus' description of the situation inside the city was apparently tendentious or exaggerated, as was the description of the overall war situation.

<sup>33</sup> Rapoport 1983, 33; Gichon 1981a, 60; Shatzman 1983a, 311. In effect this is the most common argument identified with the name of Cestius Gallus in quite a number of studies. This argument presumable the principal explanation for his failure in the battles in Jerusalem, particularly during the stages of arrival and retreat from the city.

attack and the unexpected retreat to Mt. Scopus was “contrary to logical judgment.”<sup>34</sup>

Gichon (1981a, 56) believed that the reason for the decision to retreat was due to the sense of heavy responsibility for maintaining the integrity of the Legion and preventing its erosion of power during a siege under dangerous conditions due to the circumstances created on the field. Perhaps he felt, he should be cautious in deciding to activate it, especially in a situation where there was no guarantee of achieving his objective (taking control of the city walls) and therefore decided to retreat now to return with his forces in the spring of 67 CE.<sup>35</sup>

Shatzman preferred to put above all a simple argument to the above-mentioned assumptions, which he felt came up repeatedly from an analysis of Gallus’ activities and decisions. He felt that the source of his failures was his personality and unsuitability. Based on Josephus, Shatzman (1983a, 311 note 67) asserted<sup>36</sup> that “Gallus’ decision was not based on practical and logical considerations but on the sudden despair typical of his campaign mismanagement”.

This determination raises several reservations. First of all, a Roman general does not act and make decisions alone on the battlefield. Gallus, for instance, had a ‘War Council’ with its senior commanders on how to attack the city and its walls. A similar council was held by

Titus and his army commanders who discussed the fate of the Jerusalem temple.

From this, it should be concluded, that Gallus relied on his decisions on a substantial command structure.

Second: It also seems that Josephus concealed, or was unable to describe, the real reason for the retreat.<sup>37</sup> Which the author believes was based on an entirely rational situation assessment.<sup>38</sup>

One possibility: Simon Bar-Giora’s extraordinary success encouraged him and other insurgent groups to continue their vigorous attacks against the Roman lines throughout Gallus’ siege of Jerusalem. And possibly additional attacks were using a similar method, far in the rear of the main Roman force.<sup>39</sup>

Another possibility was the approaching winter. The fear of being with the Army in harsh winter conditions with no logistical supplies guarantee. Also, the concern about not receiving military reinforcements from Rome, since Rome was then governed by an unpredictable and terrifying emperor – Nero.<sup>40</sup> I will address below the possible connection between the personality of this emperor on the decision to retreat and Gallus’ decisions in general.

Above I suggested seeing the battle of Gibeon as a far more significant achievement for the Jews than de-

34 Gichon (1981a, 56-57) had a similar opinion. But in hindsight, clearly this assertion was made hundreds of years after the events occurred. Except for accepting Josephus’ version, it is not based on significant additional information regarding the circumstances and conditions on the battle ground and Gallus’ decision making. When it came to personal and political matters, Josephus often distorted and disrupted reality to suit his patrons. This distortion is particularly striking, in presenting Gallus as a failed and incompetent commander in comparison with the superiority of the Flavian commanders. Therefore, these are problematic determinations that cannot be fully accepted. As shown above there are several explanations and hypotheses, ranging from the political level through the military to the personal. It is not possible to point unequivocally to only one cause (especially one based on personal background) or several causes, since they are unknown and also because there are several factors.

35 Mason 2016, 325; Rapoport 1983, 33.

36 Shatzman emphasized that we can cast doubt on Josephus’ reliability. However, that would not be justified regarding the **Jerusalem retreat description**. He believed it should be accepted as correct and reliable. Hence, Cestius’ personality was unsuited to the lofty post, which required military intuition and ability to function under pressure. That is, to make decisions as a commander and leader.

37 Josephus’ description of this specific issue was extremely and clearly biased. Because he was motivated for political reasons to flatter and glorify his Flavian patrons while blaming the failure on Cestius Gallus and denigrating him. He did so but greatly exaggerated Cestius’ relative contribution to the failure to capture Jerusalem.

38 Similarly, Gichon (1981, 313; 1981a, 56) concluded: „This may or may not be the case“ (That Josephus was accurate in describing the circumstances of the retreat. R.O). „But whatever the real situation, Cestius felt that he could not safely continue his siege“.

39 Gichon 1981a, 56. On this matter Shatzman differed with Gichon (1983a, 311 note 67) and rejected the assumption as Josephus does not mention it. This however, does not mean that there were no Jewish attacks and active resistance... Goldsworthy believed (1996, 88-87) that Gallus’ army suffered greatly from supply problems caused by the Jews on the way to the city and when he camped near it. In fact, Gallus’ logistical array was limited before reaching the city. It was further reduced after the attack on Beth-Horon (as the Romans could not fill the place of the missing beasts of burden) and the ability to gather provision around the city was disrupted by the Jewish rebels.

40 Mason 2016, 315-32.

scribed by Josephus. And so was the decision to halt the attack against the city walls and later retreat from Jerusalem. This idea is based on hints hidden between lines in Josephus’ account. These hints indicate that the Romans suffered a painful and unexpected blow. Certainly, this influenced Roman tactical decisions and operational abilities.

To capture Jerusalem, the Romans would deploy a double expeditionary force in the future. A total of three to four legions and thousands of auxiliary troops would be needed for this operation. They would conquer the country incrementally and avoid using an army in the winter. That indicates that those were the military lessons learned from the failed campaign. They were probably also Gallus’ reasons for deciding to retreat.

Josephus noted the unexpected decision to retreat changed the Jews’ fighting spirit and ability drastically. Before the attack on their city walls, the Roman army’s appearance led them to evacuate and abandon Beth-Zeita and secluded themselves behind the city walls. Now the trend was reversed, and the masses and Jewish fighters attacked the Roman rear and caused heavy losses.

### The retreat from Jerusalem – the conclusion and results of the Gallus journey

At this point apparently, Gallus’ campaign became a hasty retreat journey of the Roman forces from Mt. Scopus towards Gibeon, and later even to a flight and a fiasco in which a significant part of the Roman expeditionary force with some of its baggage fell to the Jews (below)<sup>41</sup> Josephus names (BJ II, xix,7) very senior

officers who were killed during the retreat: including the head of Gallus’ staff and the commander of the Sixth Legion, Turranius Priscus,<sup>42</sup> the commander of the battalion (Ala miliaria) Longinus (‘Tribune Miliaria’) and senior commander of the Aemilian cavalry, Aemilius Secundus.

The XII Legion’s sacred eagle standards and other very significant items of religious and symbolic importance also fell into Jewish hands.<sup>43</sup> For the Romans, this was such a serious disgrace that usually justified the dismantling of a military unit and imposing a badge of disgrace on it.<sup>44</sup>

When the military column reached Gibeon, with much difficulty and sustained many casualties, Cestius decided to remain there for two more days. This was apparently to recover and reorganize while attempting to find a way out of the situation and the Jewish attacks. “at Gibeon it was that Cestius stayed two days, and was in great distress to know what he should do in these circumstances; but when, on the third day, he saw a still much greater number of enemies, and all the parts round about [Gibeon R.O] full of Jews, he understood that his delay was to his own detriment, and that if he stayed any longer there, he should have still more enemies upon him” (BJ II, xix,7).

At the end of the lull, Cestius decided to resume the retreat and lead his army again via the Beth-Horon pass.

Since the Romans already encountered very strong Jewish resistance at the pass on their way to Jerusalem. What made them choose the same route back even

41 BJ II, xix, 7. Josephus mentioned a lot of weapons, body protection equipment and even heavy siege engines that fell into the Jews’ hands. The Romans were forced to kill all the mules and pack animals in the baggage convoy for fear of falling into Jewish hands, but mainly because they delayed the pace of withdrawal. The animals that carried the artillery and heavy machines were excluded from Josephus’ account. He explained that the Romans attributed Supreme Importance to them. These activities clearly reflect the Romans’ great pressure and sense of loss. This action did not achieve its objective, since Josephus said (II, xix, 9), that during the final stage of the retreat on the slope of Lower Beth-Horon in the direction of Antipatris: “*Insomuch that the soldiers, through the astonishment and fear they were in, left behind them their engines for sieges, and for throwing of stones, and a great part of the instruments of war. All these were taken by the Jews that day for booty, and used later on against those who abandoned them.*” ... “*So the Jews went on pursuing the Romans as far as Antipatris, after which, seeing they could not overtake them, they came back, and took the engines, and spoiled the dead bodies, and gathered the prey together which the Romans had left behind them, and came back running and singing to their metropolis.*”

42 The same Turranius Priscus served as *legatus legions et prefectus castrorum*. He was therefore the senior and most experienced commander in Gallus’ army chain of command. Mason (2016, 289) believed that Priscus was the commander of the Sixth Cohort of the XII Legion, and „may have been the same man who served as the commander of Castius’ army camp (*prefectus castrorum*).

43 BJ II, xix,7-8; Suetonius, Life of Vespasian, 4. For the significance of the loss of the ensigns, see Luttwak 1982, 143 note 199. Luttwak believed that the defeat was so grave that even the legion’s sacred eagle banner was lost; Goldsworthy 1996, 88-87. For a discussion of the XII Legion’s eagle loss see Mason 2016, 282, note 3.

44 Luttwak 1982, 143 note 199.



though they had other options?<sup>45</sup> This question is very critical, yet difficult to answer.<sup>46</sup> In hindsight, it was another mistake, because the Jews predicted this move and got organized on this route and totally disrupted Gallus' army retreat. Josephus noted that the retreat continued in the Gibeon-Beth-Horon section, to increase the speed of the army's march to the mountainous pass Cestius ordered (BJ II, xix,8): "to cast away what might hinder his army's march."<sup>47</sup>

From the moment his forces began to descend the Beth-Horon ascent, especially in the above-mentioned narrow sections (Fig. 5), Josephus described them as: "When they were penned up in their descent through narrow passages", they encountered a Jewish ambush that blocked their continued descent. At the same time, the Jews also blocked the retreat path at the rear of the long and narrow Roman column (at the top of the ascent) trapped inside a low valley surrounded by high extensions where entry and exit were blocked.

At the same time, a heavy Jewish offensive began from all sides, including the Roman rearguard at the top of the passage. According to Josephus' dramatic description (BJ II, xix,8), the Jewish insurgents struck at the legionnaires from a distance by hurling stones and other objects. This is a picture of a killing field in which the Romans suffered a barrage of spears and arrows.

"The whole [Jewish] multitude extended themselves over against the neck of the passage (The deep gorge through which the road passed) and covered the Roman army with their arrows and slingstones."

Due to the difficult terrain and combat conditions, the legionnaires with their heavy armour could not attack their light-footed enemies, certainly not on the ascent of the steep extensions and hills where the Jews stood.

The rest of the description emphasizes the gravity of the Romans' situation:

"And the Jews almost taken Cestius' entire army prisoners, had not the night come on, when the Romans fled to Beth-Horon, And the Jews sized the places round about them and guarded the valley's exits."

In such a tough situation, there was no combat drill or equipment, rules of discipline, or organization that could have saved the Roman army And brought about a different result than that described by Josephus. Fighters' formation ranks were broken and their flight from the battle zone was disorganized, resulting in many casualties and deaths

At nightfall, when the surviving forces arrived at the Beth-Horon camp, after assessing the situation Cestius found a severe one, which would prevent him from forging a path with his remaining forces and extricating the rest of his army from the siege in Beth-Horon. Josephus notes that by adopting an exceptionally sophisticated and surprising distraction, the Romans extricated their army from the critical situation and secretly escaped.

A single brigade was chosen from the army to mislead the Jews and cause them to believe that the Romans were still in the besieged camp. Gallus ordered a handful of the remaining soldiers: "that when they went up to the morning guard, they should erect their ensigns, that the Jews might be made to believe that the entire army was there still" (BJ II, xix,9).

He made an unexpected move by the Jews and ordered the rest of the force to immediately continue a speedy retreat without a break under cover of night, from the Beth-Horon camp to the Coastal plain.

As expected, no good fate awaited the remaining troops in the camp. At dawn, it was destroyed. Assuming this account was true, by adopting this difficult and exceptional tactic Cestius saved the rest of his army from a severe blow in the best case, and almost certain destruction in the worst. It was among the few successful Roman maneuvers (and the last) during this campaign.

According to Josephus, by the end of the Cestius' campaign to quell the insurgencies in Judea, the Romans had lost a total of 480 cavalrymen and 5,300 infantrymen.<sup>48</sup>

### Conclusions and Summary

From the beginning, the colossal failure, which was the extraordinary result of C. Gallus' and the XII Legion's journey to Jerusalem, was a major factor and focus in the re-examination and analysis in these pages. In the search for the answer to the main question, what were the reasons for the withdrawal decision, and the journey failure, several directions were examined and checked. Overall and by retrospective assessment, the following insights and conclusions can be identified:

### On the tactical level

The Romans had theoretical and practical combat theories consolidated during hundreds of years of combat. Due to their experience fighting the Barbarian tribes in Europe and Asia, these methods should have been suited to the topographical problems and the Jews' combat methods. And beyond that.

The various military forces and tactical units composing Gallus' army were suited to multiple missions. This is in the sense that they could provide a solution to the variety of challenges and military problems<sup>49</sup> they encountered during the journey from Acre to Jaffa.<sup>50</sup>

The size of the forces and the number of soldiers allocated to the task were the source of the difficulty and the major mistake. In hindsight, the force proved insufficient to deal with several combat sectors simultaneously. In addition, the large army of Jewish rebels and fighters, which coalesced while events in Jerusalem and its environs took place. The problem of the limited scope of forces recurred in several cases and places throughout the campaign.

Yet the Roman force proved to have very well and immediate tactical ability that made up for faulty strategic planning (with an emphasis on choosing a long and difficult route, and an absence of intelligence about the Jews' intentions and capabilities). The Roman weakness was reflected in the lack of "field intelligence" and in planning which was the personal responsibility of Gallus, whose role as the general of the campaign was revealed here in its weakness, as it appears that the campaign was not properly planned.

In contrast, his soldiers responded well to the Jewish offensive and suited the Roman army's reputation. It may seem Gallus demonstrated initiative and functioned well in the field, or it was one of his deputy commanders or cavalrymen. Of course, this is relative to the battle circumstances, particularly on Mt. Atzmon and even more in Gibeon.

Some scholars felt that Gallus committed tactical errors and deviated from Roman combat theory in those problematic and difficult situations described and discussed by ancient writers and tacticians.<sup>51</sup> However, his tactical performance during the land-maritime operation to capture Jaffa attests to a high level of training and ability to coordinate fighting between maritime and ground forces, as it testifies to the Roman army's capability in terms of mobility and movement.

As stated, Gallus' army expedition proved tactically effective up until he entered Beth-Horon and Judean Hills Pass.

Heavy damage was caused by abandoning the baggage convoy as a result of deviating from Roman rules and regulations during the ascent to Jerusalem. This damage seems to have affected to an unknown extent the failure of the capture/siege of Jerusalem. It later

<sup>45</sup>There are at least four main access roads to Jerusalem: Roll 1976, 38-50; Finkelstein 1977, 174; Fisher et al. 1996.

<sup>46</sup> We should recall that we know very little of the conditions and circumstances in the field as perceived by the Roman commander during a time of pressure and distress, as he looked over the mass of Jews who surrounded the camp complex in Gibeon. This question seems to remain open to speculation.

<sup>47</sup> Additional actions ordered by Cestius to accelerate the retreat, see note 102.

<sup>48</sup> On top of that, we should add a large number of dead from the auxiliary units and the armies of the Eastern kings to these figures, which appear mainly to refer to the XII Legion and the cavalry. Despite the fact that Josephus does not mention them in this context. But since they constituted an integral part of Gallus' army, obviously they also suffered losses, probably many, mainly during the retreat.

<sup>49</sup> Heavy infantry (legionnaires) – for an ordinary battle formation. The light soldiers and bowmen were used to cover the heavy infantry, while the cavalry was used to ensure quick movement, to ensure the advantage on level ground, and to engage in pursuit of the enemy.

<sup>50</sup> One example was the combined activation of the light and heavy infantry, bowmen and various cavalrymen, in battles at Mt. Atzmon, in which combined Roman troops turned an initial Jewish victory into a defeat.

<sup>51</sup> Shatzman 1983a, 310; Onasder, 5, 1-8, 7, 1-2; Frontinus, a, 4,6; see also, above, notes 72-73, 77.

led to a series of decisions, which only exacerbated the Romans' failure and defeat.

### **Cestius Gallus' functioning as the senior commander in the field**

Some scholars thought Gallus himself could not be classified as a "senior military commander" or lacking in command experience.

Based on the conjecture that he served in the civil administration rather than the military command (before being appointed the 'Syrian governor'). They saw that as one of the main reasons for Roman failure.<sup>52</sup> And even concluded that Gallus found himself involved in an intense and challenging war campaign without sufficient warning while lacking the military background and skills to deal with this situation.

The last conclusion is actually based on a lack of information, or partial information, and cannot be definitively determined. To the same extent, it can be assumed that Gallus had a commanding military background and experience, but those details were omitted or not kept/mentioned. In addition, even if Gallus had been considered "an experienced Roman general," as they put it, it doesn't seem likely that this would have helped him survive the Jewish offensive and ambush at Gibeon and in the Beth-Horon hasty retreat.<sup>53</sup>

In hindsight, it is clear that the Roman political leaders behind the decision to dispatch the campaign under Gallus' command (he probably was among them...), erred in their "Intelligence assessment."

the composition of Gallus' troops suffered from a faulty assessment of the size and strength of the Jewish resistance in Judea, and the Jerusalem area in particular. Josephus' description of the battles around Jerusalem indicates that the Jews controlled the entrances to Jerusalem due to their very large numbers. These numbers

were reinforced by their fervour and religious hatred of the Romans. This unexpected factor can sometimes tip the scales in favor of the enemy even when faced with an experienced and skilled commander and army.

The time factor worked against the Romans with the approach of the cold and rainy season. Gallus' army could not function for long without suitable logistical means. On top of that was a fear of being cut off from the coast or a lack of reinforcements due to winter conditions. This would have prevented the arrival - of forces and supplies in the hard and steep ascents of the Jerusalem Hills - or to retreat.<sup>54</sup>

The narrative of Josephus portrays Gallus as a failed general and in a very negative light. However, the pages above have shown through textual analysis in several instances, that it is a tendentious description, motivated by foreign motives, which are unrelated to the matter, are unknown or can only be guessed at. But one motive is very obvious - highlighting the superior military command of his Flavian patrons.

Gallus' decision to ascend straight to Jerusalem to nip the revolt in the bud was a proper strategic decision which indicates a correct and realistic view of the situation. However, he failed to assess the popular Jewish resistance and therefore did not control the area in his rear. This was reflected in the revolt in the Galilee, the surprise attack by Simon Bar-Giora on the baggage convoy and in my understanding, during the siege of Jerusalem as well (which Josephus doesn't discuss).

Regarding the main arguments about Gallus' misfits as a general/supreme leader, claims that in my opinion are unfounded. In support of this view, a factor from the psychological field was brought up here for the first time, with considerable potential to influence Gallus' decisions.

<sup>52</sup> Shatzman 1983a, 311; Gichon 1981a, 60; Goodman 2007, 16, 560.

<sup>53</sup> Goldsworthy 2007, 53-54. Reinforcement of this can be seen in the famous debacle of Germany's procurator, Publius Quinctilius Varus. Varus who in the past also served as governor of Syria, was considered a very experienced general and military governor, and yet he erred and led his army into the famous and lethal ambush set for him by the Germans in the Teutoburg Forest (Saltus Teutoburgiensis), from which he could not extricate himself. As a result, he lost his life and most of the members of the three legions he commanded. Gallus found himself in a similar situation. Mason (2016, 282) believed that this was a failure under similar circumstances.

<sup>54</sup> Gichon 1981a, 56, notes 76, 67; Safrai 1981, 320. Even if the army had all the appropriate logistical means, it was still not common in Roman doctrine to fight in such conditions, winter conditions in particular.

In an analysis of the military conduct until the Beth-Horon battle, I have suggested an array of considerations that could be described as, a system of psychological pressures and constraints, that most probably lay behind the general's thoughts and considerations:

A) The fact that his reaction as supreme governor responsible for events in Syria and Judea came very belatedly - to a degree critical relative to the start of the Jewish uprising. Gallus most likely aspired throughout his campaign to compensate for the delay in the timetable (also due to the approaching winter) and to achieve a victory in Judea as fast as possible. Naturally, someone who acts hastily is more likely to make mistakes and his judgment is likely to be adversely affected.<sup>55</sup>

B) On the political level, Gallus must have been well aware during his campaign (perhaps even before it began) that Emperor Nero considered him primarily responsible for the dangerous situation created in Judea because he didn't deal with it in the early stages. This emperor had no patience with his subordinates. On the contrary, he was known to be unpredictable and infamous for his political liquidations and purifications. This was mainly based on simple accusations far less serious than Gallus' political-military embroilment in Judea.

From this, we can conclude that Gallus was forced to act under unusual and exceptionally strong pressure. The only solution was to try with all his might, at any price, to rectify the situation. This could be done with a speedy victory and the total suppression of the Jewish revolt. In light of a survival consideration of this kind, Cestius understandably made decisions that seemed right in the unexpected situations in which he found himself.<sup>56</sup>

His decisions and actions may have been "calculated risks" - and uncalculated ones, but under the circumstances Gallus had no choice, hoping the gamble would succeed. When it became clear that the gamble had failed, few would want to swap places with him.

Judicial observation of Gallus' actions (sometimes as 'wisdom after the fact'), and describing them as "poor and erroneous," as did Josephus and in his wake, modern scholars at a distance of many years from actual events, is extremely problematic and requires finding another explanation as suggested above (the coming winter, home front attacks and lack of siege and manpower). Gichon (1981a, 60, note 97) calls our attention to Tacitus' short description of the Gallus campaign (*Historiae* V, 6;10). The fact that Gallus served as governor of this province until his death in the winter of 66-67 proves that the emperor and his advisers did not think Gallus' decision to retreat in itself was a mistake.

He concluded that there were instructions for a "temporary retreat" in order to guarantee the welfare of the legions, as a proper and even desirable tactical action. Gichon's discussion made the critical argument that rather than a calculated and orderly tactical retreat based on Roman military rules, Cestius' retreat was uncontrolled and unordered, leading to a disastrous flight with many losses in life and equipment, and a collapse of the military column.

In describing the circumstances of Cestius' death, Tacitus (*Histories*, V, 10) used the expression: "Fato aut Taedio accidit"<sup>57</sup> which means "naturally or from disgust." Some believe that the meaning of "disgust"

<sup>55</sup> There is already possible proof of that based on his overly swift movement on the margins of the Galilee to the coastal plain. As a result, his army had to return to the Galilee/Mt. Atzmon to quell a renewed insurgency that arose. His hasty advance prevented him from dealing more thoroughly with the rebellion in Galilee.

<sup>56</sup> These considerations were foreign to his military mission and could easily lead to serious errors in his tactical-military judgment. See Mason (2016, 315-334), for an extensive discussion of Gallus' complicated political situation under Nero's horror reign. (p. 319): "the time of Cestius and Florus' appointments (63/64 CE), then, was one of great fear and uncertainty in elite Rome. Tacitus claims that Nero's actions installed fear in the upper classes and that they in turn supported intrigues against the emperor." And concerning the political danger posed to Gallus in carrying out his journey: "Cestius had every reason to be cautious about embarking on any kind of noticeable venture..." As for the complicated political relationship between Gallus and governor Florus: he must have been as concerned as Galba about Nero's procurator in his province (Florus, R.O), who could turn informant in a moment"... "the details are lost to us, but these political realities must have factored into Cestius' calculation." (p. 324): "but they remained vulnerable to senatorial informers and freedman and procurators of Nero such as Gessius Florus." In this context, it is easy to understand the elderly Cestius' extreme caution at such a precarious time in the relation between Nero and the senatorial class. He was in a difficult spot."

<sup>57</sup> In some translations, such as Penguin, London, 1995, it translates: „died of a natural death, or chose to commit suicide as a martyr.“ the implied possibility, He chose a sacred death to save his lost honor as a nobleman of high status who failed, as was customary in Roman culture.



is suicide.<sup>58</sup> If that is the case, it was evident that over time Gallus was personally accused of failure.<sup>59</sup>

Josephus chose to mention that Emperor Nero understood the dimensions of Gallus' defeat and the gravity of the political situation that ensued. He said in response to the news "what had happened was rather owing to the negligence of the commanders, than to any valour of the enemy." (BJ III, I,1).

Finally, it should be noted that the Jews were unable (for reasons unknown at present) to prevent the breakthrough of Cestius' army from Beth-Horon strait to Antipatris, when Gallus carried out his outstanding diversion maneuver, which may have saved his forces from total destruction.

### The campaign's strategic-political results

In Roman military terms, such a military failure was a serious blow, but it could easily be overcome. But for the Jews, the victory greatly encouraged and strengthened the extremists. Jewish rebels received increasing support for their victory, which gave them a propaganda victory and a morale booster. They believed that the downfall of Gallus' army opposite Jerusalem's walls was clear proof of the fulfilment of the messianic hope. It was also proof of God's intervention of his followers in their war against the evil and impure Roman Empire.

In fact, from an overall perspective, we cannot ignore the fact that never, before, or since, did the Jews achieve a clear victory over a Roman army of significant size. In the internal battle for the support of the Jewish nation, the support for the rebels continued to increase substantially.<sup>60</sup> Josephus' words speak for themselves: "But as to those who had pursued after Cestius, when they were returned back to Jerusalem, they overbore some of those that favoured the Romans by violence, and some them

they persuaded to join with them, and got together in great numbers in the temple, and appointed a great many generals for the war..." (BJ II, xx,3)

In Roman political terms, the situation worsened and turned into a disgraceful defeat (which also damaged the Roman army's reputation). The momentum and the window of opportunity for swift military action that would lead to suppression of the revolt passed and was lost. Now it would take the Romans three years of tough, expensive, and prolonged fighting, and the allocation of considerable resources and military forces in order to restore the situation to its previous state.

In addition, the military crisis that developed in Judea could affect the eastern part of the empire, where there were provinces that were considered civilized with well-developed urban culture, and assets. Therefore easy to rule and for the most part had little desire for combat. The news of the Roman defeat in Judea, and worse, the Jews' defiant declaration of political independence had negative diplomatic and political consequences. This was mainly a blow to the Roman Empire's prestige and authority.

But more importantly, Roman deterrence in the eastern part of the empire could weaken.<sup>61</sup> The emperor who ruled the empire, and the governing bodies subordinate to him, were almost certainly aware of these serious consequences. When Rome's military prestige was damaged, the Romans customarily "repaired the damage" to their image with wartime acts of retaliation. These acts usually included collective punishment, designed to eliminate any opposition to their authority and rule and to restore deterrence in the provinces. This was considered standard behavior. In itself, this act of punishment required an extensive military campaign and numerous forces to execute it.

<sup>58</sup>According to Mason (2016, 325-326), the possible explanation for „disgust with life“ is that Cestius' failure was resounding and impossible to conceal. Moreover, Gichon (1981a, 60, note 97) also claimed that Tacitus' description left only the question of whether this suicide resulted from a personal impulse (either before or after Cestius was replaced by the next general), as well as the assumption that the „decision“ to commit suicide was ordered by the murderous Emperor Nero. It can be found in Josephus that Gallus was very afraid of Nero's anger, as well as of what awaits him when Nero finds out the outcome of the battle (BJ II, xx,1). „Cestius sent Saul, and his friends (Jews who supported Rome, who fled from the extremists in Jerusalem when Cestius' campaign failed, and joined his forces), at their own desire, to Achaia (Greece), to Nero, to inform him of the great distress they were in, and to lay the blame of their kindling the war upon Florus, as hoping to alleviate his own danger, by provoking his indignation against Florus.“

<sup>59</sup> Mason 2016, 325, 282-283.

<sup>60</sup> Rapoport 1983, 33; Goodman 2007, 425.

<sup>61</sup> Goodman 2007, 425.

Clearly, Cestius Gallus' campaign failure was the cause of all that. The situation that resulted required taking immediate military steps, while finding a strategic solution that differed from that adopted until now. This was to quell the Judean insurgency. Instead of being a marginal and local tactical issue, quelling the Jewish revolt turned into a burning large-scale political crisis on a strategic level. Based on past precedents, it



Fig. 9: a gold coin, "ivdaea recepta" (Judea recapture again) stroke in honour of the Roman victory over the Jews. The coin is one of a kind. Left: The portrait of Emperor Vespasian, who rose to power in 68 CE the third year of the Jewish Revolt. Right: an image of a woman representing the conquered Province of Judea with the above inscription. ivdaea recepta, which was typical at the time to describe a recapture of a province that was a Roman Province before. The coin was struck in Jerusalem or Caesarea Maritima in 70 CE and was in use shortly after the first Jewish revolt's oppression. (Israel Museum, Jerusalem 2015)

is known that Roman military retaliation, especially following a defeat that could not be concealed, was usually brutal and powerful.

The Roman Empire in the first century CE had no problem allocating those forces and resources. It took a very short time to set up a new command and special expeditionary force headed by one of the most experienced Roman generals and commanders at the time: Titus Vespasian Flavius.

The Gallus campaign lessons were well learned by the Roman authorities and by the new general. This was reflected in an increase in the number of legions in the expeditionary force from one to three. In the army of

Titus (who finally captured Jerusalem), there were even four legions, which constituted 10.3% to 13.8% of all the legions at the disposal of the Roman Empire during the Flavian emperors' reign.<sup>62</sup>

This is evidence that the Romans changed their understanding of the potential danger of the Jewish enemy and its ability to cause damage. In other words, the potential threat was seen as far more significant than it was considered before Gallus' defeat. We can also see a change in the Roman assessment of the quantity and scope of the military forces required, in their opinion, to bring about the total suppression of the Jewish revolt. This change can also attest to the major repercussions of the outcome of the battle of Gibeon. It can also attest to the difficult battle that took place during Gallus' army's withdrawal from Jerusalem.

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<sup>62</sup> Luttwak 1982, 27. The Roman Empire had 29 standard legions at the time. And especially the table comparing the composition of forces among the armies of the various generals: Gallus and Vespasian in Ortner 2018, 220-223.

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