



# STRATEGY AND STRUCTURES ALONG THE ROMAN FRONTIER

HARRY **VAN ENCKEVORT**, MARK **DRIESSEN**, ERIK **GRAAFSTAL**,  
TOM **HAZENBERG**, TATIANA **IVLEVA** AND CAROL **VAN DRIEL-MURRAY** (EDS)

**LIMES XXV** VOLUME 2





# **STRATEGY AND STRUCTURES ALONG THE ROMAN FRONTIER**





# STRATEGY AND STRUCTURES ALONG THE ROMAN FRONTIER

HARRY **VAN ENCKEVORT**, MARK **DRIESSEN**, ERIK **GRAAFSTAL**,  
TOM **HAZENBERG**, TATIANA **IVLEVA** AND CAROL **VAN DRIEL-MURRAY** (EDS)



**LIMES XXV** VOLUME 2

© 2024 Individual Authors

Archeologische Berichten Nijmegen 10

Published by Sidestone Press, Leiden  
[www.sidestone.com](http://www.sidestone.com)

Lay-out & cover design: Sidestone Press

Photograph cover: Photo by Klaas Doting of 'Het gezicht van Nijmegen' (The Face of Nijmegen), a nearly 6 m high artwork by Andreas Hetfeld.

ISBN 978-94-6426-278-0 (softcover)  
ISBN 978-94-6426-279-7 (hardcover)  
ISBN 978-94-6426-280-3 (PDF e-book)

DOI: 10.59641/l1634ox



*Nijmegen*



# Contents

<b>Preface</b>	<b>11</b>
<b>PART 1: ROMAN IMPERIALISM AND EARLY FRONTIER FORMATION. THE CREATION-RESHUFFLING OF TRIBAL (ID)ENTITIES</b>	<b>13</b>
<b><i>From deserta Boiorum to civitas Boiorum. Changes in the settlement structures in Northwest-Pannonia in the 1<sup>st</sup> century AD</i></b>	<b>15</b>
Szilvia Bíró	
<b><i>Making Suebi. Roman frontier management in the southern Upper Rhine valley in the 1<sup>st</sup> century AD?</i></b>	<b>25</b>
Lars Blöck, Alexander Heising, Uwe Xaver Müller and Johann Schrempp	
<b><i>Westwards! Population dynamics along the Middle and Upper Rhine during the 1<sup>st</sup> century BC</i></b>	<b>33</b>
Arno Braun and Sabine Hornung	
<b><i>The Cugerni and the reshuffling of tribal (id)entities on the Lower Rhine</i></b>	<b>43</b>
Marion Brüggler	
<b><i>The siege of Cerro Castarreño. Assessing the impact of Rome on the transformation of an archaeological landscape between the river Duero valley and the Cantabrian Mountains (Spain)</i></b>	<b>53</b>
José M. Costa-García and Jesús García Sánchez	
<b><i>Agri vacui. De- and repopulation of the Dutch coastal area c. 50 BC-AD 100</i></b>	<b>63</b>
Jasper de Bruin	
<b><i>Military forts from the period of the Principate in the Balkan interior</i></b>	<b>69</b>
Damjan Donev	
<b><i>Changing landscapes on the northern frontier. Outline and preliminary results of the 'Beyond Walls' project</i></b>	<b>79</b>
Manuel Fernández-Götz, Dave Cowley, Derek Hamilton, Ian J. Hardwick and Sophie McDonald	

<b>Immigrants from the <i>Barbaricum</i>. Controlled colonisation of <i>deserta</i> in the Augustan period. A forgotten aspect of early Roman frontier policy</b>	<b>89</b>
Erik Graafstal	
<b>Before the Romans, their coins came. Hoards of Roman <i>denarii</i> ending with coins of Augustan period in Late Iron Age South-Carpathian <i>Dacia</i></b>	<b>99</b>
Dragoş Măndescu and Ioan-Andi Piţigoi	
<b>The development of a border zone in a desert environment. The example of <i>Tripolitania</i></b>	<b>107</b>
Michel Reddé	
<b>Indigene und exogene Bevölkerungsgruppen im Alpenvorland und die Organisation der Provinz Raetia et Vindelicia während des 1. Jahrhunderts nach Chr.</b>	<b>115</b>
Bernd Steidl	
<b>Evidence for immigration in the Batavian region in the pre-Claudian Era. The study of large handmade pottery assemblages using a combination of traditional and science-based techniques</b>	<b>125</b>
Julie Van Kerckhove and Gerard Boreel	
<b>PART 2: RECENT RESEARCH INTO THE ROMAN MILITARY ACTIVITIES DURING THE REPUBLIC. ARCHAEOLOGICAL EVIDENCE</b>	<b>135</b>
<b>Roman troops in high mountains. The challenge of establishing Roman hegemony in the Poenine Alps</b>	<b>137</b>
Romain Andenmatten, Tristan Allegro, Alessandra Armirotti, Gwenaël Bertocco, Fabien Langenegger and Michel Aberson	
<b>The archaeological remains of the Cimbrian Wars. The Lampourdier site and the Battle of Arausio (105 BC)</b>	<b>147</b>
Loïc Buffat, Yahya Zaaraoui and Alexandre Gravier, in collaboration with Nathalie Ginoux, Marion Gourlot, Marie-Laure Le Brazidec and Audrey Renaud	
<b>Basque Country (Iberian Peninsula), rearguard of Rome in the Cantabrian Wars?</b>	<b>157</b>
Jagoba Hidalgo-Masa	
<b>The internal layout of a Roman camp of the mid-1<sup>st</sup> century BC. Concerning camp F at Lautagne (Valence, Drôme, France)</b>	<b>165</b>
Magalie Kielb Zaaraoui, Loïc Buffat and Yahya Zaaraoui	
<b>Ulaka site complex. Late Republican and Augustan Roman military earthworks and small finds</b>	<b>175</b>
Boštjan Laharnar and Janka Istenič	
<b>The Roman-Republican fortress at Cáceres el Viejo (Cáceres, Spain). Old theories and new perspectives</b>	<b>185</b>
Carlos S.P. Pereira	



<b>The <i>castellum</i> of Puig Castellar de Biosca. A Roman Republican fortress in the 1<sup>st</sup> century of the conquest of <i>Hispania Citerior</i> (180-120 BC)</b>	<b>195</b>
Esther Rodrigo Requena, Núria Romaní Sala, César Carreras Monfort, Joaquim Pera Isern and Laia Catarineu Iglesias	
<b>A maritime frontier in <i>Hispania Citerior</i> during the Sertorian Civil Wars. A geostrategic story</b>	<b>203</b>
Feliciano Sala-Sellés, Sonia Bayo Fuentes and Jesús Moratalla Jávega	
<b>New evidence of Roman military activities between the rivers Krka and Cetina (Dalmatia, Croatia)</b>	<b>211</b>
Domagoj Tončinić, Joško Zaninović, Domagoj Bužanić and Mirjana Sanader	
<b>PART 3: FORTRESSES AND MILITARY INSTALLATIONS. STATE OF RESEARCH</b>	<b>219</b>
<b>The Roman fortress of <i>Mogontiacum</i>/Mainz. Revised data of the defensive works and their chronology</b>	<b>221</b>
Daniel Burger-Völlmecke	
<b>Tel Shalem. A Roman military camp in the Jordan valley</b>	<b>231</b>
Eckhard Deschler-Erb and Sebastian A. Knura	
<b>Why did the Roman army leave Nijmegen?</b>	<b>239</b>
Paul F.J. Franzen	
<b>The three fortresses of <i>Legio II Italica</i> in the province of <i>Noricum</i>: Ločica (Slovenia), <i>Lauriacum</i> and Albing (Austria)</b>	<b>247</b>
Stefan Groh	
<b>Pictured fortifications in Roman art as the source for their reconstruction</b>	<b>257</b>
Dmitry A. Karelin and Aleksandra E. Medennikova	
<b><i>Arae Flaviae</i> / Rottweil. A Flavian fortress on the Upper Neckar</b>	<b>271</b>
Klaus Kortüm	
<b>Amphora studies in Xanten. From the local Roman legionary occupation to the imperial supply system</b>	<b>281</b>
Matheus Morais Cruz	
<b>Roman practice camps near <i>Legio</i>. Trobajo del Camino, San Andrés de Rabanedo and Oteruelo de la Valduncina, León, Spain</b>	<b>287</b>
Ángel Morillo, Brais X. Currás, Almudena Orejas and Agostino Nobilini	
<b>The location of the <i>Legio X Fretensis</i> fortress in Jerusalem after 70 AD. Back to the unsolved question – a new proposal</b>	<b>297</b>
Ran Ortner	
<b>The fortress of <i>Vindonissa</i>. State of research</b>	<b>309</b>
Jürgen Trumm	

<b>Valkenburg ZH. An unexpected fortress near the mouth of the river Rhine (The Netherlands)</b>	<b>319</b>
Wouter K. Vos, Edwin Blom and Jasper de Bruin	
<b>What did and what did not change in the fortification system of <i>Novae</i> (Svishtov, Lower Moesia). The legionary base of <i>Legiones VIII Augusta</i> and <i>I Italica</i></b>	<b>329</b>
Piotr Zakrzewski	
<b>PART 4: FINES. THE MECHANISMS AND POLITICS OF FRONTIER COLLAPSE, AND THE AFTERLIFE OF FRONTIER INSTALLATIONS</b>	<b>341</b>
<b>L'abandon des frontières dans le nord-ouest de la Gaule: le rôle des Francs</b>	<b>343</b>
Raymond Brulet	
<b>The abandonment of Roman military installations in the river Trebižat valley (Bosnia and Herzegovina)</b>	<b>351</b>
Tomasz Dziurdzik, Michał Pisz and Mirko Rašić	
<b><i>Apud limitem latina iura ceciderunt</i>. Processes of continuity and collapse on the middle Rhine frontier and its hinterland in late antiquity</b>	<b>357</b>
Ferdinand Heimerl	
<b>South Shields Roman fort as a case study in transition and abandonment at the end of Empire. An interim statement</b>	<b>365</b>
Nick Hodgson	
<b>The borderlands of Egypt's Western Desert in late antiquity</b>	<b>375</b>
Paul N. Kucera	
<b>Das spätrömische <i>castellum</i> auf dem Aachener Markthügel</b>	<b>383</b>
Andreas Schaub	
<b>The late antique fortified town <i>Castra Herculis</i> (?) in Nijmegen</b>	<b>393</b>
Harry van Enckevort	
<b>Late Roman fortifications in Popovac, Croatia</b>	<b>401</b>
Igor Vukmanić and Branko Mušić	
<b>PART 5: A FRONTIER ODYSSEY</b>	<b>409</b>
<b>Roman watchtowers in Mauretania Tingitana</b>	<b>411</b>
Maciej Czapski, Jakub Kaniszewski, Radosław Karasiewicz-Szczypiorski, Aomar Akerraz, Layla Es-Sadra, Fadwa Benjaafar, Sebastien Mazurek, Karol Bartczak, Natalia Lockley and Maciej Marciniak	
<b>Rediscovery of the Augustan findspot in Augsburg-Oberhausen (Bavaria, Germany)</b>	<b>419</b>
Sebastian Gairhos	
<b>Fearing the Parthian threat? Pontic-Cappadocian frontier area and Flavian military policy in the East</b>	<b>427</b>
Victor Humennyi	

<b>Cohorts of <i>Legio V Macedonica</i> in <i>Apsaros</i> (Georgia) and their building activity</b>	<b>433</b>
Radosław Karasiewicz-Szczypiorski, Natalia Lockley and Shota Mamuladze	
<b>A battlefield of the Dacian Wars</b>	<b>439</b>
Felix Marcu	
<b>The <i>Limes Moesiae/Mysiae/Mysiacus</i> and the <i>Limes Scythiae/Scythicus</i> according to the written sources. An overview</b>	<b>447</b>
Dominic Moreau	
<b>Die Ausdehnung und Grenzen der Provinz <i>Dacia</i></b>	<b>455</b>
Zsolt Visy	



# Preface

The 25<sup>th</sup> Limes Congress was held in the Lindenberg Cultuurhuis in Nijmegen from 21 to 27 August 2022. Two days were used for excursions to important sites along the Lower German Limes (see volume 1). During the remaining five days 37 sessions took place with 246 papers presented on a wide range of topics related to the frontiers of the Roman Empire. In addition, 27 posters, in which limes scholars presented their research, were displayed for the participants to view.

We are publishing 184 articles based on the papers and posters presented at the Congress in four separate, themed volumes. The papers in this volume are divided into five themes. The first theme explores Roman imperial imperialism, the early frontier formation and the creation and reshuffling of tribal (id)entities. The second theme focuses on Roman military activities during the Republic. Fortresses and other installations of the Roman legions are the subject of the third theme. The fourth theme focuses on collapse of Roman frontiers, and the afterlife of frontier fortifications. The papers collected under the final theme presents an odyssey along different parts of the Limes.

Harry van Enckevort, Mark Driessen, Erik Graafstal, Tom Hazenberg, Tatiana Ivleva and Carol van Driel-Murray



PART 1

**ROMAN IMPERIALISM  
AND EARLY FRONTIER  
FORMATION**

THE CREATION AND  
RESHUFFLING  
OF TRIBAL (ID)ENTITIES





# From *deserta Boiorum* to *civitas Boiorum*

Changes in the settlement structures in  
Northwest-Pannonia in the 1<sup>st</sup> century AD

Szilvia Bíró

Regarding the history of the 1<sup>st</sup> century BC, a place called *deserta Boiorum* occurs in the written sources. This area can be located somewhere in the northwestern part of the later Pannonia province. A couple of decades later, an administrative unit called the *civitas Boiorum* was established in the first half of the 1<sup>st</sup> century AD in Northwest-Pannonia too. It belonged to an administrative system, in which the boundaries of each unit were probably created respecting the previous ethnical/tribal borders. So the *civitas Boiorum* was formed on a territory, where the Celtic tribe of *Boii* was to be found around Christ's birth. The recent archaeological discoveries and results may help us to enlighten the process of how the previous tribal system integrated in and formed a part of the Roman province.

In the territory of *Pannonia*, many civilian settlements of Celtic traditions have already been identified, although no local antecedent settlement could have been documented. In these Roman civilian *vici*, the existence of the Celtic heritage could be detected both in the architectural technique and in the find material, moreover, the agricultural and/or industrial features are common on these sites. Besides, the Roman (import) finds have a lower proportion in their first periods. The earliest *vici* emerged mainly in the limes hinterland and their establishment chronologically corresponds with the first military installation (Bíró 2017, fig. 11-14 and 266-271; 2021, 81 and 82, fig. 8; Láng & Bíró 2018, 613-616.).

One of the best excavated civilian *vici* is located in Győr-Ménfőcsanak (fig. 1) in the hinterland of the military fort of *Arrabona* (Győr, HU). The settlement is one of the largest known *vici*: settlement features were documented on a more than 50 ha area (Bíró 2017, 341-342, no. 38, with the previous literature). The site, which was excavated in many seasons by several archaeologists, has not been fully evaluated yet. More than 400 sunken-featured buildings (pit houses) can be dated to the Roman Period, besides wells, storage pits, and ditches were documented, mainly sunken features (Szőnyi 1996), although in the later periods (probably 3<sup>rd</sup> century) remains of a building with stone-foundations also came to light. The extension and the core area of the settlement changed over the centuries. The first inhabitants of the *vicus* may have arrived right after the arrival of the first permanent military unit (*Ala I Augusta Ituraeorum Sagittarium*) at *Arrabona* (Bíró 2022, 123). The heyday of the *vicus* was undoubtedly in the 2<sup>nd</sup> century AD when

## Szilvia Bíró

Iseum Savariense  
Archaeological Collection and  
Research Centre / Savaria  
Museum, II. Rákóczi Ferenc  
utca 6-8., Szombathely 9700,  
Hungary,  
szilvia.biro@hotmail.com

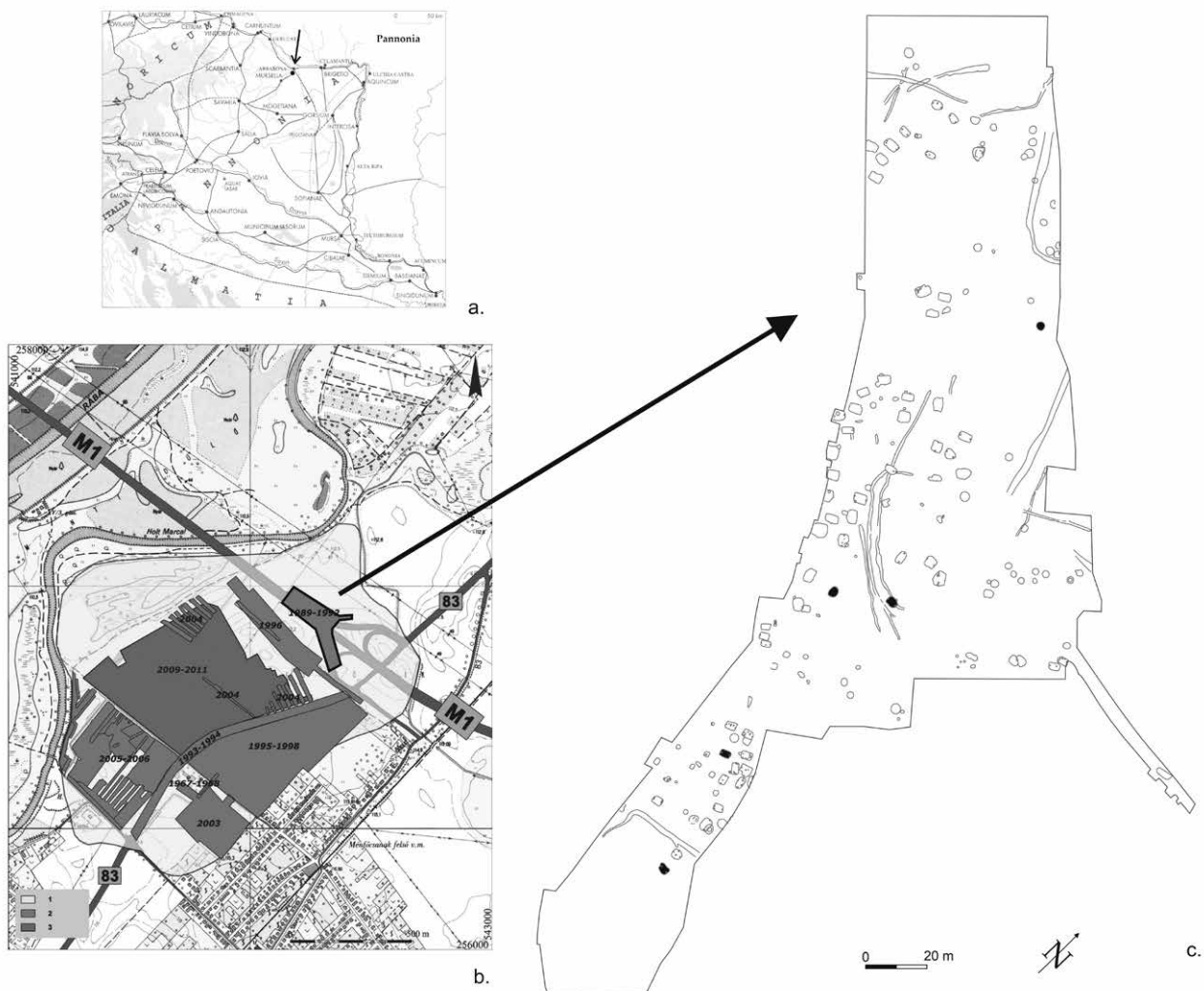


Figure 1. The location of the civilian vicus in Győr-Ménfőcsanak (HU) with the earliest features.

its extension might have reached its high point. Based on some finds and a Late Roman cemetery, the settlement was probably inhabited in the 4<sup>th</sup> century too.

The earliest features of the *vicus* can be located on a small sand-hill near the river Marcal along the *Savaria-Arrabona* route. Based on the sunken-featured buildings and other features, a loosely structured settlement may be reconstructed, which consisted of several households further from each other. The find material from the 1<sup>st</sup> century AD shows a very strong Celtic tradition, just like the sunken features (Bíró 2021, 66-70) (fig. 2). In these early features, two ceramic types are very common: the wheel-thrown, fine-tempered grey ware (fig. 3a), which often has burnished decoration, and a couple of painted ware and graphite-tempered sherds, which also came to light, have deliberate antecedents in the Celtic ceramics. The other type is hand-made, coarse kitchenware, often with plastic decoration, and especially in the first periods,

this type is tempered with shell fragments. This coarse vessel type has two main leading forms: the barrel-formed pot and the cups with transversal sides. This type occurs in the research as ‘Dacian’ ceramic, nowadays rather Dacian-like ceramic (fig. 3b). It is wide-spread in the LT D2 period, mainly in the North Transdanubian area (Horváth 1998, 75; 2004, 344-347) and north of the Danube (Luštiková 2007; Pieta 2010, 185), and always occurred together with the ‘classical’ Celtic material. In the early Imperial Age, the type came to light on sites where strong local (Celtic) tradition or even the continuation of Late Iron Age community can be assumed (Horváth 2004; e.g. the surrounding of Esztergom: Horváth 1998; around *Aquincum*: Ottományi 2005; Horváth 2007).

For the dating of the first horizon of the *vicus* in Győr-Ménfőcsanak, we may use the Roman import finds. There are at least ten coins dated to the Julio-Claudian-dynasty, besides a couple of thin-walled pottery, some *terra sigillata*

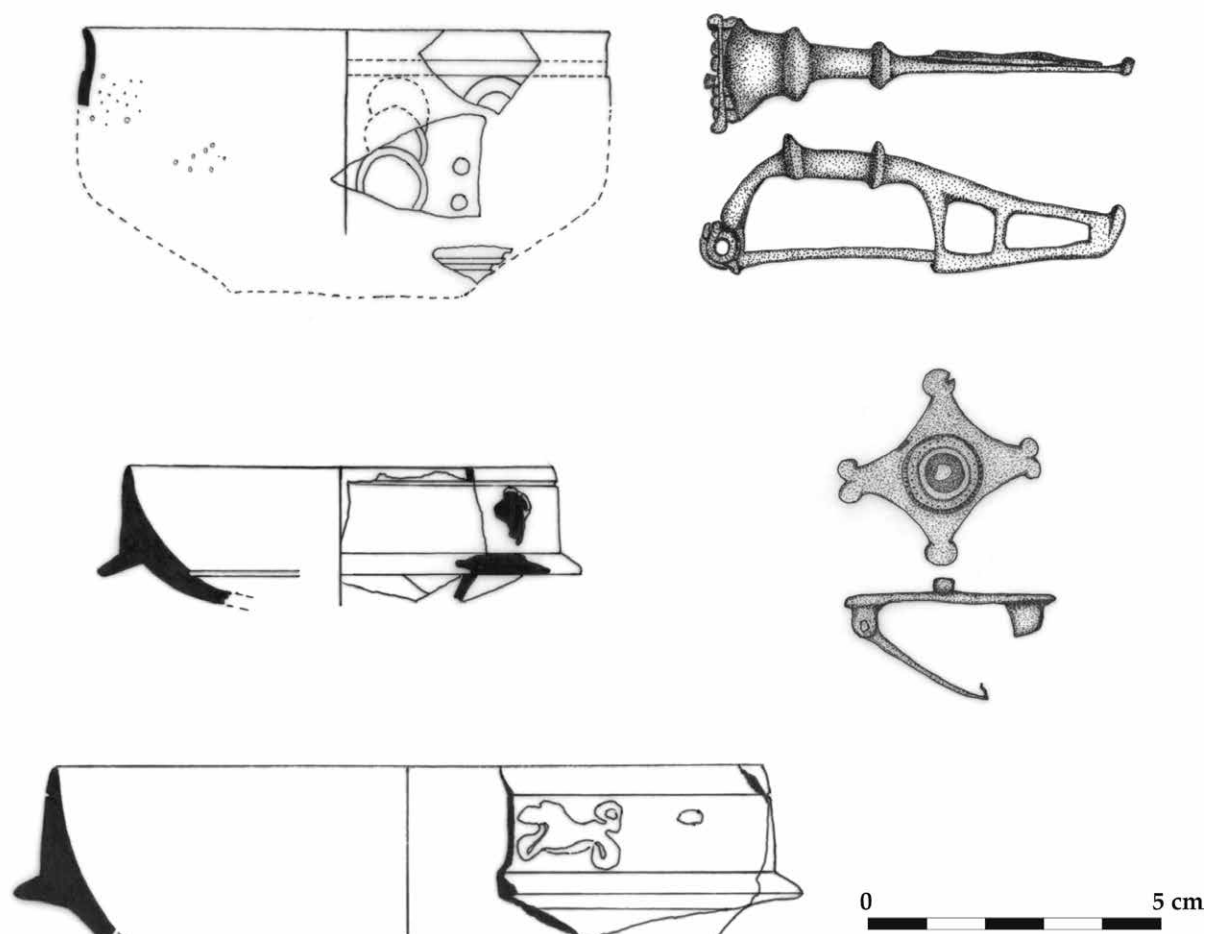


Figure 2. Selection of the earliest finds from Győr-Ménfőcsanak.

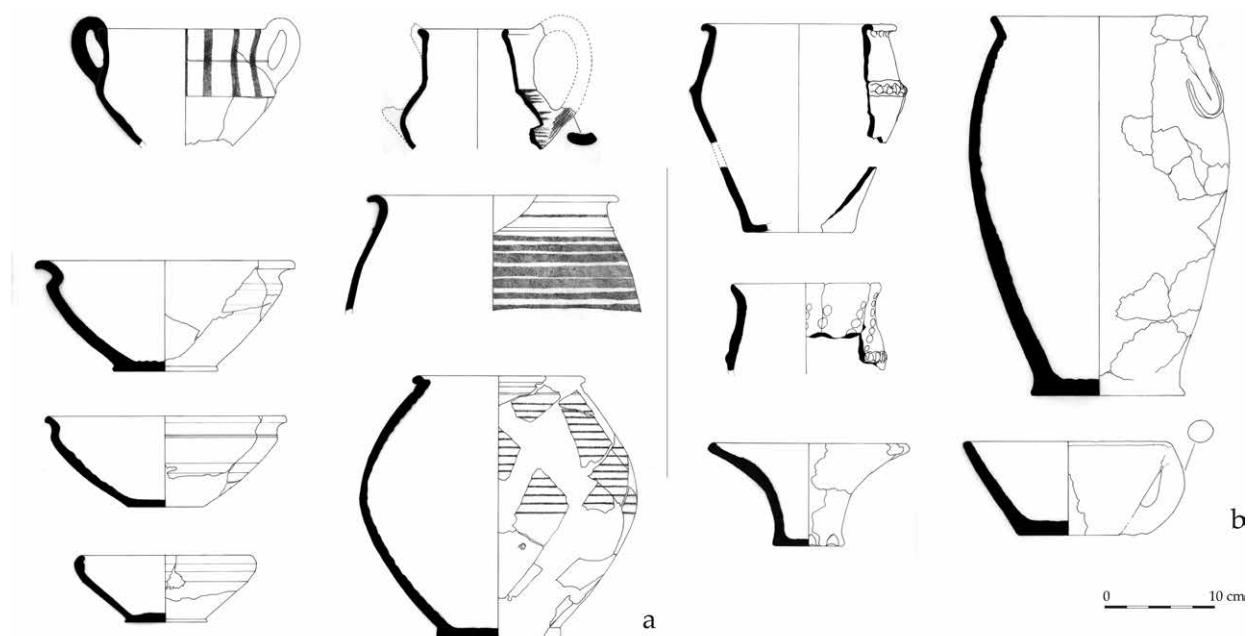


Figure 3. Selection of the fine-tempered grey (a) and the hand-made, Dacian-like ceramics (b) from Győr-Ménfőcsanak.

from the Po valley manufactures, and some brooches. Based on these finds, they came from features which were filled up during the Flavian Period, so they might have been established in the middle third of the 1<sup>st</sup> century AD.

Although the site is often mentioned as a surviving Celtic settlement, hardly any proof supports this theory. Very few finds came to light which could be undoubtedly dated to the LT D2 period: a lion-brooch (Bíró 2013, 249, type Riha 4.6; Feugère 18.b1, dating around 50 BC) and a couple of graphite-tempered sherds. All of them were discovered in features which could be dated to the 1<sup>st</sup> (or even 2<sup>nd</sup>) century AD, so they came from not contemporary fillings. Up till now, not a single feature could be dated to the LT D period. A Late Celtic settlement is also known from the territory (Tankó 2016, 2020), but it ended at the beginning of the LT C1 period, so between c. 200 BC and 50 AD, we need to count with a chronological gap on this site.

From where the very first inhabitants of the Roman *vicus* came to this area is not clear yet. The fort and the military *vicus* of *Arrabona*, which lay only a couple of Roman miles away from it, offered a power of potency and stable welfare. It was the largest and most important Roman settlement in the region for more than half a century, until the first Roman municipal rank was given to a settlement in the region, and until the limes section was arranged by further forts. So the first generation of the *vicus* in Győr-Ménfőcsanak may have gathered from smaller farm-like settlements from the surroundings too, and their people established a settlement along the *Savaria-Arrabona* road on a territory with prosperous agricultural and geographical advantages (Láng & Bíró 2018, 613-616).

Up till now, we know very few sites and archaeological material from the Small Plain (Kisalföld) region which can be dated to the LT D period. However, the amount of the finds from the earlier LT B-C is much higher (Bíró 2015, 71-73; Molnár & Ujvári 2020, 408-410). Regarding today's so-called Hanság and Rábaköz (along the river Rába) areas, as well as the Szigetköz és Žitný ostrov/Csallóköz (the two main islands in the Danube with many oxbows), it is assumed the marshy land was not available for settling down (Strobel 2015, 76), but this would not explain why these areas were densely populated in the previous and in the later periods. The exact date of the few known sites can be set generally to the LT D period due to the lack of good datable finds. An LT D2 coin hoard east of Győr proves that there must have been some kind of connection between the larger centres (Haupt & Nick 1997; Torbágyi 2017, 102-103). The known pieces of the hoard consisted of 21 Erawiscan denars, and based on the archetypes, they can be dated to the middle-third quarter of the 1<sup>st</sup> century BC.

The low amount of LT D sites in the region might be easily connected to the *deserta Boiorum*, which is mentioned in the written sources (Plinius the Elder *Historia Naturalis* 3.146, Strabo *Geographica* 7.1.5,

3.11 and 5.2; lastly summarized in Strobel 2015, 43-47). According to these, the Dacian expedition, during which Boirebistas the Dacian king subdued the *Boii-Tauriscan* alliance, devastated their territory. This act can be dated to the middle of the 1<sup>st</sup> century BC, but up till now, only some local data could support it archaeologically. The question of the *deserta Boiorum* is still under discussion: on one hand, it is interpreted purely as a topos created by the Romans (Kovács 2018, 166-167), but on the other hand, the area disposed over a lower population number (Zabehliczky & Zabehliczky 2004). But it is generally accepted that the *deserta Boiorum* can be located in the territory of the later Northwest-Pannonia. The whole rearrangement of the population might be connected indirectly to the expansion, which ended the *Boii* territorial power and influence and so the previous power hierarchy changed. It probably made some smaller groups and tribes 'visible' also for the contemporary historians and some power centres and *oppida* ceased or their impact reduced.

However, it seems to be archaeologically confirmed that much fewer archaeological sites are known from the Hungarian Small Plain during the 1<sup>st</sup> century BC and in the first decades of the 1<sup>st</sup> century AD. It also means that we can count on a less dense population in the region (and so in the hinterland of the limes) in the time when the first Roman installations and settlements emerged.

By investigating the wider area in this period, we can find different development and settlement structures. South of the site of Győr-Ménfőcsanak, a Late Celtic fortified settlement is known on the southern section of the river Rába. The chronology of the site near Nagysimonyi (earlier known as Ostffyasszonyfa) can be traced until Christ's birth since after this, the Romans already used the valley of the Rába as a marching route to its estuary in Arrabona (Károlyi 1985).

In the western zone, the Amber Road was much more frequented because of the long-distance trade. Along the Amber Road, more *oppida* signified the centres of a smaller region: Sopron-Burgstall (Patek 1982), Velem (Szabó 2015, 64-65, Tankó & Szabó 2019) and Schwarzenbach (Lobisser & Neubauer 1997). In this area, although smaller settlements came to light, their number is still quite low, especially in the Obernpullendorf-basin (Wallner 2013, 213-221.) and around the later *Savaria* (Gabler 1996; Szilasi 2011).

On the contrary, a dense settlement network can be reconstructed on the northern section of the Amber Road in the Danube region. In the triangle of the Bratislava-Devín-Vienna-basin (fig. 4), the central territory of the *Boii* can be assumed in the 1<sup>st</sup> century BC. Besides the *oppida* – Bratislava-Castle (Čambal 2004; Čambal *et al.* 2015; Musilová 2017a; 2017b), Bratislava-Devín (Pieta & Plachá 1999; Harmadyová 2017, 91-107), Wien-Leopoldsberg (Urban 1999) and Hainburg-Braunsberg

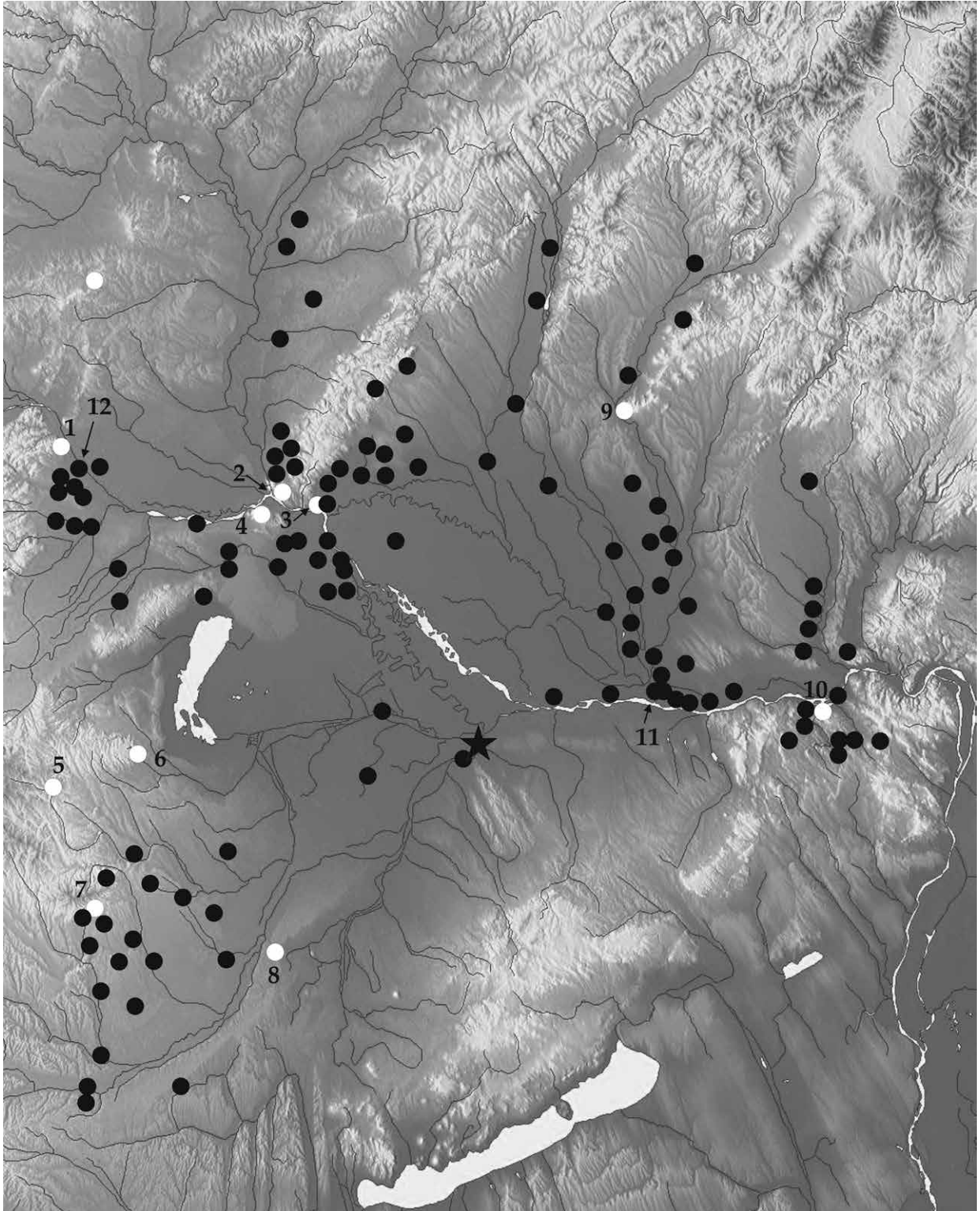


Figure 4. LT D2 sites in the NW-zone of the Carpathian Basin with the sites mentioned in the text. 1. Wien-Leopoldsberg; 2. Bratislava-Devín; 3. Bratislava-Castle; 4. Hainburg-Braunsberg; 5. Schwarzenbach; 6. Sopron; 7. Velem; 8. Nagysimonyi; 9. Nitra; 10. Esztergom; 11. Komárno; 12. Wien. The star marks the *vicus* of Győr-Ménfőcsanak.

(Urban 1995; Schmitsberger 2018, 140-144) – a larger flat-land settlement have been identified in Vienna. The find material testifies to very close connections to the Italian and Mediterranean regions, besides the common LT D feature of the finds (Adler-Wölfl & Mosser 2015, 35-38; Mosser & Adler-Wölfl 2018, 149-161). The settlement came to an end in the middle of the 1<sup>st</sup> century BC (Adler-Wölfl 2021), in the same time Bratislava-Devín became denser and it seems that the Bratislava-Castle area partly lost its influence. Bratislava-Devín got more attention when in 6 AD, Tiberius established a winter quartier for the legions against the German king, Maroboduus, here (*hiberna ad Danuvium* – Velleius Paterculus *Historia Romana* I2.110.1, a *Carnunto* – 2.109.5), which is also attested by the numerous small finds of the Augustan era (for Bratislava-Devín Gabler 2006, 81-84; Harmadyová 2017, 95 and for Bratislava-Castle: Strobel 2015, 55; Musilová 2017a, 14). These changes in the middle of the 1<sup>st</sup> century AD are often connected to the Dacian expansion. In Bratislava, a destruction layer can be linked probably to this incident, however, the *oppida* itself did not perish (Kovár *et al.* 2018, 54-57; Čambal *et al.* 2015, 231.) According to recent interpretations, the Dacian expansion might have been only a short-term military action, which did not induce any cultural changes in this Bratislava region (Čambal 2019, 123-126). However, the number of sites decreased generally in the second half of the 1<sup>st</sup> century BC (Pieta 2010, 85-88), and/or new ceramic forms appeared, especially in the Vienna Basin and around Bratislava, but this change can be interpreted as an increasing Norican impact (Čambal *et al.* 2016). Nevertheless, the *Boii* coin minting continued after the middle of the century, too (Kolníková & Kovár 2010; Čambal 2019, 122-123). Around the *oppida*, a dense flat-land settlement network could be reconstructed (Pieta 2010, fig. 29; Čambal *et al.* 2015, fig.1.), in these sites the different elements of the Dacian culture occurred from the beginning of the 1<sup>st</sup> century AD in the Celtic find material (e.g. Bernolákovo – Březinová & Daňová 2019). At first, they were only stray finds, but in the second half of the century, they appear in a larger amount. This Dacian-like material did not reach the Vienna basin, where up till now no such find has been identified (Adler-Wölfl & Mosser 2015; Mosser & Adler-Wölfl 2018).

To the east of the Bratislava region, a probably larger LT D2 settlement has been identified recently in Komarno, at the estuary of the river Váh (Gere 2013; Gere & Ratimorská 2017). Only small-scale excavations have been carried out since then, so its extension is not verified. Ceramic furnaces have been documented and based on the find material, the settlement continued till the last decade of the 1<sup>st</sup> century BC (Brezinová & Gere 2021, 158). Along the rivers Váh and Nitra, also many LT D2 sites are known, one of their centres was probably the fortified settlement in

Nitra (Bednár *et al.* 2005; Pieta 2010, 66, fig. 29). The sites are concentrated mainly along the rivers. A big difference to the Bratislava region in the find material is the appearance of the Dacian-like ceramics already from the beginning of the 1<sup>st</sup> century BC (beginning of the LT D2a). The Slovakian research identifies this phenomenon as a Celtic-Dacian horizon, and connects it to a strong Dacian cultural impact coming from the East, already earlier than the Boirebistas expedition (Pieta 2010, 46-54; for the ceramic Luštková 2007; for the Hungarian areas Visy 1995).

A similar settlement pattern can be reconstructed in the direction of the Danube Bend. Esztergom and its surroundings were densely populated without a break into the Roman Period, so on several sites it was possible to detect the direct continuity between the Celtic and the Roman horizons (H. Kelemen 1990; H. Kelemen & Merczi 2002; Horváth 1998), just like around the Gellérthill and its vicinity (Ottományi 2005).

As we have seen from the short description above, mainly the territory north of the Danube and the Danube Bend Region was densely populated in the last decades of the 1<sup>st</sup> century BC – the first decades of the 1<sup>st</sup> century AD. These sites show great resemblance to the earliest horizon of the Roman *vicus* at Győr-Ménfőcsanak. A large amount of the fine-tempered burnish decorated grey ware along with the handmade Dacian-like ceramics came to light from sunken-featured buildings, which building technique was also very populated in the LT period. From the Celtic settlement discovered on the same site, hand-made ceramic is very rare, and the Dacian-like decoration is completely unknown (Tankó 2020). So the assumption that the first generation of the Roman *vicus* has moved from a further territory, where this find material assembly is common, cannot be excluded.

For getting a complete impression, we need to complete the above-mentioned with the arrival of the first Germanic people to the north of the Danube. Although some Germanic stray finds can already been found from the 1<sup>st</sup> century BC in Bratislava (e.g. Čambal *et al.* 2013) and in Vienna (Adler-Wölfl & Mosser 2015, 22, fig.10; Mosser & Adler-Wölfl 2018, 157-161), the first settlements and graves which can be connected undoubtedly to the Germanic population can be identified only in the first decades of the 1<sup>st</sup> century AD (Krekovič 2009; Tejral 2009; Pieta 2010, 56-58). This chronology corresponds with the historical events reconstructed from the written sources.

## Conclusion

By the arrival of the Germans, two possibilities remained for the local (Celtic) people: either they form a joint community with the Marcomanns, who just moved from the north to their territory, or they look for their success on the other side of the Danube, where the Roman province is just about to form. The Amber Road

was already an important (marching) route for the Romans, who gradually took this zone under control after the military action in 6 AD, and the administrative organisation of the province started under the reign of Tiberius (Mráv 2013; Kovács 2018). The theory of resettling has already emerged earlier regarding the population continuation between the Bratislava region and the lake of Neusiedl (Fer-tő, Čambal 2019, 119.). According to this, the previous *Boii* centre located north of the Danube was shifted to the southern side, which can be also attested by the *Boii* inscriptions. Their occurrence in the hinterland of *Carnuntum* raises however some questions regarding the 'Romanisation' process, for they can be dated earliest to the Flavian time (Hainzmann 2015; for the question of the population continuation Gassner 2008). The arrival of the first Germanic groups corresponds more or less with the first Roman military installation along the Danube, which split the whole region into two zones for almost 400 years. A part of the Celtic-Dacian population on the northern side has probably strong connections to the already-known Roman culture (see the Roman imports) and could move inside the province. This possible resettling was also very beneficial for both sides; for the Roman sites, they disposed over great power of economical attraction, meanwhile, the so emerged settlements could form the agricultural background and supply of the military sites. Although this assumption cannot be undoubtedly proven, its possibility cannot be excluded. But from where the first people of the *vicus* of Győr-Ménfőcsanak arrived, needs to be researched in the future.

## Bibliography

- Adler-Wölfl, K., 2021: Neues zur spätlätènezeitlichen Siedlung am Rochusmarkt in Wien 3. Campana und <sup>14</sup>C-Daten, *Fundort Wien* 24, 82-106.
- Adler-Wölfl, K. & M. Mosser, 2015: Archäologie am Rochusmarkt. Die Grabungen in Wien 3, Rasumofskygasse 29-31, *Fundort Wien* 18, 4-48.
- Bednár, P., G. Březinová & S. Ptáčková, 2005: Neskoroleténske osídlenie hradného návršia v Nitre, *Študijné zvesti archaeologického ústavu SAV* 37, 115-185.
- Bíró, Sz., 2013: Fibeln aus einer dörflichen Siedlung in Pannonien, in: G. Grabherr, B. Kainrath & Th. Schierl (Hrsg.), *Verwandte in der Fremde. Relations abroad. Fibeln und Bestandteile der Bekleidung als Mittel zur Rekonstruktion von interregionalem Austausch und zur Abgrenzung von Gruppen vom Ausgreifen Roms während des 1. Punischen Krieges bis zum Ende des Weströmischen Reiches. Akten des Internationalen Kolloquiums. Innsbruck 27. bis 29. April 2011*, Innsbruck (IKARUS 8), 247-256.
- Bíró, Sz., 2015: Der östliche Teil der deserta Boiorum. Ein Forschungsstand, in: U. Lohner-Urban & P. Scherrer (Hrsg.), *Der obere Donauraum 50 v. bis 50 n. Chr. Akten des V. Symposiums Region in Umbruch vom 17.-20. 11. 2011 an der Universität Graz*, Berlin, 71-82.
- Bíró, Sz., 2017: *Die zivilen Vici in Pannonien*, Mainz (Römisch-Germanisches Zentralmuseum Mainz Monographien 131).
- Bíró, Sz., 2021: A helyi lakosság továbbélése Pannoniában a településszerkezeti változások tükrében – előtanulmány, *Archaeologiai Értesítő* 146, 65-92.
- Bíró, Sz., 2022: Interpreting space. A case study of Arrabona (HUN), in: Sz. Bíró (ed.), *Pannonia underground. Proceedings of the international conference held at Szombathely, 25-26 November 2021*, Szombathely, 121-140.
- Březinová, G. & K. Daňová, 2019: Sídliisko z doby laténskej v Bernolákove, in: I. Bazovský & G. Březinová (ed.), *L'udie a hory. Archeologická perspektiva. Interakcie ľudských spoločností horských a podhorských oblastí západného Slovenska*, Bratislava-Nitra, 153-177.
- Březinová, G. & M. Gere, 2021: Komárno in the La Tène Period, in: Z. Robak & M. Ruttkay (eds), *Celts – Germans – Slavs. A tribute anthology to Karol Pieta*, Nitra (Slovenská Archeológia Supplementum 2), 149-165.
- Čambal, R., 2004: *Bratislavský hradný vrch. Akropola neskoroleténskeho oppida / Der Bratislavaer Burghügel. Die Akropolis von spätlatènezeitlichem oppidum*, Bratislava (Zborník Slovenského Národného Múzea, Archeológia Supplementum 1).
- Čambal, R., 2019: Osídlenie juhozápadného Slovenska v strednej a neskorej dobe laténskej a problematika jeho záveru, in: B. Kovár & M. Ruttkay (eds), *Kolaps očami archeológie*, Nitra, 115-135.
- Čambal, R., B. Kovár & M. Hanuš, 2013: Najstaršie germánske nálezy na území Bratislavy?, *Zborník Slovenského Národného Múzea* 107, *Archeológia* 23, 79-84.
- Čambal, R., I. Bazovský, M. Budaj & B. Kovár, 2015: Boische Besiedlung im Oppidum von Bratislava und in seinem Hinterland, in: M. Karwowski, V. Salač & S. Sievers (Hrsg.), *Boier zwischen Realität und Fiktion. Akten des internationalen Kolloquiums in Český Krumlov vom 14.-16.11*, Bonn (Kolloquien zur Vor- und Frühgeschichte 21), 225-242.
- Čambal, R., M. Gregor, I. Bazovský, G. Březinová, B. Kovár & M. Karwowski, 2016: The pottery with thickened club rim at the end of the Late La Tène Period in the Middle Danube Region (mineralogical and petrographic characteristics), in: M. Karwowski & P.C. Ramsel (Hrsg.): *Boii – Taurisci. Proceedings of the international seminar, Oberleis-Klement, June 14<sup>th</sup>-15<sup>th</sup>, 2012*, Wien, 147-169.

- Gabler, D., 1996: Spätkeltische und römische Siedlungen des 1. nachchristlichen Jahrhunderts im Stadtgebiet von Savaria, *Arheološki Vestnik* 47, 239-247.
- Gabler, D., 2006: Das Donautal in augusteischer Zeit. Zur Frage der frühen Militärstationen, *Carnuntum Jahrbuch*, 81-101.
- Gassner, V., 2008: "Boische" Keramik und "boische Grabstelen". Zur Problematik ethnischer Zuweisungen in der materiellen Kultur in den römischen Provinzen, in: Ch. Franek, S. Lamm, T. Neuhauser, B. Porod & K. Zöhrer (Hrsg.), *Thiasos. Festschrift für Erwin Pochmarski zum 65. Geburtstag*, Wien, 291-297.
- Gere, M., 2013: Záchraný archeologický výskum Komárno, "Nová pevnosť". Predbežné výsledky, *Iuxta Danubium* 15, 87-108.
- Gere, M. & P. Ratimorská, 2017: Komárom és környéke a késő kelta korban, in: J. Kisné Cseh (ed.): *Korszakok és birodalmak határán. Kelták a Kárpát-medencében*, Tatabánya (Tatabányai Múzeum Tudományos Füzetek 12), 83-92.
- H. Kelemen, M., 1990: Keltische Siedlungen in der Gemarkung von Esztergom, in: *Die Ergebnisse der archäologischen Ausgrabungen beim Aufbau des Kraftwerksystems Gabčíkovo-Nagymaros. Nové Vozokany 6-7. Oktober 1988*, Nitra, 37-42.
- H. Kelemen, M. & M. Merczi, 2002: Az esztergomi Várhegy 1934-38. Évi ásátásának későkelta és római kori kerámiaja, *Komárom-Esztergom Megyei Múzeumok Közleményei* 9, 25-72.
- Harmadyová, K., 2017: Devín in the La Tène Period, in: P. Barta & M. Musilová (eds), *The Celts from Bratislava / Kelten aus Bratislava*, Bratislava, 91-107.
- Hainzmann, M., 2015: Zur epigraphischen Hinterlassenschaft der Boier, in: M. Karwowski, V. Salač & S. Sievers (Hrsg.), *Boier zwischen Realität und Fiktion. Akten des internationalen Kolloquiums in Český Krumlov vom 14.-16.11.2013*, Bonn (Kolloquien zur Vor- und Frühgeschichte 21), 103-113.
- Haupt, P. & M. Nick, 1997: Ein neuer Münzschatz mit Denaren der Eravisker aus der Gegend von Győr (Ungarn), *Numismatische Zeitschrift* 104/105, 41-81 and plate 15-16.
- Horváth, F., 1998: Handgeformte spätkeltische und römische Keramik in Esztergom und ihrer Umgebung, *Alba Regia* 27, 65-81.
- Horváth F., 2004: Römische bodenständige Keramik, *Antaeus* 27, 345-365.
- Horváth F., 2007: Kézrel formált bennszülött kerámia, in: K. Ottományi, A pátyi római telep újabb kutatási eredményei, *Studia Comitatus* 30, 300-345.
- Károlyi, M., 1985: The Late Celtic hillfort at Ostffyasszonyfa-Földvár major (Vas county), *Acta Archaeologica Academiae Scientiarum Hungaricae* 37, 391-418.
- Kolníková, E. & B. Kovár, 2010: Laténske mince v Bratislavskom Podhradí, *Zborník Slovenského Národného Múzea* 104 (Archeológia 20), 69-73.
- Krekovič, E., 2009: Anfänge der germanischen Besiedlung in der Slowakei, in: V. Salač & J. Bemmann (Hrsg.), *Mitteleuropa zur Zeit Marbods*, Praha/Bonn, 269-272.
- Kovács, P., 2018: Northern Pannonia and the Roman conquest, in: M. Miličević Bradač & D. Demicheli (eds), *The century of the brave. Roman conquest and indigenous resistance in Illyricum during the time of Augustus and his heirs*, Zagreb, 163-174.
- Kováč, B., R. Čambal & M. Budaj, 2018: The La Tène oppidum in Bratislava, in: S. Berecki, A. Rustoiu & M. Egri (eds), *Iron Age connectivity in the Carpathian Basin. Proceedings of the international colloquium from Targu Mures*, Cluj-Napoca (Bibliotheca Musei Marisiensis Series Archaeologica 16), 51-63.
- Láng, O. & Sz. Bíró, 2018: "Unpleasant to live in, yet it makes the city rich". Industry and commerce in military and civil settlements along the Pannonian Limes, in: C.S. Sommer & S. Matešić (Hrsg.), *LIMES XXIII. Proceedings of the 23rd International Congress of Roman Frontier Studies, Ingolstadt 2015 / Akten des 23. Internationalen Limeskongresses in Ingolstadt 2015*, Mainz (Beiträge zum Welterbe Limes Sonderband 4), 609-619.
- Lobisser, W. & W. Neubauer, 1997: Rekonstruktion der spätlatènezeitlichen Befestigungsanlage auf der Höhensiedlung Burg bei Schwarzenbach / NÖ. MG Schwarzenbach VB Wr. Neustadt, *Archaeologica Austriaca* 81, 211-219.
- Luštková, L., 2007: Dácka keramika na území Slovenska, *Východoslovenský pravek* 8, 77-94.
- Molnár A. & F. Ujvári 2020: Adatok Győr vaskorához. Kora vaskori leletek a Káptalandombról és kelta lelőhelyek a város területéről, in: G. Nemes (ed.), *Tomka 80. Ünnepi tanulmányok Tomka Péter köszöntésére*, Győr, 401-418.
- Mosser, M. & K. Adler-Wölfl, 2018: Neues von der spätlatènezeitlichen Siedlung am Rochusmarkt. Die Grabungen in Wien 3, Kundmannngasse 21-27, *Fundort Wien* 21, 148-164.
- Mráv, Zs., 2013: The Roman army along the Amber Road between Poetovio and Carnuntum in the 1st century A.D. Archaeological evidence. A preliminary research report, *Communicationes Archaeologicae Hungariae* 2013, 49-100 (DOI: 10.54640/CAH.2013.49).
- Musilová, M., 2017a: The Bratislava oppidum, in: P. Barta & M. Musilová (eds), *The Celts from Bratislava / Kelten aus Bratislava*, Bratislava, 13-29.
- Musilová, M., 2017b: The Celtic hillfort on the site of Bratislava Castle, in: P. Barta & M. Musilová (eds), *The Celts from Bratislava / Kelten aus Bratislava*, Bratislava, 30-45.



- Ottományi, K., 2005: Die spätlatènezeitlich-römische Siedlung von Budaörs, *Acta Archaeologica Academiae Scientiarum Hungaricae* 56, 67-132.
- Patek, E., 1982: Neue Untersuchungen auf dem Burgstall bei Sopron, *Bericht der Römisch-Germanischen Kommission* 63, 105-177.
- Pieta, K., 2010: *Die keltische Besiedlung der Slowakei. Jüngere Latènezeit*, Nitra.
- Pieta, K. & V. Plachá, 1999: Die ersten Römer im nördlichen Mitteldonaunraum im Lichte neuen Grabungen in Devín, in: T. Fischer, G. Precht & J. Tejral (Hrsg.), *Germanen beiderseits des spätantiken Limes*, Köln-Brno (Spisy Archeologického Ústavu AV ČR Brno 14), 179-205.
- Schmidtsberger, O., 2018: Bemerkenswerte Funde der spätesten La-Tène-Zeit (und anderer Metallzeiten) aus Hainburg an der Donau, Niederösterreich, *Fundbericht aus Österreich* 55, 140-144.
- Strobel, K., 2015: Die Boii. Ein Volk oder nur ein Name? Zur Problematik von antiker Geographie und Ethnographie, in: M. Karwowski, V. Salač & S. Sievers (Hrsg.), *Boier zwischen Realität und Fiktion. Akten des internationalen Kolloquiums in Český Krumlov vom 14.-16.11*, Bonn (Kolloquien zur Vor- und Frühgeschichte 21), 36-67.
- Szabó, M., 2015: A kelták Magyarországon, in: M. Szabó & L. Borhy (eds), *Magyarország története az ókorban. Kelták és rómaiak*, Budapest, 13-81.
- Szilasi, A.B., 2011: Szombathely, Kálvária u. 63, in: Cs. Farkas (Hrsg.), *Zeitschnecke. Neue Forschungsergebnisse zur Vorgeschichte vom Komitat Vas, Szombathely (Őskorunk 3)*, 194-197.
- Szőnyi, E., 1996: Römerzeitliche Altansässigensiedlung von Ménfőcsanak (Umgebung von Győr), *Arheološki Vestnik* 47, 249-256.
- Tankó, K., 2016: Chronological aspects of ceramic types from recently investigated La Tène settlements in Hungary, in: S. Berecki (ed.), *Iron Age chronology in the Carpathian Basin. Proceedings of the International Colloquium from Târgu Mureș, 8-10 October 2015*, Cluj-Napoca, 165-190.
- Tankó, K., 2020: *Kelta falu Győr határában. A ménfőcsanaki késő vaskori település / A Celtic village in North-West Hungary*, Budapest (Studien zur Eisenzeit im Ostalpenraum 2).
- Tankó, K. & G.V. Szabó, 2019: Depotfunde spätlatènezeitlicher Eisengegenstände aus dem Oppidum von Velem-Szent Vid, Ungarn, in: P.C. Ramsel, K. Rebay-Salisbury & P. Trebsche (Hrsg.), *Schichtengeschichten. Festschrift für Otto H. Urban*, Bonn (Universitätsforschungen zur Prähistorische Archäologie 328), 145-161.
- Tejral, J., 2009: Das Gebiet nördlich der mittleren Donau zur Zeit Marbods, in: V. Salač & J. Bemmman (Hrsg.), *Mitteleuropa zur Zeit Marbods*, Praha/Bonn, 149-202.
- Torbágyi, M., 2017: Késő kelta éremverés a Dunántúlon, in: J. Kisné Cseh (ed.), *Korszakok és birodalmak határában. Kelták a Kárpát-medencében*, Tatabánya (Tatabányai Múzeum Tudományos Füzetek 12), 97-109.
- Urban, O.H., 1995: *Keltische Höhensiedlungen an der mittleren Donau vom Linzer Becken bis zur Porta Hungarica 2. Der Braunsberg*, Linz.
- Urban, O.H., 1999: *Der Leopoldsberg. Archäologische Forschungen auf dem Wiener Hausberg*, Wien (Wiener Archäologische Studien 2).
- Visy, Zs., 1995: The problems of the Dacian ethnic group in Hungary, in: S. Dumitrașcu, V. Moga, A. Chiriac & S. Șipoș (eds), *Din Istoria Europei Romane / From the history of the Roman Europe*, Oradea, 93-104.
- Wallner, M., 2013: Die 'deserta Boiorum'. Ein Zentrum der vorrömischen Eisenindustrie?, in: R. Karl & J. Leskovar (Hrsg.), *Interpretierte Eisenzeiten. Fallstudien, Methoden, Theorie. Tagungsbeiträge der 5. Linzer Gespräche zur interpretativen Eisenzeitarchäologie*, Linz (Studien zur Kulturgeschichte von Oberösterreich 37), 209-222.
- Zabehlicky, H. & S. Zabehlicky, 2004: Wieder einmal "agri et deserta Boiorum", in: H. Heftner & K. Tomaschitz (Hrsg.), *AD FONTES! Festschrift für Gerhard Dobesch zum fünfundsiebsigsten Geburtstag am 15. September 2004*, Wien, 733-736.



# Making Suebi

## Roman frontier management in the southern Upper Rhine valley in the 1<sup>st</sup> century AD?

Lars Blöck, Alexander Heising, Uwe Xaver Müller  
and Johann Schrempp

### Lars Blöck

Generaldirektion Kulturelles  
Erbe RheinlandPfalz,  
Direktion Landesarchäologie,  
Außenstelle Trier,  
Rheinisches Landesmuseum  
Trier, Weimarer Allee 1,  
D-54290 Trier,  
lars.bloeck@gdke.rlp.de

### Alexander Heising / Uwe Xaver Müller

Institut für Archäologische  
Wissenschaften, Universität  
Freiburg, Glacisweg 7,  
D-79098 Freiburg im  
Breisgau, alexander.heising@  
archaeologie.uni-freiburg.de /  
Uwe-Mueller-Archaeologie@  
web.de

### Johann Schrempp

Archäologisches  
Landesmuseum Baden-  
Württemberg, Dienststelle  
Rastatt, Lützowerstraße 10,  
D-76437 Rastatt,  
schrempp@rastatt.alm-bw.de

The question of the pre-Roman occupation of the Upper Rhine area on the right bank of the Rhine has been a controversial topic in archaeological research for decades. This is especially true with regard to the ancient sources, in which this region is described as almost devoid of settlements (Tacitus *Germania* 29.3; Ptolemaeus *Geographia* 2.11.6). While preceding generations of researchers have questioned the authenticity of these, recent research findings, such as pollen analysis and dendro chronology (Smettan 1999, 804-807; Blöck 2016, 223-224), indicate a decline of settlement activities from about 80 BC onwards (Schlegel 2000, 23-24; 2005, 86; Lenz-Bernhard 2002, 130; Faustmann 2007, 71-72; Keller 2015, 288; Blöck 2016, 223-224, with note 1653; Wiegels 2017, 48-52; Deschler-Erb 2019, 93-94; Schrempp 2021, 137-140 and 143). This situation changes at the beginning of the 1<sup>st</sup> century AD with the emergence of a new population group in the immediate vicinity of the Rhine, as indicated by recent archaeological finds from Diersheim.

Diersheim is situated in southwestern Germany, about 20 km northeast of Strasbourg, directly on the German side of the Rhine. Already in the Tiberian period, which will be examined in more detail below, the Rhine served as a frontier, in this case between the Roman Empire and the *Germania Magna*. In the 1930's, a cremation cemetery comprising 53 burials was excavated on the western edge of the village of Diersheim, in an area called Oberfeld (fig. 1).

With a total of 48 burials, urn graves are the most common burial type. Cremation graves without an urn, on the other hand, were found only in five instances (Nierhaus 1966, 31-32). The initial occupation of the cemetery can be dated to the middle of the 1<sup>st</sup> century AD (Nierhaus 1966, 153-155). The cemetery attracted particular attention because of the grave goods found in the graves, representing a burial custom that differs distinctly from that of contemporary Gallo-Roman burial sites. About half of the graves contained a rich assemblage of grave goods, including weapons (Nierhaus 1966, 41). Spearheads were the most frequent type of weaponry, while shield fittings or so-called combat knives were less frequent. Only one double-edged sword was found (Nierhaus 1966, 54-55). Furthermore, two axes are also likely to be considered as weapons (Nierhaus 1966, 56, plate 5.8d and plate 6.15b). The inclusion of weapons in burials is rather untypical for the Gallo-Roman region and, apart from the territory of the Treverians in the Moselle region, is more similar to finds from the Elbe-Germanic settlement area, which includes parts of Central and Eastern Germany, the Czech Republic and Slovakia (Nierhaus 1966, 55-56; Adler 1993, 207-228; Blöck 2018, 32; Slovakia: Kolník 1980; Verčák 2007, 131 with further literature;



Figure 1. Overview plan of the cemeteries at Diersheim. The yellow dots represent finds from the cemetery in the Oberfeld and the red dots the distribution of surface finds from the cemetery in the Fachheu (J. Lauber).

Czech Republic: Motyková-Šneidrová 1963, 5). Similarly, the urns, clothing accessories and fittings of drinking horns from the Diersheim burials show clear references to the Elbe-Germanic territory (Nierhaus 1966, 63, 75-76, 92-99, 107, 138-140 and 149). In addition to this Germanic components, many of the graves also contained Roman imports in the form of pottery, brooches, bronze and glass vessels. The bronze vessels as well as the majority of the Germanic weapons were mostly deformed and burned (Nierhaus 1966, 44-45, 63-64, 66, 78-84, 107-117 and 132-137). The high number of grave goods of Roman origin is indicative of close contacts between the burial community and the Roman Empire. All this led Rolf Nierhaus to identify the people buried at Diersheim as Germanic tribesmen, whom Nierhaus associated with the tribe of the *Suebi* due to the strong Elbe-Germanic references present in the burials (Nierhaus 1966, 10-11 and 183).

Together with the grave finds from Oberfeld, Nierhaus published another grave, which was discovered in 1948 about 800 m southeast of the Oberfeld cemetery, in an area called Fachheu (fig. 1) (Nierhaus 1966, 32, 268, Fundplatz 87 and plate 18.87; Schrempp *et al.* 2016, 158 with fig. 99).

This grave showed similar characteristics as the Oberfeld burials in terms of grave goods and burial customs. However, Nierhaus left the question unanswered, whether this site could be part of a second cemetery. Consequently this second site fell into oblivion, until 2012, when Andreas Karcher, a volunteer prospector, reported over 100 *fibulae* and over one thousand fragments of bronze vessels, which he had collected from the Fachheu site. Alarmed by this large number of surface finds, which suggested an acute threat to the cemetery due to agricultural cultivation, a cooperative project was initiated between the Department of Provincial Roman Archaeology



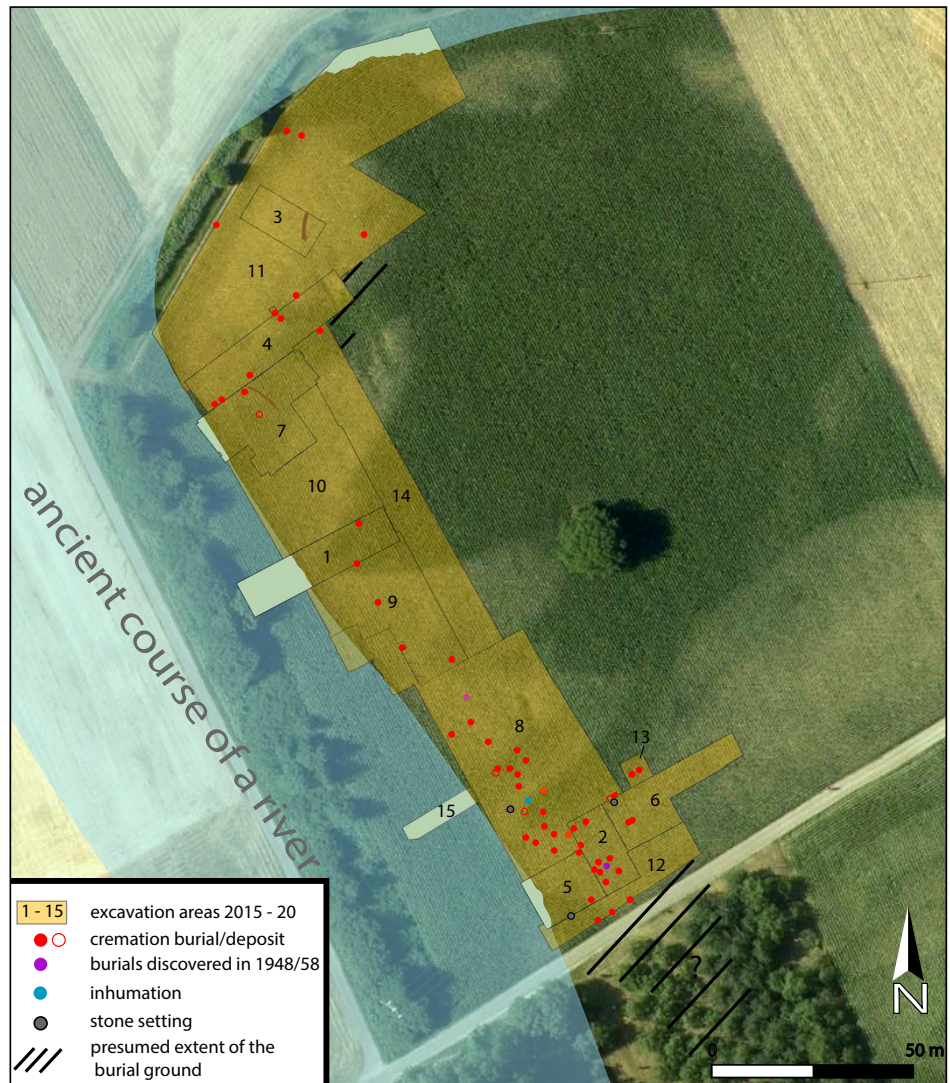


Figure 2. Excavation plan of the imperial-period cemetery of Diersheim-Fachheu.

at the University of Freiburg and the State Office for the Preservation of Monuments in Baden-Württemberg. In this way, the site could be successively excavated between 2015 and 2022 and thus saved from its final destruction (Schrempp *et al.* 2016, 158-159; Heising 2021, 13-14; Heising 2023, 90-95). The excavation led to the discovery of 53 graves from the Roman period (fig. 2).

These burials were located on a 200 m long and 40 m wide loess-covered gravel ridge, which rises island-like from the furcation zone of the Rhine (Schrempp *et al.* 2016, 158-159; Müller *et al.* 2021, 168). This gravel ridge shows two distinct elevations in the north and in the south on which the majority of the burials were concentrated. The distribution of graves implies a horizontal stratigraphic development with the oldest graves being located in the north and the youngest in the south (Schrempp *et al.* 2017, 179; 2018, 165; 2019, 178; Müller *et al.* 2021, 168-169). The Fachheu cemetery is similar in many respects to the

one from the Oberfeld. Urn burials prevail here as well, with 38 documented burials compared to four cremation graves without an urn and eleven other burials. According to the finds from grave 14, which is the earliest grave that can be dated more precisely, the beginning of the occupation of the cemetery can be dated to the Tiberian period (Schrempp *et al.* 2017, 178). This chronological approach is also supported by a number of isolated finds, which probably originate from graves that had already been completely destroyed by the agricultural cultivation.

The most recent burials can be dated back to the Traianic period. It is remarkable that at the Fachheu burial site, in contrast to the Oberfeld cemetery, weapons are still present in graves dated as late as the beginning of the 2<sup>nd</sup> century. For example, this can be established, at grave II, which contained an axe and a spearhead in addition to Roman glass and bronze vessels (fig. 3), or at grave 18, which contained an intentionally bent spatha



Figure 3. 'Grave II' as an example for a typical grave inventory from the cemetery of Diersheim-Facheu, containing an pottery urn made in Elbe-Germanic style, weapons, tools, fragments of molten glass and bronze vessels (J. Lauber).

(Schrempp *et al.* 2018, 164-165). The presence of a large number of Roman imported goods is also a feature shared by all of the Fachheu burials. These grave goods of Roman origin consist mainly of bronze drinking vessels, ceramic or glass vessels, brooches, and furniture parts.

As another parallel to the Oberfeld cemetery, the Fachheu burial assemblages show again clear connections to the Elbe-Germanic territory. Especially the urn pottery displays strong formal references to the south-western Slovakia, where the best parallels can be found in the cemeteries of Sladkovicovo and Abraham (Kolník 1980, 13-90, plate I-LXIX and 126-162, plate CXXII-CLXV). Whether these connections must necessarily have corresponded to the origin or the self-perception of the settlers of Diersheim cannot yet be said with absolute confidence. Comparative chemical analyses of the pottery from Diersheim and the above-mentioned sites in south-western Slovakia, as well as other Germanic sites, could provide new insights.

The case of some burials, however, is more clearer, where so-called pine pitch (Wunderlich 1999, 211-215; Hegewisch 2010, 194-195) was found among the grave goods. With the offering of this pine pitch a burial

practice can be identified, which also has its origin in the Elbe-Germanic territory and is a clear indication that those buried in these graves belonged to this cultural sphere (Schrempp *et al.* 2016, 160; Becker 2019, 220; Schrempp 2021, 140).

The discussion about the self-perception of these non-Roman burial communities has gained new traction through the recent discovery of an inscription stone near Offenburg-Bühl, about 20 km south of Diersheim. The epitaph (fig. 4), which can be dated to the 1<sup>st</sup> or early 2<sup>nd</sup> century AD, was probably originally part of a funerary monument (Blöck *et al.* 2016, 499 and 502-503).

The inscription tells us, that a certain Proculus had this funerary monument erected. The name of the deceased itself has only been preserved in fragments, which unfortunately do not allow a reliable completion. In the following inscription line, the deceased is identified as *princeps sueborum* (Blöck *et al.* 2016, 499-501). Such *principes* of peregrine *gentes* are mainly attested in only rudimentally Romanized and urbanized regions of the Roman Empire. Here, they took on functions within the Roman provincial administration at a local level



as an administrative chief of their *gens* (Blöck *et al.* 2016, 503-505).

Due to the spatial proximity, it is tempting to connect the inscription from Offenburg with the Germanic people attested at Diersheim. According to the inscription, the deceased was a *Suebi* chief, living during the 1<sup>st</sup> century AD. The Suebian people associated with him settled on the right side of the southern Upper Rhine area, which at that time already belonged to the territory of the Roman Empire. Apparently, these *Suebi* maintained little differentiated, non-urbanized settlement patterns, which is why they were hardly structured along the lines of a Roman provincial administration based on territorial entities. Instead they were organized as *gens* in the sense of an association of individuals and led by a *princeps*, who probably belonged to the Suebian elite and was approved by the Roman administration (Blöck *et al.* 2016, 506).

But the Diersheim *Suebi* represent only the southern most group of comparable groups in the Upper Rhine area that show strong influences by the Elbe-Germanic culture (Schlegel 2000, 162-163) (fig. 5). One of these other groups of Suebian settlers can be located at least since Claudian times further to the north at the Neckar estuary (Schlegel 2000, 149-151; Lenz-Bernhard 2002, 130-131). The inscriptions from this region prove, that these people identified themselves as *Suebi Nicrenses* and that from the Trajanic period onwards they were organized in the *civitas Ulpia Sueborum Nicrensium* with Lopodunum-Ladenburg as its *caput civitatis* (Rabold 2005, 91 and 94; Schlegel 2005, 85 and 88). Beside this so-called Ladenburg group, the so-called Groß-Gerau group can be mentioned as a third group, which can be located even further north in the southern Main region. (Behn 1936, 27-31; 1930, 178-183; Lenz-Bernhard 2002, 130) The earliest of these cemeteries date back to the Late Augustan-Early Tiberian period (Lenz-Bernhard & Bernhard, 1992, 282; Maurer 2011, 53-54, 157-158, 180 and 269), more or less contemporary with the beginning of the first occupation of the Fachheu cemetery at Diersheim. A fourth group can be identified near Bürstadt by a small group of graves dating to Neronian/early Flavian times (Lenz-Bernhard & Bernhard, 1992, 285-286; Schlegel 2000, 163). Consequently, these so-called Upper Rhine *Suebi* are divided into at least four different groups, which, as the toponymic addition *Nicrenses* in the case of the *Suebi* of the Ladenburg group suggests, also tried to distinguish themselves from each other by their self-designation (Schlegel 2000, 162-163; Blöck *et al.* 2016, 502). In analogy to the *princeps* inscription from Offenburg-Bühl, each of these groups may have been organized as a *gens*, subordinate to its own *princeps Sueborum* (Blöck *et al.* 2016, 506). As the map (fig. 5) shows, the settlement of these Germanic groups always took place on the right river bank of the Rhine in the approaches to the Roman military sites. Therefore, it can be assumed that this settlement certainly took place with Rome's approval,



Figure 4. The epitaph from Offenburg-Bühl (Ortenaukreis) (J. Lauber).

if not even on its initiative. Nierhaus already assumed that these Germanic groups were 'militias or military settlers' whose task was to secure the not yet incorporated areas in the approaches to the Roman frontier on the right bank of the Rhine (Nierhaus 1966, 231-232; Schlegel 2000, 165; Lenz-Bernhard 2002, 131-132; Wiegels 2017, 55; Blöck 2018, 34; Schrempp 2021, 140). This could also be indicated by the numerous Roman imports in the graves, which prove close cultural contacts with the Roman Empire. Perhaps the systematic settlement of Germanic groups at the immediate frontier of the Roman Empire has to be seen in connection with a new frontier policy under Tiberius (Schrempp *et al.* 2017, 179).

Due to lacking success, Tiberius was forced around 16/17 AD to abandon the occupation plans for the *Germania Magna* and to designate the Rhine as the frontier of the Roman Empire once again. On the Upper Rhine, Tiberius was now confronted with the daunting task of militarily securing an over 300 km long section of the frontier, and this despite reduced military strength due to heavy military losses during the *clades Variana* and the following campaigns under Germanicus. The solution was the creation of a buffer zone in the immediate approaches to the imperial border through a systematic settlement of Suebian groups, who, as military settlers, were supposed to keep this area free from enemy incursions.

The current state of research does not allow a conclusive answer, to what extent the collapse of the former kingdom of Marbod around 18/19 AD and the resulting resettlement of the followers of Marbod and his successor Catualda, mentioned by ancient sources,

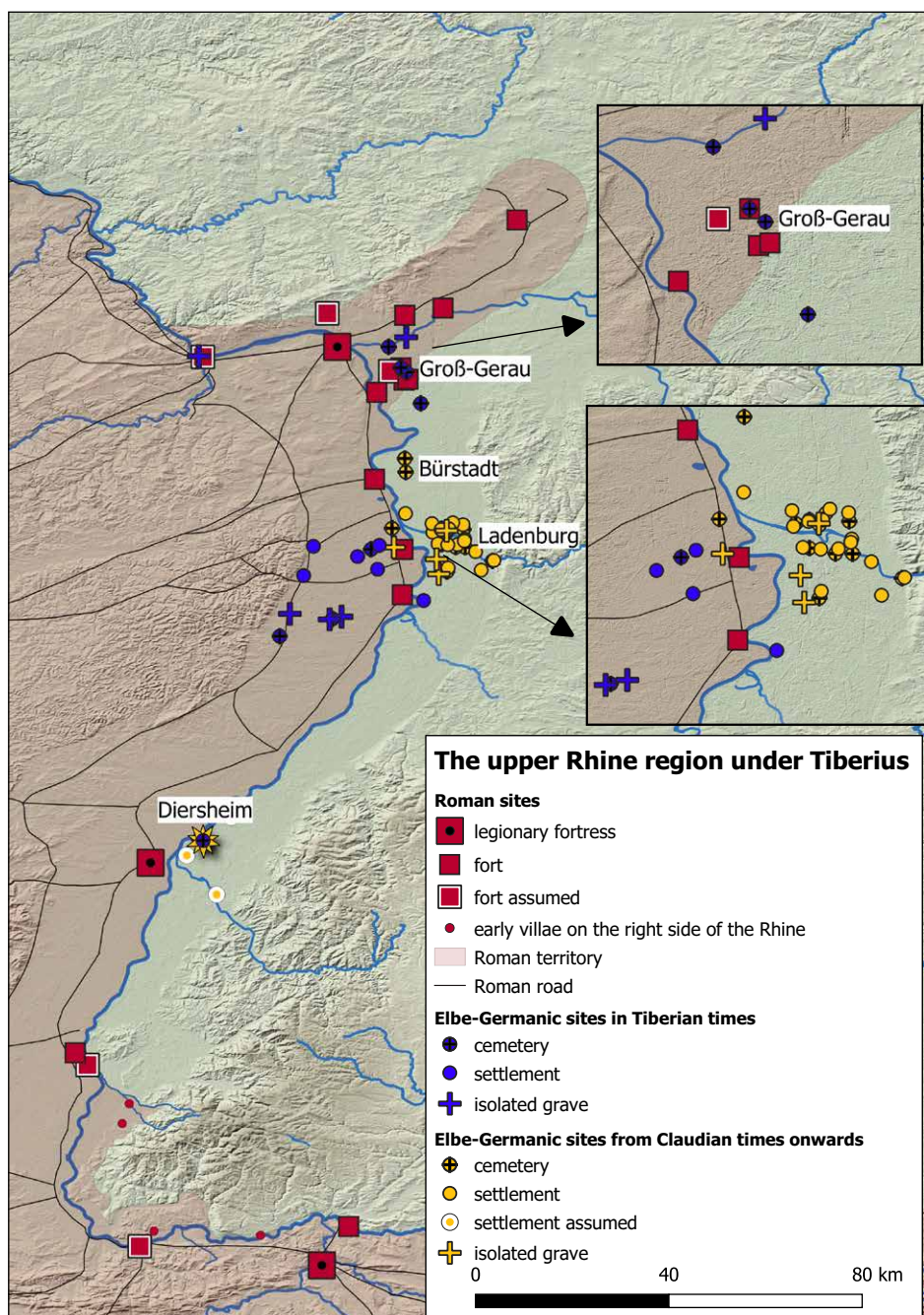


Figure 5. Sites with an Elbe-Germanic character in the upper Rhine region.

may have contributed to these developments. However, it is all too tempting to see these arrangements on the right bank of the Upper Rhine in a similar vein as the more or less contemporary appearance of Elbe-Germanic groups in *Raetia*, as pointed out recently by Bernd Steidl, who sees this development as a continuation of the Germanic policy cultivated under Tiberius (Steidl 2013, 168-169). This policy tried to achieve the greatest benefit for the Roman Empire by systematically promoting and exploiting intra-Germanic conflicts. With the collapse of the Marbod Kingdom, only the tribal alliance under the leadership of Arminius remained

as a significant menace to the Roman Empire in this area. Since this alliance had acted before as a bitter adversary of the Marbodian Empire, it is quite conceivable that Tiberius systematically countered this Rhine-Weser-Germanic tribal alliance with hostile Elbe-Germanic formations in the approaches to the frontier of the Roman Empire. However, further research is needed to be able to prove this with more certainty, especially with regard to the specific origin of the Germanic groups which settled in the Upper Rhine region. To further this issue, large scale comparative ceramic analyses could provide new impulses.



## Bibliography

- Adler, W., 1993: *Studien zur germanischen Bewaffnung. Waffenmitgabe und Kampfesweise im Niederelbegebiet und im übrigen Freien Germanien um Christi Geburt*, Bonn (Saarbrücker Beiträge zur Altertumskunde 58).
- Becker, T., 2019: Wie germanisch bin ich? Überlegungen zu Siedlungs- und Grabfunden des 1. Jahrhunderts n. Chr. im südmainischen Hessen, in: S. Bödecker, E. Cott, M. Brüggler, E. Deschler-Erb, M. Grünewald, S. Hornung, J. Morscheiser-Niebergall & P. Tutlies (eds), *Spätlatène- und frühkaiserzeitliche Archäologie zwischen Maas und Rhein. Tagung Roman Networks in the West II, Krefeld, 14.-16. Juni 2018*, Bonn (Materialien zur Bodendenkmalpflege im Rheinland 28), 209-221.
- Behn, F., 1936: *Urgeschichte von Starkenburg*, Mainz (Starkenburg in seiner Vergangenheit 1).
- Behn, F., 1930: Zur ersten germanischen Besiedlung Starkenburgs, in: *Schumacher-Festschrift. Zum 70. Geburtstag von Karl Schumacher*, Mainz, 178-183.
- Blöck, L., 2016: *Die römische Besiedlung im rechten Oberrheingebiet*, Wiesbaden (Forschungen und Berichte zur Archäologie in Baden-Württemberg 1).
- Blöck, L., J. Lauber & F. Tränkle, 2016: Princeps Sveborvm. Der "Neufund" einer römischen Grabinschrift aus Offenburg-Bühl (Ortenaukreis), *Archäologisches Korrespondenzblatt* 46/4, 497-516.
- Blöck, L., 2018: Die römische Kolonisierung des südlichen Oberrheingebiets, in: A. Bräuning & A. Heising (eds), *Entlang der Fernstraße. Die römische Siedlung von Lahr-Dinglingen*, Esslingen (Archäologische Informationen aus Baden-Württemberg 80), 29-37.
- Deschler-Erb, E., 2019: Von der Eisenzeit zur römischen Kaiserzeit. Der südliche Oberrhein in der späten Republik, in: S. Bödecker, E. Cott, M. Brüggler, E. Deschler-Erb, M. Grünewald, S. Hornung, J. Morscheiser-Niebergall & P. Tutlies (eds), *Spätlatène- und frühkaiserzeitliche Archäologie zwischen Maas und Rhein. Tagung Roman Networks in the West II, Krefeld, 14.-16. Juni 2018*, Bonn, (Materialien zur Bodendenkmalpflege im Rheinland 28), 87-105.
- Faustmann, A.C., 2007: *Besiedlungswandel im südlichen Oberrheingebiet von der Römerzeit bis zum Mittelalter*, Rahden (Freiburger Beiträge zur Archäologie und Geschichte des ersten Jahrtausends 10).
- Heising, A., 2023: Die Gräberfelder von Rheinau-Diersheim (D) und die "Oberrheingermanen" in der frühen Kaiserzeit, in: L. Formato, E. Krieger, F. Lang, A. Maspoli, J. Rabitsch, L. Schönmann, S. Traxler & A. Wyss (eds), *Gräber in Kontaktregionen. Aussagepotenzial und Methoden bei der Auswertung römischer Nekropolen*, Salzburg (ArchaeoPlus 14), 85-98.
- Heising, A., 2021: Grabungen am römischen Gräberfeld von Rheinau-Diersheim erfolgreich abgeschlossen, *Collegium Beatus Rhenanus. CBR-Newsletter* 24, 13-14.
- Hegewisch, M., 2010: Lampen im Barbaricum. Ein Beitrag zur Beleuchtung in germanischen Siedlungen, in: T. Armbruster & M. Hegewisch (eds), *On pre- and earlier history of Iberia and Central Europe. Studies in honour of Philine Kalb*, Bonn (Studien zur Archäologie Europas 11), 193-228.
- Keller, R., 2015: *Die Siedlung der Eisenzeit und Römischen Kaiserzeit im "Reiðswag" bei Lauda-Königshofen im Taubertal*, Darmstadt (Materialhefte zur Archäologie in Baden-Württemberg 100).
- Kolník, T., 1980: *Römerzeitliche Gräberfelder in der Slowakei*, Bratislava (Archaeologica Slovaca fontes XIV).
- Lenz-Bernhard, G., 2002: *LOPODVNM III. Die neckarsuebische Siedlung und Villa rustica im Gewann "Ziegelscheuer". Eine Untersuchung zur Besiedlungsgeschichte der Oberrheingermanen*, Stuttgart (Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg 77).
- Lenz-Bernhard, G. & H. Bernhard, 1992: Das Oberrheingebiet zwischen Caesars gallischem Krieg und der flavischen Okkupation (58 v.-73 n.Chr.). Eine Siedlungsgeschichtliche Studie, *Mitteilungen des historischen Vereins der Pfalz* 89, 3-347.
- Maurer, T., 2011: *Das nördliche Hessische Ried in römischer Zeit. Untersuchungen zur Landschafts- und Siedlungsgeschichte im rechtsrheinischen Vorfeld von Mainz vom 1. bis 5. Jahrhundert n. Chr.*, Bonn (Frankfurter archäologische Schriften 14).
- Motýková-Šneidrová, K., 1963: *Die Anfänge der römischen Kaiserzeit in Böhmen*, Prag (Fontes Archaeologici Pragenses 6).
- Müller, U.X., K. Kortüm, G. Kuhnle & A. Heising, 2021: Bestattungen mit Flußblick. Zum Abschluss der Ausgrabungen im germanisch-römischen Gräberfeld von Diersheim, *Archäologische Ausgrabungen in Baden-Württemberg* 2020, 168-171.
- Nierhaus, R., 1966: *Das suebische Gräberfeld von Diersheim. Studien zur Geschichte der Germanen am Oberrhein vom gallischen Krieg bis zur alamannischen Landnahme*, Berlin (Römisch-Germanische Forschungen 28).
- Rabold, B., 2005: Ladenburg "Ziegelscheuer". Von der neckarsuebischen Siedlung zur römischen Villa, in: *IMPERIUM ROMANUM. Roms Provinzen an Neckar, Rhein und Donau. Begleitband zur Ausstellung des Landes Baden-Württemberg im Kunstgebäude Stuttgart 1. Oktober 2005 bis 8. Januar 2006*, Esslingen am Neckar, 91-96.
- Schlegel, O., 2000: *Germanen im Quadrat. Die Neckarsueben im Gebiet von Mannheim, Ladenburg und Heidelberg während der frühen römischen Kaiserzeit*, Rahden (Internationale Archäologie 34).

- Schlegel, O., 2005: Germanen an Oberrhein und Neckar. Fremde zwischen Tradition und Integration, in: *IMPERIUM ROMANUM. Roms Provinzen an Neckar, Rhein und Donau. Begleitband zur Ausstellung des Landes Baden-Württemberg im Kunstgebäude Stuttgart 1. Oktober 2005 bis 8. Januar 2006*, Esslingen am Neckar, 85-90.
- Schrempp, J., 2021: Wo sind all die Kelten hin?, in: *Magisches Land. Kult der Kelten in Baden-Württemberg. Begleitband zur großen Sonderausstellung im Archäologischen Landesmuseum Baden-Württemberg vom 24. Juli 2021 bis 9. Januar 2022*, Darmstadt, 134-143.
- Schrempp, J., A. Heising, J. Lauber & K. Kortüm, 2017: Diersheims "Sueben". Zeugen tiberischer Grenzpolitik am Oberrhein, *Archäologische Ausgrabungen in Baden-Württemberg* 2016, 176-179.
- Schrempp, J., K. Kortüm & A. Heising, 2018: Parallelgesellschaften am Oberrhein? Die Diersheimer Waffengräber auf römischen Provinzboden, *Archäologische Ausgrabungen in Baden-Württemberg* 2017, 162-166.
- Schrempp, J., K. Kortüm, G. Kuhnle & A. Heising, 2019: Gräber und Deponierungen. Aktuelle Untersuchungen im römisch-germanischen Gräberfeld bei Diersheim, *Archäologische Ausgrabungen in Baden-Württemberg* 2018, 178-179.
- Schrempp, J., M. Machura, J. Lauber, K. Kortüm & A. Heising, 2016: Frühe Germanen am Oberrhein? Ein neues Gräberfeld mit Waffenbeigaben in Diersheim, *Archäologische Ausgrabungen in Baden-Württemberg* 2015, 158-161.
- Smettan, H.W., 1999: Besiedlungsschwankungen von der Latènezeit bis zum Frühen Mittelalter im Spiegel südwestdeutscher Pollendiagramme, *Fundberichte aus Baden-Württemberg* 23, 779-807.
- Steidl, B., 2013: Die Augenfibeln Almgren 45-46 in Raetien und den Nordwestprovinzen. Eine Sachform als Spiegel historischer Vorgänge?, in: G. Grabherr, B. Kainrath & Th. Schierl (eds), *Relations abroad. Brooches and other elements of dress as sources for reconstructing interregional movement and group boundaries from the Punic Wars to the decline of the Western Roman Empire. Proceedings of the International Conference from 27<sup>th</sup>-29<sup>th</sup> April 2011 in Innsbruck*, Innsbruck (IKARUS 8), 154-175.
- Verčák, M., 2007: Die germanische Bewaffnung der älteren römischen Kaiserzeit aus dem Gebiet der südwestlichen Slowakei, *Analecta Archaeologica Ressoviensia* 2, 131-160.
- Wiegels, R., 2017: Die Besitznahme der Oberrheinlande durch Rom. Aspekte einer Bevölkerungs- und Militärgeschichte, *Frankfurter elektronische Rundschau zur Altertumskunde* 34, 37-72 (<https://www.fera-journal.eu/index.php/ojs-fera/article/view/227/206>).
- Wunderlich, C.-H., 1999: Pech für den Toten. Die Untersuchung von "Urnenharzen" aus Ichstedt, Ldkr. Kyffhäuserkreis, *Jahresschrift für mitteldeutsche Vorgeschichte* 82, 211-220.

# Westwards!

## Population dynamics along the Middle and Upper Rhine during the 1<sup>st</sup> century BC

Arno Braun and Sabine Hornung

According to archaeological sources, the Middle and particularly Upper Rhine regions suffered a decline in population density and were affected by processes of decentralization between the LT D1b/D2a transition and the establishment of a permanent Roman military presence in Augustan times, *i.e.* from about 80 to 17/16 BC (Hornung 2016, 271-272 and 446-460). These developments, which had been caused by fundamental economic changes in the Late La Tène Culture, are contrasted with evidence from historical sources highlighting a widespread mobility across the Rhine during that very same period (*Caesar Commentarii de Bello Gallico* 1.2 and 1.31; Ptolemaeus *Geographia* 2.11.6; Tacitus *Germania* 28.2). However, archaeological evidence for these migrations has long been missing. Latest research on the important iron production site of Eisenberg (Donnersbergkreis, Rhineland-Palatinate) now provides first insights into the processes of mobility around the middle of the 1<sup>st</sup> century BC, which seem to have been much more complex than previously assumed.

The *vicus* of Eisenberg is located east of the northern foothills of the Haardt mountains, in the centre of the fertile Eisenberger Becken, where large deposits of fireclay sand are found. The fact that the Eisenberg Basin is surrounded by various iron ore deposits also seems of some interest. The Roman settlement developed along the road from Worms to Metz, which can be traced back to the Iron Age (Engels 1964-1994; Brücken 2018). The distance to Worms is 27 km. Apart from being linked with the Rhine axis, the Eisenberg region is situated between the confluences of the Main and Neckar, but on their opposite bank. This seems significant, because both river systems functioned as natural gateways towards the areas east of the Rhine.

Between 1992 and 2002 about 7,000 m<sup>2</sup> of the settlement area were excavated by the local antiquities department in Speyer. The actual *vicus* seems to have developed from the Flavian period onwards and was settled until the mid 5<sup>th</sup> century, covering an area of up to 12 ha. It emerged from an earlier iron production site of industrial scale, probably of the same extent (Bernhard *et al.* 2007, 222, fig. 274). According to the latest research on an area in the centre of the settlement some 700 m<sup>2</sup> in size (Braun in press), settlement activity can be traced back to around 40-30 BC, *i.e.* LT D2b in the Treveran chronology (Braun in press, 530-544). This phase is characterized by numerous rectangular sunken features (fig. 1). Associated larger buildings are missing, which makes a cellar function unlikely. Since wooden superstructures or roofs can be assumed, an interpretation as sunken-featured buildings is highly probable. Although most of these sunken features have not yet been subject to systematic research, it turns out that in at least 15 cases they

### Arno Braun / Sabine Hornung

Institute for Pre- and  
Protohistory, Department  
for Ancient Studies,  
Saarland University,  
66123 Saarbrücken,  
Arno.Braun@uni-saarland.  
de / Sabine.Hornung@uni-  
saarland.de

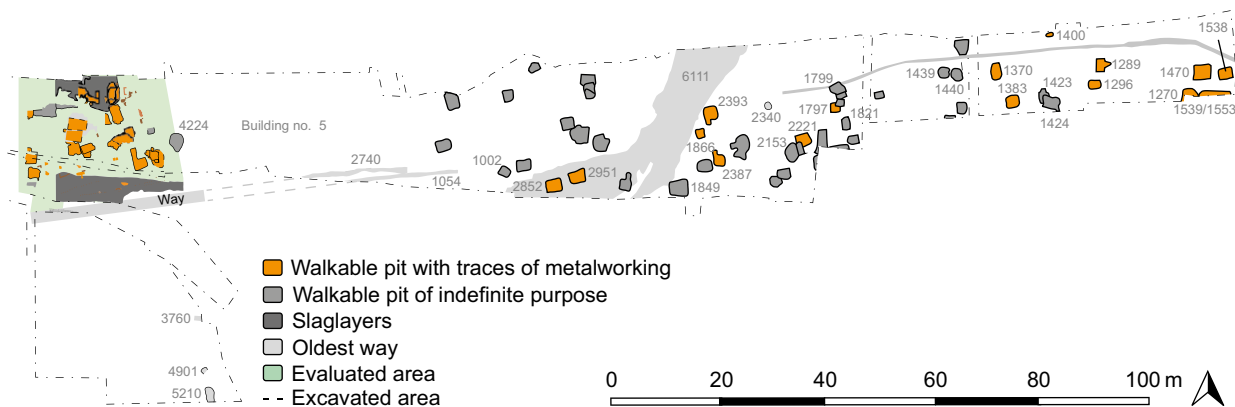


Figure 1. Plan of the centre of the early Roman settlement of Eisenberg (after Bernhard *et al.* 2007, 23 fig. 18 with additions).

were used for metalworking. Sunken-featured buildings are unparalleled in regional building traditions but very common in areas further to the east, for example in the Late La Tène Culture of north-western Bohemia (Salač & Kubálek 2015, catalogue).

Currently, ten areas with evidence for iron smelting have been identified. They are distributed across large parts of the later *vicus*. The outstanding importance of this iron industry with respect to the economy of the early settlement is also illustrated by a slag heap (Braun 2019, 178-179, fig. 3). Its volume can be estimated to about 45,000 m<sup>3</sup>, indicating a total production of 50,000 tons of iron in almost 100 years of smelting activity, i.e. 500 to 600 tons a year (Braun in press, 78-80). Embedded in this slag heap, three Roman bloomery shaft furnaces were discovered in 1882 (Mehlis 1883).

Eisenberg is surrounded by several other sites also connected to iron production and scattered across the above-mentioned areas of natural iron ore deposits. Apart from a poorly understood but large site in Grünstadt (Kreis Bad-Dürkheim, Rhineland-Palatinate), ten smaller sites can be dated to the early Roman period. At one site, in Weisenheim am Berg (Kreis Bad-Dürkheim, Rhineland-Palatinate), additional Iron Age finds were recorded (Walling 2005). The distribution of these smelting sites covers an area of about 100 km<sup>2</sup>, thus defining an important local iron district.

A recent study on the above-mentioned area in the settlement centre of the Eisenberg *vicus* also elaborated on various traces of activities connected with iron smelting. A very characteristic feature is the regular occurrence of rectangular pits of the above-mentioned type. In 14 of the documented sunken features, a production of iron is certain or likely. With regards to a possible start of these activities, a *terminus ante quem* around the transition between the early and middle Augustan periods (c. 15 BC) can be specified, but, since even the oldest ground surfaces already contained slag, it is highly probable that the

settlement foundation and the iron smelting both date to about the same time (Braun in press, 444). Metalworking then continued for at least 90 years and can be divided into three horizons (a-c). Horizon *a* ended during the middle Augustan period, horizon *b* comprised the late Augustan and Tiberian periods and horizon *c* lasted from the Claudian to early Flavian period (AD 71-79 *terminus post quem*) (Braun in press, 530, table 1). In the context of this paper, it seems reasonable to concentrate only on the earliest horizon *a*, as it provides important indications on the cultural background of the local population in general and the ironworkers in particular.

The working-pits, or rather sunken-featured workshops used for iron smelting, contained bloomery shaft furnaces in the interior of the pits or attached to their sides (fig. 2). The free-standing variant of these furnaces is restricted to the youngest horizon *c*, though. To date, no technological parallels seem to exist anywhere west of the Rhine. Instead, domed furnaces were widely distributed in La Tène and early Roman Gaul, southern Germany, Austria and England (Pleiner 2000, 163-172). Influenced by the Late Republican shaft furnaces known from the Montagne Noire in south-western Gaul (Fabre *et al.* 2016), these domed furnaces were later replaced by the Gallo-Roman shaft furnaces built at ground level and common from the mid-1<sup>st</sup> century AD onwards (Pleiner 2000, 68-69).

Direct parallels to the sunken workshops with shaft furnaces from Eisenberg are known from Bohemia, for example from Lovosice (district of Litoměřice/CR, Pleiner & Salač 1987) (fig. 2). The earliest examples seem to date to the Late La Tène period, as smelting sites from Mšec (district Rakovník/CR), Chýně (district of Prague-west/CR) or in the vicinity of the *oppidum* of Stradonice (district of Kladno/CR) suggest (Pleiner 2000, 64-65), although their early dating has recently been discussed critically (Lehnhardt 2019, 301-307 and 331-336). At any rate, most known sites of the same type relate to the Early Roman Iron Age (Eggers 1955: RKZ A-B). Apart from Lovosice,

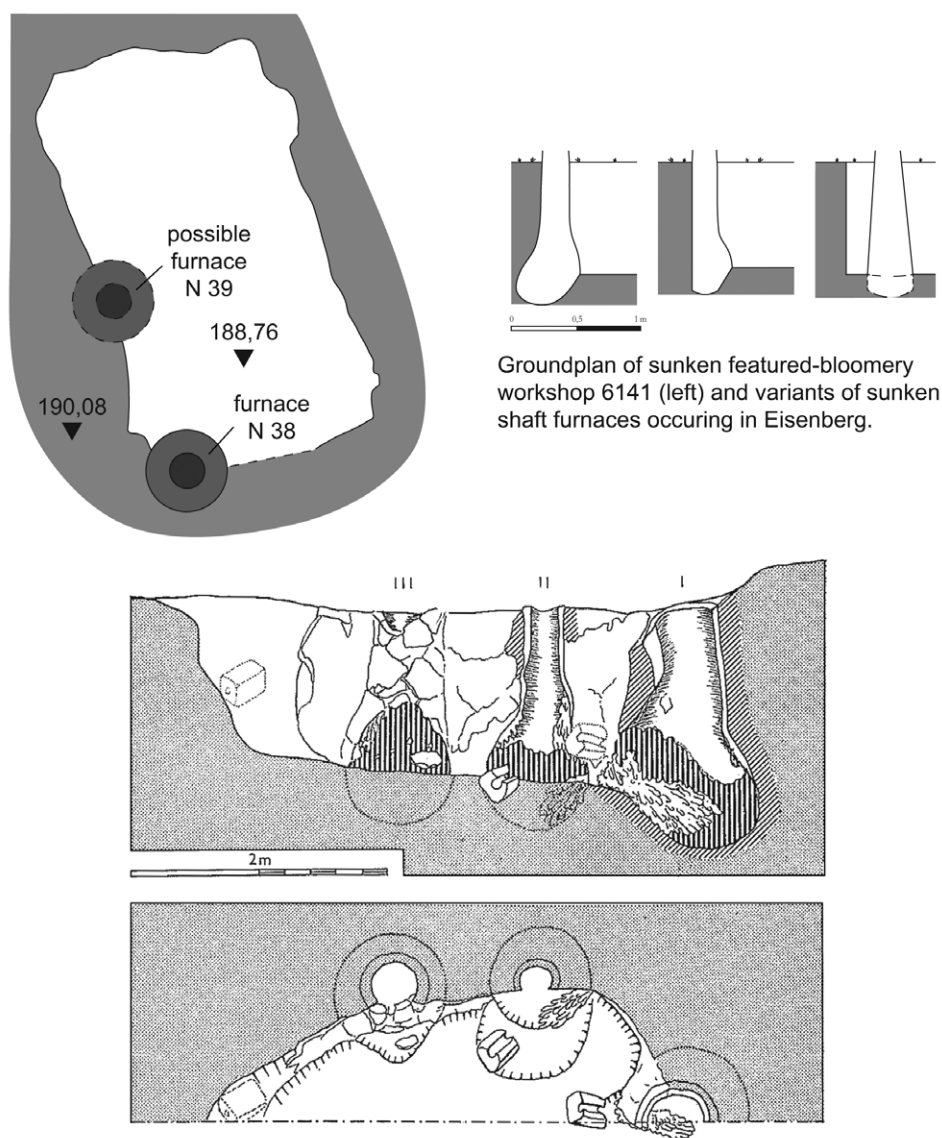


Figure 2. Sunken-featured bloomery workshops in Eisenberg and Lovosice / CR. Scale 1:50 (after Pleiner & Salač 1987, 77, fig. 3).

Vertical section and groundplan of the sunken-featured bloomery workshop at Lovosice / CR.

similar installations were discovered in Ořech (district of Prague-west/CR) and can be dated to the second half of the 1<sup>st</sup> century BC here (Motyková & Pleiner 1987), but also in Tuklaty (district of Kolín/CR), Dubeč (district of Prague/CR) and several other places (Pleiner 1964; 2000, 65-67).

Most probably as a result of the Germanic expansion into Bohemia, sunken smelting-workshops then spread towards the north, but also in a westerly and – though less far – a north-easterly direction. The oldest such site has been found in Gröba in Saxony (city of Riesa, Kreis Meißen), dating to about the birth of Christ (Pleiner 1964, 28). Only in the 1<sup>st</sup> century AD did this technology finally reach the western Baltic coastal area (Leube 2009, 62-74). Further to the west, a sunken-featured bloomery workshop of Augustan to Neronian/Vespasianic date was excavated

in Wetzlar-Dalheim and, therefore, in the traditional distribution area of the La Tène domed furnaces of the type Siegerland (Schäfer 2010). Apparently, new technological ideas and the people making use of them had moved in from areas further to the east. The westernmost smelting site of the same type to date was excavated in Heek-Nienborg (Kreis Borken), close to the Dutch border (Nikulka 2000). The Eisenberg findings, therefore, seem to fit quite well into this broader picture of a mobility-related transfer of technology, particularly if the major importance of the regional ore district is also taken into account.

Thus, it is hardly surprising that a part of the earliest Eisenberg pottery shows similar cultural relations. A selection of pots has striking formal parallels to vessels from the eastern part of the Late La Tène Culture, including its northern periphery, and particularly in high-quality

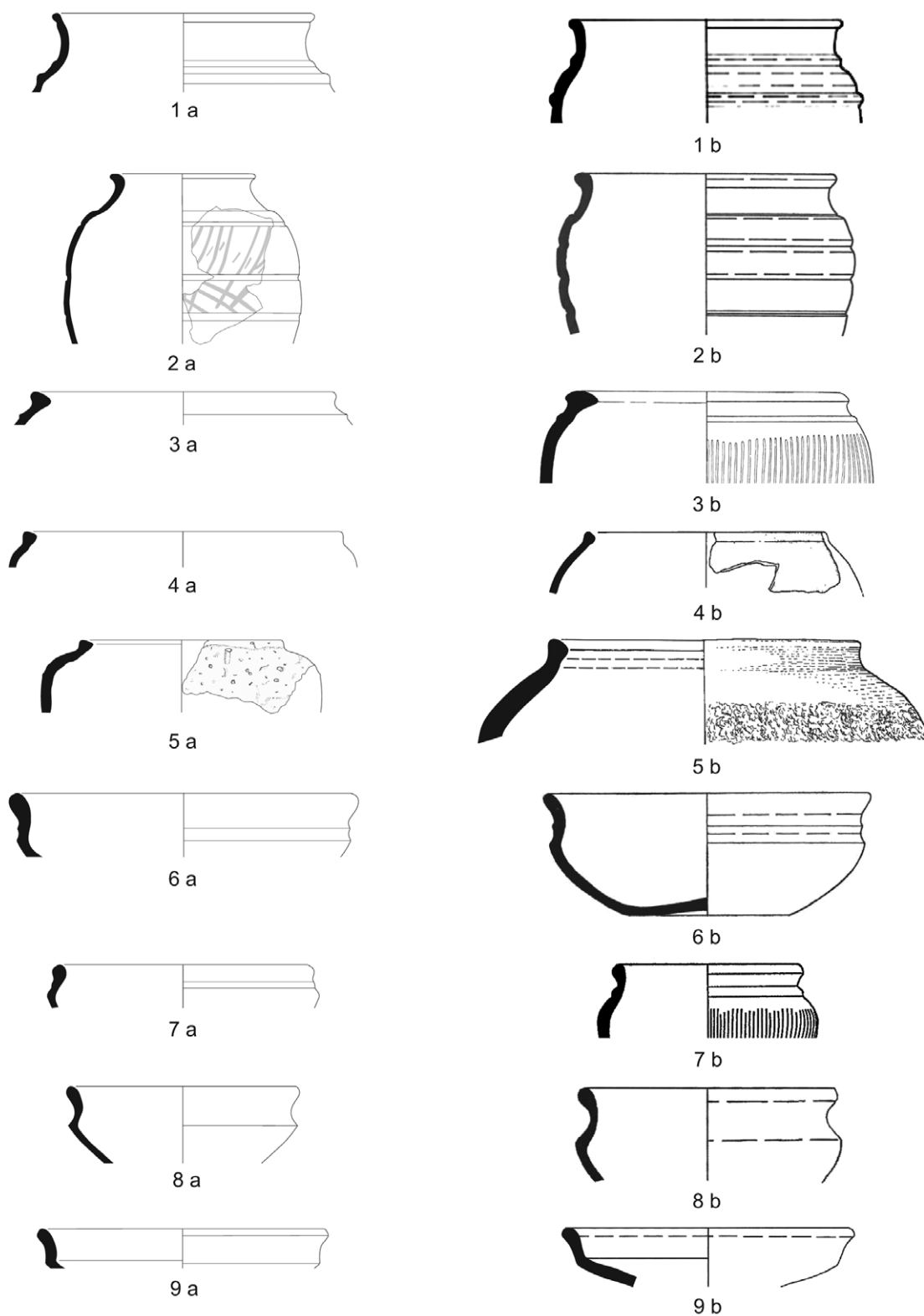
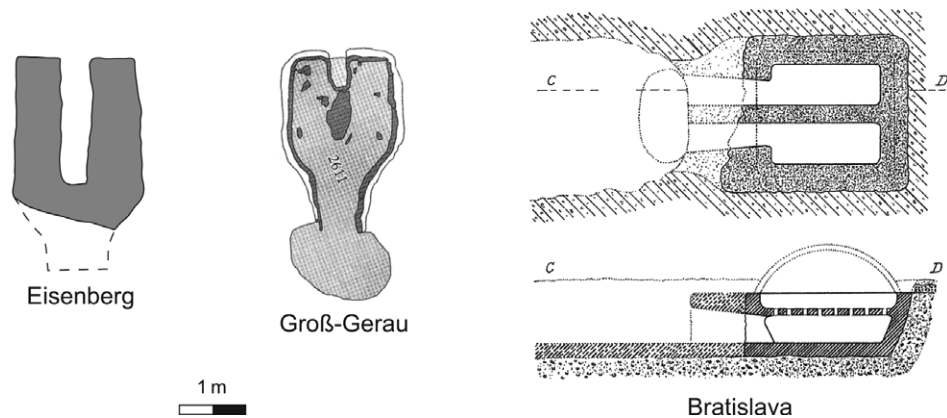


Figure 3. Eisenberg pottery and finds from the area of the eastern Late La Tène Culture and its northern periphery. Scale 1:4; 1:6 (3 b). Sites after Kappel 1969, 84 fig. 29, 10 [7 b]; Pingel 1971, plate 27, 330 [2 b], plate 28, 343 [1 b] and plate 60, 918 [6 b]; Meduna 1980, plate 29, 7 [3 b]; Peschel 2000, 11 fig. 7, 12 [5 b]; Salač & Kubálek 2015, plate 140, 5 [8 b] and plate 207, 5 [9 b]; Kretschmer 2019, plate 72, G 6 [4 b].

Figure 4. Early Central European pottery kilns with rectangular plan. Scale 1:100 (Bratislava after Mangel & Thér 2018, 439 plate 119; Groß-Gerau after Helfert 2010, 17, fig. 4).



wheel-thrown ware (fig. 3, 1a-4a). This type of pottery has no regional LT D1 predecessors and also lacks comparisons in Gaul. Moreover, a rough but very hard fired, handmade ware is common in Eisenberg, too (fig. 3, 5a). With respect to their situla-like shape, such vessels are characteristic for the transitional period between the pre-Roman and Roman Iron Age on the northern periphery of the eastern Late La Tène Culture, *i.e.* during the second half of the 1<sup>st</sup> century BC (fig. 3, 5b).

What is more, the same can also be observed for bowls with a structured profile, which are a typical feature of the early Eisenberg pottery (fig. 3, 6a-9a). Representing a regional phenomenon restricted to the early Roman period, similar bowls are distributed exclusively along the northern Upper and Middle Rhine, with a clear focus in the area between the confluences of the Main and Neckar. Once more, these vessel profiles can be traced back to eastern Late La Tène designs (fig. 3, 6b-9b). Yet this particular type of pottery also reveals Germanic influences visible in a tendency towards sharply bent profiles and increased coarseness. The same phenomenon of cultural admixture can be observed along the entire northern and north-eastern periphery of the Late La Tène sphere during the transitional period, *i.e.* in the decades around and following the middle of the 1<sup>st</sup> century BC (*e.g.* Meduna 1980, 145-148 fig. 21; Salač & Kubálek 2015, 189; Kretschmer 2019; Hornung *et al.* 2020; 192-193). As the appearance of vessels representing Germanic traditions in Eisenberg is not restricted to horizon a, this transfer of material culture not only seems to have been temporally extended, but shows a somewhat younger chronological focus as well. Possible Germanic influences could thus have been a secondary phenomenon compared with the earlier influx from the eastern Late La Tène sphere.

In this regard, an early Middle Augustan pottery kiln of uncommon design stands out, which again dates to the oldest settlement horizon a (fig. 4). Typologically speaking, it represents a vertical, two chambered kiln with rectangular plan. This type of kiln originated in Italy and

was then adopted rather late in Roman Gaul and the Rhine provinces, where it generally appeared no earlier than the second half of the 2<sup>nd</sup> century AD (Duhamel 1978/1979, 71; Heising 2007, 199). The most convincing parallels for the Eisenberg kiln are distributed in the Rhine-Main area (Biegert 1999, 20-24, fig. 6 and 100-102; Helfert 2010, 16-23 figs. 4-5 and 8-9). Some examples from the late Augustan military camp of Haltern with probable rectangular plan differ from this type (Rudnick 2001, 7-19, figs. 3 and 5). Apart from these findings, a kiln in Groß-Gerau (Helfert 2010, 17, fig. 4) dating between AD 75 and 120 is chronologically the closest. Consequently, the Eisenberg kiln represents the oldest example of this particular type known to date in the north-western provinces. However, another parallel seems important with respect to the origin of this kiln type: a Late La Tène kiln from the *oppidum* of Bratislava in Slovakia (fig. 4, Mangel & Thér 2018, 168, 171-172, fig. 96-97, 1A1g, 258-259, K1P1 and plate 119). Therefore, even pottery production may well have been determined by the same influences from the eastern Late La Tène sphere also visible in sunken-featured workshops with shaft furnaces and the Eisenberg pottery.

How can these possible relations be explained? In general, contacts between the eastern Late La Tène Culture, particularly in Bohemia, and the Rhine-Main-Moselle region already existed during LT D1 and can be traced back even into the Early La Tène period (Salač & Von Carnap-Bornheim 1994). Bearing the topography of the wider region in which Eisenberg is located in mind, such cultural contacts seem hardly surprising. Yet all relevant local finds are without parallels in native LT D1-contexts along the northern Upper and Middle Rhine regions and there is, of course, a chronological conflict. According to its formal and technical features, the Eisenberg material clearly suggests a dating between a developed stage of LT D2b (40/30 BC) and the Augustan period. The eastern Late La Tène Culture, on the other hand, suffered a decline starting in a later phase of LT D1, sometime from the beginning of the 1<sup>st</sup> century BC. During the second

half of the 1<sup>st</sup> century BC and particularly between about 40 and 25 BC, when the Eisenberg settlement developed, this process was well advanced. It had already resulted in a widespread decentralization, a decline in specialized production and a loss of economic power leading to a relative cultural isolation of the affected areas. An interpretation of the Eisenberg wheel-thrown pottery as trade goods is, therefore, very unlikely.

Taking all presented aspects into account, particularly the transfer of ideas rather than material culture only, the evidence from Eisenberg suggests that people from the east, meaning from the eastern Late La Tène sphere or its northern periphery, were physically present here. The local iron ore district surely functioned as an economic attractor pushed by the Roman authorities or, respectively, a growing Roman demand for iron in the freshly established province of Gaul before and during the Augustan campaigns into Germania. But this cultural phenomenon does not seem to be just a local one either, it becomes increasingly visible in the entire northern Upper Rhine area from a rising number of small settlements. Gertrud Lenz-Bernhard and Helmut Bernhard deserve the credit of having drawn attention to this phenomenon, although focusing primarily on possible indications for a re-settlement of ‘Germanic’ *Vangiones* and *Nemeti* (Lenz-Bernhard & Bernhard 1991; Bernhard & Lenz-Bernhard 2015). Mixed find complexes combining elements alien to the region and local material culture are distributed even more widely on the entire western bank of the northern Upper Rhine region. A major problem with respect to a better understanding of these dynamic developments between the end of the LT D1 period and the stationing of the Roman military along the Rhine still lies in an unclear chronology.

Fortunately, however, further evidence to help us better understand the processes leading to an appearance of foreign cultural influences on the Upper Rhine now comes from the Taunus and Westerwald mountains, i.e. from the eastern part of the Rhenish Massif. It mainly relates to a LT D settlement discovered in the area of the Late Republican military camp II on the Greifenberg near Limburg-Eschhofen and superimposed by this Roman fortification (Schade-Lindig 2020, 68-105; Schallmayer 2020). This hamlet with a core area some 2-3 ha in size seems to have been short-lived and existed for no more than one or two decades. It was burnt and levelled, possibly when the Roman army arrived. The supposed Caesarian dating of camp II therefore provides us with a *terminus ante quem* for all recorded settlement traces, which comprise post-built structures but also a number of sunken-featured buildings, mostly with roof-bearing posts on their short sides – a building tradition once more missing in native LT D1 contexts from this region. Pottery finds from the Limburg-Eschhofen settlement are no less remarkable

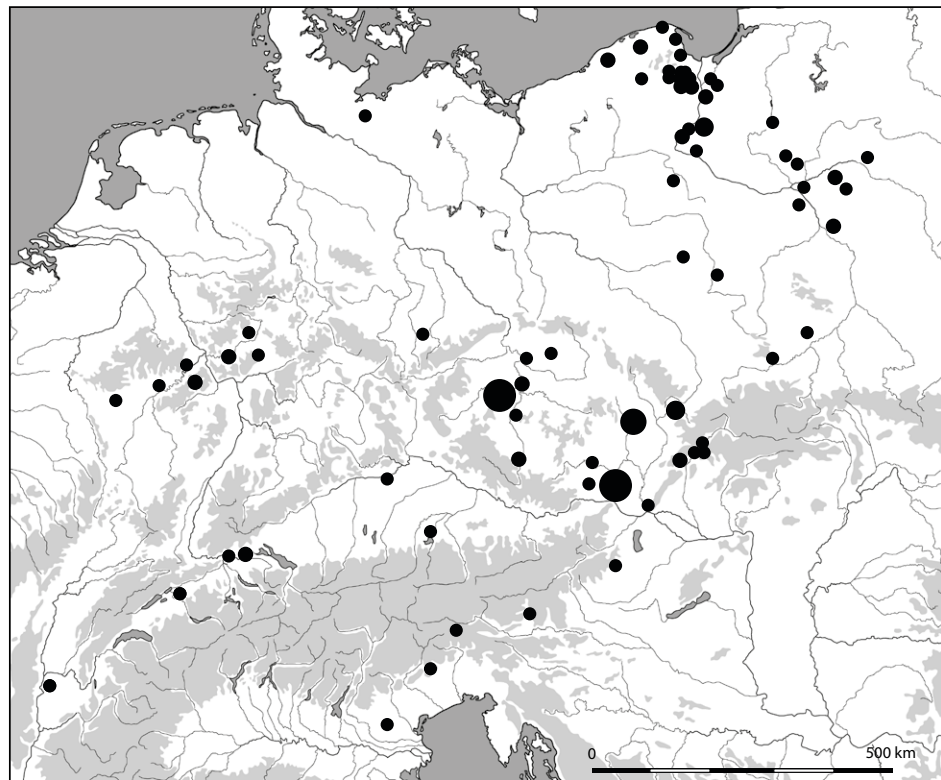
(Hornung *et al.* 2020). Particularly striking is a large percentage of high-quality wheel-thrown ware often bearing impressed, horizontal wave decoration. This type of pottery is known from the areas west of the Middle Rhine, but dating no later than LT D1 there. However, it is very common in LT C2/D1 contexts in north-western Bohemia, where it seems to live on well into the middle of the 1<sup>st</sup> century BC (Salač & Von Carnap-Bornheim 1994, 99-106). Similar cultural influences are reflected in the handmade pottery from Limburg-Eschhofen (Hornung *et al.* 2020, 136-152). Beside a number of thin-walled sherds decorated with crescent-shaped imprints and illustrating contacts with the ‘Germanic’ sphere, another type of handmade pottery with plastic rib decoration on the rim and shoulder seems remarkable, the latter often appearing in combination with pitch coating (‘Pichung’). Parallels are found mainly in north-western Bohemia and Moravia, particularly in the Bílina region (Salač & Kubálek 2015), but are also known from the contact zone further to the north. Yet this particular type of handmade pottery is once more missing in native LT D1 context and, therefore, represents a foreign cultural influx in the areas east of the Middle Rhine. Since there is no doubt as to its local production in Limburg-Eschhofen, it clearly illustrates the mobility of the people who made it.

The same type of pottery is also known from several other sites in the area between the Lahn and Westerwald and regularly comes from hamlet-like settlements, such as Waldbrunn-Lahr (Schade-Lindig 2015) or Wetzlar-Blasbach (Hornung 2018) and several fortifications (hillforts and *oppida*). The open settlements are new foundations and apparently very short-lived. They all date to LT D2a or the LT D2a/b transition (probably from about 70/60 BC onwards), a time when the local LT D1 settlement system had already suffered a decline caused by the supra-regional changes in major economic networks mentioned before (Hornung 2023). Therefore, a lack of stratified finds from hillforts and *oppida* makes it hard to determine whether the pottery reflecting foreign influences can be seen as an indication of possible interactions of newly arriving groups with the remaining native population or, rather, a re-use of already deserted fortifications.

At any rate, it seems significant that pottery finds in this foreign style are always accompanied by metal objects indicating relations with the *oppida* culture of southern Germany and Bohemia, its northern periphery, as well as the contact zone further to the north. It is, for example, regularly associated with iron spoon-bow fibulae (*Schüsselfibeln*) most common in the Boian coinage zone (Karwowski 2020), where these are closely linked with the final horizon of the *oppida* (LT D1b in local chronology). In the Taunus and Westerwald regions, these brooches first appear in a pre-Caesarian horizon, or LT D2a in the



Figure 5. Distribution of iron spoon-bow fibulae of Kostrzewski type J (after Karwowski 2020, 332, fig. 5, with additions).



Treveran chronology, whereas some examples from the areas west of the Rhine are somewhat younger and can be dated to LT D2b and even the Augustan period (fig. 5). A similar time delay can be observed with respect to the distribution of pottery with rib decoration and pitch coating as well as impressed decoration, which appears no earlier than the LT D2a/b transition in all areas west of the Rhine. Other foreign metal finds, like a fibula with curved bow (type Almgren 18a) from Waldbrunn-Lahr or a silver rainbow-cup stater of the Vindelici from Wetzlar-Blasbach, further support the overall picture of small foreign groups arriving in the Taunus and Westerwald regions from 70/60 BC onwards. These influences reached the areas west of the Rhine somewhat later, from about the middle of the 1<sup>st</sup> century onwards, but seem to be associated with material from native LT D2b Treveran context on quite a regular basis in the wider Moselle region, thus speaking in favour of an integration of people from the east into pre-existing groups here (Hornung 2023, 195).

At the moment, Eisenberg is, therefore, still the only newly founded LT D2b site on the easternmost periphery of Gaul clearly reflecting such foreign influences on a broader basis. It highlights the idea that the areas east and west of the Upper and Middle Rhine might have been affected by considerable population dynamics from just before the time of the conquest and shortly after. This is well in line with historical sources and the

formation of new *civitates* on the western bank of the Rhine (Plinius the Elder *Historia Naturalis* 31; Tacitus *Germania* 28.4), although not necessarily with the idea of a concerted resettlement of ‘Germanic’ groups (Hornung 2016, 300-305, 318, 399-404 and 516-517). At any rate, Eisenberg can surely be seen as a key location for a better understanding of these still poorly-researched processes, particularly with regards to the origin and intensity of foreign influences, visible in both the material culture and technology. Its large-scale iron production also emphasises the fact that economic developments were, by all probability, closely linked to processes of mobility and that foreigners may well have been integrated into newly emerging structures, the development of which was ultimately fuelled by the arrival of the Roman military along the Rhine.

### Acknowledgement

The authors would like to thank Clive Bridger for his help with the English translation of this manuscript. All mistakes are entirely our own.

## Bibliography

- Bernhard, H. & G. Lenz-Bernhard, 2015: Kelten – Germanen – Römer in der Pfalz. Bemerkungen zu einigen Neufunden, in: P. Henrich (ed.), *Non solum sed etiam. Festschrift Thomas Fischer zum 65. Geburtstag*, Rahden, 11-30.
- Bernhard, H., A. Braun, U. Himmelmann, T. Kreckel & H. Stickl, 2007: *Der römische Vicus von Eisenberg. Ein Zentrum der Eisengewinnung in der Nordpfalz*, Speyer (Archäologische Denkmäler Pfalz 1).
- Biegert, S., 1999: *Römische Töpferöfen in der Wetterau*, Frankfurt (Schriften Frankfurter Museum für Vor- und Frühgeschichte, Archäologisches Museum 15).
- Braun, A., 2019: 'Schmelztiegel' Eisenberg. Ein frühromischer Verhüttungsplatz am nördlichen Oberrhein, in: S. Bödecker, E. Cott, M. Brüggler, E. Deschler-Erb, M. Grünwald, S. Hornung, J. Morscheiser-Niebergall & P. Tutlies (eds), *Spätlatène- und frühkaiserzeitliche Archäologie zwischen Maas und Rhein. Tagung Roman Networks in the West II, Krefeld 14.-16. Juni 2018*, Bonn, 175-192.
- Braun, A., in press: *Studien zur Besiedlungsgeschichte des römischen Eisenberg. Das Areal der Parzellen 3 und 4* (PhD thesis Mainz).
- Brücken, G., 2018: Das Gräberfeld von Worms-Herrnsheim. Der aktuelle Forschungsstand, in: M. Koch (Hrsg.), *Archäologie in der Großregion. Internationales Symposium zur Archäologie in der Großregion in der Europäischen Akademie Otzenhausen 23.-26.März 2017*, Nonnweiler (Archäologentage Otzenhausen 4), 111-118.
- Duhamel, P., 1978/1979: Morphologie et évolution des fours céramiques en Europe Occidentale. Protohistoire, monde celtique et Gaule romaine, *Acta Praehistorica et Archaeologica* 9/10, 1978/79, 49-76.
- Eggers, H.J., 1955: Zur absoluten Chronologie der RKZ im freien Germanien, *Jahrbuch Römisch-Germanisches Zentralmuseum Mainz* 2, 96-244.
- Engels, H.-J., 1964-1994: Fundkarte der älteren Eisenzeit (Hallstattkultur 800-450 v. Chr.); Fundkarte der jüngeren Eisenzeit (Latènekultur 450 v. Chr.-30 n. Chr.), in: W. Alter, *Pfalzatlant II*, Speyer, Karte 16-17.
- Fabre, J.-M., C. Domergue & F. Dabosi, 2016: *Le fer romain de la Montagne Noire. Martyrs 2. Les débuts. 25 années de recherches pluridisciplinaires (1988-2013)*, Montpellier (Revue archéologique de Narbonnaise Supplément 43).
- Heising, A., 2007: *Figlinae Mogontiacenses. Die römischen Töpfereien von Mainz*, Remshalden (Ausgrabungen und Forschungen 3).
- Helfert, M., 2010: *Groß-Gerau II. Die römischen Töpfereien von Groß-Gerau, 'Auf Esch'*. Archäologische und archäometrische Untersuchungen zur Keramikproduktion im Kastellvicus, Frankfurt (Frankfurter Archäologische Schriften 11).
- Hornung, S., 2016: *Siedlung und Bevölkerung in Ostgallien zwischen Gallischem Krieg und der Festigung der römischen Herrschaft*, Mainz, Darmstadt (Römisch-Germanische Forschungen 73).
- Hornung, S., 2018: Spätlatènezeitliche Siedlungsreste und mittelalterliche Eisengewinnung bei Wetzlar-Blasbach, *hessenArchäologie* 2018, 238-242.
- Hornung, S., 2023: Late 2<sup>nd</sup> and early 1<sup>st</sup> century settlement and population dynamics in the Middle Rhine region. The role of economic change, in: V. Guichard (ed.), *Continuity and discontinuity at the end of the 2<sup>nd</sup> century BC in the Celtic zone and on its margins*, Glux-en-Glenne (Collection Bibracte 32), 181-200.
- Hornung, S., F. Verse & I. Balzer, 2020: Die Spätlatènekeramik aus der Siedlung und den römischen Militärlagern bei Limburg an der Lahn, in: S. Schade-Lindig (ed.), *Archäologie am Greifenberg bei Limburg an der Lahn. Spuren von der Jungsteinzeit bis zur Römischen Republik*, Darmstadt (hessenArchäologie Sonderband 4), 125-156.
- Kappel, I., 1969: *Die Graphittonkeramik von Manching*, Wiesbaden (Ausgrabungen in Manching 2).
- Karwowski, M., 2020: Boii Iron 'Schüsselfibeln' of Kostrzewski type J and their distribution area, in: I. Čížmář, H. Čížmářová & A. Humpolová (eds), *Jantarová stezka v proměnách času*, Brno, 327-338.
- Kretschmer, S., 2019: *Zwenkau-Nord. Eine Siedlung der späten Latènezeit am Übergang zur Römischen Kaiserzeit aus Mitteldeutschland*, Dresden (Veröffentlichungen Landesamt für Archäologie Sachsen 69).
- Lehnhardt, E., 2019: *Die Anfänge der Eisenverhüttung im Bereich der Przeworsk-Kultur*, Berlin (Berlin Studies of the Ancient World 62).
- Lenz-Bernhard, G. & H. Bernhard, 1991: *Das Oberrheingebiet zwischen Caesars Gallischem Krieg und der flavischen Okkupation (58 v.-73 n. Chr.). Eine siedlungsgeschichtliche Studie*, Speyer (Mitteilungen Historischer Verein der Pfalz 89).
- Leube, A., 2009: *Studien zu Wirtschaft und Siedlung bei den germanischen Stämmen im nördlichen Mitteleuropa während des 1. bis 5. Jahrhunderts n. Chr.*, Mainz (Römisch-Germanische Forschungen 64).
- Mangel, T. & R. Thér, 2018: *Laténské hrnčářské pece ve střední Evropě. La Tène pottery kilns in Central Europe*, Hradec Králové.
- Meduna, J., 1980: *Die latènezeitlichen Siedlungen in Mähren*, Prague (Ceskoslovenská Akademie Věd, Archeologický Ústav 1).

- Mehlis, Ch., 1883: Rufiana – Eisenberg. Ein Beitrag zur Topographie und Archäologie der Rheinlande, *Mitteilungen Historischer Verein der Pfalz* 11, 1-42.
- Motyková, K. & R. Pleiner, 1987: Die römerzeitliche Siedlung mit Eisenhütten in Ořech bei Prag, *Památky Archeologické* 78, 371-448.
- Nikulka, F., 2000: Zur Genese der Eisenmetallurgie in Nordwestdeutschland. Die Rennfeueröfen von Heek-Nienborg, Kr. Borken, *Archäologische Mitteilungen aus Nordwestdeutschland* 23, 59-105.
- Peschel, G., 2000: Keramik aus Siedlungen der jüngeren vorrömischen Eisenzeit und frühen römischen Kaiserzeit in Nordthüringen, in: S. Biegert, S. von Schnurbein, B. Steidl & D. Walter (eds), *Beiträge zur germanischen Keramik zwischen Donau und Teutoburger Wald*, Bonn (Kolloquien zur Vor- und Frühgeschichte 4).
- Pingel, V., 1971: *Die glatte Drehscheiben-Keramik von Manching*, Wiesbaden (Ausgrabungen in Manching 4).
- Pleiner, R., 1964: Die Eisenverhüttung in der 'Germania Magna' zur römischen Kaiserzeit, *Berichte Römisch-Germanische Kommission* 45, 11-86 and Beilage 1.
- Pleiner, R., 2000: *Iron in archaeology. The European bloomery smelters*, Prague (Archeologický Ústav).
- Pleiner, R. & V. Salač, 1987: Eine eingetiefte Eisenverhüttungswerkstatt der älteren römischen Kaiserzeit in Lovosice, *Archeologické rozhledy* 39, 75-89.
- Rudnick, B., 2001: *Die römischen Töpfereien von Haltern*, Mainz (Bodenaltertümer Westfalens 36).
- Salač, V. & C. von Carnap-Bornheim, 1994: Die westlichen Beziehungen Böhmens in der Mittel- und Spätlatènezeit am Beispiel der Keramik, *Germania* 72, 95-131.
- Salač, V. & T. Kubálek, 2015: *Die latènezeitliche Siedlungskeramik aus Nordwestböhmen*, Prag.
- Schade-Lindig, S., 2015: Kelten im Westerwald. Ein Grubenhaus der Spätlatènezeit aus Waldbrunn-Lahr, *hessenArchäologie* 2014, 80-85.
- Schade-Lindig, S. (ed.), 2020: *Archäologie am Greifenberg bei Limburg an der Lahn. Spuren von der Jungsteinzeit bis zur Römischen Republik*, Darmstadt (hessenArchäologie Sonderband 4).
- Schäfer, A., 2010: 'Zwischen' Dünsberg und Waldgirmes. Wirtschaftsarchäologische Untersuchungen an der mittleren Lahn, *Berichte Kommission Archäologische Landesforschung Hessen* 10, 69-90.
- Schallmayer, E., 2020: Caesar in 'Germanien'. Die spätlatènezeitliche Siedlung und die römischen Militärlager im historischen Kontext, in: S. Schade-Lindig (ed.), 2020: *Archäologie am Greifenberg bei Limburg an der Lahn. Spuren von der Jungsteinzeit bis zur Römischen Republik*, Darmstadt (hessenArchäologie Sonderband 4), 250-292.
- Walling, H., 2005: *Der Erzbergbau in der Pfalz von seinen Anfängen bis zu seinem Ende*, Mainz.



# The *Cugerni* and the reshuffling of tribal (id)entities on the Lower Rhine

Marion Brüggler

The following contribution is dedicated to the *Cugerni*, the somewhat understudied tribe whose settlement area was located on the Lower Rhine in the area around Xanten. The first and only epigraphic evidence of a *Cugernus* is a tombstone found in Croatia, which is on stylistic reasons dated to the middle of the 1<sup>st</sup> century. The stone commemorates the cavalryman Melvadius ‘*domo Cugernus*’, who served in the *Ala Claudia Nova* (CIL III.9727, Derks 2009). The significance of epigraphic evidence for tribal identities – however – is debated: Whereas Derks underlines it (Derks 2009), Speidel (2017, 49-50) rejects its value for “sentiments of identity, tribal bonds...” altogether and rather sees administrative necessities of identification.

Plinius the Elder lists the ‘*Guberni*’ between the *Ubii* and *Batavi* in his Natural History (4.106), therefore the settlement area is thought to have been located between those two tribes. Tacitus (*Historiae* 4.26) reports that the *Cugerni* fought on the side of Julius Civilis in the Batavian Revolt, when Vocola led a force into Cugernian villages in the neighbourhood of *Gelduba*, modern Krefeld-Gellep (“...in proximos *Cugernorum* pagos...”).

A *cohors* was drafted from the *Cugerni*, *Cohors I Cugernorum*, the first mention of which is on a diploma dated to AD 103. So the unit must have been founded before that date, maybe in the reign of Trajan (Alföldy 1968, 84). Davies (1977, 389) thinks that, like the *Batavi* and being from the Lower Rhine, the unit was specialised for amphibious crossings and combat. By the 120's the unit's name refers to the newly founded colony at Xanten and it is now called *Cohors I Ulpia Traiana Cugernorum c(ivium) R(omanorum)*, which underlines the connection of the tribe to the colony. Several more inscriptions refer to the unit, most of them found in Britain, where the unit was stationed. The last mention is from AD 213 (Spaul 2000, 239). While at the time of its establishment ethnic units consisted of persons from the tribe named, later on gaps were filled with men from where the unit was stationed (Derks 2009, 243), therefore, evidence of the unit in the 2<sup>nd</sup> century cannot be taken as proof of the existence of the tribe at that time anymore.

Whereas Plinius the Elder spells the name with a ‘B’ – *Guberni* (cf. above), in most other instances, the name is given with a ‘G’ (Bridger 1994, 191; Spaul 2000, 239). The difference in spelling makes an etymological interpretation difficult (Neumann 1984). ‘*Cugerni*’ was thought to have meant ‘Lovers of cows’ – possibly as a derogatory term (Much 1893, 157-159), an interpretation that has since been contested (Neumann 1984).

## Marion Brüggler

LVR – Amt für  
Bodendenkmalpflege im  
Rheinland, Außenstelle  
Xanten/LVR – State Service for  
the Archaeological Heritage  
in the Rhineland, Department  
Xanten Augustusring 3,  
46509 Xanten, Germany,  
Marion.Brueggler@lvr.de

Heinrichs recently supposed that the name underlined the importance of cattle (Heinrichs 2015, 136).

As to the origin of the tribe, the written sources give only vague clues. According to Suetonius (*De vita Caesarum*, *Tiberius* 9.2), Tiberius (as commander-in-chief) settled 40,000 *Germani* from beyond the Rhine to areas adjacent to the river. In another passage Suetonius (*De vita Caesarum*, *Augustus* 21.1) reports that Augustus settled *Sugambri* and *Suebi* from beyond the Rhine next to the river. Both passages are thought to refer to the year 8 BC (Heinrichs 2000, 56-57 and 71). The land that Augustus claimed as a new settlement area for these trans-Rhenanian tribes is thought to have been largely depopulated after the disruptions caused by Caesar's campaigns (Heinrichs 2000, 59). After their resettlement, three Sugambrian cohorts were installed before the evidence for *Sugambri* on the west bank of the Rhine ends (Alföldy 1968, 84; Galsterer 1999, 262). These western-Rhenanian *Sugambri* and the likewise resettled *Suebi* probably merged with remnants of the indigenous population (maybe *Eburones* after Galsterer 1999, 262) to form a new tribe, the *Cugerni* (Heinrichs 2000, 60 and 71; Alföldy 1968, 84). Or the *Cugerni* may have formed a *pagus* of the *Sugambri* from the beginning (Galsterer 1999, 262). In any case, with the resettlement of the 40,000 *Germani*, Augustus closed a settlement gap between the *Batavi* in the north and the *Ubii* in the south, who like the *Cugerni* both at least partly had eastern-Rhenanian origins (Heinrichs 2000, 69).

According to the *Tabula Siarensis*, the *civitates* west of the Rhine existed by the death of Drusus at the latest, among them, as is surmised, a *civitas* of the *Cugerni* (Galsterer 1999, 262). The *caput civitatis* was supposedly at Xanten on the site of the later colony (Precht 2008, 200 for a summary of the debate). Already in the early 1<sup>st</sup> century the pre-colonia settlement had a planned layout with an orthogonal street grid. At the time of the Batavian Revolt the settlement was about 30 ha in size, taking up the eastern side of the later colony (Precht 2008, 202; Willmitzer 2017, 89). An inscription on an altar dedicated to Mars Cicolluis, that is dated to between AD 55/56 and 68, led to a reconstruction of the town's name as '*Cibernodurum*' (Bogaers 1984, 38). Unfortunately, the inscription is fragmentary. Only the letters C (or G) I and probably B (or P, R) are preserved. The reading '*Cibernodurum*' is therefore insecure and has been contested. Lenz suggested *CIR[cvm veterae]* (Lenz 2003).

Not only the name is insecure, it is also questionable whether the pre-colony-settlement actually functioned as a centre for the tribe. According to inscriptions, the place was rather settled by *Remi* and *Lingoni* (Precht 2008, 203). Also, the spectrum of the small finds does not indicate a presence of people from the surroundings (Liesen 2008, 216).

There seems to be a strong population decline in the Lower Rhine region shortly before or in the wake of Caesar's campaigns (for two contrasting views

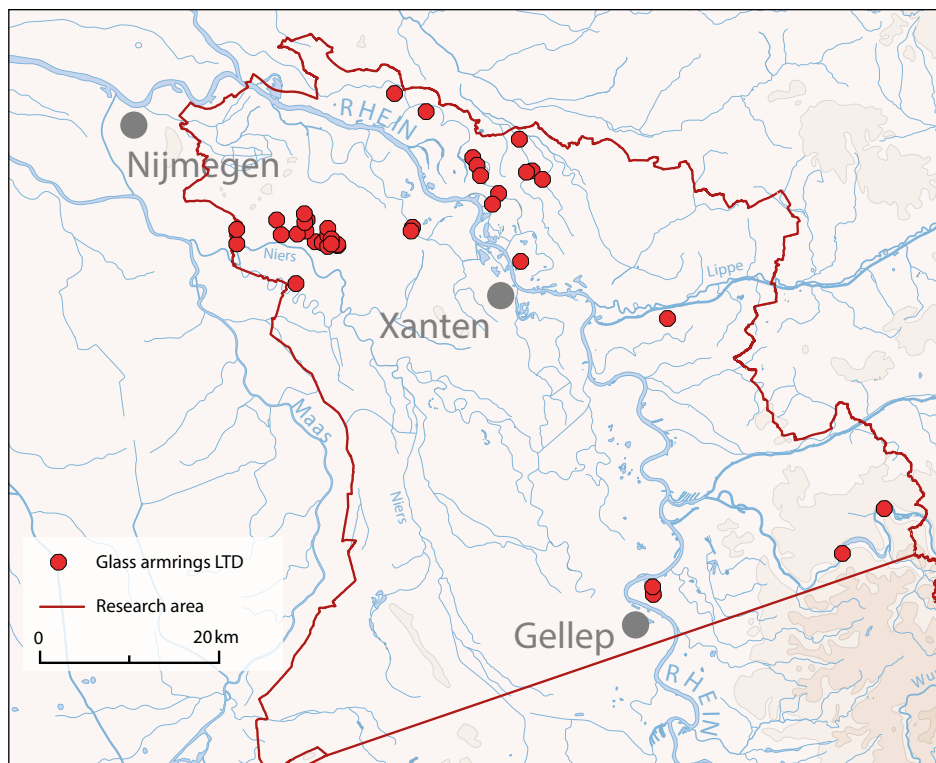


Figure 1. Distribution of La Tène-D-glass armrings (after Tutlies & Brüggler 2019, 71; graphics by Karin White-Rahneberg).

on the extent of Caesar's influence (Hornung 2019; Roymans 2019). For the ethnogenesis of the *Cugerni*, it is a crucial question whether the tribe that is attested here in the 1<sup>st</sup> century AD consisted of newly arrived people, derived from indigenous groups or was a mix of these.

## Archaeological evidence

What information does the archaeological record provide on settlements of the La Tène D-period in the research area? First of all, several problems need to be addressed. A very important one is our insufficient understanding of the pottery-chronology of the Late Iron Age in the region. Often, the handmade sherds can only be very roughly dated, which makes it hard to identify settlements of that period. Also, the loamy and sandy soils are detrimental for the preservation of metals, especially copper alloy. Therefore, small finds that can be dated more precisely

than pottery, like *fibulae* and coins, occur far fewer than in areas with other soil types. Moreover, the post-Roman practice of plaggen-fertilisation effectively covered prehistoric and Roman period sites, so that these now lie beneath soil layers of 0.8-1.0 m thickness, preventing their detection by ploughed-up surface finds or aerial photography (Gerlach 2017).

Excavated settlements that can be securely dated to the 1<sup>st</sup> century BC are almost completely lacking. The exception that proves the rule is a fortified settlement near Rees, district of Kleve, on the eastern bank of the Rhine, that is dated by three sherds of Dressel-1-amphorae to the first half of the 1<sup>st</sup> century BC (Schletter 2019, 250-251). In order to at least determine areas of settlement in the last century BC, certain *Leitfossilien* can help, even if they are often surface finds without a context: Glass bangles, *fibulae*, early imperial coins and Italian sigillata.

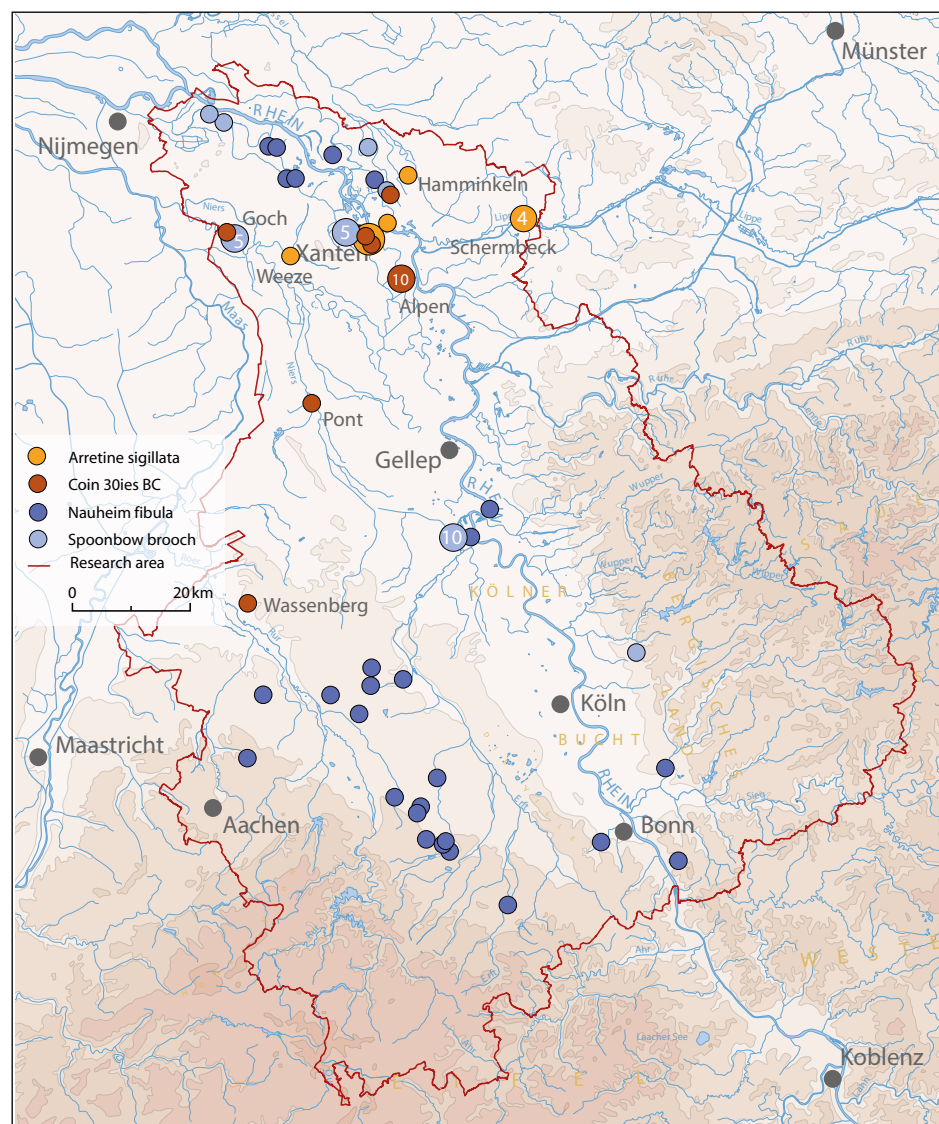


Figure 2. Distribution of Arretine sigillata, early imperial coins, Nauheim- and spoonbow-brooches in the German Lower Rhine (data: LVR-ABR Archive; M. Brüggler on a map by Christoph Duntze, LVR-Landesmuseum Bonn).



According to Roymans and Verniers glass bangles with a D-shaped cross-section and those made of purple glass peak in La Tène D (Roymans & Verniers 2010, 203). A distribution map shows a cluster to the north of Xanten on both sides of the Rhine (fig. 1; Tutlies & Brüggler 2019, 70-71), that continues the dense distribution in the adjacent Eastern River Area of the Netherlands (Roymans & Verniers 2010, 197). There is, however, a conspicuous lack of finds in the hinterland of the Rhine to the southwest of Xanten down to Neuss.

Much rarer are *fibulae*. Without going into the details of subtypes and derivatives, spoonbow brooches can be dated from 70 BC to the early Roman period (Heeren & Van der Feijst 2017, 51-52) and Nauheim *fibulae* from 150-50 BC, with derivatives to 1 BC (Heeren & Van der Feijst 2017, 43). As with the glass bangles, there is a cluster northwards of Xanten on both sides of the Rhine (fig. 2). Again, there is a total lack of finds in the hinterland from south of Nijmegen to the northern rim of the loess zone – with the exception of one findspot on the small river Kendel near Goch (Schultze 2022).

With the arrival of the Roman military, copper-alloy coins make their appearance. Found in rural settlements they can reflect ethnic recruitment. Important for this argument are Lugdunum I asses (7-3 BC), Nemausus I coins (16-8 BC), Vienna/Copia coins (38-36 BC) and a pre-Augustan horizon of silver quinars from Central-Eastern Gaul (Roymans forthcoming). In our case, their distribution can indicate otherwise undated rural settlements. Copper alloy coins from the 30's BC are very rare on the German Lower Rhine. All of them are surface finds. Again, the findspot on the river Kendel is significant (Schultze 2022), the other concentration with as many as ten coins is the military site at Alpen (Klages *et al.* 2018, 86). Pont, in the borough of Geldern, is a *vicus*, which in that early phase was probably also connected with the army (Berger *et al.* 2020). Only Wassenberg and Rees 'Lange Renne' are probably rural settlements (LVR-ABR archival data: NW 2019/0443; NI 2010/0176 and Bridger forthcoming). As for the Lugdunum and Nemausus asses, there are no findspots in the hinterland at all, apart from the above mentioned site on the Kendel near Goch (fig. 2).

Nico Roymans has pointed out the significance of the occurrence of Italian sigillata in non-military sites and – as with the early imperial coins – draws a connection with these sites and the Roman military (Roymans 2011, 150). Again, the findspots can indicate settlement activities. However, sites with finds of Italian sigillata are very few. Apart from the fortress at *Vetera castra* in Xanten, Italian sigillata was found in Hamminkeln (Reichmann 1979, 420-424; 2007, 76), Schermbeck and Wesel-Bislich, district of Wesel (Bridger forthcoming) as well as in a rural settlement in Weeze-Vorselaer, district of Kleve (Brüggler *et al.* 2017, 42). The finds at Hamminkeln and Wesel-

Bislich to the east and Vorselaer to the west of the Rhine can be connected to rural sites, whereas the site type of Schermbeck is insecure (fig. 2). A tabular summary of the at least partially excavated rural settlements shows that only the sites at Rees-Bergswick, Weeze-Vorselaer and the *vicus* at Pont start before or around the beginning of the Christian Era. All the other settlements have a later starting date (fig. 3).

As these excavations show, the hinterland of Xanten belongs to the non-villa landscape of the Lower Rhine (Roymans & Derks 2011). Post-built byre-houses dominate the picture down to the northern rim of the loess-belt, where *villae rusticae* make up most of the rural settlements (Brüggler *et al.* 2017). It had been thought that the soils of the Lower Rhine were unsuitable for the cultivation of wheat and, therefore, animal husbandry was the alternative (Bridger 2008, 614). Recent investigations have shown, however, that the soils of the German Lower Rhine Plain are in fact not unsuitable for the cultivation even of nutrient-demanding crops such as spelt (here and in the following Brüggler *et al.* 2017, 72-89). A quarter of the soils have a high (spelt-) quality and another half of the soils of medium quality can still be used for cultivating less demanding crops like barley and millet. The soils of the Lower Rhine Plain are, however, less fertile than those of the Cologne Bay, where two thirds of the soils have a very high to high quality, but all in all not so much more arable land was available there. There is a drawback: The fertile soils of the Lower Rhine Plain do not form such a very large connected area as in the loess-belt, but rather a patchwork.

So the potential of the soils would have allowed the cultivation even of spelt in the area that is ascribed to the *Cugerni*. However, the byre-houses and the lack of large granaries rather point to a focus on animal husbandry. Also, in the analyses of botanical remains spelt does not appear as a dominant crop (Brüggler *et al.* 2017, 82-83). Rather, barley and millet were cultivated, as in the Iron Age, with no fruit and no herbs. In comparison to the botanical remains of the Roman towns of Cologne and Xanten as well as Cologne's hinterland, the different food regime is striking (fig. 4). It can, of course, be argued that the availability of imported food items was less easy in the hinterland than in the town, but the difference between the hinterlands of Xanten and Cologne has to be explained. It may well be that the cultivation and consumption of food in the Xanten hinterland was an active choice made by the inhabitants and was not only forced on them by poor soils and bad accessibility of other food. This, then, might indicate different groups of people settling in the northern Lower Rhine than in the southern parts. As with the rural settlements, dated graves of the end of the La Tène period and early Roman period are more or less lacking. The rural cemeteries start in the second third of the 1<sup>st</sup> century (fig. 5).



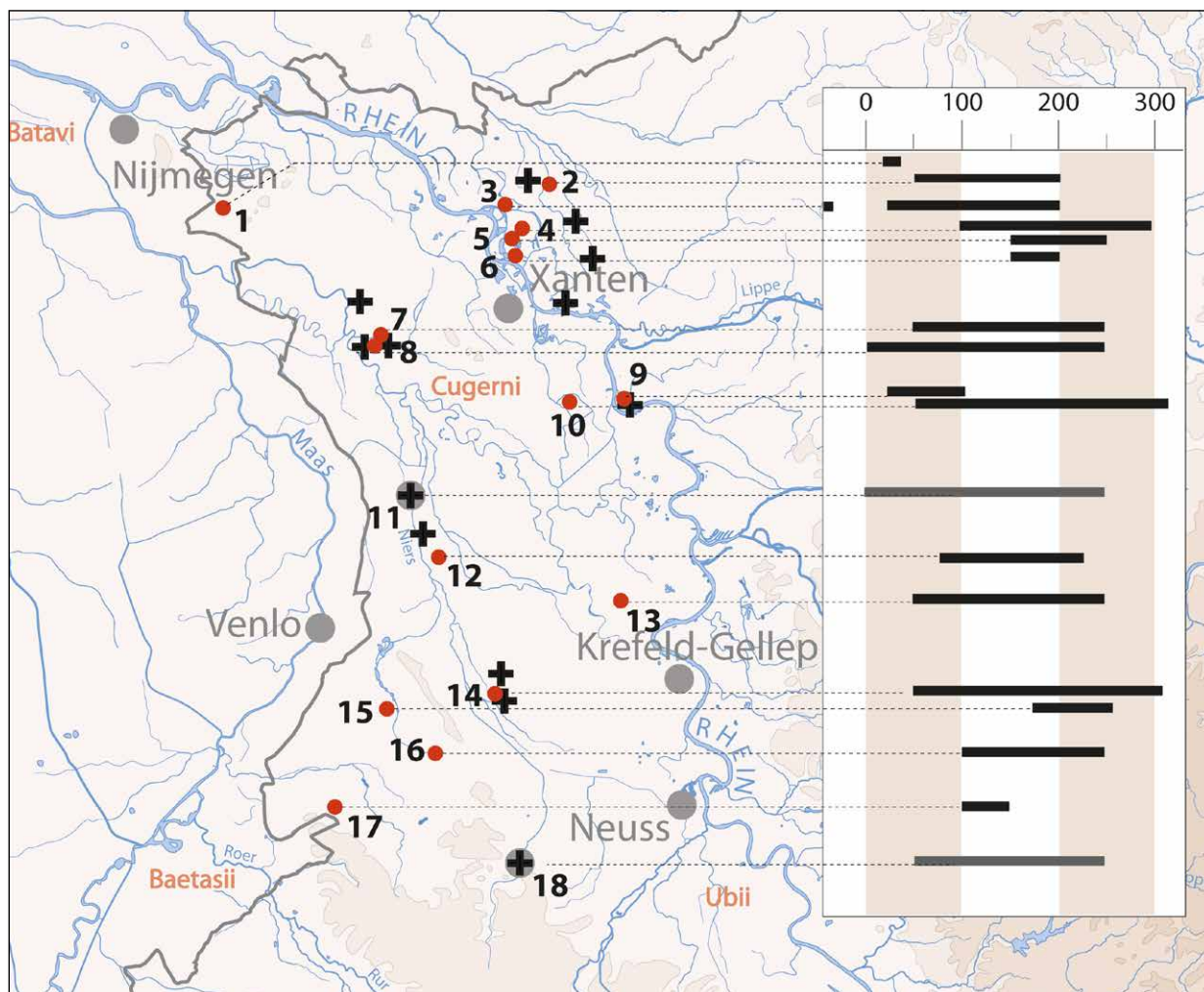


Figure 3. (Partially) excavated rural settlements, distribution and date: 1. Kranenburg (unpublished, LVR-ABR Archive 3079 014); 2. Rees-Haldern (Kersten 1940a); 3. Rees-Bergswick (Brügglar 2013; Schletter 2019); 4. Reeser Bruch (Schuler 1998); 5. Rees-Haffen-Mehr (Kempa 1995); 6. Rees-Reckerfeld (Kyriz 2014); 7. Kevelaer-Grotendonk (Brügglar *et al.* 2017); 8. Weeze-Vorselaar (Brügglar *et al.* 2017); 9. Voerde-Mehrum (Brand & Schönfelder 2009); 10. Alpen (Motsch & Schönfelder 2016); 11. Geldern-Pont (Berger *et al.* 2020); 12. Wachendonk-Meerendonkshof (Langenhoff 2021); 13. Krefeld-Traar (Görür & Hofmann 2016); 14. Tönisvorst-Vorst (Eigen 2017); 15. Nettetel-Breyell (Cott 2019); 16. Viersen-Ninive (Heinen 1993); 17. Niederkrüchten-Boschershausen (Cott 2019); 18. Mönchengladbach-Mülfort (Hupka 2011) (M. Brügglar on a map by Christoph Duntze, LVR-Landesmuseum Bonn).

Notably, some of the earlier graves seem to point to connections to Elb-Germanic areas, like Voerde-Mehrum and Mönchengladbach (Kersten 1940b; Frank 2018, 470). Also, in Tönisvorst-Vorst, certain types of *fibulae*, a knife, an ornamental pin and drinking-horn-fittings can be connected to settlers from further east of the Rhine (Bridger 1996, 301). These Elb-Germanic influences are thought to point to the *Suebi*, who are mentioned by Suetonius as having been resettled here together with the *Sugambri* (cf. above; Reichmann 1979, 306-321; 2007; Frank 2018, 473). An end date of the cemeteries on the eastern bank of the Rhine around the turn of

the millennium in connection with the population movements mentioned by Suetonius, as is stated by Reichmann (2007, 78) is not verifiable.

## Conclusion

To sum up. Written evidence tells us about the resettlement of people from east of the Rhine into what archaeologically looks like at least partially empty landscapes. Because of an indistinguishable material culture in the Late Iron Age between the eastern and western banks of the Rhine, these early settlers are hard to grasp. Early Roman Period settlers are so far only accounted for at Weeze-Vorselaar,

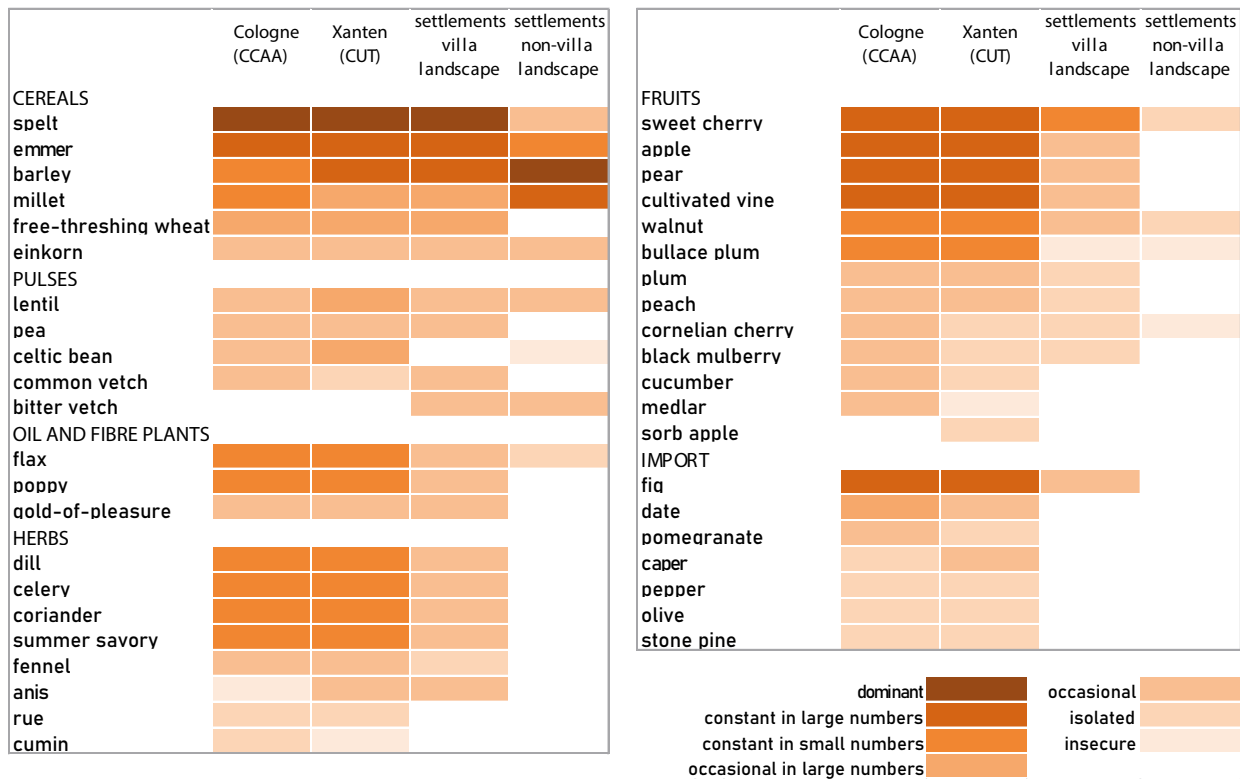


Figure 4. Evidence of food plants in the towns of Cologne and Xanten and their respective hinterlands (Tanja Zerl, University of Cologne, updated from Brüggler *et al.* 2017).

Goch, Mönchengladbach and Tönisvorst. At Vorselaer and Goch there is a connection to the Roman military. Furthermore, there are a few hints of people from Elb-Germanic areas.

There is a difference between the hinterlands of Xanten and Cologne in building style, food consumption and food production. Especially the last point is interesting. The agricultural potential for arable farming in the Cugernian area was there, so why was it not used? On extensive loess soils, the large-scale cultivation of spelt was more promising and mechanical harvesting more effective – something that was hardly possible on the small-scale, varied soils of the Lower Rhine Plain. But was it only for economic reasons? The people that were settled here were not arable farmers beforehand, but livestock farmers. A change in production regime cannot be brought about without causing serious disruptions in food supply with starvation being the most likely result.

So far only one gravestone and a unit that is named after them is a pointer to a Cugernian identity. There is a clear difference in the material culture, food production and consumption between the people in the rural areas of the Lower Rhine Plain – the *Cugerni* – to those in the Cologne Bay, the *Ubii*. The northern neighbours, the *Batavi*,

cannot be discerned from the *Cugerni* on these points, but in the mass of epigraphic evidence (Derks 2009, 246).

The sparse epigraphic and written evidence referring to the *Cugerni* (not the *cohors*) ends around the year 100. It may have been that the establishment of the colony at Xanten led to a marginalisation of the peregrine section of the original tribal population and, thus, their disappearance from the record (Derks 2009, 260). It can also be interpreted differently: it need not mean that the tribal population was marginalised, but that it now emphasised its belonging to a Roman colony rather than their tribal affiliation (Derks 2009, 269). So far, at least, it would stretch the thin evidence to speak of a clearly discernible Cugernian identity before the name of the tribe disappears again from the record.

## Abbreviation

CIL: *Corpus Inscriptionum Latinarum*

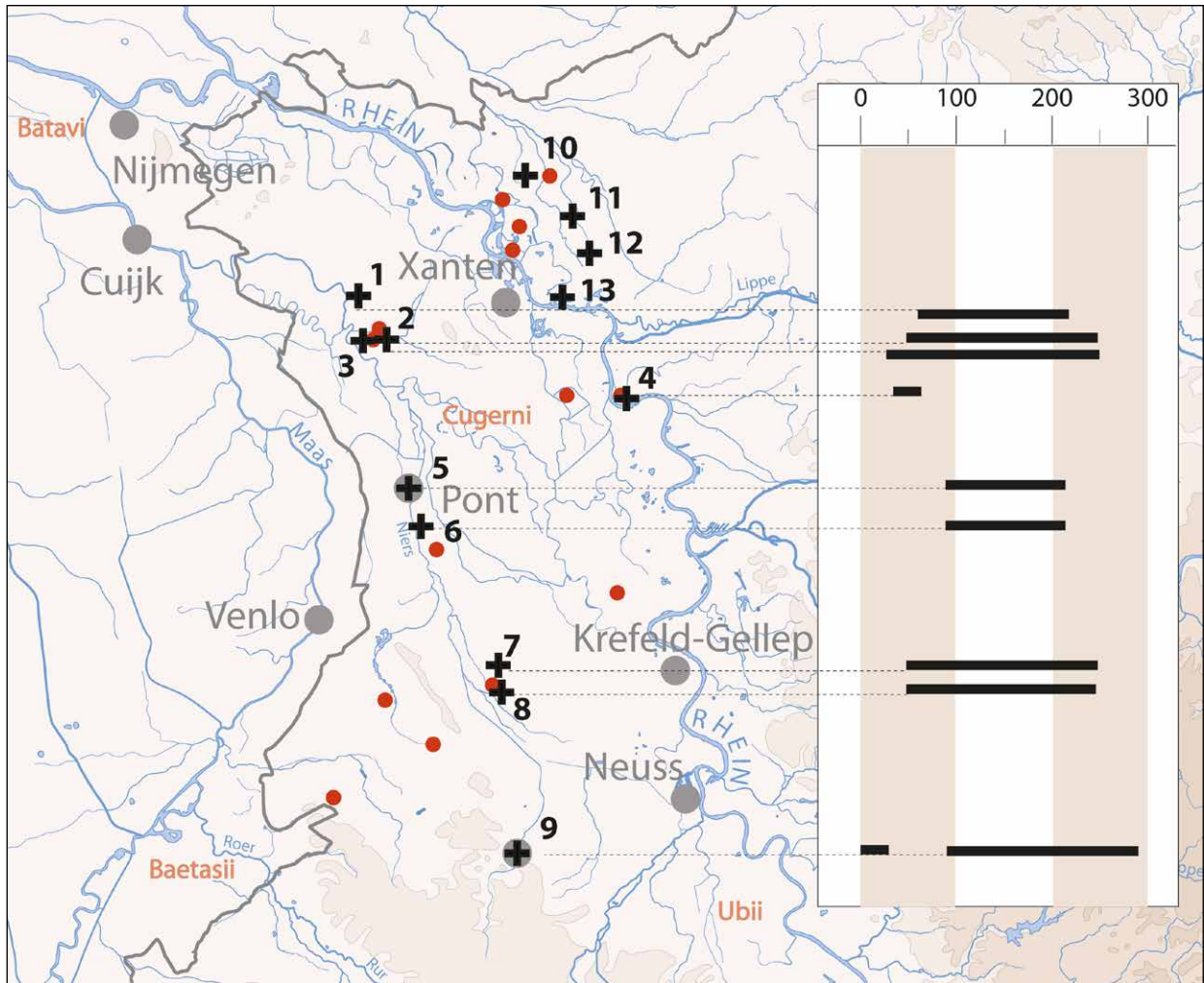


Figure 5. (Partially) excavated rural cemeteries, distribution and date: 1. Uedem-Keppeln (Petrikovits & Stampfuss 1940); 2. Weeze-Vorselaer (Brügglar 2019); 3. Kevelaer-Grotendonk (Ocklenburg & Kahler 2020); 4. Voerde-Mehrum (Bridger & Kraus 2005; Frank 2018); 5. Geldern-Pont (Cüppers 1962); 6. Straelen (Cüppers 1962); 7. Tönisvorst-Butzenstraße (Brügglar 2022); 8. Tönisvorst-‘An Hinkes Weißhof’ (Bridger 1996); 9. Mönchengladbach-Mülfort (Erkelenz 2012); 10. Rees-Haldern Heringsberg (Reichmann 1979, 373-376); 11. Hamminkeln-Mehrhoog (Reichmann 1979, 420-424); 12. Hamminkeln – ‘Düne Gunz’ (Reichmann 1979, 426-428); 13. Wesel-Bislich Westerheide (Frank 2012), (M. Brügglar on a map by Christoph Duntze, LVR-Landesmuseum Bonn).

## Bibliography

- Alföldy, G., 1968: *Die Hilfstruppen der Römischen Provinz Germania inferior*, Düsseldorf (Epigraphische Studien 6).
- Berger, L., S. Bödecker, M. Brüggler & E. Rung, 2020: Geldern-Pont. Ein vicus im Gebiet der Cugerner, in: E. Claßen & M. Trier (eds), *Archäologie im Rheinland 2019*, Oppenheim, 114-116.
- Bödecker, S., E. Cott, M. Brüggler, E. Deschler-Erb, M. Grünwald, S. Hornung, J. Morscheiser & P. Tutlies (eds), 2019: *Spätlatène- und frühkaiserzeitliche Archäologie zwischen Maas und Rhein. Tagung Roman Networks in the West II, Krefeld, 14.-16. Juni 2018*, Bonn (Materialien zur Bodendenkmalpflege im Rheinland 28).
- Bogaers, J.A.E., 1984: Zum Namen des "oppidum Cugernorum", *Naamkunde* 16, 33-39.
- Brand, C. & U. Schönfelder, 2009: Germanen links des Rheins. Die frühromischen Siedlungsspuren in Voerde-Mehrum, in: J. Kunow (ed.), *Archäologie im Rheinland 2008*, Stuttgart, 79-81.
- Bridger, C., 1994: Traianenses in Britannia. Niederrheinische Soldaten im römischen Britannien, *Jahrbuch Kreis Wesel* 15, 185-191.
- Bridger, C., 1996: *Das römerzeitliche Gräberfeld "An Hinkes Weisshof" Tönisvorst-Vorst, Kreis Viersen*, Köln, Bonn (Rheinische Ausgrabungen 40).
- Bridger, C., 2008: Die civitas Traianensis. Das römische Umland von Xanten, in: Müller *et al.*, 607-626.
- Bridger, C. forthcoming: *Römische Funde aus dem rechtsrheinischen Teil der Kreise Kleve und Wesel*, Bonn (Archäologische Beiträge aus dem Rheinland Beiheft 2).
- Bridger, C. & K. Kraus, 2005: Germanische Krieger in römischen Diensten, in: J. Kunow (ed.), *Archäologie im Rheinland 2004*, Stuttgart, 83-84.
- Brüggler, M., 2013: Eine eisenzeitliche bis hochmittelalterliche Siedlung in Rees-Bergswick, in: J. Kunow & M. Trier (eds), *Archäologie im Rheinland 2012*, Stuttgart, 103-105.
- Brüggler, M., 2019: Ein früh- bis mittelkaiserzeitliches Gräberfeld in Weeze-Vorselaer, in: E. Claßen & M. Trier (eds), *Archäologie im Rheinland 2018*, Oppenheim, 112-115.
- Brüggler, M., 2022: Ein neues römisches Gräberfeld in Tönisvorst-Vorst, in: E. Claßen & M. Trier (eds), *Archäologie im Rheinland 2021*, Oppenheim, 116-119.
- Brüggler, M., K. Jeneson, R. Gerlach, J. Meurers-Balke, T. Zerl, M. Herchenbach & A.J. Kalis, 2017: The Roman Rhineland. Farming and consumption in different landscapes, in: M. Reddé (ed.), *Gallia rustica. Les campagnes du nord-est de la Gaule, de la fin de l'Âge du fer à l'Antiquité tardive*, Bordeaux, 19-95.
- Cott, E., 2019: Römische Fundstellen und ihr landschaftlicher Kontext. Eine Übergangsregion im Nordwesten des Rheinlandes, in: Bödecker *et al.*, 265-279.
- Cüppers, H., 1962: Zwei kaiserzeitliche Brandgräberfelder im Kreise Geldern, *Bonner Jahrbücher* 162, 299-390.
- Davies, R.W., 1977: Cohors I Cugernorum, *Chiron* 7, 385-392.
- Derks, T., 2009: Ethnic identity in the Roman frontier. The epigraphy of Batavi and other Lower Rhine tribes, in: N. Roymans & T. Derks (eds), *Ethnic constructs in antiquity. The role of power and tradition*, Amsterdam (Amsterdam Archaeological Studies 13), 239-276.
- Eigen, M., 2017: *Die eisenzeitliche und römische Siedlung von Tönisvorst-Vorst (Kreis Viersen)*. Heidelberg (Archäologische Quellen 1, DOI:10.11588/propylaeum.276.362).
- Erkelenz, Chr., 2012: *Die römischen Nekropolen des vicus Mönchengladbach Rheydt-Mülfort*, Rahden (Kölner Studien zur Archäologie der Römischen Provinzen 11).
- Frank, K., 2012: Römisches Militär in germanischen Gräbern im Vorfeld des Niedergermanischen Limes?, in: P. Henrich (ed.), *Der Limes vom Niederrhein bis an die Donau. 6. Kolloquium der Deutschen Limeskommission, 15.-16. März 2011*, Stuttgart (Beiträge zum Welterbe Limes 6), 9-19.
- Frank, K., 2018: Mehrum. Neues zu einem alten Grabfund, in: M. Aufleger & P. Tutlies (eds), *Das Ganze ist mehr als die Summe seiner Teile. Festschrift für J. Kunow anlässlich seines Eintritts in den Ruhestand*, Bonn (Materialien zur Bodendenkmalpflege im Rheinland 27), 465-476.
- Galsterer, H., 1999: Kolonisation im Rheinland, in: M. Dondin-Payre & M.-Th. Raepsaet-Charlier (eds), *Cités, municipes, colonies. Les processus de municipalisation en Gaule et en Germanie sous le Haut Empire romain*, Paris (Histoire ancienne et médiévale 53), 251-269.
- Gerlach, R., 2017: Plaggenesch, "Humusbraunerde" und Erdesch am Unteren Niederrhein, in: J. Kunow & M. Trier (eds), *Archäologie im Rheinland 2016*, Darmstadt, 42-45.
- Görür, Z. & M. Hofmann, 2016: *Abschlussbericht OGE Krefeld-Moers Fundstelle VI, NI 2014/0029 and Abschlussbericht OGE Krefeld-Moers Fundstelle VII, NI 2014/0030*, (unpublished report).
- Heeren, S. & L. van der Feijst, 2017: *Prehistorische, Romeinse en middeleeuwse fibulae uit de Lage Landen*, Amersfoort.
- Heinen, M., 1993: *Archäologische Fundstellen und Funde im Stadtgebiet Viersen*, Viersen.

- Heinrichs, J., 2000: Römische Perfidie und germanischer Edelmut? Zur Umsiedlung protocugernischer Gruppen in den Raum Xanten 8 v. Chr., in: Th. Grünewald & H.-J. Schalles (eds), *Germania inferior. Besiedlung Gesellschaft und Wirtschaft an der Grenze der römisch-germanischen Welt*, Berlin/New York (Reallexikon der germanischen Altertumskunde: Ergänzungsbände 28), 54-92.
- Heinrichs, J., 2015: Wanderungen versus Genozid. Einheimische Verbände im nordgallischen Raum unter römisch bestimmten Rahmenbedingungen, in: G.A. Lehmann & R. Wiegels (eds), *Über die Alpen und über den Rhein*, Berlin, 133-163 and 407-408.
- Hornung, S., 2019: Bewegte Zeiten. Kultureller, demografischer und ökonomischer Wandel am Übergang von der Eisen- zur Römerzeit im Gebiet beidseits des Rheins, in: Bödecker *et al.*, 11-36.
- Hupka, D., 2011: *Die römischen Siedlungsfunde, gewerblichen Reste und Straßenbefunde in Mönchengladbach-Mülfort*, Köln (PhD Universität zu Köln).
- Kempa, M., 1995: *Haffen. Eine vor- und frühgeschichtliche Siedlung im Altkreis Rees*. Köln/Bonn (Rheinische Ausgrabungen 39).
- Kersten, W., 1940a: Haldern, Kreis Rees, *Bonner Jahrbücher* 145, 303-305, plate 62.
- Kersten, W., 1940b: Rheydt, *Bonner Jahrbücher* 145, 294-296.
- Klages, C., R. Otte & J. Hunke, 2018: Fundmünzen aus Alpen-Drüpt, *Bonner Jahrbücher* 218, 81-148.
- Kyritz, D., 2014: *Haffen-Mehr. Die Kontaktzone am niederrheinischen Limesgebiet*, Bonn (PhD Rheinische Friedrich-Wilhelms-Universität, <http://hss.ulb.uni-bonn.de/2014/3684/3684.htm>).
- Langenhoff, Th., 2021: Die römerzeitliche Siedlung bei Wachtendonk-Meerendonkshof, Kreis Kleve, in: M. Müller (ed.), *Grabung – Forschung – Präsentation*, Oppenheim (Xantener Berichte 36), 79-199.
- Lenz, K.H., 2003: Der antike Name des frühkaiserzeitlichen Siedlungsgefüges römischer Hilfstruppenlager und Lagervici im Areal der Colonia Ulpia Traiana (Xanten). Zu den Civitas-Hauptorten des 1. Jahrhunderts n. Chr. in Niedergermanien, *Archäologisches Korrespondenzblatt* 33, 375-392.
- Liesen, B., 2008: Soziale und wirtschaftliche Entwicklungstendenzen der Colonia Ulpia Traiana im Spiegel des Fundmaterials. Von den Anfängen bis zur Spätantike, in: Müller *et al.*, 211-226.
- Motsch, P. & U. Schönfelder, 2016: Ein neu entdeckter römischer Vicus in Alpen, in: J. Kunow & M. Trier (eds), *Archäologie im Rheinland* 2015, Darmstadt, 143-145.
- Much, R., 1893: Die Germanen vom Niederrhein, in: E. Sievers, H. Paul & W. Braune (eds), *Beiträge zur Geschichte der Deutschen Sprache und Literatur* 17, 137-177.
- Müller, M., H.-J. Schalles & N. Zieling (eds), 2008: *Colonia Ulpia Traiana. Xanten und sein Umland in römischer Zeit*, Mainz (Geschichte der Stadt Xanten 1).
- Neumann, G., 1984: Cuberni, Cugerni, in: J. Hoops, *Reallexikon der Germanischen Altertumskunde*, Berlin/New York, 103-104 (2<sup>nd</sup> edition).
- Ocklenburg, U. & J. Kahler, 2020: *Schlussbericht zur archäologischen Ausgrabung in Kevelaer-Kervenheim, Flur 3 und 4. Abgrabung Grotendonk, Süderweiterung. Aktivitätsnummer NI 2016/1021*, (unpublished report).
- Petrikovits, H. von & R. Stampfuss, 1940: *Das germanische Brandgräberfeld Keppeln, Kr. Kleve*, Leipzig (Quellenschriften zur westdeutschen Vor- und Frühgeschichte 3).
- Precht, G., 2008: Die früheste römische Besiedlung im Gebiet der späteren CUT, in: Müller *et al.*, 171-209.
- Reichmann, Chr., 1979: *Zur Besiedlungsgeschichte des Lippemündungsgebietes während der jüngeren vorrömischen Eisenzeit und der ältesten römischen Kaiserzeit*, Wesel.
- Reichmann, Chr., 2007: Die Besiedlung des Lippemündungsgebiets in frühromischer Zeit, in: G. Uelsberg (ed.), *Krieg und Frieden. Kelten – Römer – Germanen. Begleitbuch zur Ausstellung im Rheinischen LandesMuseum Bonn 21.6.2007-6.1.2008*, Darmstadt/Bonn, 72-78.
- Roymans, N., 2011: Ethnic recruitment, returning veterans and the diffusion of Roman culture among rural populations in the Rhineland frontier zone, in: N. Roymans & T. Derks (eds), *Villa landscapes in the Roman north. Economy, culture and lifestyles*, Amsterdam (Amsterdam Archaeological Studies 17), 139-160.
- Roymans, N., 2019: Eroberung, Demografie und ethnische Dynamik in der niedergermanischen Grenzzone, in: Bödecker *et al.*, 37-64.
- Roymans, N., forthcoming: Ethnic recruitment and the genesis of the Batavi as a soldiering people. The numismatic evidence.
- Roymans, N. & T. Derks, 2011: Studying Roman villa landscapes in the 21<sup>st</sup> century. A multi-dimensional approach, in: N. Roymans & T. Derks (eds), *Villa landscapes in the Roman north. Economy, culture and lifestyles*, Amsterdam (Amsterdam Archaeological Studies 17), 1-44.
- Roymans, N. & L. Verniers, 2010: Glass Latène bracelets in the Lower Rhine Region. Typology, chronology and social interpretation, *Germania* 88/1-2, 195-219.

- Schuler, A., 1998: Eine Siedlung der vorrömischen Eisenzeit und der römischen Kaiserzeit im Reeser Bruch, in: H. Koschik (ed.), *Archäologie im Rheinland* 1997, Köln/Bonn, 49-52.
- Schletter, H.-P., 2019: Viereckschanzen am Niederrhein? Eisenzeitlicher Kulturtransfer am Beispiel des "Herrenhofs" von Rees-Bergswick, in: Bödecker *et al.*, 245-264.
- Schultze, K.-H., 2022: *Die römische Fundstelle "Auf der Schanz" in Goch-Hassum, Kreis Kleve*, Cologne (Bachelor thesis Universität zu Köln).
- Spaul, J., 2000: *Cohors 2. The evidence for and a short history of the auxiliary infantry units of the imperial Roman army*, Oxford (British Archaeological Reports International Series 841).
- Speidel, M.A., 2017: Recruitment and identity. Exploring the meanings of Roman soldiers' homes, *Revue internationale d'histoire militaire ancienne* 6, 35-50.
- Tutlies, P. & M. Brügger, 2019: Eisenzeitliche und römische Siedlungslandschaft am Niederrhein, in: Bödecker *et al.*, 65-85.
- Willmitzer, A., 2017: *Die Grabung 80/26 zwischen Insulae 15 und 22 der Colonia Ulpia Traiana*, Darmstadt (Xantener Berichte 31).



# The siege of Cerro Castarreño

Assessing the impact of Rome on the transformation of an archaeological landscape between the river Duero valley and the Cantabrian Mountains (Spain)

José M. Costa-García and Jesús García Sánchez

## José M. Costa-García

GIR Hesperia. Dpto. de Prehistoria, Historia Antigua y Arqueología. Universidad de Salamanca, Facultad de Geografía e Historia. C/Cervantes s/n, 37002. Salamanca, Spain, [jm.costagarcia@usal.es](mailto:jm.costagarcia@usal.es)

## Jesús García Sánchez

Instituto de Arqueología-Mérida (IAM). Consejo Superior de Investigaciones Científicas (CSIC)-Junta de Extremadura. Plaza de España 15. 06800, Mérida (Badajoz), Spain, [j.garcia@iam.csic.es](mailto:j.garcia@iam.csic.es)

The study of the Roman expansion in northern *Iberia* between the late 2<sup>nd</sup> century BC and late 1<sup>st</sup> century BC has become a vibrant archaeological research topic in the last decades. Traditionally, the scarce and limited mentions in ancient written sources channelled the attention of scholars towards some historical episodes – such as the Augustan campaigns against *Astures* and *Cantabri* (29-19 BC) – leaving many others in the dark (Peralta Labrador 2002). Even today, large areas of this vast territory still suffer from this lack of narratives, and we barely know how and when they were effectively integrated into the Roman imperial framework. The commitment of several researchers to incorporating new methods and techniques has spurred the discovery of dozens of sites related to the Roman army in northern *Iberia*, which now total more than 200 (Costa-García *et al.* 2019; Martín Hernández *et al.* 2020; Menéndez Blanco *et al.* 2020; Morillo *et al.* 2021). With many of them located outside the traditional areas of scholarly interest, the foundations for new approaches to the diverse dynamics of Roman-native interaction in the region have been laid.

Within the Romanarmy.eu initiative (Costa García *et al.* 2021), the ‘Warscapes’ project started in 2017 to study the transformations experienced by the archaeological landscapes of the Sasamón area between the Late Iron Age and the Roman periods (4<sup>th</sup> century BC-4<sup>th</sup> century AD). According to ancient written sources, the *Turmogi* inhabited the zone before Rome’s arrival and it is generally assumed that their annexation occurred before Augustus started his campaign against the *Cantabri* in 26 BC (García Sánchez & Costa-García 2019). Previous archaeological research in the area located an indigenous *oppidum* at Cerro Castarreño and a Roman city – *Segisamo* – immediately northwards, under the modern-day town of Sasamón (Abásolo Álvarez & García Rozas 1993; Sacristán de Lama 2007). However, the process by which the latter replaced the former as the main political, socioeconomic and cultural pole is unclear beyond a generic chronological adscription to Augustan times in connection with the military activities in Cantabria. The recent discovery of archaeological traces related to the Roman Army using aerial photography was also linked with these events without much delving into the debate (Didierjean *et al.* 2014). After six years of archaeological research in the area, we are

in a position to offer new archaeological data that might challenge traditional narratives.

## Materials and methods

Since it emerged as an informal research collective, the Romanarmy.eu initiative has been at the forefront in adopting new digital tools and geospatial datasets to develop innovative approaches to studying the Roman expansion in *Iberia* (Menéndez Blanco *et al.* 2013; Costa-García & Fonte 2017; González-Álvarez *et al.* 2019). One of the main contributions of our collective has been the development of a modular methodology for detecting ephemeral Roman military sites in northern *Iberia* where remote sensing –aerial and satellite imagery, LiDAR, UAV-derived surveys – played a major role. Despite the initial criticism in some academic circles, the initiative always comprised solid ground-truthing protocols that resulted in the generation of reliable archaeological data regularly submitted to the Heritage management authorities (Costa García *et al.* 2021).

After a first phase focused on the detection and initial documentation of new sites, we delved into the detailed characterisation of the Roman military presence in the region through several case studies (Costa-García *et al.* 2020; Fonte *et al.* 2021). In the last five years, more than a dozen sites have been studied across the territory using a bespoke methodology that involves conventional intra and off-site surveys, metal-detecting oriented surveys, geophysics, targeted test-pit excavation, and palaeoenvironmental and absolute dating sampling (<sup>14</sup>C and OSL). These sites show different morphologies, settlement patterns and constructive systems, revealing the Roman army's enormous adaptability and operational versatility (Costa-García 2018; 2023). The diversity of geological contexts, land use strategies, states of preservation, administrative frameworks and heritage management policies have posed a tremendous logistical and methodological challenge. Quite frequently, we have face problematic contexts for archaeological research which forced us to push forward the limits of our methodology.

## Sasamón and the *Turmogi*

The Sasamón area is a cereal-growing, calcareous plain located northeast of the Spanish Plateau and immediately south of the Cantabrian Mountains. The settlements in the region during the Late Iron Age follows the same patterns seen in other areas of the Duero Valley, where the predominant role of the *oppida* reflects the increasing socioeconomic centralisation and political hierarchisation of these societies (Sacristán de Lama 2007; 2011; García Sánchez 2022).

Cerro Castarreño was one of these regional poles and one of the main settlements of the *Turmogi*, a human group we barely know anything about when compared

to neighbouring peoples such as the *Celtiberi*, *Cantabri*, *Vaccaei* or *Astures* (García Sánchez & Costa-García 2019). As it usually happens in these cases, the name evokes an indigenous (ethnic?) reality that was conveniently reformulated in Roman times to serve as a generic label encompassing the inhabitants of this region (López Jiménez 2005; Salinas de Frías 2007). Unfortunately, the few preserved written and epigraphic sources tell us nothing about pre-Roman times' social organisation, practices or cultural traditions. Quite significantly, they even disagree on fundamental aspects such as the actual name of these people – *Turmogi*, *Turmogidi*, *Murbogoi* – or the *nuclei* they controlled (Plinius the Elder *Historia Naturalis* 3.18-30; Ptolemaeus *Geographia* 2.6.52), an aspect that could be taken as evidence of their minor political importance or limited demographics.

Florus (*Epitome* 2.33.47) was the first and only author to connect this indigenous community with any historical event. His account of the Augustan campaigns against the *Cantabri* (and *Astures*) explicitly states the attacks of the mountainous tribes on the neighbouring tribes as *casus belli*. As victims of these alleged aggressions, one may implicitly assume that the *Turmogi* were allies or subjects to Rome in 26 BC. The foundation of a Roman city – *Segisamo* – in the area once the conflict was over might indirectly support this hypothesis.

If the Romans had effectively absorbed the *Turmogi* by then, when and how was this process articulated? Was it a 'peaceful' or 'violent' incorporation – if those gross categories can even be used? We could overcome the lack of data on the *Turmogi* by analysing what happened to other neighbouring peoples. For instance, the *Vaccaei* have a long tradition of interactions with Rome (Sánchez Moreno 2010). Some years before the Augustan campaigns in the north, the *Vaccaei* (or at least part of them) were held responsible for the endemic instability in the Duero valley with *Astures* and *Cantabri* (Cassius Dio *Historia Romana* 51.21). The offensive of *Statilius Taurus* (29 BC) seems to have definitively ended that situation. The *Vaccaei* are no longer identified as aggressors after that date.

Florus' short report on the Cantabrian Wars mentions that Augustus pitched his camp close to *Segisama* before advancing northwards. The question of which nucleus the Latin author exactly refers to is tiresome to detail here and feeds on some inconsistencies from ancient written sources. Suffice it to say that scholars are divided between those who consider it a Turmogian enclave – under or close to modern-day Sasamón – or a Vaccaean settlement (García Sánchez & Costa-García 2019). The control of those two cereal-producing areas – Vaccaean and Turmogian – makes sense before establishing a logistical rearguard and supply base in one of them during the offensive against the *Cantabri*.



Archaeology has identified a massive accumulation of military sites in the Cantabrian Mountains related to the Augustan campaigns against the northerners since the late 20<sup>th</sup> century (Peralta Labrador *et al.* 2019). Several scenarios of fossilised violence add now to the crudeness transmitted by the ancient written sources depicting the conflict. Unfortunately, the theoretical rearguards of that campaign in the northern Spanish Plateau did not receive similar attention until recently (Martín Hernández *et al.* 2020; Menéndez Blanco *et al.* 2020), delaying the formulation of innovative interpretations of their role in the conflict.

The Turmogian area became fully integrated into the Empire after 19 BC, and a city was founded where modern-day Sasamón lies. The scarce archaeological data related to its oldest phases indicates an early imperial foundation (Abásolo Álvarez & García Rozas 1993). The ancient written sources – including *Itineraria* and epigraphic evidence – massively support the identification of this nucleus as *Segisamo* (García Sánchez & Costa-García 2019). One of the major military nuclei in *Iberia* until mid-1<sup>st</sup> century AD, the base of *Legio IIII Macedonica* in Pisoraca (Herrera de Pisuergra, Palencia), lays just 30 km to the northwest.

## Results

Thanks to the previous work of different scholars, we had a pretty clear picture of the general human occupation sequence in the area when the ‘Warscapes’ project started in 2017. Our main goal was to characterise the different archaeological landscapes and determine the purpose of the Roman military presence in the area. According to those objectives, the project has focused on gathering relevant archaeological data from the indigenous *oppidum* of Cerro Castarreño (2017-2020), the Roman military structures in the plains (2017-2022), and the Roman city of *Segisamo* (2017-present). The following lines will synthesise the results of the research carried out in the two first areas and highlight their relevance for understanding the Turmogian region during the last centuries BC.

### The *oppidum* of Cerro Castarreño

Cerro Castarreño is an impressive calcareous plateau of c. 23 ha in size, rising some 80 m above the surrounding plains (fig. 1). Our work here started in 2017/2018 through magnetometric (fluxgate gradiometer) and GPR surveys aimed at identifying archaeological features. Aware that the intensive ploughing could have destroyed any structures that may have existed above the geological level, various test pits were excavated to document the site’s surviving stratigraphic sequence in suitable areas in 2018-2020.

The excavation of a wide defensive ditch delimiting the northern area of the *oppidum* showed that human presence

here started in the 8<sup>th</sup> century BC. The different fillings revealed that the structure was already out of use in the Late Iron Age (5<sup>th</sup>-1<sup>st</sup> centuries BC), when human occupation spread across the entire plateau. <sup>14</sup>C dating indicates the *oppidum* ceased to be inhabited in an indefinite moment between 1<sup>st</sup> century BC and 1<sup>st</sup> century AD in connection with the Roman expansion in the region. Among many discarded artefacts (pottery sherds, animal bones and metallic objects) documented in the more recent deposits, we can list various Roman hobnails (*clavi caligarii*), one trilobate arrowhead and different indigenous materials dating from the 2<sup>nd</sup>-1<sup>st</sup> centuries BC.

The results in the remaining test trenches were very similar, with limited structural or material evidence of the latest phases of the *oppidum*. Discarded indigenous pottery and Roman militaria were recovered in rubbish pits dated between mid-1<sup>st</sup> century BC and mid-1<sup>st</sup> century AD (<sup>14</sup>C). It seems that the site was not inhabited in imperial times since the presence of Roman pottery was only negligible and mainly came from the surface.

Due to the systematic destruction of the upper archaeological deposits, the excavations could not reveal whether the site was destroyed or abandoned and when these events might have occurred. Likewise, we could not determine if the Roman materials resulted from an offensive action or belonged to a later military occupation of the site, a phenomenon largely attested in the Cantabrian Wars scenarios (Fernández-Götz *et al.* 2017).

### The Roman military presence

Parallel to work on the Cerro Castarreño, field and aerial surveys focused on studying the different archaeological traces located in the surroundings, leading to the detection of new features (García Sánchez & Costa-García 2020) (fig. 2). In 2020, Google publicly released a new aerial coverage from Maxar Technologies taken in an optimal moment of crop maturation the year before. It was vital to confirm the suspicion that most traces already identified belonged to a siege structure around the indigenous *oppidum*. Targeted aerial surveys allowed us to document new sections of the 6-km long complex integrated by a double-lined *circumvallatio*, a similar feature in the rearguard acting as *contravallatio* and several military camps (fig. 1).

After ground-truthing, we notified regional heritage management bodies of the findings. We asked permission to validate our hypothesis through an ambitious archaeological campaign using a tailored methodology to study ephemeral contexts in 2021 and 2022. Pending the results of the initial phase and due to the high risk of illegal metal detecting activities in the area, we decided not to make public the findings yet. In the meantime, other colleagues carrying out independent research also identified the features using similar geospatial datasets and published them (Martín Hernández *et al.* 2020).

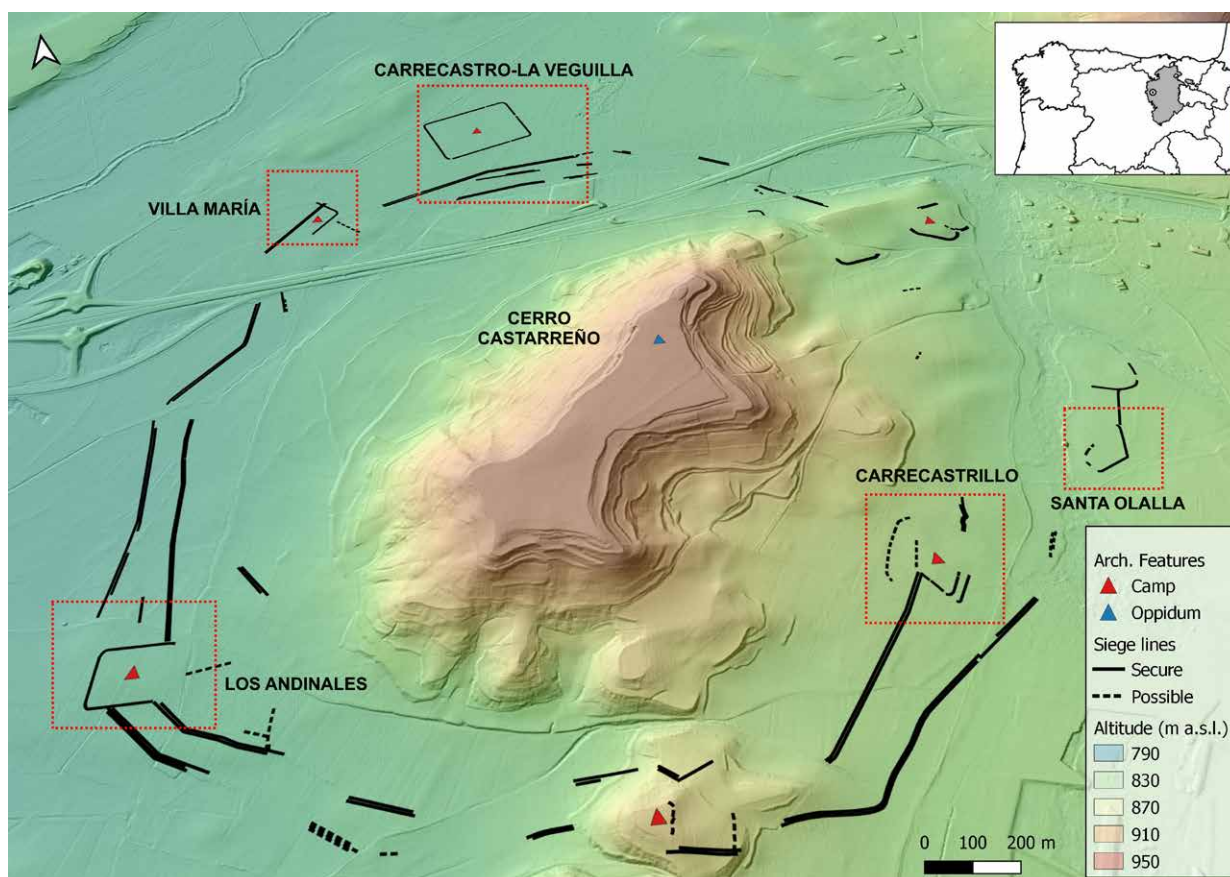


Figure 1. The siege scenario around Cerro Castarreño.

### The Carreastro-La Veguilla sector

Carreastro is a playing-card-shaped camp of c. 7.4 ha with no evident connection with the siege structures. Artefactual and metal-detecting-oriented surveys revealed that no permanent human occupation has ever existed in this land. No structures were detected on the surface. However, aerial and magnetometry surveys revealed that the defensive ditch was probably very shallow, and the two entrances detected showed no *titulum* or *clavicula*.

The excavation of two test trenches in 2021 confirmed the existence of a V-shaped ditch (50-80 cm deep) but could not reveal traces of the ramparts (fig. 3A). The ploughing most probably razed the ditches' upper part and the earthwork's foundations. Some hobnails were recovered on the surface, but no datable material was documented in unaltered archaeological contexts (fig. 4).

In the neighbouring Arroyo del Puerco/La Veguilla area, aerial and geophysical surveys documented an anomaly in the northern sector of the siege scenario. Three double ditches were located here instead of the two standard, double-lined features documented on the circumvallation and contravallation elsewhere. Since the landowners did not grant permission to excavate test trenches in this

location, we do not know whether this phenomenon should be understood in a synchronic or diachronic sense.

### The Villa María sector

Aerial coverages had already revealed the presence of a single-ditched camp in connection with the *contravallatio* system (García Sánchez & Costa-García 2020). However, the recent GPR survey showed that the two defensive structures do not annex (García Sánchez *et al.* 2022). The camp defences sectioned the double ditch or vice-versa. This evidence points towards the existence of different building phases in the siege scenario.

The excavations revealed the presence of two V-shaped ditches of remarkable dimensions (c. 3.00 m wide by 1.20 m deep) in the *contravallatio*. Unfortunately, no significant artefacts were found in their fillings. A slightly smaller V-shaped ditch and a well were the most distinctive elements documented at the camp (fig. 3B). Two fragments of an amphora – probably a Dressel 7-11 produced in the Guadalquivir Valley area during the 1<sup>st</sup> century BC – were uncovered at the bottom of the latter. Some *clavi caligarii* were recovered in the ditch's fillings (fig. 4).

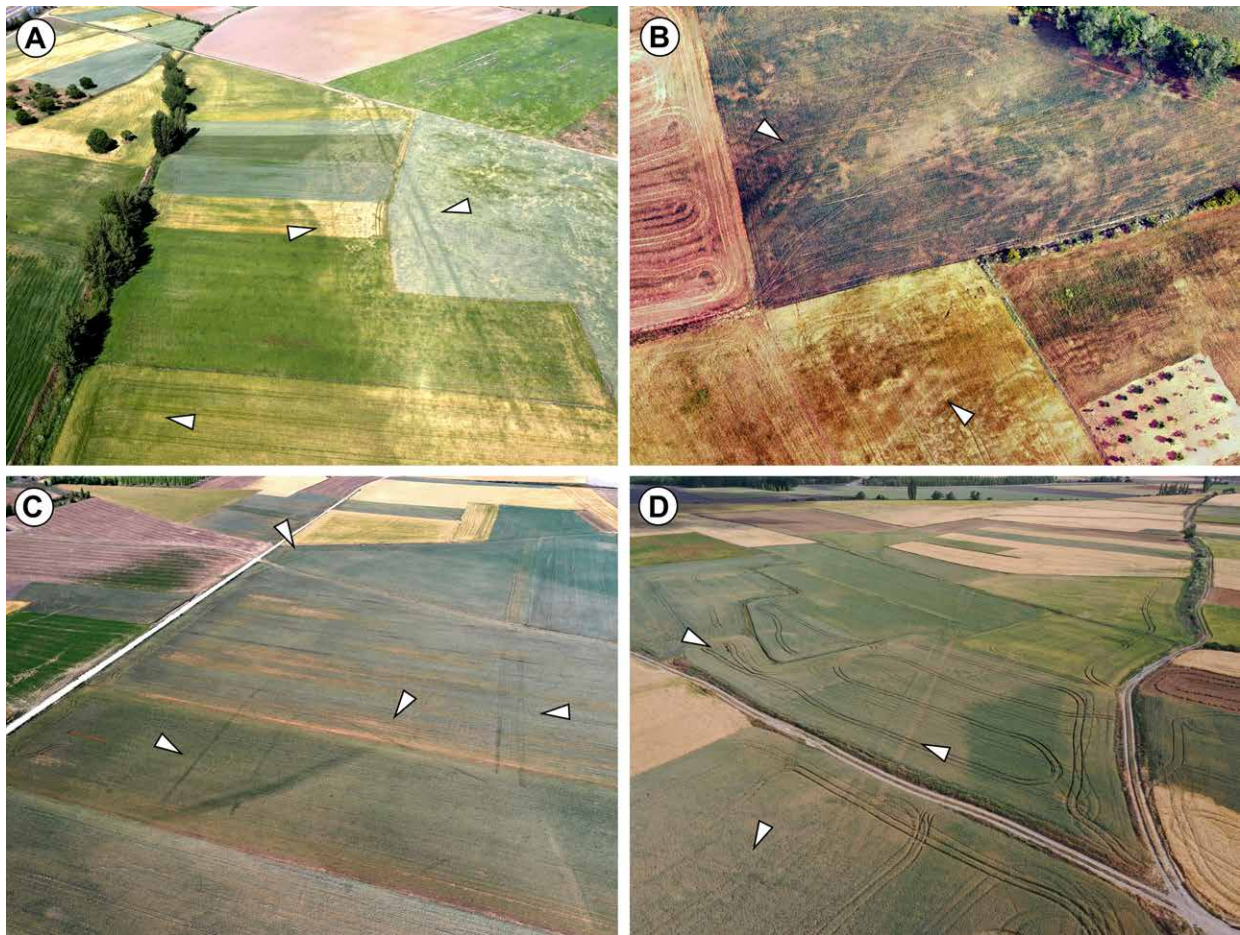


Figure 2. Archaeological traces documented in La Veguilla (A), Villa María (B), Carrecastrillo (C) and Los Andinales (D).

### Los Andinales sector

Aerial surveys attested to the existence of a military camp in connection to the siege lines here. Magnetometry allowed us to define the limits of this slightly irregular playing-card-shaped enclosure of c.2.7 ha and identify its northern gate. It also showed that a gap separated the ditches of the *circumvallatio* and the camp (fig. 5). The excavations uncovered two V-shaped ditches with a simple stratigraphic sequence of fillings. They were the only structural remains documented for the contravallation (fig. 3C). The camp revealed the foundations of a stone and earth rampart in addition to a singular V-shaped defensive *fossa*. Some sherds of Late Iron Age pottery were recovered from the bottom of the ditch, while a *clavus caligae* was lost when building (or razing) the rampart (fig. 4).

### Carrecastrillo and Santa Olalla sectors

The 2022 campaign focused on the eastern sector of the siege scenario. In Carrecastrillo, the excavation of the circumvallation resulted in the uncovering of two wide V-shaped ditches (2.00-3.30 m). The inner one was

intentionally filled with cut stone blocks that probably belonged to the defensive rampart in this area (fig. 3D). Other traces indicate the existence of a playing-card-shaped camp with at least two building phases. The enclosure shows two separate defensive lines in its southeast sector and some distinctive variations in its defensive perimeter. They both show a shallow V-shaped ditch (c.2 m wide by 0.5 m deep), but the ramparts' foundations vary from clayey soils to deposits of stone and compacted earth. A lead slingshot projectile, a trilobate arrow and some *clavi caligarii* come from these test trenches (fig. 4).

Some researchers have stated that some traces documented in Santa Olalla could belong to another military installation (Didierjean *et al.* 2014). Our metal-detecting oriented surveys recovered some Roman hobnails and Late Iron Age decorative fittings in 2019. However, these pieces are superficial finds and coexist with other materials of different chronologies altered by the ploughing. Most likely, the features documented here correspond to the fencing of a Roman suburban complex located northwards.



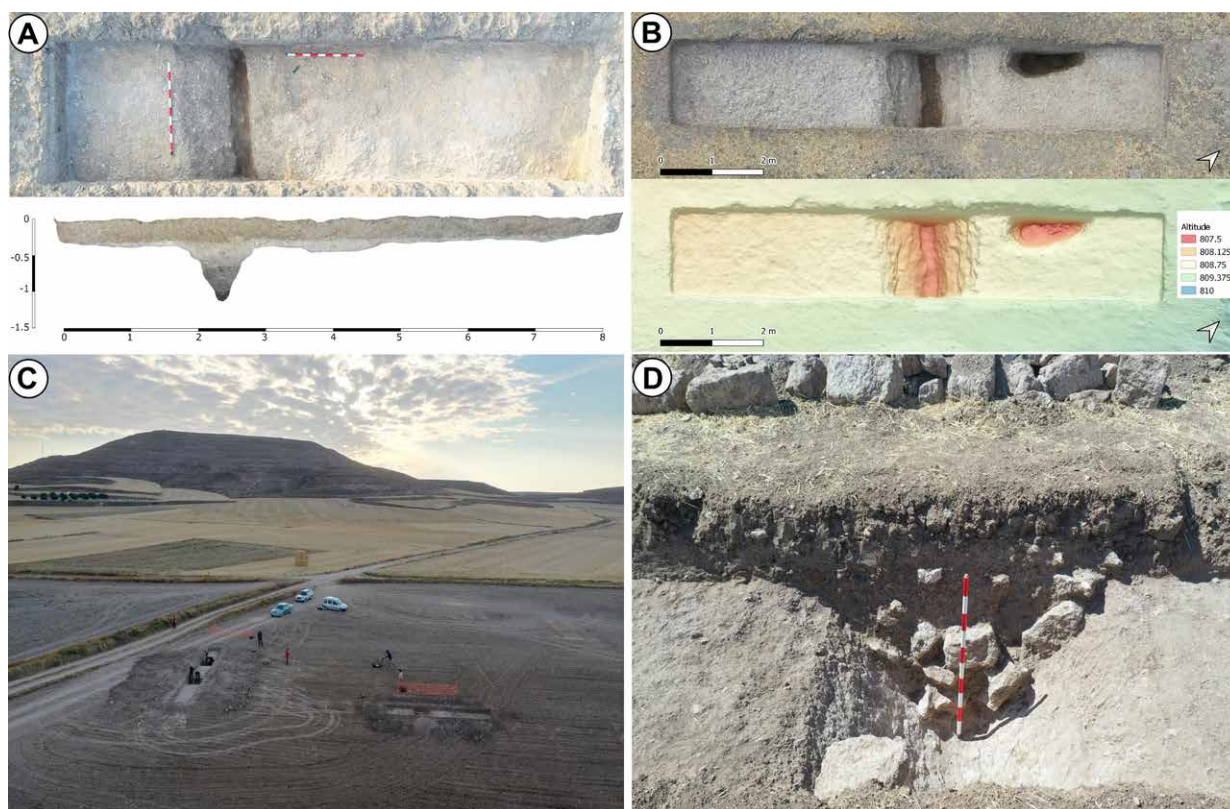


Figure 3. The defences of the Carreastro (A) and Villa María camps (B). Los Andinales sector (C). The *circumvallatio* inner ditch in Carreastro (D).

### Dating of the siege scenario

The archaeological interventions of 2021 and 2022 revealed that the structures related to the Roman military presence have suffered the effects of constant ploughing heavily. Both ramparts' dismantling and ditches' filling started in ancient times, possibly as soon as the siege structures ceased to be in use. The  $^{14}\text{C}$ -dating of charcoal found at the bottom of the outer circumvallation ditch in Los Andinales sets its initial filling in cal BC 97-cal AD 5 ( $1\sigma$ ). An animal bone found in the upper deposits filling the external ditch of Villa María indicates that the process concluded cal BC 40-cal AD 75 ( $1\sigma$ ), possibly in connection with the Roman agricultural exploitation of these fields. Pending the combined analysis of the results of the OSL dating, the eight soil samples taken at the bottom of the ditches in Carreastro, Villa María and Los Andinales in 2021 point to the 1<sup>st</sup> century BC as the most likely chronological horizon for the destruction of military structures. However, the Carreastro camp could be slightly later than the siege scenario, which is interesting considering the absence of a structural connection.

Most of the material findings came from the surface levels affected by the ploughing, with elements dating from the Late Iron Age to the present day. We have

already mentioned the scarce pottery documented in undisturbed contexts, with some indigenous and Roman productions that would not have been more recent than the 1<sup>st</sup> century BC. Among the metallic findings, we can highlight the morphological similarities between elements found in the Roman camps and the *oppidum* that could date back to the 50-30's BC (Poux 2008; Istenič *et al.* 2015).

### Conclusions

Since 2017, we have used different methodologies to understand better the transformations of the archaeological landscapes in the Sasamón area and answer specific research questions, such as how the *Turmogi* were effectively incorporated into the Roman Empire. The discovery of a massive siege scenario around the indigenous *oppidum* of Cerro Castarreño allows us to defy the traditional historical narratives based on the classical written sources and question whether their account is simply incomplete or purposely inaccurate.

Regarding the precise dating of this episode, the study of ephemeral archaeological contexts poses a methodological challenge. The limited evidence

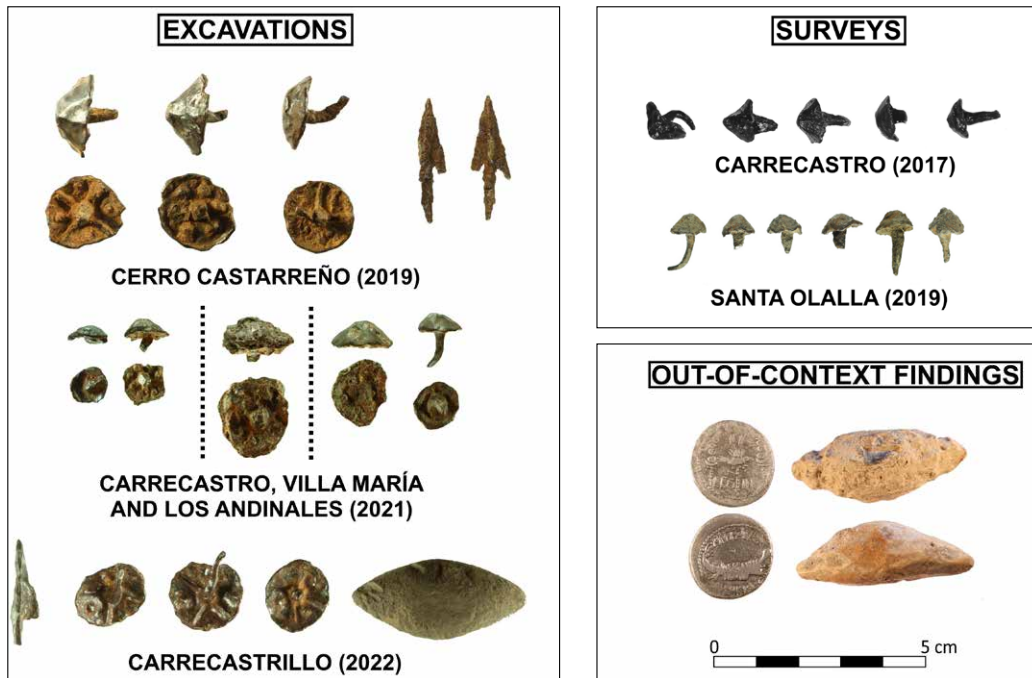


Figure 4. A selection of metallic findings recovered in the study areas.



Figure 5. The camp and siege lines at Los Andinales. Geophysical survey.

indicates that the events probably occurred in the 1<sup>st</sup> century BC, a period of intense military activity in *Iberia*. Without ruling out other previous conflicts, the chronological proximity of the campaigns of Statilius Taurus against the *Vaccae* (29 BC) leads us to think that this event could be one of the obscure actions leading to the *ex Hispania* victories mentioned by the *Fasti Triumphales* in the 30's and 20's of the 1<sup>st</sup> century BC (Amela Valverde 2006).

No similar violent episode has been documented yet in the area, so one might wonder if the Turmogian reaction to the Roman expansion was unitarian and whether the foundation of *Segisamo* was a reward or a punishment. The siege of Cerro Castarreño could have been an extreme, exemplary and dissuasive action that preceded the fear policy applied by the Roman army in Cantabria (26-19 BC). However, it is not clear that it meant the complete extermination of the indigenous people. The Roman city excavations reveal a strong indigenous component during the Late Republican-Early Imperial phase (Abásolo Álvarez & García Rozas 1993). As late as 163, a former resident of Sasamón was still referred to as *Tormogus Hispanus natus Segisamone* (CIL VI.24162).

## Acknowledgements

We want to thank F. Teichner, L. Lagóstena and their archaeological teams from the Universities of Marburg and Cádiz for their contribution in 2017 and 2018 to the magnetometric (fluxgate gradiometer) and GPR surveys aimed at identifying archaeological features. We thank J. Sanjurjo Sánchez (University of A Coruña) for processing the samples of the ditches in Carrecastro, Villa María and Los Andinales in 2021.

## Abbreviation

CIL: *Corpus Inscriptionum Latinarum*

## Bibliography

- Abásolo Álvarez, J.A. & R. García Rozas, 1993: *Excavaciones en Sasamón (Burgos)*, Madrid.
- Amela Valverde, C., 2006: Triunfos en Hispania a finales de la República (36-27 a. C.), *Iberia* 9, 49-61.
- Costa-García, J.M., 2018: Roman camp and fort design in Hispania. An approach to the distribution, morphology and settlement pattern of Roman military sites during the Early Empire, in: C S. Sommer & S. Matešić (eds), *Limes XXIII. Proceedings of the 23<sup>rd</sup> International Limes Congress in Ingolstadt 2015 / Akten des 23. Internationalen Limeskongresses in Ingolstadt 2015*, Mainz (Beiträge zum Welterbe Limes Sonderband 4), 986-993.
- Costa-García, J.M., 2023: The rationale behind the Roman military deployment in NW Iberia during its initial phase (2<sup>nd</sup> to 1<sup>st</sup> c. BCE), *Limes XXIII. Proceedings of the 24<sup>th</sup> International Congress of Roman Frontier Studies, Serbia 2018*, Belgrade.
- Costa-García, J.M. & J. Fonte, 2017: Scope and limitations of airborne LiDAR technology for the detection and analysis of Roman military sites in Northwest Iberia, in: V. Mayoral Herrera, C. Parcero-Oubiña & P. Fábrega-Álvarez (eds), *Archaeology and geomatics. Harvesting the benefits of 10 years of training in the Iberian Peninsula (2006-2015)*, Leiden, 57-73.
- Costa-García, J.M., J. Fonte & M. Gago, 2019: The reassessment of the Roman military presence in Galicia and Northern Portugal through digital tools. Archaeological diversity and historical problems, *Mediterranean Archaeology and Archaeometry* 19/3, 17-49.
- Costa-García, J.M., A. Menéndez Blanco, J. Fonte & F. Alonso Toucido, 2020: A Penaparda (A Fonsagrada, Lugo – Santalla, Asturias). Intervención arqueológica en un recinto campamental romano en el Occidente de la Cordillera Cantábrica, *Cuadernos de Estudios Gallegos* 67/133, 45-74.
- Costa-García, J.M., D. González-Álvarez, M. Gago Mariño, J. Fonte, J. García Sánchez, A. Menéndez Blanco, R. Blanco-Rotea & V. Álvarez Martínez, 2021: Una década de investigación del colectivo RomanArmy. eu. Novedades y desafíos sobre la conquista romana del noroeste ibérico, in: A. Carretero Pérez & C. Papí Rodes (eds), *Actualidad de la investigación arqueológica en España. Ciclo III (2020-2021). Conferencias impartidas en el Museo Arqueológico Nacional*, Madrid, 153-170.
- Didierjean, F., Á. Morillo Cerdán & C. Petit-Aupert, 2014: Traces des guerres, traces de paix armée. L'apport de quatre campagnes de prospection aérienne dans le nord de l'Espagne, in: F. Cadiou & M.N. Caballero (eds), *La guerre et ses traces. Conflits et sociétés en Hispanie à l'époque de la conquête romaine (III<sup>e</sup>-I<sup>er</sup> s. a.C.)*, Bordeaux, 149-179.
- Fernández-Götz, M., J.F. Torres-Martínez & A. Martínez Velasco, 2017: The battle at Monte Bernorio and the Augustan Conquest of Cantabrian Spain, in: M. Fernández-Götz & N. Roymans (eds), *Conflict archaeology. Materialities of collective violence from Prehistory to Late Antiquity*, Oxford, 127-140.
- Fonte, J., J.M. Costa-García & M. Gago, 2021: O Penedo dos Lobos. Roman military activity in the uplands of the Galician Massif (Northwest Iberia), *Journal of Conflict Archaeology* 17/1, 5-29.
- García Sánchez, J. & J.M. Costa-García, 2019: El oppidum del Cerro de Castarreño, Olmillos de Sasamón. Historiografía y arqueología de un hábitat fortificado de la Segunda Edad del Hierro, *Boletín Institución Fernán González* 97/258, 9-45.

- García Sánchez, J. & J.M. Costa-García, 2020: Del oppidum indígena a la ciudad romana. Evolución del paisaje de Segisamo (Sasamón, Burgos, España) a través de la fotografía aérea. Datos de la prospección aérea de 2019, *Lucentum* 39, 131-148.
- García Sánchez, J., J.M. Costa-García, J. Fonte & D. González-Álvarez, 2022: Exploring ephemeral features with ground-penetrating radar. An approach to Roman military camps, *Remote Sensing* 14/19, 4884.
- García Sánchez, J., 2022: The last frontier. Late Iron Age society, Roman conquest and the Romanization of the territory north of the river Duero, in: T.D. Stek (ed.), *The archaeology of Roman Portugal in its western Mediterranean context*, Oxford, 68-84.
- González-Álvarez, D., J.M. Costa-García, A. Menéndez Blanco, J. Fonte, V. Álvarez Martínez, R. Blanco-Rotea & M. Gago Mariño, 2019: La presencia militar romana en el noroeste ibérico hacia el cambio de era. Estado actual y retos de futuro, in: B. Vallori Márquez, J.P. Bellón Ruíz & C. Rueda Galán (eds), *Accampamenti, guarnigioni e assedi durante la Seconda Guerra Punica e la conquista romana (secoli III-I aC). Prospettive archeologiche*, Roma, 127-138.
- Istanič, J., B. Laharnar & J. Horvat, 2015: *Evidence of the Roman army in Slovenia*, Ljubljana.
- López Jiménez, Ó., 2005: Las fuentes antiguas y la creación literaria de la Vetonia, *Gerión. Revista de Historia Antigua* 22/1, 201-214.
- Martín Hernández, E., A. Martínez Velasco, D. Díaz Alonso, F.A. Muñoz Villarejo & L. Bécares Rodríguez, 2020: Castrametación romana en la Meseta Norte hispana. Nuevas evidencias de recintos militares en la vertiente meridional de la cordillera Cantábrica (provincias de Burgos y Palencia), *Zephyrus. Revista de prehistoria y arqueología* 86, 143-164.
- Menéndez Blanco, A., J. García Sánchez, J.M. Costa-García, J. Fonte, D. González-Álvarez & V. Vicente García, 2020: Following the Roman army between the southern foothills of the Cantabrian Mountains and the northern plains of Castile and León (North of Spain). Archaeological applications of remote sensing and geospatial tools, *Geosciences* 10/12, n. 485 (DOI: 10.3390/geosciences10120485).
- Menéndez Blanco, A., D. González-Álvarez, V. Álvarez Martínez & J.I. Jiménez Chaparro, 2013: Propuestas de prospección de bajo coste para la detección de campamentos romanos de campaña. El área occidental de la Cordillera Cantábrica como caso de estudio, *Munibe Antropologia-Arkeologia* 64, 175-197.
- Morillo, Á., B.X. Currás, A. Orejas & A. Nobilini, 2021: El conjunto de campamentos romanos para prácticas de Trabajo del Camino (San Andrés de Rabanedo) y Oteruelo de la Valduncina (León). Una aproximación preliminar, *Gladius* 41, 91-119.
- Peralta Labrador, E., 2002: Los campamentos romanos de campaña (castra aestiva). Evidencias científicas y carencias académicas, *Nivel Cero. Revista del grupo arqueológico Attica* 10, 49-87.
- Peralta Labrador, E.J., J. Camino Mayor & J.F. Torres-Martínez, 2019: Recent research on the Cantabrian Wars. The archaeological reconstruction of a mountain war, *Journal of Roman Archaeology* 32, 421-438.
- Poux, M. (ed.), 2008: *Sur les traces de César. Militaria tardo-républicains en contexte gaulois*, Glux-en-Glenne.
- Sacristán de Lama, J.D., 2007: *La edad del hierro en la Provincia de Burgos*, Burgos.
- Sacristán de Lama, J.D., 2011: El urbanismo vacceo, *Complutum* 22/2, 185-222.
- Salinas de Frías, M., 2007: *Los pueblos prerromanos de la Península Ibérica*, Madrid.
- Sánchez Moreno, E., 2010: Los vacceos a través de las fuentes. Una perspectiva actual, in: F. Romero Carnicero & C. Sanz Mínguez (eds), *De la región vaccea a la arqueología vaccea. Jornadas Científicas conmemorativas del 50 aniversario de la publicación de La Región Vaccea*, Valladolid, 65-104.







# *Agri vacui*

## De- and repopulation of the Dutch coastal area c. 50 BC-AD 100

Jasper de Bruin

It is well known that the expansion of the Roman Empire was accompanied by violence. The result of this violence could be archaeologically translated into remnants of battlefields and burned-down settlements. In many cases, however, something else can be seen, namely an interruption of the habitation of a region, often located on the edges of newly conquered Roman territory. A striking phenomenon is that these areas often remain empty, in other words, there is no question of a quick resettlement. In the course of the 1<sup>st</sup> century AD, when the border zones of the Roman Empire became more established, areas just outside the immediate border zone seem to be cleared of habitation. The former empty lands within the Empire are rather quickly resettled with a diverse group of rural communities, that are pressed into a new, constructed ethnic identity, imposed by Rome. Question is, if these empty areas were consciously planned and what their main function was.

### Empty lands in Northern Gaul

The first one to describe the concept of empty lands as a power tool is Julius Caesar: “As a nation, they [the Germans] count it the highest praise to have the land on their borders untenanted over as wide a tract as may be, for this signifies, they think, that a great number of states cannot withstand their force.” (Caesar *Commentarii de Bello Gallico* 4.3). He also states: “Their states [the Germanic states] account it the highest praise by devastating their borders to have areas of wilderness as wide as possible around them. They think it the true sign of valour when the neighbours are driven to retire from their lands and no man dares to settle near, and at the same time they believe they will be safer thereby, having removed all fear of a sudden inroad.” (6.23). Question is, if Cesar describes a genuine Germanic custom, or that this is in fact a Roman practice.

Between 57 and 51 BC, Julius Caesar campaigned against the northern tribes. The tribe of the *Aduatuci* was attacked in 57 BC, possible at Thuin in Southern Belgium, where their hillfort (*oppidum*) was located (Roymans & Scheers 2012, 20-24 and 29). If this is the case, this could well be the most northern findspot of a Caesarean battle on the European continent.<sup>1</sup> After the battle, the *Aduatuci* fell victim to mass enslavement. In a wide area to the north of Thuin, in current Belgium, the Netherlands and

**Jasper de Bruin**  
National Museum of  
Antiquities, Rapenburg 28,  
P.O. Box 11114, 2301 EC  
Leiden, The Netherlands,  
j.debruin@rmo.nl

1 The site of Kessel-Lith, seen by Roymans (2018, especially 176-179) as the place for a Caesarian battlefield, could be interpreted in various ways. Therefore, the site is excluded in this discussion.

Germany, a break in the habitation is observed, suggesting an end to the present Iron Age habitation (De Clercq 2009, 498-499; Heeren 2009, 258; Hiddink & Roymans 2015, 84; Tichelman 2016, 48). This phenomenon is mirrored by a horizon of hoards, consisting of Celtic coins, in the same area, pointing to a date in the middle of the 1<sup>st</sup> century BC (Roymans & Scheers 2012, 20). Although we are quite well informed of the genocidal campaign against the *Eburones*, it is very well possible that these actions caused a larger number of people to flee, away from the advancing Roman army. It is conceivable that Roman military scouts were active in the areas to the north of the main military actions in Caesar's era and it is possible that the intimidating presence of these scout groups might have scared people away, especially when they were aware of what was going on in the lands of the *Eburones*.

Strikingly, the area in which the habitation is disrupted in the 50's BC, remained mainly empty after this period. Only a limited amount of people seem to have returned to the area. Or maybe, most people were not allowed to return, by order of the Roman military. If the latter was the case, this area must have been quite firmly under Roman control, maybe not in a physical way, but with the stationing of Roman soldiers in the region of the *Treveri* (Kemmers 2005, 51 and 56), the army wasn't far away and could project its power. The coins from the oldest fortress in Nijmegen are linked with coin finds from the Treveran Titelberg, suggesting a provenance of the troops from that location (Kemmers 2005, 54). The case of the defeat of the Fifth Legion under the command of Lollius against the *Sugambri* in 17 or 16 BC (Kemmers 2005, 56), shows the possibility of the Roman army to act in this 'empty' area when necessary. Given the fact that this part of Northern Gaul remained empty for at least several decades, suggests that the power projection of the Roman army reached until the southern banks of the Lower Rhine already from the 50's BC, providing some archaeological evidence to back to Caesar's conquest of all of Gaul up until the Rhine. To see how such an empty area can be archaeologically detected, we will have a closer look at the area that in the 1<sup>st</sup> century AD became the homeland of the local community of the *Cananefates*, located along the western Dutch coast.

### The western Dutch coast

The western Dutch coast is characterized by rivers, that discharged in the sea. In the north, the Oer IJ and Lower Rhine are both branches of the same river, the Rhine (fig. 1). In the south, the river mouth of the river Meuse is located. Along the coast, high and dry sandy beach barriers and low dunes protected the clayey floodplains and the more inland located peat areas from direct influence of the sea. The floodplains were intersected by tidal inlets and creeks, that offered higher grounds, because of the sedimentation

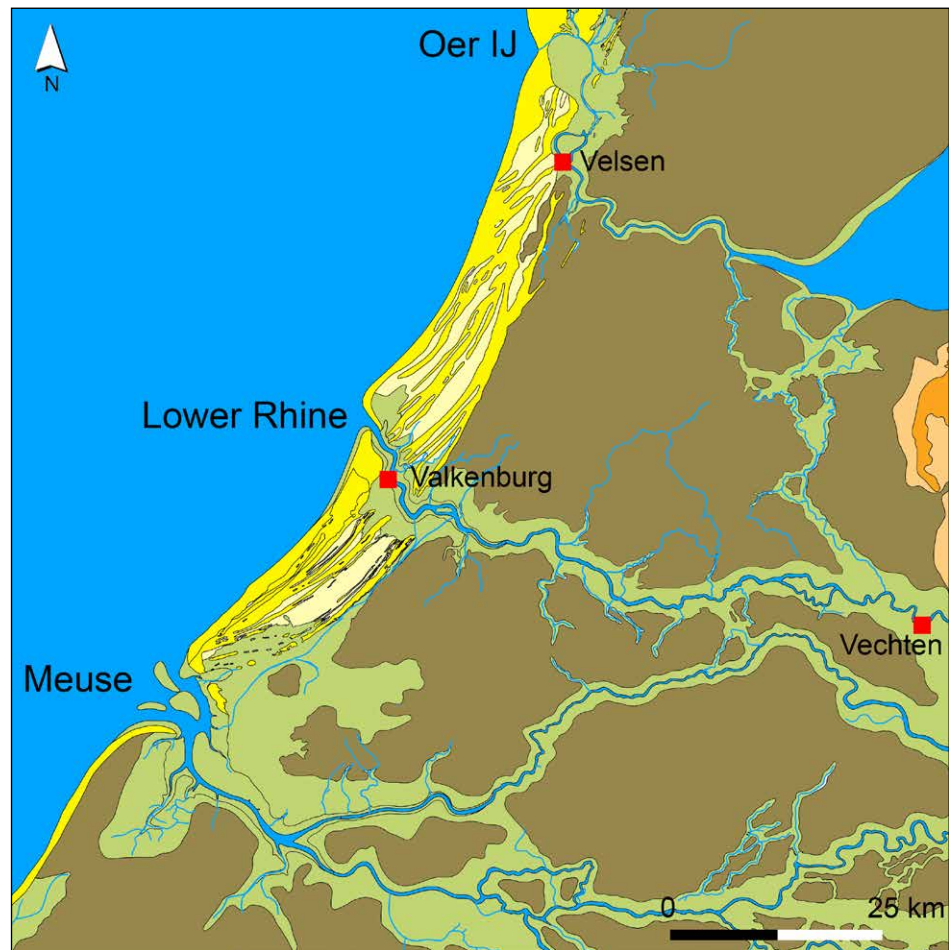
of sandy clay, and possibilities for transportation by boat. In the 1<sup>st</sup> century BC, especially the beach barriers and the peat area were densely inhabited. But then, for the area between the Lower Rhine and the Meuse (fig. 1), the image changed. Based on the few metal finds, habitation seems to have ended in the 1<sup>st</sup> century BC. The remarkable lack of 'Celtic' coins and the poor representation of La Tène glass bracelets also supports the idea of a sparsely inhabited landscape at the end of the Iron Age (De Bruin 2019, 145). Looking at the available <sup>14</sup>C dates, it is striking that the habitation seems to have ended in the 1<sup>st</sup> century BC (Van Heeringen 2011, table 17.3, 414 and 418).

Changes in the local environment, like flooding or subsidence of the peat areas, may have driven this decline in habitation. Yet, this does not apply to the beach barriers, which were high and dry. Despite this fact, no settlements are known from the beach barriers at the end of the Late Iron Age. At settlements where wheel thrown pottery from the Roman period has been found, handmade pottery of the typologies ascribed to the Late Iron Age is absent (De Bruin 2019, 145). Moreover, there are large differences between the handmade pottery of the Iron Age and that from the Roman period. House types from the Late Iron Age do not occur in the Roman period, which points to a break in the development of the local building tradition. Overall, it seems that the large-scale habitation of the area in the Iron Age came to an end somewhere in the 1<sup>st</sup> century BC. Although there are certainly environmental reasons behind the end of the habitation in this period, these cannot explain the entire exodus from the area. The reason for the end of the habitation should therefore be sought more in the socio-political sphere. The advance of the Roman army from the south could provide such an explanation. Around the beginning of our era the western Dutch coast south of the Lower Rhine is practically empty, and there appears to be a clear hiatus in the habitation of the area. However, in the area around the Oer IJ, north of the Lower Rhine, many sites seem to be in use continually.

### The Roman military

It is interesting to have a look at the earliest military deployment along the western Dutch coast (fig. 1). The first fort was built in Vechten (around the beginning of our era, or even a bit earlier, around 12 to 5 BC (Polak 2014, 75). In Velsen, near the Oer IJ, several fortifications of various dimensions were built between AD 15-50 (Bosman 1997, 321; 2022, part III, 42-47). In Valkenburg, a large fortress or even a *castra* was built in AD 40 (Vos *et al.* 2021, 24-31). The positions of the forts seem to reflect strategic considerations. They were built on places where the soldiers could monitor movement on water, like Vechten that is built near the bifurcation of the Lower Rhine and the Vecht, a river that flowed to the north in the direction of Velsen. The latter guarded the river Oer

Figure 1. Part of the western Dutch coast. Waters are indicated in blue, yellow are beach barriers and low dunes, green are clay areas and brown are peat areas. To the far east, in orange, are the higher sandy soils of the central part of the Netherlands. The Roman forts are indicated by red squares. Map adjusted from Vos *et al.* 2020.



IJ and Valkenburg oversaw the delta of the Lower Rhine. Especially Valkenburg and Velsen are also located at the edges of the higher and dryer beach barriers that provided dry north-south land routes, suggesting that these areas were also critically important in the eyes of the Roman army. Yet, if we look at the starting dates of the forts, one could also suggest that these forts served another function: the monitoring of the movement of people.

The late Augustan '*Landnahme*' in the case of Utrecht, discussed by Erik Graafstal (this volume), coincides with the earliest traces of Roman military presence in Vechten. Utrecht is not far away from Vechten, suggesting that the foundation of Vechten and the Augustan repopulation of the nearby region might be connected. In Valkenburg, a large fortress was built in AD 40, or maybe even a bit later (Vos *et al.* 2021, 24-31). It is remarkable that the fortress in Valkenburg was constructed around the same time that the oldest rural settlements in the surrounding region sprang up. Velsen was situated in an area that was already inhabited by a rural population, but as we shall see below, this area could have been the origin of many migrant groups to the south of the Lower Rhine. So, one could argue that the forts in Vechten, Valkenburg and Velsen were also

built in connection with the de- and repopulation of the areas that surrounded them. The same image could very well apply to the Augustan fortress in Nijmegen, where the transfer of *Batavi* might have been one of the reasons for the earliest military presence (Kemmers 2005, 53 and 236). The same image could very well be applicable to the earliest forts in the German Rhineland. To summarize, the early Roman forts along the western Dutch coast should not be seen only as bases for military campaigns, but also or even more primarily as control and monitoring nodes for the movement of people.

### The *Cananefates*

The first settlements of non-Roman, rural groups in the area between Lower Rhine and Meuse were founded around AD 40/50 along the Lower Rhine itself (much of the information in this section is derived from De Bruin 2019). Like the Augustan sites in Utrecht, they can be dated in the same period as the construction of the earliest fort in Valkenburg. The rural sites appear to be related to the military, based on finds of military equipment and coins. The handmade pottery relates directly to that found in the Velsen area, including numerous fragments of handmade pottery

from the Velsen I fort (Diederik 2013, 83, 85-90 and 94-97). Tacitus mentions an *Ala Canninefas* that fought in the Frisian Revolt, supposedly in the Velsen area, in AD 28 (Tacitus *Annales* 4.73). Tacitus' account is also the oldest historical reference to the Cananefates. If the Cananefatian *ala* was indeed stationed in Velsen, it is conceivable that the unit was (partially) composed of local recruits.

After the Frisian Revolt, the *ala* remained part of the Roman army and it is very well possible, that they moved with the military when the first forts along the Lower Rhine were built. The incentive to do this, can also be derived from Tacitus' works, because he mentions that after the Frisians provided hostages to the Roman army in AD 47, they were restricted to an area indicated by Corbulo (Tacitus *Annales* 11.19). In addition, he set up a senate, civil servants, and laws. A fort was built in the Frisian area to keep the region under control. While Corbulo was establishing a camp in the enemy's territory, he was recalled by the emperor Claudius (Tacitus *Annales* 11.20), probably towards the Lower Rhine area in the western Netherlands. Here he ordered the excavation of the Corbulo Canal that linked the mouths of the Lower Rhine and Meuse (Cassius Dio *Historia Romana* 60.30.4-6). It is quite possible that Corbulo took with him a part of the *Frisii* or the Frisian hostages, as they had placed themselves under his command at the start of his military campaigns. Together with the *Ala Canninefas*, they might have been the first *Cananefates*. It is striking that Tacitus mentions the relocation of *Frisii* under Corbulo, because his account coincides with the archaeological data in the Cananefatian area.

Moving away from the Lower Rhine itself, the southern part of the homeland of the *Cananefates* was very suitable for habitation. Most sites here date from AD 70. The settlements are all new foundations and the fact that these spring up so massively, suggest a large scale immigration into the area. Because the chain of forts along the Lower Rhine was already established, this immigration took place under Roman military control. The handmade pottery again resembles the typologies found in Velsen, and the brooches also point to the northern Netherlands and/or military background of the inhabitants, though such *fibulae* are very common in the wider region in the 1<sup>st</sup> century AD. If we look at the distribution of the house types, the dominant type is known mainly within the research area (Kodde 2014, 308-309). An exception to this are the houses in the far south of the Cananefatian region, where the roof construction and lay-out resemble the housebuilding tradition along the coastal area further to the south. The different construction method can be explained by the composition of the local soil, that is composed of peat, but buildings with a similar construction have also been found on the more solid clay soils, and it may be that this construction method is (partly) culturally determined, as

the building of houses almost always fits into a cultural sphere. On the basis of these observations, it seems that a group of people settled in the far south, who were inspired to construct their houses following examples common in the region south of the Cananefatian area.

If we review the information, one could say that the repopulation of the Cananefatian area took place in three so-called waves, of which the first one dates around AD 40. This first wave was possibly composed of people who had a direct link with the Roman military and they settled in the vicinity of the Roman fort in Valkenburg. This image is comparable to the case presented by Erik Graafland (this volume). The second wave took place in the period AD 70-100 and was possibly the largest group, originating from the area around Velsen, the Oer IJ region. These migrants settled mainly in the southern area, where dozens of new settlements appear. A third group might have had their roots in more southern regions. They settled near the river Meuse. Although some sites were dated in the late Flavian period, the majority of the sites starts around AD 100. Through the influx of different groups of people into the Cananefatian area during the 1<sup>st</sup> century, the population consisted of an amalgam of peoples. All of them originated from areas along the western coast of the Netherlands.

Soon, the material culture on the settlements in the Cananefatian area starts to show great similarities, suggesting a strong interconnection. Yet, no elite settlements can be observed. The rural society seems to be built up of relatively autonomous local units or groups that interacted intensively with each other. However, there are few traces of communal activities. What they share is a set of practices and beliefs, but these do not seem to be imposed by an elite group, but more by the presence of another, external and dominant factor like the Roman army. When the area had to be organised as a Roman *civitas*, the diversity of peoples would have produced a problem for the Roman authorities, namely in naming of the area. Assuming that the Romans viewed this entire area primarily through a military lens, it is not surprising that the whole area came to be known as the *civitas Cananefatium*. The rather loose groups in the area were forced into a new (administrative) structure and subsequently formed a new community, that of the *Cananefates*. This imposed and constructed identity was gradually embraced by the inhabitants of the *civitas* (De Bruin 2019, 243-245).

### ***Prata legionis?***

At the start of the 2<sup>nd</sup> century AD, the area around Velsen seems to be empty. All known settlements are abandoned. Given the large scale migration of these people into the Cananefatian area in the decades before, this may not come as a surprise. Yet, the area around Velsen remained

empty for quite a long time. Directly to the north of the Lower Rhine, rural settlements seem to end in the Flavian period, suggesting a new empty land (De Bruin 2019, 34-35 and 94-95). The total width of the empty area is not known, but it might have extended to the Velsen area. Empty forelands on the outside of river frontiers, that sometimes are referred to as *agri vacui* (Tacitus *Annales* 13.54), are seen by Potter (1992, 273-274) as part of the Roman control mechanism over rivers. Evidence for this can be found in the account of Tacitus (*Annales* 13.54), who describes that in AD 55-58, members of the Frisian tribe settled along the banks of the Rhine, at locations that were reserved for the Roman army, the so-called *prata legionis*. The Roman authorities demanded they leave the area or face armed action, but Verritus and Malorix, who reigned as 'kings' over their people, undertook a diplomatic mission to Rome. Apparently this negotiation had little effect; they both received Roman citizenship but were ordered by Nero to leave the area near the Rhine. Potter sees this movement of the Frisians in the *prata legionis* as a symbolic act, aimed at challenging the military power of Rome. Apparently, both the Frisians and the Romans "... recognized that the zone symbolized Rome's claim to be the preeminent power in the area" (Potter 1992, 274). In the case of the foreland of the western Dutch coast, such an area might have existed to the north of the Lower Rhine. Yet, resettlement in this area took place in the late 2<sup>nd</sup> and 3<sup>rd</sup> centuries, suggesting that the power projection was not functioning any more, or the maintenance of such an empty area was not necessary any more.

## Resettlement

The resettlement of rural groups that became known as the *Cananefates* fits into a much wider image of resettlement, that is mainly known from historical sources (Boatwright 2015, 122-146). Increasingly, the processes of resettlement are backed by archaeological evidence. Resettlement seems to be a widespread phenomenon, suggesting that a conscious policy might play at the background. Conquering an area, first by use of violence and later by drastically changing its ethnic composition, might have been a proven mechanism for imperial control. For the area around the Netherlands, we have the cases of the *Batavi*, the *Cugerni*, the *Ubii* and the *Cananefates* (Roymans *et al.* 2020, 271-275), but the inscription on the tomb of the Plautii in Tivoli, Italy, also point to large-scale resettlement in *Moesia* (Boatwright 2015, 134-135; CIL XIV.3608). The phenomenon was apparently widespread during the first centuries BC and the 1<sup>st</sup> century AD. However, there are also examples from later periods, like the resettlement of 'civilians' in newly conquered areas in *Africa Tripolitana* (Mattingly 2013, 69; CIL VIII.9228) and the assumed clearance of large parts of the Roman province of *Germania inferior* in the second half of the 3<sup>rd</sup> and 4<sup>th</sup> century AD (Roymans *et al.* 2020, 277-282).

## Conclusions

It seems that the empty lands, coinciding with the early phases of Roman conquest, could well be part of a conscious policy. Especially the fact that these empty areas remained empty for some time, adds to the image of a deliberate action. The main function of the empty zones at the edges of newly conquered Roman territory was the projection of Roman military power. Resettlement of these areas, often during the establishment of frontier systems, appears to be in the standard toolbox of Roman imperialism, aimed at creating a new community along the lines of Roman interest. The coinciding date of the earliest Roman forts and the oldest rural sites indicates a direct involvement of the Roman military in the resettlement processes. Finally, the *prata legionis*, established on the outside of Rome's frontiers, was used for control of the frontier itself, like riverine transport on the Lower Rhine, but it also was part of an outward oriented powerplay.

## Abbreviation

CIL: *Corpus inscriptionum latinarum*

## Bibliography

- Bosman, A.V.A.J., 1997: *Het culturele vondstmateriaal van de Vroeg-Romeinse versterking Velsen I*. Amsterdam (PhD thesis University of Amsterdam).
- Bosman, A.V.A.J., 2022: *Velsen 2. Het onderzoek naar de Vroeg Romeinse basis in de periode 1945-2005. Deel III Synthese & Bijlagen*, Dordrecht (Military Legacy Rapport 38).
- Boatwright, M.T., 2015, Acceptance and approval. Romans' non-Roman population transfers, 180 B.C.E.-ca. 70 C.E., *Phoenix* 69, 122-146.
- De Bruin, J., 2019: *Border communities at the edge of the Roman Empire. Processes of change in the Civitas Cananefatium*, Amsterdam (Amsterdam Archaeological Studies 28).
- De Clercq, W., 2009: *Lokale gemeenschappen in het Imperium Romanum. Transformaties in rurale bewoningsstructuur en materiële cultuur in de landschappen van het noordelijk deel van de civitas Menapiorum (provincie Gallia-Belgica, ca. 100 v. Chr.-400 n.Chr.)*, Ghent (PhD thesis Ghent University).
- Diederik, F., 2013: *Local pottery found in the Roman military fortress Velsen I. An approach at understanding local pottery from the Late Iron Age found at the location of Velsen I*. Haarlem (Rapport Provincie Noord-Holland).
- Heeren, S., 2009: *Romanisering van rurale gemeenschappen in de civitas Batavorum. De casus Tiel-Passewaaij*, Amersfoort (Nederlandse Archeologische Rapporten 36).
- Hiddink, H. & N. Roymans, 2015: Exploring the rural landscape of a peripheral region, in: N. Roymans,

- T. Derks & H. Hiddink (eds), *The Roman villa of Hoogeloon and the archaeology of the periphery*. Amsterdam (Amsterdam Archaeological Studies 22), 45-86.
- Kemmers, F., 2005: *Coins for a legion. An analysis of the coin finds of the Augustan legionary fortress and Flavian canabae legionis at Nijmegen*. Nijmegen (PhD thesis Radboud University Nijmegen).
- Kodde, S.W., 2014: Wonen in het westen. Huisplattegronden in het West-Nederlandse kustgebied uit de late ijzertijd en de Romeinse periode, in: A.G. Lange, E.M. Theunissen, J.H.C. Deeben, J. van Doesburg, J. Bouwmeester & T. de Groot (eds), *Huisplattegronden in Nederland. Archeologische sporen van het huis*. Amersfoort, 297-312.
- Mattingly, D., A. Rushworth, M. Sterry & V. Leitch, 2013: *Frontiers of the Roman Empire. The African frontiers. Die Grenzen in Afrika. Les frontières africaines*, Edinburgh.
- Polak, M., 2014: An early Roman naval base at Vechten. Facts and fiction, in: C. Nickel, M. Röder & M. Schukz (eds), *Honesta Missione. Festschrift für Barbara Pferdehirt*, (Römisch Germanisches Zentralmuseum Mainz Monographie 100), 69-97.
- Potter, D., 1992: Empty areas and Roman frontier policy, *The American Journal of Philology* 113/2, 269-274.
- Roymans, N., 2018: A Roman massacre in the far north. Caesar's annihilation of the Tencteri and Usipetes in the Dutch river area, in: M. Fernández-Götz & N. Roymans (eds), *Conflict archaeology. Materialities of collective violence in Late Prehistoric and Early Historic Europe*, 167-181.
- Roymans, N., T. Derks & S. Heeren, 2020: Roman imperialism and the transformation of rural society in a frontier province. Diversifying the narrative, *Britannia* 51, 265-294.
- Tichelman, G., 2016: *Romeinse tijd in Limburg. Een actuele kennisstand van de Romeinse tijd in Limburg aan de hand van archeologisch onderzoek tussen 2007 en 2013*, s.l. (<https://www.limburg.nl>).
- Van Heeringen, R.M., 2011: Handgevormd aardewerk, in: Y. Eijsskoot, O. Brinkkemper & T. de Ridder (eds), *Vlaardingen-De Vergulde Hand-West. Onderzoek van archeologische resten van de middenbronstijd tot en met de late middeleeuwen*. Amersfoort (Rapportage Archeologische Monumentenzorg 200), 411-418.
- Vos, P., M. van der Meulen, H. Weerts & J. Bazelmans 2020: *Atlas of the Holocene Netherlands. Landscape and habitation since the last ice age*, Amsterdam.
- Vos, W, E. Blom, B. Cornelisse, J. de Bruin, J. Loopik, A. Ruiter, A. Tol & L. van der Feijst, 2021: A legionary fortress at Valkenburg. Discovering a springboard for the conquest of Britannia?, *Current World Archaeology* 108, 24-31.

# Military forts from the period of the Principate in the Balkan interior

Damjan Donev

The paramount role of the Roman army in the process of urbanization and Romanization of the Balkan and Danube provinces has been underlined by virtually all scholars who have studied this region (e.g. Wilkes 1969; Mócsy 1974; Gerov 1997; Tačeva 2004; Mirković 2007). Indeed, it is impossible to make sense of the urban geography or the urban hierarchy in this part of the Empire without recourse to army movement and deployment during and after the wars of conquest. A study of the genesis of the towns and town-like settlement in the Balkan and Danube provinces has concluded that over 40 % of all settlements founded by the Romans were garrison sites, that is settlements that developed next to active legionary and auxiliary forts (Donev 2020). The size of the military sector was, by all standards, impressive, and this impression cannot be mitigated by pointing to the apparent research bias towards military sites. In fact, it can be argued that, by excluding the settlements that emerged at sites of abandoned camps, the figure given above underestimates the full impact of the army on the regional urban map. Moreover, the impact of the military did not end with the foundation acts, but was deeply woven into the functioning of both civilian and garrison towns, shaping their economic orientation and demographic profile (Mócsy 1974, 183-212). Towns relied on the military not only for their protection, but also as a stable market for their goods and as a pool of future well-to-do citizens and administrators. In its turn, the military depended on towns for the settlement of veteran soldiers and for securing not a small part of their logistical needs.

Although this interdependence between the military and civilian sector has been elaborated by earlier scholars, few if any have observed that it runs against a very ancient Roman principle of separation between military and civilian. The city of Rome ends at the Martian Fields or, in the words of Mommsen (1873, 299-326) “... *wo die Stadt ist kein Lager, wo das Lager, keine Stadt sein kann.*” With the introduction of permanent standing armies at the time of Augustus, the strict adherence to this principle had become increasingly problematic. In particular, the growing prosperity of the communities that sprung next to the garrison forts on the frontier demanded a relaxation if not a total abolition of this rule. By the early 2<sup>nd</sup> century, the Roman authorities had worked out a way of acknowledging this urban growth in the frontier zone, while formally maintaining the old principle of separation between soldiers and citizens (Piso 1991, 131-169). This formal line of separation was finally erased in the Severan period, but it had persisted

## Damjan Donev

Institute for National History,  
Grigor Prličev 3, 1000 Skopje,  
North Macedonia,  
damjaned@gmail.com

ancient name	modern name	evidence	founded <i>ante quem</i>	abandoned <i>ante quem</i>	sources
<i>Marsonia</i>	Slavonski Brod	1	100	400	Buzov 2011, 355-374
unknown	Doboj	3	150	400	Čremošnik 1984, 23-84
<i>Bigeste</i>	Ljubuški	2	50	400	Dodig 2011, 327-343
<i>Andetrium</i>	Muč	3	50	400	Bekić 2011, 315-326
<i>Horreum Margi</i>	Čuprija	1	150	235	Vasić <i>et al.</i> 1989, 7-37
<i>Tilurium</i>	Trilj	3	50	300	Sanader & Tončinić 2010, 33-52
<i>Timacum Minus</i>	Ravna	3	100	400	Petrović 1995; Diers 2018, 126
unknown	Stojnik	2	200	400	Mirković & Dušanić 1976
unknown	Rudnik	1	200	400	Mirković & Dušanić 1976; Loma 2008, 189-196
<i>Naissus</i>	Niš	2	100	300	Petrović 1976
<i>Germania</i>	Sapareva Banja	1	200	400	Ivanov 2003, 202-214
<i>Abritus</i>	Razgrad	2	100	400	Ivanov 1980; Ivanov 2003, 110-148
<i>Cabyle</i>	Yambol	2	100	300	Velkov 1982; Šarankov 2017, 199-243
<i>Montana</i>	Montana	2	100	400	Aleksandrov 1994; Ivanov 2003, 160-182
<i>Sostra</i>	Lomec	3	150	400	Hristov 2015, 279-340

Table 1. Overview of the permanent military outposts in the Balkan interior.

throughout the first couple of centuries AD and it represents the starting postulate of the following study.

To some extent, the segregation between the military and civilian sectors was made easier by the fact that over 90 % of the garrison sites were located in a narrow strip along the Danube frontier. However, a small group of garrison sites, mostly auxiliary forts or small outposts, make a surprise appearance deep in the Balkan interior, in areas hundreds of kilometers behind the Danube frontier and in provinces *inermis*. In this paper, we shall turn our attention to this group of garrison sites. Whereas it is impossible to avoid considering the question of their likely functions, it should be stressed that the primary goal of the present study is to evaluate their impact on the administrative and urban map of the Balkan interior.

### Defining the subject of the study

Because these sites do not form a fully coherent group, it is important to delineate the subject matter before continuing any further. In short, the focus of this study is on the permanent military outposts occupied during the first couple of centuries AD in the areas behind the Danube Limes. This excludes those auxiliary forts that, due to local topographic circumstances, were built at short distances from the frontier line. It also excludes the temporary camps built at the time of the conquest of this region, as well as the permanent forts abandoned after the establishment of the Danube Limes under the Flavians. At the other end of the chronological frame,

forts and outposts constructed under the Severans or in later periods are also excluded from consideration. As was already mentioned, by that time, the line that separated the military and civilian sectors had become completely blurred, which invalidates the starting point of this study. In fact, the Marcomannic wars of Marcus Aurelius provide an even better terminus, because they ushered in an era of internal instability and a new wave of militarization of the interior. However, the state of research at the majority of these sites prohibits fine chronological distinctions. Finally, we shall focus only on the interior of the Balkan Peninsula and disregard *Dacia*, not because the patterns observed in the former area do not continue on the left bank of the Danube, but because along most of its frontier, *Dacia* lacked the system of linear defenses that enable the distinction between forts on the frontier and forts in the interior of the province (Gudea 1997, 1-113).

### The nature of the evidence

Modern scholarship has identified over a dozen of forts and outposts in the Balkan interior that meet the criteria outlined above. There is not enough space to review the available evidence for each fort, nor is the author of this paper in position to verify their existence and chronology. However, because the weight of the evidence is not even, it seemed useful to make a tabular overview of these sites, indicating the strength of evidence of military presence and the known period of occupation.



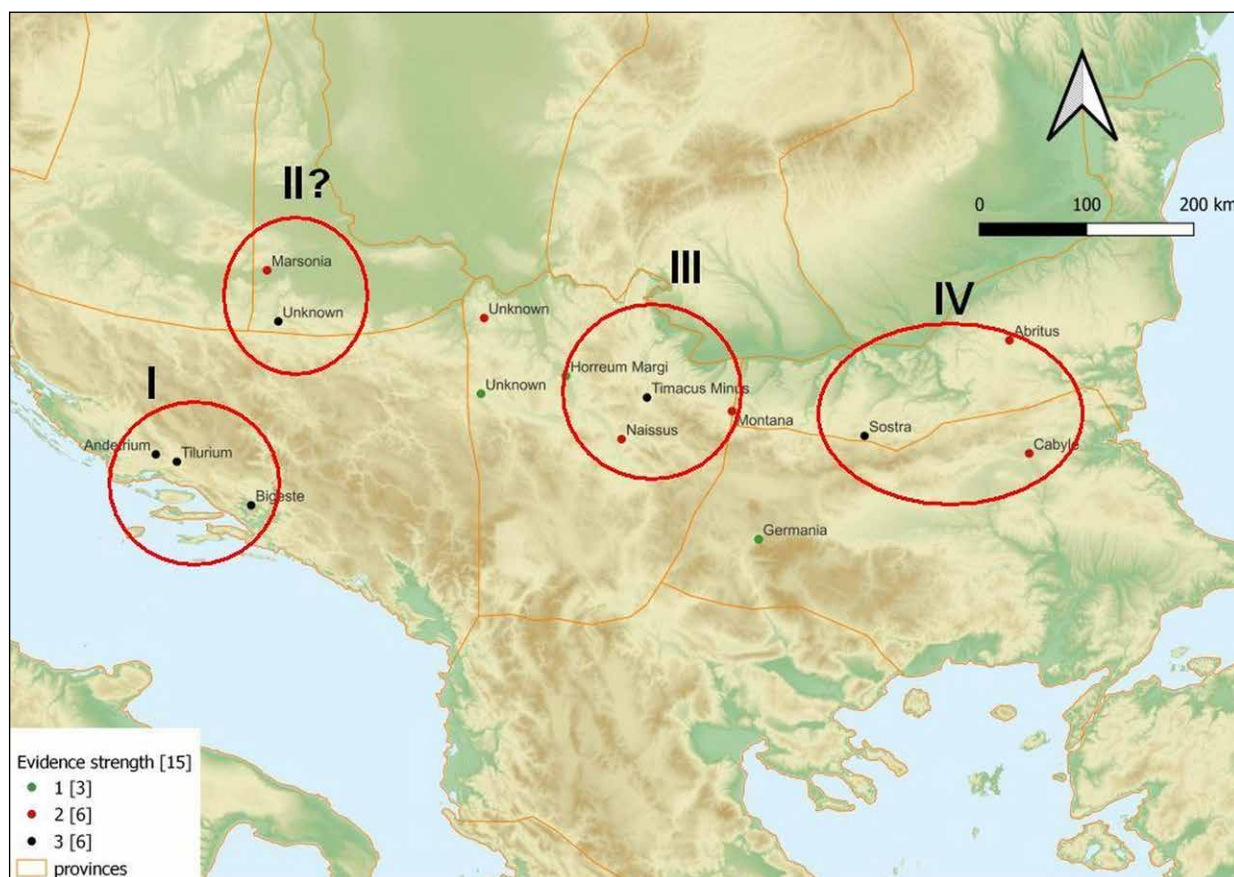


Figure 1. Distribution of army forts and outposts in the Balkan interior.

All evidence of permanent military presence can be subsumed under three categories: architectural remains, inscriptions and finds of military equipment. The evidence strength for sites with preserved architectural remains and at least one other category is ranked three, those at which military presence is attested only by inscriptions and small finds, two, and sites at which only one of the latter two categories are represented are ranked one. The two columns on the right show the *ante quem* dates for the founding and the abandonment or demilitarization of the forts. The data contained in table 1 is self-evident and it is unnecessary to make detailed comments. It is probable that future research will disprove the existence of some of these forts or add new candidates to the list. But this is unlikely to lead to radical changes in the patterns observed or to undermine the subject of this study as a discrete category of military sites.

## Distribution

Ignoring the poorly evidenced and late sites, it is possible to observe three or four spatially distinct clusters of forts (fig. 1). The Dalmatian group (I) was constructed at the time of pacification of *Dalmatia* or immediately afterwards.

(Wilkes 1969, 91; Periša 2008, 507-517) There is plentiful epigraphic evidence of continued military presence at these sites throughout the Principate. Because of the scant evidence of military presence at *Marsonia*, the integrity of the second, south Pannonian cluster is uncertain. At both *Dobo* and *Marsonia*, the earliest finds date to the end of the 1<sup>st</sup> or the early 2<sup>nd</sup> century. The third cluster or the Moesian group of forts – *Naissus*, *Timacum Minus* and *Montana* – were founded at about the same time as the south Pannonian group. The fourth and the sparsest cluster is a group of forts founded in the territory of the former Thracian Kingdom and they are dated to the first half of the 2<sup>nd</sup> century. These are *Sostra*, *Abritus* and *Cabyle*.

The two outposts on the border between *Dalmatia* and *Moesia superior* – the anonymous forts near *Stojnik* and *Rudnik* – have been associated with the opening of the new mining district in Mount *Kosmaj* under *Aurelius*, but most of the epigraphic and archaeological evidence is *Severan* or later (Mócsy 1974, 195-196; Dušanić 1991, 217-224). The same applies to *Germania* in western Thrace. Both the latter site and *Horreum Margi* in the *Morava Valley* have not provided decisive proof of permanent military presence at any time-period.

## Interpretation

The permanent military outposts in the Balkan interior have not attracted much scholarly attention or, at least, they have never been studied as an integral group. As a result, some of their common characteristics have been overlooked. Scholars who study individual or smaller groups of forts and outposts naturally tend to understand the presence of these installations in their particular geographic and historic contexts. Interpretations vary accordingly, from traffic control and road maintenance, the Dalmatian and Thracian groups (Wilkes 1969, 88-152; Cesarik 2018, 53-63; Tačeva 2004, 58-78), involvement in the mining operations, the south Pannonian and Moesian groups (Mócsy 1974, 133 and 195; Mirković & Dušanić 1976, 104-107; Čremošnik 1984, 39) to policing and maintaining internal security (Mócsy 1974, 195-196; Ivanov 1980, 202; Dušanić 2000, 351-352) and supply and logistical support for the frontier troops, albeit pertinent to Late Antiquity only (Rizos 2013, 659-696).

All of these are reasonable explanations, even though not a single one applies to all forts included in our study group. Moreover, the different roles of these forts need not be mutually exclusive and, in fact, most are inseparable from each other. Traffic control is essentially a policing activity

and the transport of ore or semi-finished products requires a certain degree of security in the countryside. One problem with these explanations, with the possible exception of the mining theory, is that military presence in large permanent bases would not have been the optimal format for policing the hinterland or the control of traffic. But the big question missed by most scholars that have studied these forts are the implications of their presence in the civilian sector for the administrative arrangements in this region. In whose territory were these forts founded and what was their legal status?

## Military presence and *civitates peregrinae*

Turning again to the geographic distribution of these forts, there is another coincidence that has been overlooked by most, if not all scholars. Almost all of the groups of forts identified in the preceding chapters are located either in the territories of peregrine communities or close to former tribal or dynastic centres (fig. 2) The Dalmatian group of forts, with the possible exception of *Bigeste*, is located on the territory of the *Delmatae*, the eponymous people of *Dalmatia* (Wilkes 1969, 172-174,



Figure 2. Distribution of army outposts and *civitates* in the western Balkans.

fig. 5; Dzino 2010). These forts are located precisely in the area that was the stage of the fiercest battles during the wars of conquest and the suppression of the Great Pannonian Revolt of 6-9 AD (Wilkes 1969, 46-58, 69-77; Šašel Kos 2005). The tentative south Pannonian group has been associated with the territory of the *Breuci*, the *Daesitiates* or the *Maezei*, people that played a seminal role in the Pannonian uprising in AD 6 and are all recorded as separate *civitates* after the final pacification of the area (Mócsy 1974, 37-39 and 53-54, fig. 9; Dzino 2010, 142-149). The Moesian group can also be associated with *civitates* and in particular, the Dardanians and the *Timachi*. (Mócsy 1974, 66-68, fig. 12) The former were another major opponent of Rome and both groups occupied areas rich in metallic ores (Papazoglou 1978, 131-187; Dušanić 2004, 5-32).

Obviously, this connection cannot be followed in Thrace, because this province was not divided into *civitates* (fig. 3). Nonetheless, two of the garrison sites from this group, *Abritus* and *Cabyle*, can be associated with the seats of the old *strategiai* or dynastic centres (Ivanov 1980, 10-14 Šarankov 2017, 201-205), and all are closely linked to sanctuaries or thermal springs, centres of great importance

and popularity in ancient Thrace (Aleksandrov 1994, 67-102; Hristov 2015, 279-280; sanctuaries in Thrace, Tačeva 2004, 191-198) This connection between military presence and sanctuaries or former seats of power can also be observed in *Dacia*, at forts like *Germisara* or *Orastioara de Sus* (Gudea 1997, 103-105).

This relationship between the army and the *civitates* is not the simple corollary of an observed spatial pattern. Although not particularly numerous, historical and epigraphic sources leave little room for doubt over the involvement of the army in the administration of local communities, especially the *civitates stipendariae*. The office of the *praefectus civitatis* is well-attested in the Balkan provinces, including among many of the peoples who inhabited the areas in which our forts are located (Wilkes 1969, 104, 174, 193 and 289; Mócsy 1974, 49, 51 and 69-70; Dzino 2010, 161-176). These officials were either recruited from the commanders of the nearby auxiliary units or, more rarely, senior legionary officers. This connection between auxiliary forts and *civitates peregrinae* is not limited to the Balkan interior. In fact, over half of the examples come from the Danube frontier. In some cases, the names of the *principes* of these people

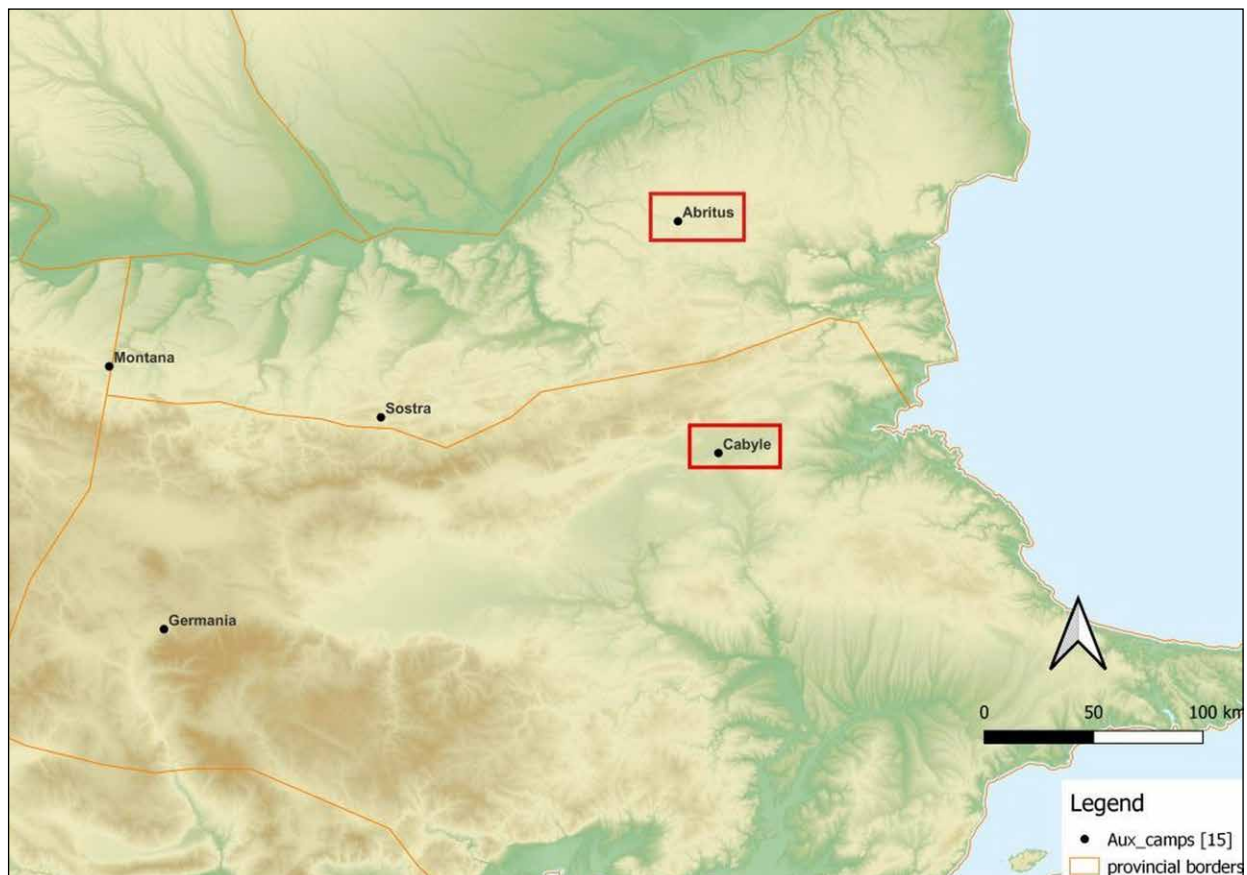


Figure 3. Distribution of army outposts in Thrace and *Moesia inferior*.



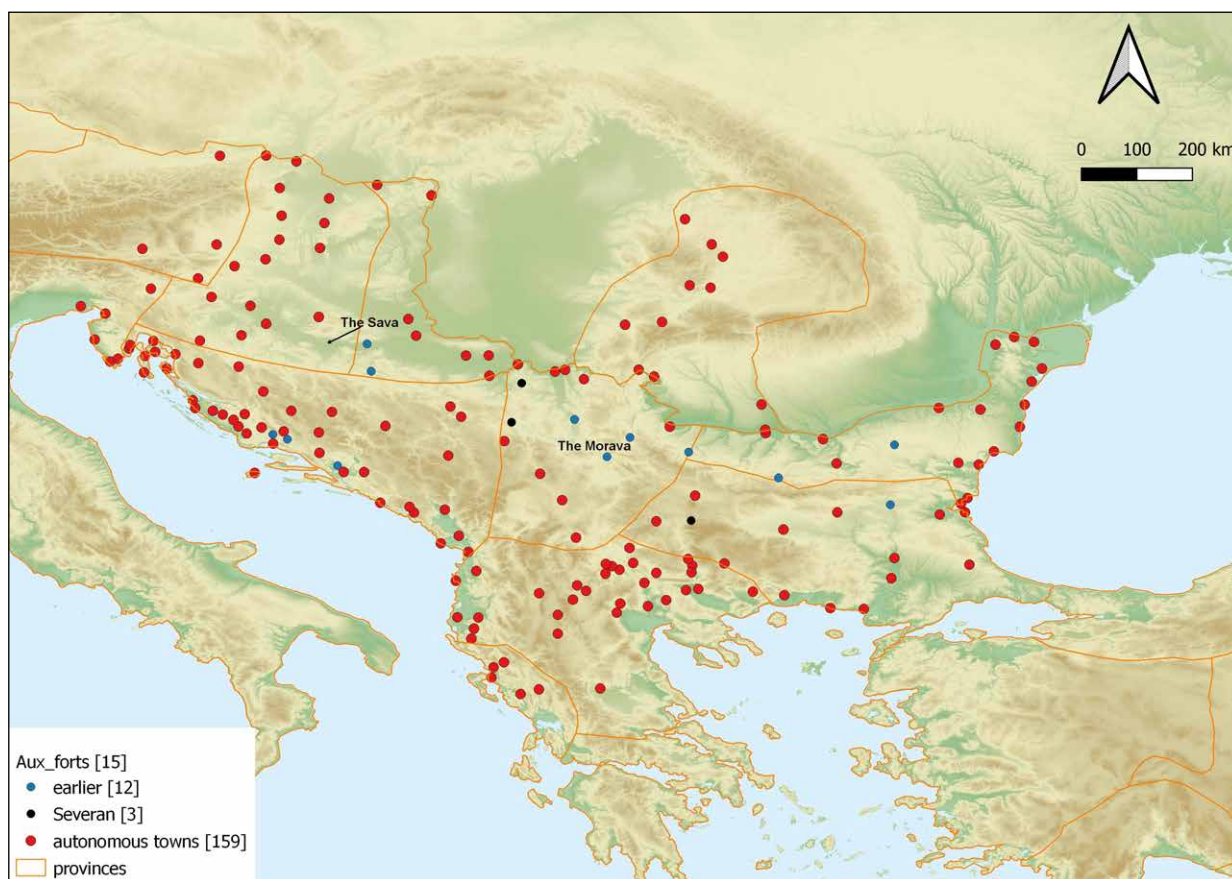


Figure 4. distribution of army outposts and autonomous towns in the Balkan provinces.

appear on funerary inscriptions found at certain limes forts, (AÉ 1997, 1261, a *princeps Azalorum* at the auxiliary fort at Solva) in others, this connection is reflected in the toponymy, the name of the fort being derived from the name of the *civitas* or vice-versa (*Arrabona* and the *Arrabiates*, *Tricornium* and the *Tricornenses*, Mócsy 1974, 53-54 and 66). It is indeed difficult to escape the impression that these garrison sites were, at least in aspiration, the central places of the *civitates* in which they were located.

In the Balkan provinces, the office of the *praefectus civitatis* does not postdate the first third of the 2<sup>nd</sup> century, and it has been surmised that this was a transitional institution, abandoned once the *civitas* in question was capable of taking care of its own administration and judiciary (Wilkes 1969, 287-289; Mócsy 1974, 134-135). However, there is very little to suggest that all of these communities had been municipalized by the end of the 2<sup>nd</sup> century. On the contrary. The epigraphic record reveals that many of the communities brought under military supervision had their own non-municipal institutions from early on, most typically the *principes* (Wilkes 1969, 104, 167 and 240; Mócsy 1974, 70 and 134-137). Among some communities, this institution survived into

the early 3<sup>rd</sup> century, postdating the latest mentions of the *praefecti* by almost a century (AÉ 2005, 1241; CIL III,03303; admittedly, this title is not incompatible with a municipal constitution, see AÉ 2004, 1226). Although it is likely that military control was gradually loosened, prior to Late Antiquity, there is neither epigraphic nor archaeological evidence of municipal institutions or autonomous towns in these areas. These communities must have had some degree of autonomy, probably broadened in the course of the 2<sup>nd</sup> century, but they had remained under military supervision during most of the Principate.

### Military presence and towns

The position of these military outposts within the constellation of autonomous towns in the study region is equally symptomatic. The Balkan and Danube provinces were certainly not among the most densely urbanized corners of the Roman Empire. Still, towns appear at roughly regular intervals of 50 to 60 km over most of this area (Donev 2020). However, as shown on figure 4, there are a number of large blank spots on the urban map of this region. Most of these coincide with areas of wild and inhospitable mountains, but there are quite a few that

fall in highly fertile and well-connected areas, like the Sava and Morava corridors or the Moesian tableland. So far, no evidence has been provided for the presence of autonomous towns under the High Empire in these areas and it is unlikely that new discoveries will radically change this. The absence of towns in areas like the Sava or the Morava Valleys is particularly perplexing in view of the large number of prehistoric sites and developments in later periods (Bojanovski 1984, 145-264; Mladenović 2012, 9-16). This suggests that the lack of towns cannot be ascribed to unfavorable environmental factors or poor rates of preservation.

That the great majority of the military outposts studied in this paper are located precisely in these rural areas is surely not without significance, especially if the opening predicate of this study is borne in mind. During most of the Principate army presence would have been incompatible with a fully-fledged local autonomy. In this context, it should be pointed out that even the communities that possessed some form of municipal constitution, like the *canabae* or the mining *municipia*, do not show evidence of *duumviri* or *quatorviri*. (Mommsen 1873, 312 and 316; Dušanić 2004, 29-30) The prerogatives of the highest municipal offices would have been in collision with those of the military commander or the district procurator. After it had become the garrison site of the Second Lucensian Cohort, *Cabyle*, the former seat of the Sapaeian dynasty, ceased to be a town in the legal sense (Šarankov 2017, 205-206). But although incompatible, these two forms of local government were complementary. Some form of administrative and economic centre would have been necessary even in areas that were not allowed or lacked the potential to evolve into autonomous urban communities, and permanent military outposts would have been the obvious, albeit not necessarily the preferred, substitute.

Maintaining permanent army forts comes at considerable costs. Military bases were indispensable during campaigns of conquest and they were the principal component of the linear system of defenses on the limes. However, their usefulness in performing policing duties or traffic control has been questioned (Bishop 1999, 111-118). From a military point of view, these tasks are best performed by small, mobile units distributed across series of outposts. In fact, this is probably the reason why it has proven so difficult to discover the garrison sites of units known only from the Severan period onwards. However, if the primary tasks of the army units were administrative, like carrying out census operations, tax-collection or recruitment for the army, and judiciary, the presence of permanent forts and outposts is easy to comprehend (Periša 2008, 514). They were essentially acting as proxies for the missing administrative centres in the territories of the *civitates*. Indeed, the archaeological evidence from

some of these sites suggests that they did appropriate central place functions (Ivanov 2003, 177-179; Diers 2018, 126). In this light, the transformation of some of these military forts into proper towns during the 3<sup>rd</sup> century AD is the logical outcome of a process initiated soon after the Roman conquest.

## Conclusion

Perhaps an unduly large part of this paper was dedicated to clarifying the purpose of the permanent army outposts behind the Danube frontier. This was a necessary step towards dispersing the conviction that the presence of the army in the Balkan interior is chiefly linked to fulfilling concrete logistical, technical or policing duties. However, the reader and the author alike, can easily lose sight of the main concern of this study. The goal was not simply to rebuke the existing explanations for the role of these outposts. Most probably these units did perform some of the tasks discussed above, but the point was to show that they assumed a much more important role in the administration of certain peregrine communities in the Balkan provinces than has been hitherto acknowledged. There are a number of signs that point in this direction. These are chiefly hidden in the spatial relationships between military outposts and *civitates peregrinae*, and military outposts and autonomous towns, but they are also lying scattered in the epigraphic and archaeological records of the study region. The lack of evidence of urban development in these communities, together with the persistence of non-municipal institutions and the close connections between certain *civitates* and auxiliary forts provide additional support to the thesis outlined in this study.

This thesis also goes a long way towards explaining the 'anomalous', deurbanized areas in the Balkan interior, which was really the starting point of the present study. Is it by chance that the areas brought under military supervision left only faint traces in the archaeological record? The lack of not only tangible central places, but also sumptuous burials and temples, can readily be taken as a sign of their lowly place and role in the political economy of the wider region. Deprived of a full autonomy, these *civitates* could not exploit their demographic and economic potential to their own advantage. During most of the Principate they were relegated to the role of providing army recruits and labor force for the mines and quarries, and the surplus they were able to produce was taxed directly by the government (Dušanić 2004, 25-26; Eck 2016, 111-126).

In the end, it should be stressed that, in and of itself, the army should not be seen as the principal factor that inhibited economic growth in these areas. Quite the opposite, the presence of the army was a decisive catalyst in the process of urbanization of the Balkan and Danube regions. The military outposts in the Balkan interior are merely a symptom of the disadvantaged

status of the local communities, not the cause of their stagnation. Once the segregation between citizens and peregrines was cancelled in the early 3<sup>rd</sup> century, the areas in question started to show the first signs of revival. By the early 4<sup>th</sup> century, proper towns had emerged in some of these areas, precisely at the sites of the former army outposts.

## Abbreviations

AÉ: *L'Année Épigraphique*

CIL: *Corpus inscriptionum latinarum*

## Bibliography

- Aleksandrov, G., 1994: *Istorija na Montana-Kutlovica i rajona*, Montana.
- Bekić, L., 2011: Andetrij, rimsko vojno uporište. Topografske odrednice, in: A. Librenjak & D. Tončinić (eds), *Arheološka Istraživanja u Cetinskoj Krajini*, Zagreb (Izdanja HAD 27), 315-326.
- Bishop, M.C., 1999: Praesidium. Social, military and logistical aspects of the Roman army's provincial distribution during the Early Principate, in: A. Goldsworthy & I. Haynes (eds), *The Roman army as a community*, Portsmouth RI (Journal of Roman Archaeology Supplementary Series 34), 111-118.
- Bojanovski, I., 1984: Rimska cesta Siscia-Sirmium (Tab. Peut.) i njena topografija. Arheološko-topografska studija, *Godišnjak Centra za Balkanološka Ispitivanja* 20, 145-264.
- Buzov, M., 2011: Ancient settlements along the Sava river, *Histria Antiqua* 11, 355-374.
- Cesarik, N., 2018: River crossings and Roman auxiliary forts. The evidence from the river Cetina, *Collegium Antropologicum* 42, 53-63.
- Čremošnik, I., 1984: Rimski Castrum kod Doboja, *Glasnik Zemaljskoga Muzeja Bosne i Hercegovine u Sarajevu* 39, 23-84.
- Diers, L., 2018: Timacum Minus in Moesia superior. Centrality and urbanism at a Roman mining settlement, *Land* 7, 126-143.
- Dodig, R., 2011: Rimski kompleks na Gračinama. Vojni tabor ili...?, in: A. Librenjak & D. Tončinić (eds), *Arheološka Istraživanja u Cetinskoj Krajini*, Zagreb (Izdanja HAD 27), 327-343.
- Donev, D., 2020: *The busy periphery. Urban systems of the Balkan and Danube provinces (2<sup>nd</sup>- 3<sup>rd</sup> c. AD)*, Oxford (Archaeopress Roman Archaeology).
- Dušanić, S., 1991: Iz istorije kasnoantičkog rudarstva u Šumadiji, *Starinar* 40-41, 217-224.
- Dušanić, S., 2000: Army and mining in Moesia superior, in: G. Alföldy, B. Dobson & W. Eck (eds), *Kaiser, Heer und Gesellschaft in der Römischen Kaiserzeit*, Stuttgart (Heidelberger althistorische Beiträge und epigraphische Studien 31), 343-363.
- Dušanić, S., 2004: The princeps municipia Dardanorum and the metalla municipia Dardanorum, *Živa Antika* 54, 5-32.
- Dzino, D., 2010: *Illyricum in Roman politics, 229 BC-AD 68*, Cambridge.
- Eck, W., 2016: Die Entwicklung der Auxiliareinheiten als Teil des römischen Heeres in der frühen und hohen Kaiserzeit. Eine Teilsynthese, in: C. Wolff & P. Faure (eds), *Les auxiliaires de l'armée romaine. Des alliés aux fédérés*, Paris (Collection Études et Recherches sur l'Occident Romain 51), 111-126.
- Gerov, B., 1997: *Beiträge zur Geschichte der römischen Provinzen Moesien und Thrakien II*, Amsterdam.
- Gudea, N., 1997: Der Dakische Limes. Materialien zu seiner Geschichte, *Jahrbuch des Römisch-Germanischen Zentralmuseums* 44/2, 1-113.
- Hristov, I., 2015: Sostra, in: R. Ivanov (ed.), *Thracian, Greek, Roman and Medieval cities, residences and fortresses in Bulgaria*, Sofia, 279-340.
- Ivanov, T., 1980: *Abritus. Rimski kastel i ranovizantijski grad v Dolna Mizija*, Sofia.
- Ivanov, R. (ed.), 2003: *Rimski i ranovizantijski selišta v Bâlgarija*, Sofia.
- Loma, S., 2008: Dva epigrafsko-istorijska Priloga, *Starinar* 43, 189-196.
- Mirković, M., 2007: *Moesia superior. Eine Provinz an der mittleren Donau*, Mainz (Orbis Provinciarum Sonderbände der Antiken Welt).
- Mirković, M. & S. Dušanić (eds), 1976: *Singidunum et le nord-ouest de la province*, Belgrade (Inscriptions de la Mésie Supérieure I).
- Mladenović, D., 2012: *Urbanism and settlement in the Roman province of Moesia superior*, Oxford (British Archaeological Reports International Series 2367).
- Mócsy, A., 1974: *Pannonia and Upper Moesia*, London.
- Mommsen, T., 1873: Die Römischen Lagerstädte, *Hermes* 7/3, 299-326.
- Papazoglou, F., 1978: *The central balkan tribes in Pre-Roman Times*, Amsterdam.
- Periša, D., 2008: Je li delmatsko područje presjekao rimski limes?, *Archaeologia Adriatica* 2/2, 507-517.
- Petrović, P., 1976: *Niš u Antici*, Belgrade.
- Petrović, P. (ed.), 1995: *Timacum Minus et la vallée du Timok*, Belgrade (Inscriptions de la Mésie Supérieure III/2).
- Piso, I., 1991: Die Inschriften vom Pfaffenberg und der Beriech der Canabae legionis, *Tyche* 6, 131-169.
- Rizos, E., 2013: Centres of the late Roman military supply network in the Balkans. A survey of horrea, *Jahrbuch des Römisch-Germanischen Zentralmuseums* 60/2, 659-696.
- Sanader, M. & D. Tončinić, 2010: Gardun-antički Tilurium, in: I. Radman-Livaja (ed.), *Nalazi rimske vojne opreme u Hrvatskoj*, Zagreb, 33-52.

- Šarankov, N., 2017: Nadpisi ot Kabile. Novi pročitani i tolkuvanija, *Bulgarian e-Journal of Archaeology* 7, 199-243.
- Šašel Kos, M., 2005: *Appian and Illyricum*, Ljubljana (Situla 43).
- Tačeva, M., 2004: *Vlast i socium v rimska Trakija i Mizija*, Sofia.
- Vasić, M., J. Kavajin-Mundrić & S. Popović, 1989: Horreum Margi-Ravno-Čuprija (iskopavanja 1979 i 1986-1988 godine), *Vesnik Vojnog Muzeja* 33, 7-37.
- Velkov, V. (ed.), 1982: *Kabyle I*, Sofia.
- Wilkes, J.J., 1969: *Dalmatia*, London.





# Changing landscapes on the northern frontier

Outline and preliminary results of the  
'Beyond Walls' project

Manuel Fernández-Götz, Dave Cowley, Derek Hamilton, Ian J. Hardwick and Sophie McDonald

**Manuel Fernández-Götz /  
Ian J. Hardwick**

School of History, Classics  
and Archaeology, University  
of Edinburgh, M.Fernandez-  
Götz@ed.ac.uk / Ian.  
Hardwick@ed.ac.uk

**Dave Cowley**

Archaeological Survey,  
Historic Environment  
Scotland,  
dave.cowley@hes.scot

**Derek Hamilton / Sophie  
McDonald**

Scottish Universities  
Environmental Research  
Centre, University of Glasgow,  
Derek.Hamilton.2@glasgow.  
ac.uk / Sophie.McDonald@  
glasgow.ac.uk

What was the impact of Rome across its northernmost frontier, both south and north of Hadrian's Wall? This question lies at the core of long-standing debates in British archaeology, and is also relevant for wider comparative work on the impact of the Empire along its frontier regions. For several centuries, northern Britain represented a fluid frontier region, with alternating episodes of Roman occupation and withdrawal, witnessing both military confrontation and peaceful interactions between local communities and the Roman state (Hunter 2007; Hingley & Hartis 2011; Harding 2017). While there is a long tradition of scholarship on the Roman presence in this region, particularly along Hadrian's Wall and the Antonine Wall, numerous questions remain regarding the interactions with, and effects on, indigenous communities.

Several issues have hindered our understanding of this topic, including modern administrative borders (most notably between Scotland and England, but also between regional authorities) and traditional academic divides between prehistoric and Roman archaeology (Crellin *et al.* 2016; Hingley 2017), the latter often leading to very different approaches and narratives for the pre-Roman and Roman periods. Chronological resolution is another key challenge, particularly for the indigenous settlement record for which artefactual evidence is often scarce and chronologically imprecise, and where – in the absence of statistical modelling – the <sup>14</sup>C calibration curve can sometimes lead to date ranges spanning over 300 years (Hamilton *et al.* 2015). This means that many settlements can only be broadly dated to spans of several centuries at best, making it impossible to firmly establish contemporaneity of occupation between sites. Moreover, many studies have adopted a predominantly Roman perspective, with emphasis placed on the material remains of the Empire within and beyond its political boundaries. While this evidence is undoubtedly very important, to develop a more holistic understanding we need to pay greater attention to the indigenous side of the story, both through the study of specific sites and wider patterns of settlement in the landscape.

In order to address some of these issues and contribute to a more comprehensive picture of the period, in September 2021 we started the 3-year project 'Beyond Walls. Reassessing Iron Age and Roman Encounters in Northern Britain', funded by the Leverhulme Trust (Fernández-Götz *et al.* 2022). The project is focused on the analysis

of settlement patterns and lifestyles in an area stretching from c. 40 km south of Hadrian's Wall to c. 40 km north of the Antonine Wall. Within this large project area, which extends from northern England to the southern Scottish Highlands, existing survey and excavation data are being rationalised within a common framework. Furthermore, rapid prospection using remote sensing datasets is helping to identify previously unknown sites, allowing us to interrogate gaps in evidence and assess the representativity and reliability of known settlement patterns. In addition, four Case Studies are analysed in more detail: (1) 1,000 km<sup>2</sup> between Durham and Morpeth; (2) 1,000 km<sup>2</sup> along the Roman road of Dere Street from Otterburn to Newstead; (3) 1,900 km<sup>2</sup> along the Roman road from Carlisle to Beattock; and (4) 2,400 km<sup>2</sup> between Lanark and Crieff (fig. 1). While Case Studies 2 and 3 extend along Roman roads, Case Study 1 straddles Hadrian's Wall and Case Study 4 does the same with the Antonine Wall. Our project adopts a multi-scalar and interdisciplinary approach, with a long-term

focus that aims to trace trajectories and impacts across the period from c. 500 BC to AD 500.

The work programme comprises five distinct but interconnected packages: (1) aerial and field survey research; (2) archival research of excavations; (3) palaeoenvironmental research; (4) <sup>14</sup>C dating; and (5) synthesis. In what follows we briefly introduce some preliminary results from work packages 1 to 4 reflecting the state of research in November 2022, just over one year after the start of the project.

### Survey and excavation research. Preliminary findings from northwest England and southwest Scotland

The first completed block for detailed investigation of indigenous and Roman settlements is Case Study 3, comprising an area of 95 km by 20 km extending from south of Carlisle in Cumbria (northwest England) to the Upper Clyde valley in south Lanarkshire (southwest Scotland). This Case Study was chosen to extend north

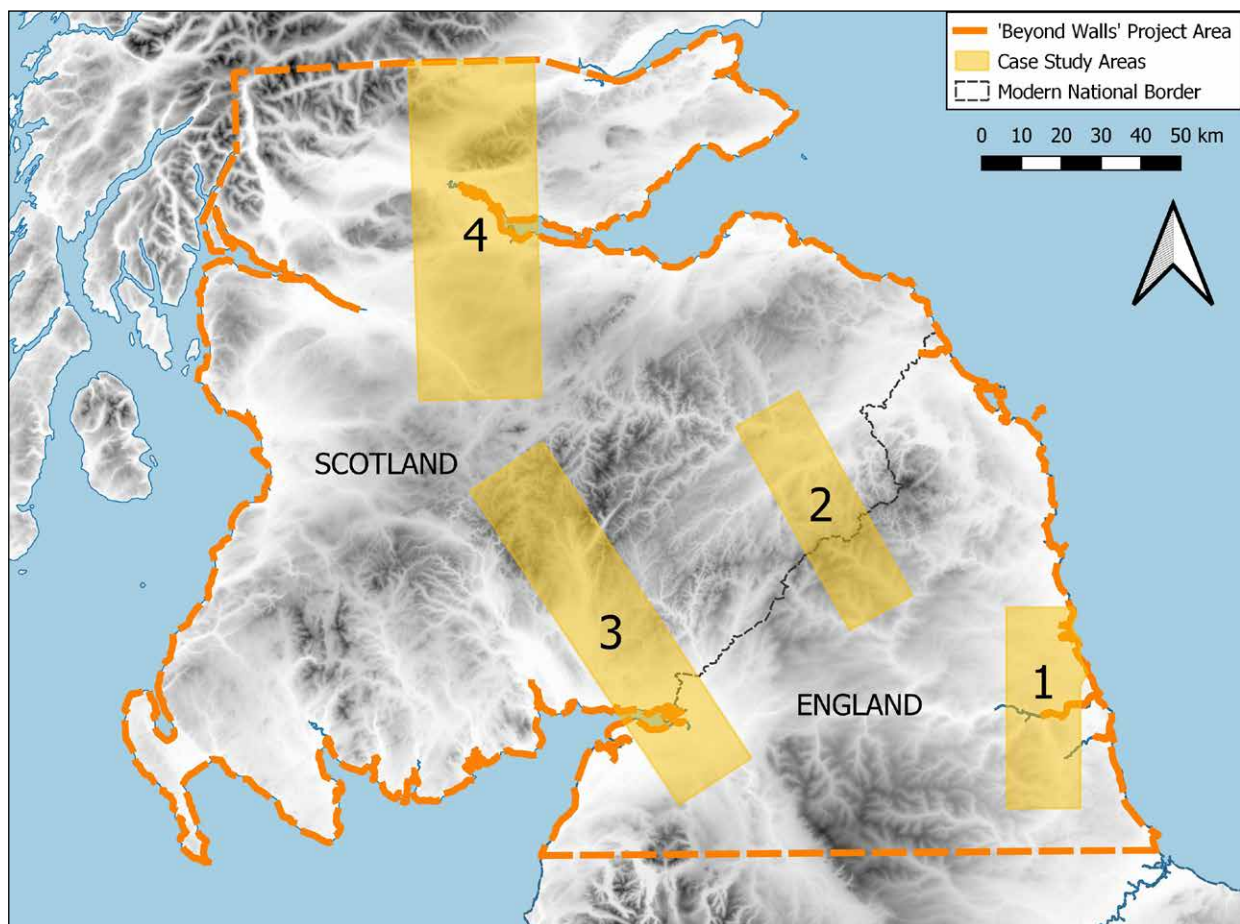


Figure 1. Overall project area and four Case Studies (authors; background topographic map contains public sector information licensed under the Open Government Licence v3.0. © Crown copyright and database rights 2023 Ordnance Survey [AC0000851941]).

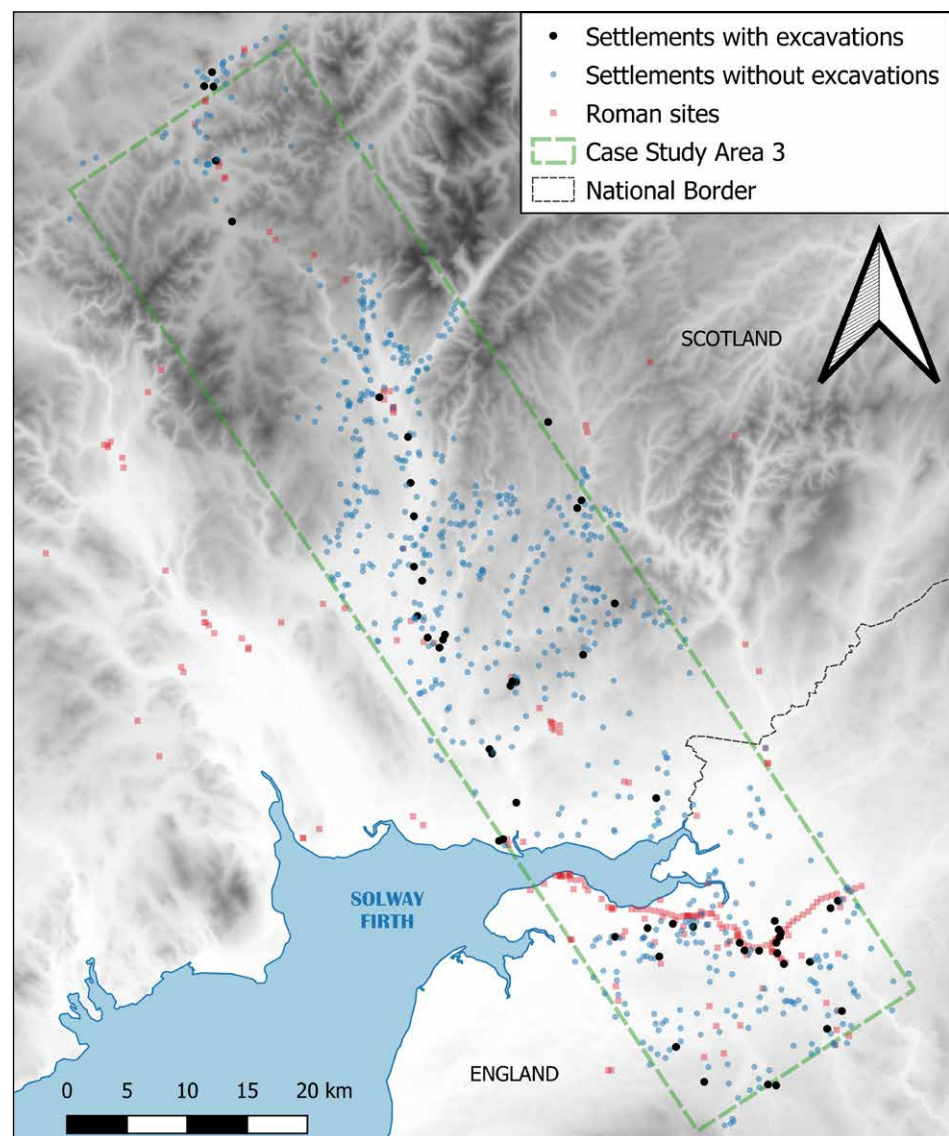
from Hadrian's Wall along one of the known lines of Roman advance into Scotland. The area benefits from a long history of large-scale surveys (*e.g.* RCAHMS 1997), which provides a good baseline knowledge that has recently been updated using lidar and geophysical survey during the pilot project 'On the Edge of Empire. Exploring Iron Age Settlement Landscapes in Southwest Scotland' (Cowley *et al.* 2022).

Case Study 3 extends north and south from the lowland coastal plain around the major inlet of the Solway Firth. The broad valleys of the rivers Eden, Caldew, and Petteril dominate the landscape south and east of Carlisle, surrounded by the upland Pennines and Cumbrian Fells. The landscapes north from the Solway comprise the major valleys of Nithsdale and Annandale and the narrower Eskdale, all rising into the southern uplands of Scotland.

The modern landscapes of the lowland coastal plain and broader parts of the major valleys comprise a mixture of arable and pastoral farming, in which earthworks are few and far between, but significant cropmark development is evident in selected areas. In contrast, the narrower valleys of the river Esk and the Annan's tributaries, as well as the fringes of the lowland valleys, are predominantly set to pasture, with extensive survival of earthwork remains. The character of historic and modern land use has a profound impact on the nature of the archaeological record, with extensive conifer plantations representing a source of bias in the evidence. Such issues will be explored in full to better understand the representativity of this Case Study's archaeological remains.

Evidence for indigenous settlement dating from c. 500 BC to AD 500 has been explored through a range of survey approaches. Examples include regional studies

Figure 2. Map showing the distribution of indigenous and Roman sites identified in Case Study 3, overlain on the natural topography and highlighting the sites with evidence from previous excavations (authors; background topographic map contains public sector information licensed under the Open Government Licence v3.0. © Crown copyright and database rights 2023 Ordnance Survey [AC0000851941]).



of eastern Dumfriesshire (RCAHMS 1997) and northern Cumbria (Higham 1982; Bewley 1994; Boutwood 2005), extensive aerial survey (Cowley & Brophy 2001), and geophysical survey of selected areas (e.g. Hanson *et al.* 2019; Cowley *et al.* 2022). Sites have been sporadically excavated, most notably during the upgrade of the A74(M) road in the 1990's and around Carlisle.

For Scotland, the majority of the varied source data is recorded in the National Record of the Historic Environment (NRHE), which is available online (<https://canmore.org.uk/>). For England, equivalent monument data from the NRHE and Cumbria Historic Environment Record (HER) is also supplemented across much of the area by mapping from the aerial surveys of the National Mapping Programme (Boutwood 2005; Oakey 2009; Deegan 2013) and successor projects (Deegan 2019; Hardwick 2021), some of which is freely-available through Historic England's Aerial Archaeology Mapping Explorer. Moreover, some recently completed 'Big Data' archaeological projects have been utilised, including the 'Atlas of Hillforts of Britain and Ireland' (Lock & Ralston 2022), 'Rural Settlement of Roman Britain' (Smith *et al.* 2016; Allen *et al.* 2017), and 'English Landscapes and Identities' (Gosden *et al.* 2021; Green & Creswell 2021).

In order to fill potential gaps in the existing archaeological record, newly available lidar has been examined during the preceding 'On the Edge of Empire' project and also in 'Beyond Walls'. This is adding considerable value, with the work during the 'On the Edge of Empire' project increasing the number of definite, probable, and possible Iron Age settlements by 134 new discoveries, adding over 20 % to the overall corpus of sites in the area (Cowley *et al.* 2022; Fernández-Götz *et al.* 2022). For Case Study 3, lidar data from the Scottish Government Remote Sensing Portal and the Environment Agency in England provided complete coverage, although at variable resolutions.

The sites in Case Study 3 have been identified and described using non-intrusive archaeological techniques during a wide range of survey activities and projects. As such, the data is highly variable and has required compilation into a single database that provides a consistent format, interpretation, and level of detail for all sites, which are also rationalised within a coherent chronological framework. This is vital to support systematic analysis. As a result, the database for Case Study 3 includes 720 indigenous settlements or monuments dating to the period from roughly 500 BC to AD 500, along with 165 Roman sites (military installations, including those along Hadrian's Wall, and urban, religious, or funerary sites).

A key consideration is that the majority of sites are not excavated and therefore are dated primarily (and broadly) on the basis of enclosure morphology, internal

structures or associated features, and by analogy with excavated or scientifically dated sites in the wider region. Only 52 indigenous settlements have been excavated in the Case Study area, of which 41 have a date provided by artefactual assemblages or scientific dating (fig. 2). In contrast, 46 Roman military or urban sites have seen excavation. The distribution of excavated sites is uneven, concentrating along the line of the upgrade of the A74(M) road in the 1990's (e.g. Banks 2000; 2004), and with many development-led excavations in the urban area of Carlisle and its surroundings (e.g. Caruana & Gladwin 1980; Dacre *et al.* 1985; McCarthy 1991; Caruana & Morgan 1996; Zant 2009). The only major exceptions are research-led excavations in Upper Eskdale, including the settlement of Boonies (Jobey 1975) and the hillforts of Long Knowe and Castle O'er and their environs (Mercer 1981; 2018). Further excavations have taken place in Nithsdale, west of the Case Study area, and are being assessed to bolster the excavation evidence within the overall project assessment. While dating remains challenging, the data collection has highlighted that c. 30 % of sites have two or more distinct phases of occupation or activity, evident either in the surviving earthwork remains in upland areas where preservation is good or from excavation (e.g. within Carlisle). While such evidence is largely absent from the cropmark record, it highlights the potential to analyse patterns of occupation, abandonment, and reoccupation as recurrent processes in these dynamic settlement landscapes. In any case, the overall scarcity of excavations within Case Study 3, their uneven spatial distribution, and the limited precise dating evidence represent key issues that need to be addressed in future analysis (discussed further below).

The data collation for Case Study 3 has provided some important preliminary results that will inform the ongoing analysis of the settlement evidence. Establishing a systematic distribution of different forms of indigenous settlement types represents foundational information, for example allowing the spatial disposition of different morphological forms to be assessed against the network of known Roman roads and military sites (fig. 3). **Curvilinear enclosures** are the most common form of settlement regionally, ranging in size from larger hillforts (e.g. Burnswark Hill, Castle O'er) to small enclosed farmsteads likely representing the home of a single family group. The reasons for notable gaps in the distribution of sites in parts of the lowland plain require analysis, but may include geology and land-use hindering the preservation of cropmarks, as well as genuine lacunae in the distribution of settlements (e.g. some extensive areas of peat).

In contrast, **rectilinear enclosures**, which tend to be slightly larger than the curvilinear farmsteads, have a very different distribution, occupying mainly lower-lying ground. Excavated examples across northern

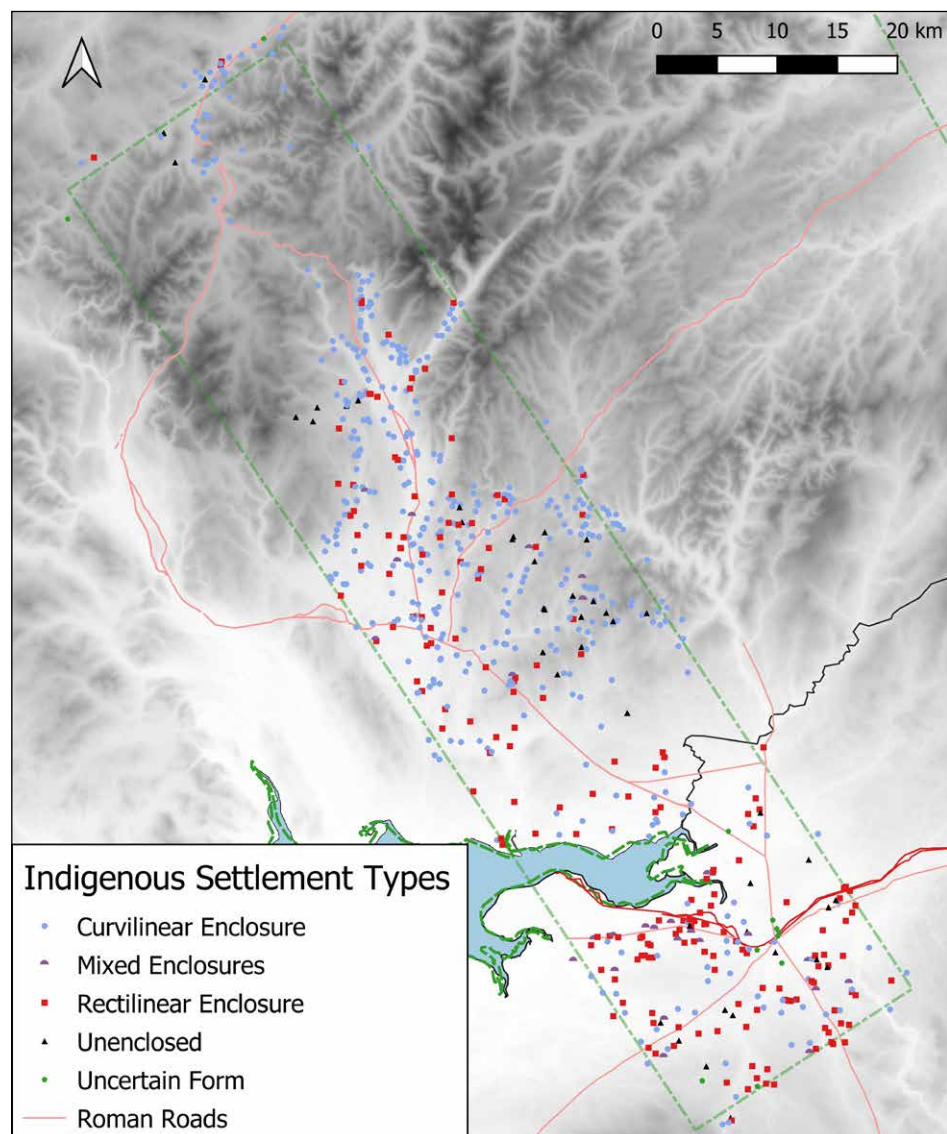


England and southern Scotland appear to date from around 200 BC to AD 200 (e.g. Hodgson *et al.* 2012), apparently representing a widespread adoption of a new form of settlement morphology in parts of the landscape, alongside traditional enclosure forms. The densest areas of rectilinear settlements include the vicinity of Hadrian's Wall, which may be due to greater archaeological investigation there but also reflects a broader tendency for these settlement forms to occupy particular landscape zones and sometimes appear in loose clusters.

The other main types of settlement are **unenclosed sites**, and their known distribution appears largely related to taphonomic factors including historic and modern cultivation and the character of archaeological investigation. Notable concentrations of unenclosed sites are generally in more upland locations than other

settlement forms – in some cases reflecting a fluctuating upper altitudinal limit for occupation over time and perhaps different forms of contemporary settlements – as well as in the hinterland of Carlisle, which has seen significant levels of excavation and archaeological investigation. This suggests that unenclosed settlements, though perhaps in places earlier in date than enclosures, are not uniformly so, forming an important part of the indigenous landscape that is not consistently identifiable by current archaeological techniques. We should therefore not be prescriptive about the placement of unenclosed settlements in any distinct phase of regional settlement sequences.

Figure 3. Map showing the distributions of the different forms of indigenous settlements within Case Study 3 and across the period from c. 500 BC-AD 500 (authors; background topographic map contains public sector information licensed under the Open Government Licence v3.0. © Crown copyright and database rights 2023 Ordnance Survey [AC0000851941]).



## **<sup>14</sup>C dating and palaeoenvironmental research**

Since chronology is a key challenge to analysing trends and transformations in indigenous settlement patterns in northern Britain, and to what extent they might have been linked (or not) to the Roman presence in the region, the ‘Beyond Walls’ project has an ambitious programme of <sup>14</sup>C dating of archival samples from selected sites across our four Case Study areas. At least 300 new <sup>14</sup>C dates will be produced during the project from both archaeological and palaeoenvironmental contexts. Archaeological sites are selected for dating based on our research questions – whether their location, morphology, and phasing allow us to answer questions regarding settlement dynamics across time and space. Samples are identified through the study of excavation archives, mostly from museums, aiming to identify secure contexts that can be used to build site-based Bayesian chronological models (Hamilton & Krus 2018). At present, new dates have been produced for Carronbridge (fig. 4), a multi-phase site consisting of two Iron Age enclosures and a Roman temporary camp (Johnston 1994), and Woodend, a multi-vallate enclosure with evidence for use in both the pre-Roman and Roman Iron Age periods (Banks 2000).

Moving beyond the settlement record, in order to understand land-use dynamics in the millennium from c. 500 BC to AD 500 we are implementing a programme of palaeoenvironmental research. A number of studies in the 1970’s (Donaldson & Turner 1977; Davies & Turner 1979; Turner 1979) attributed evidence for increasingly open landscapes in the pollen record around the Hadrian’s Wall frontier to the Roman presence, proposing woodland clearance driven by an increased need for timber to build frontier installations, and for agricultural land to support an increased population. The 1990’s saw intense research interest in the Roman-period environment of the northern British frontier zone, with debate regarding the potential

impact of the Roman military presence (e.g. Dumayne & Barber 1994; Dumayne-Peaty 1998; 1999; Dumayne-Peaty & Barber 1998; Dark 1999). It is now widely accepted that extensive woodland clearance had occurred across much of Britain by the Late Iron Age, prior to the arrival of Roman forces (e.g. Tipping 1997; Dark 1999). More recent research has indicated some evidence for new clearance episodes at sites such as Midgeholme Moss, on Hadrian’s Wall, which are interpreted as coincident with the establishment of a Roman presence in the area (Dark 2015). On the other hand, some studies have suggested that woodland regeneration and land abandonment was at least a short-term impact of the Roman invasion in certain frontier areas (Whittington & Edwards 1993; Dumayne-Peaty & Barber 1998).

Similar to the situation described above for the settlement record, a robust chronological framework is key to a nuanced understanding of temporal and geographical variation in land-use dynamics in the pre-Roman, Roman, and post-Roman periods in the northern British frontier zone. To date, there are c. 120 published pollen records relating to the period and area of interest (fig. 5, top). However, of these only 38 have chronologies based on five or more <sup>14</sup>C dates – for some cores, this means dates spaced at intervals of over one millennium. Only nine pollen records have chronologies based on 10 or more dates. The chronological resolution of many pollen records is not sufficient to allow, for example, differentiation between pre-Roman and Roman-period clearance events (Tipping 1994; Manning *et al.* 1997). In order to mitigate this shortcoming, during the course of our project we are producing new palaeoenvironmental reconstructions with high-resolution chronologies for sites across the study area (initial sample sites shown in figure 5, bottom). Selected sites with existing pollen-based palaeoenvironmental reconstructions are being revisited (similar to the approach outlined in McDonald *et al.*

OxCal v4.4.4 Bronk Ramsey (2021); r5 Atmospheric data from Reimer *et al.* (2020)

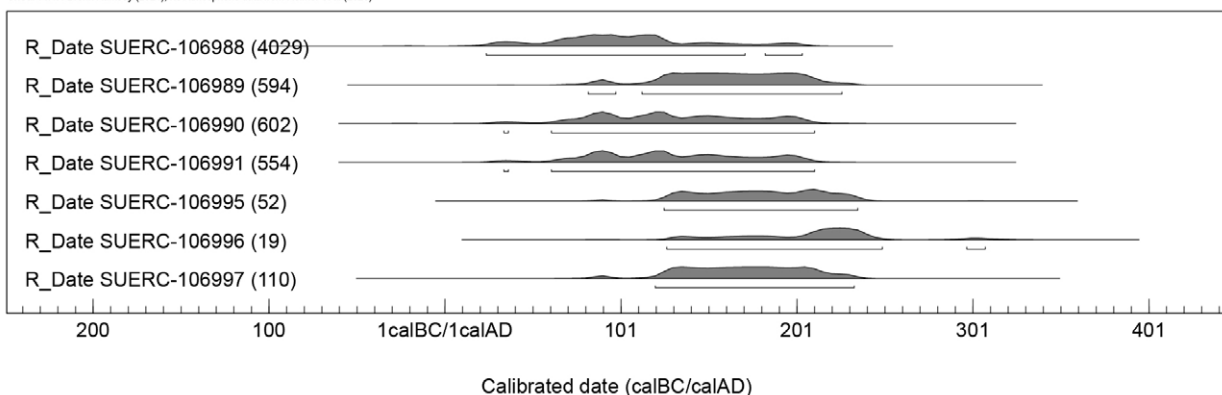


Figure 4. New dates from Carronbridge (Dumfries and Galloway), obtained from archival charcoal samples (authors).

2021), where it is thought that improved chronological resolution can refine existing narratives. In addition, we are producing new pollen sequences from cores taken at previously unresearched sites with close spatial relationships to Iron Age and Roman period settlements.

## Conclusion

While at the time of writing this chapter the 'Beyond Walls' project is still in its initial phases, our ultimate aim is to integrate the various datasets and place them within a wider socio-historical and theoretical context. Thus, we aim to explore the relationships between the broad-brush survey data from the overall project area and the assessment of the excavation data, drawing out local, regional, and supra-regional patterns. These trends and transformations will be evaluated, within the

limits imposed by available chronologies, in relation to the fluctuating Roman presence in the region, tracing elements of continuity and long-term developments against times of rapid change, growth, or abandonment. Finally, the conclusions reached for the project area will be set within a comparative framework in order to inform wider theoretical and interpretive discussions on transformations at the edges of Rome and other imperial powers.

## Acknowledgements

We are grateful to the Leverhulme Trust (RPG-2021-027) and the British Academy (SRG20\200052) for funding the research in the 'Beyond Walls' and 'On the Edge of Empire' projects respectively. We also thank Rachel Cartwright for her assistance in the production of this paper.

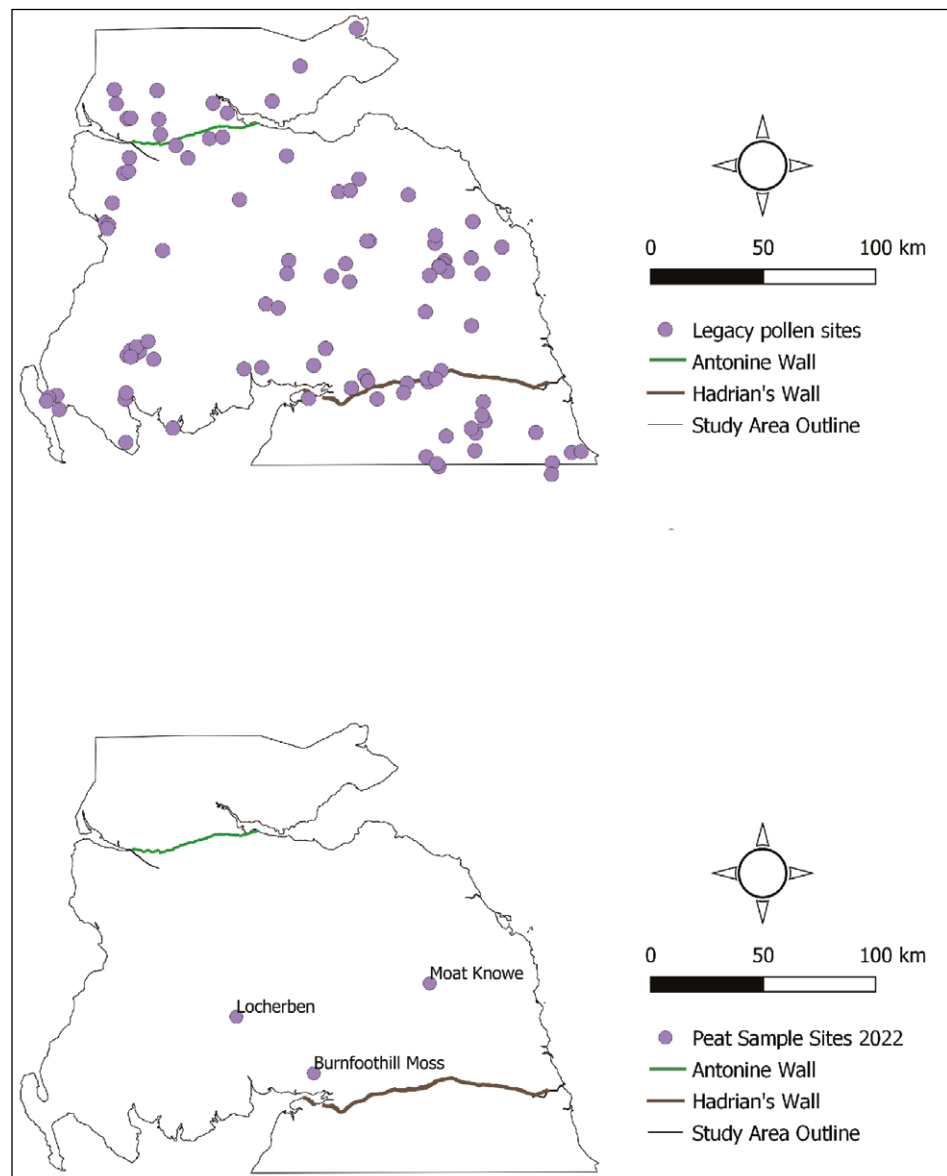


Figure 5. Top: published pollen records relating to the period between the mid-1<sup>st</sup> millennium BC and the mid-1<sup>st</sup> millennium AD in the overall project study area. Bottom: initial palaeoenvironmental sample sites (authors).



## Bibliography

- Allen, M., L. Lodwick, T. Brindle, M. Fulford & A. Smith, 2017: *New visions of the countryside of Roman Britain 2. The rural economy of Roman Britain*, London.
- Banks, I., 2000: Excavation of an Iron Age and Romano-British enclosure at Woodend Farm, Johnstonebridge, Annandale, 1994 & 1997, *Proceedings of the Society of Antiquaries of Scotland* 130, 223-281.
- Banks, I., 2004: The excavation of multi-period remains adjacent to the banked enclosure of Warden's Dykes, Gretna, *Transactions of the Dumfriesshire and Galloway Natural History and Antiquarian Society* 78 (3<sup>rd</sup> Series), 37-60.
- Bewley, R., 1994: *Prehistoric and Romano-British settlement in the Solway Plain, Cumbria*, Oxford.
- Boutwood, Y., 2005: *Hadrian's Wall NMP Project. Bowness on Solway to Carlisle, Cumbria*, York (English Heritage Aerial Survey Report Series 3/2005).
- Caruana, I. & P. Gladwin, 1980: Unpublished excavations on the line of the Roman wall in Hadrian's Camp, Carlisle, *Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society* 80 (2<sup>nd</sup> Series), 17-24.
- Caruana, I. & G. Morgan, 1996: A forum or 'mansio' in Carlisle?, *Britannia* 27, 345-353.
- Cowley, D. & K. Brophy, 2001: The impact of aerial photography across the lowlands of Scotland, *Transactions of the Dumfriesshire and Galloway Natural History and Antiquarian Society* 75 (3<sup>rd</sup> Series), 47-72.
- Cowley, D., M. Fernández-Götz, C. Rummel, S. Halliday & N. Hannon, 2022: New surveys on the edge of Empire. The later prehistoric landscapes of southwest Scotland, *AARGNews. The Newsletter of the Aerial Archaeology Research Group* 64, 14-21.
- Crellin, R., C. Fowler & R. Tipping (eds), 2016: *Prehistory without borders. The prehistoric archaeology of the Tyne-Forth region*, Oxford.
- Dacre, J., I. Caruana, B. Dickinson, T. Padley & J. Taylor, 1985: An excavation on the Roman fort at Stanwix, Carlisle, *Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society* 85 (2<sup>nd</sup> Series), 53-69.
- Dark, P., 1999: Pollen evidence for the environment of Roman Britain, *Britannia* 30, 247-272.
- Dark, P., 2015: Hadrian's Wall in context. A multi-proxy palaeoenvironmental perspective from Lakes, *Late Antique Archaeology* 11/1, 121-134.
- Davies, G. & J. Turner, 1979: Pollen diagrams from Northumberland, *New Phytologist* 82/3, 783-804.
- Deegan, A., 2013: *Cumbria terrestrial mineral resource. Air photo and lidar mapping and interpretation report*, York (English Heritage National Mapping Programme).
- Deegan, A., 2019: *Eden Petteril Caldew Transect. Air photo and lidar mapping and interpretation report*, Portsmouth (Historic England Research Report Series, 05/2019).
- Donaldson, A.M. & J. Turner, 1977: A pollen diagram from Hallowell Moss, near Durham City, UK, *Journal of Biogeography* 4, 25-33.
- Dumayne, L. & K. Barber, 1994: The impact of the Romans on the environment of northern England. Pollen data from three sites close to Hadrian's Wall, *The Holocene* 4, 165-173.
- Dumayne-Peaty, L., 1998: Forest clearance in northern Britain during Romano-British times. Re-addressing the palynological evidence, *Britannia* 29, 315-322.
- Dumayne-Peaty, L., 1999: Continuity or discontinuity? Vegetation change in the Hadrianic-Antonine frontier zone of northern Britain at the end of the Roman occupation, *Journal of Biogeography* 26/3, 643-665.
- Dumayne-Peaty, L. & K. Barber, 1998: Late Holocene vegetational history. Human impact and pollen representativity variations in northern Cumbria, England, *Journal of Quaternary Science* 13/2, 147-164.
- Fernández-Götz, M., D. Cowley, D. Hamilton, I. Hardwick & S. McDonald, 2022: Beyond Walls. Reassessing Iron Age and Roman encounters in northern Britain, *Antiquity* 96/388, 1021-1029.
- Gosden, C., C. Green, A. Cooper, M. Creswell, V. Donnelly, T. Franconi, R. Glyde, Z. Kamash, S. Mallet, L. Morley, D. Stansbie & L. ten Harkel (eds), 2021: *English landscapes & identities. Investigating landscape change from 1500 BC to AD 1086*, Oxford.
- Green, C. & M. Creswell, 2021: *The shaping of the English landscape. An atlas of archaeology from the Bronze Age to Domesday Book*, Oxford.
- Hamilton, D., C. Haselgrove & C. Gosden, 2015: The impact of Bayesian chronologies on the British Iron Age, *World Archaeology* 47/4, 642-660.
- Hamilton, W.D. & A.M. Krus, 2018: The myths and realities of Bayesian chronological modelling revealed, *American Antiquity* 83/2, 187-203.
- Hanson, W.S., R.E. Jones & R.H. Jones, 2019: The Roman military presence at Dalswinton, Dumfriesshire. A reassessment of the evidence from aerial, geophysical and LiDAR survey, *Britannia* 50, 285-320.
- Harding, D., 2017: *The Iron Age in Northern Britain. Britons and Romans, natives and settlers*, London (2<sup>nd</sup> edition).
- Hardwick, I., 2021: *Pushing the boundaries of Roman Britain. Landscape, frontier and identity in Northern Britannia*, York (PhD thesis University of York, <https://etheses.whiterose.ac.uk/30298>).
- Higham, N., 1982: The Roman impact upon rural settlement in Cumbria, in: P. Clack & S. Haselgrove

- (eds), *Rural settlement in the Roman north*, Durham (Council for British Archaeology Group 3), 105-122.
- Hingley, R., 2017: The Romans in Britain. Colonization of an imperial frontier, in: C. Beaulieu (ed.), *Frontiers of colonialism*, Gainesville, 89-109.
- Hingley, R. & R. Hartis, 2011: Contextualizing Hadrian's Wall. The wall as 'debatable lands', in: O. Hekster & T. Kaizer (eds), *Frontiers in the Roman world. Proceedings of the ninth workshop of the international network Impact of Empire (Durham, 16-19 April 2009)*, Leiden/Boston (Impact of Roman Empire 19), 79-95.
- Hodgson, N., J. McKelvey & W. Muncaster, 2012: *The Iron Age on the Northumberland Coastal Plain*, Newcastle.
- Hunter, F., 2007: *Beyond the edge of the Empire. Caledonians, Picts and Romans*, Rosemarkie.
- Jobey, G., 1975: Excavations at Boonies, Westerkirk, and the nature of Romano-British settlement in eastern Dumfriesshire, *Proceedings of the Society of Antiquaries of Scotland* 105, 119-140.
- Johnston, D.A., 1994: Carronbridge, Dumfries and Galloway. The excavation of Bronze Age cremations, Iron Age settlements and a Roman camp, *Proceedings of the Society of Antiquaries of Scotland* 124, 233-291.
- Lock, G. & I. Ralston, 2022: *Atlas of the hillforts of Britain and Ireland*, Edinburgh.
- Manning, A., R. Birley & R. Tipping, 1997: Roman impact on the environment at Hadrian's Wall. Precisely dated pollen analysis from Vindolanda, northern England, *The Holocene* 7/2, 175-186.
- McCarthy, M., 1991: *The structural sequence and environmental remains from Castle Street, Carlisle. Excavations 1981-2*, Kendal.
- McDonald, S., K. Kearney, B. Gearey & D. Hamilton, 2021: Recession or resilience. Evidence for Neolithic agriculture in updated palaeoenvironmental reconstructions from Lairg, Sutherland. *Environmental Archaeology. The Journal of Human Palaeoecology* 28/4 (DOI:10.1080/14614103.2021.1916375).
- Mercer, R., 1981: The excavation of an earthwork enclosure at Long Knowe, Eskdale, Dumfriesshire, 1976, *Transactions of the Dumfriesshire and Galloway Natural History and Antiquarian Society* 56 (3<sup>rd</sup> Series), 38-72.
- Mercer, R., 2018: *Native and Roman on the northern frontier. Excavations and survey in a later prehistoric landscape in Upper Eskdale, Dumfriesshire*, Edinburgh.
- Oakey, M., 2009: *Hadrian's Wall World Heritage Site. National mapping programme summary report*, Portsmouth (English Heritage Research Department Report Series 73/2009).
- RCAHMS – Royal Commission on the Ancient and Historical Monuments of Scotland, 1997: *Eastern Dumfriesshire. An archaeological landscape*, Edinburgh.
- Smith, A., M. Allen, T. Brindle & M. Fulford, 2016: *New visions of the countryside of Roman Britain 1. The rural settlement of Roman Britain*, London.
- Tipping, R., 1994: The form and fate of Scotland's woodlands, *Proceedings of the Society of Antiquaries of Scotland* 124, 1-54.
- Tipping, R., 1997: Vegetational history of southern Scotland, *Botanical Journal of Scotland* 49/2, 151-162.
- Turner, J., 1979: The environment of northeast England during Roman times as shown by pollen analysis, *Journal of Archaeological Science* 6/3, 285-290.
- Whittington, G. & K.J. Edwards, 1993: *Ubi solitudinem faciunt pacem appellant*. The Romans in Scotland, a palaeoenvironmental contribution, *Britannia* 24, 13-25.
- Zant, J., 2009: *The Carlisle Millennium Project. Excavations in Carlisle 1998-2001*, Lancaster.



# Immigrants from the *Barbaricum*

Controlled colonisation of *deserta* in the  
Augustan period. A forgotten aspect of  
early Roman frontier policy

Erik Graafstal

## The sites: finds and dates

The starting-point of this paper is a group of early Roman rural settlements discovered in the Utrecht region over the course of the last 25 years (figs 1-2). Only a handful of them have seen more extensive excavation, but there is a good deal we can glean from the sites as a group. A broad distinction can be made between the south, where most settlements survived into the 2<sup>nd</sup> century based on field-survey and metal-detection finds (Haarhuis & Graafstal 1993; Jansen & Van der Laan 2009), and those in the north, where occupation ended around AD 70 (in one case c. 40), apparently as part of a broad reshuffling of the frontier zone (Den Hartog 2009, 137; Luksen-IJtsma 2009, 91; Langeveld *et al.* 2010, 318; Dielemans 2014, 103-106).

Based on brooches, coins or pottery all sites saw settlement or other activity in the first half of the 1<sup>st</sup> century. In three cases, more precise dating evidence is available. At the site De Woerd, what appears to be a founder's house is datable to around AD 15. This is based on a dendrochronological date for a wall post between 3 BC and AD 17 and a moneyer's *as* from a wall-foundation trench, likely a votive deposition. These coins only started to circulate in the Lower Rhine region around AD 15 (Langeveld *et al.* 2010, 33-34). The Amerikalaan site has produced dendrochronological dates of AD 7 and 9 for two jetties in a residual gully (Dielemans & Van der Kamp, 2012, 41-43). At the key site Hogeweide, activity (or datable contact with the Roman world) started around the first decade of 1<sup>st</sup> century, based on a sample of 45 coins (Reijnen 2009, 113). An apparent house ditch belonging to the earliest settlement phase contained a coin datable 7-3 BC (Den Hartog 2009, 30-31, Structure III, with an uncertain stratigraphical relation to Structure I). None of the excavated sites have produced settlement features that must predate the start of the Common Era.

The complete spectre of current pre-Flavian brooch types is found on these sites as a group (for two rich assemblages: Hendriksen 2009, 75-91; Langeveld *et al.* 2010, 208-218). A few specimens are present of types that seem to have lasted not much beyond La Tène D2, *i. e.* after 15 BC, like a knot brooch (Weterings & Meijer, 2011, 62-63; Heeren & Van der Feijst 2017, type 10b, from a context dated between the beginning of the 1<sup>st</sup> century and the AD 40's) and two spoonbow brooches of the Kessel variant (Hendriksen 2009, 77-78;

**Erik Graafstal**  
Municipality of Utrecht,  
e.graafstal@utrecht.nl

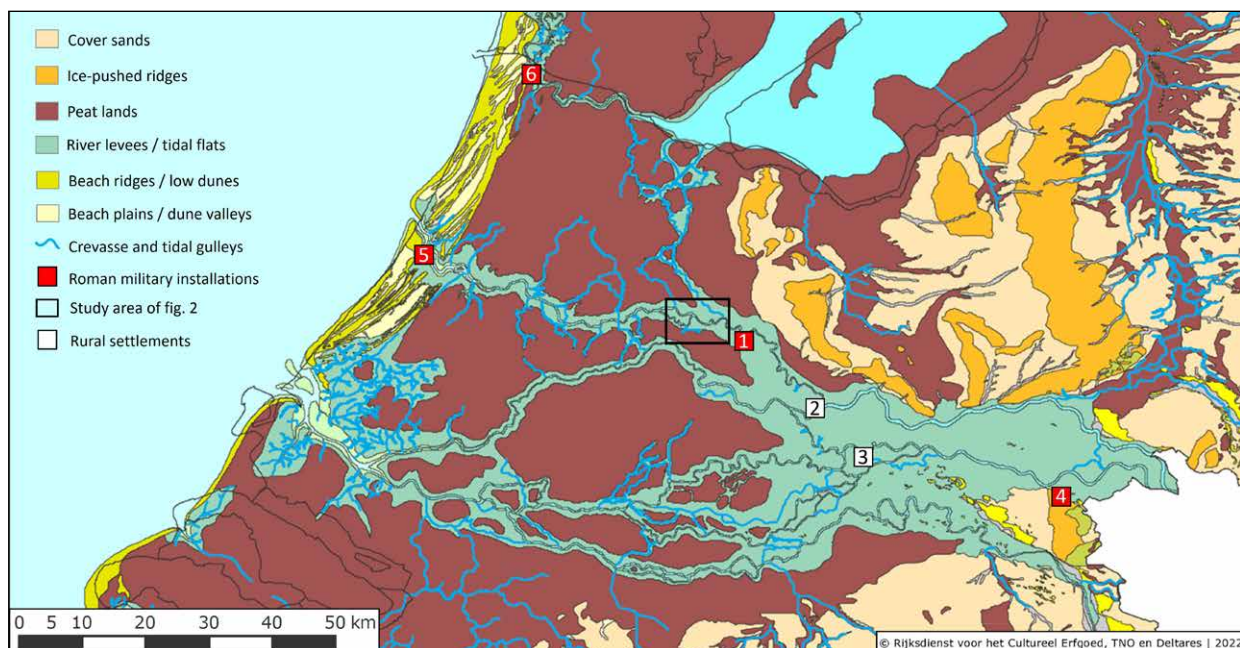


Figure 1. Palaeogeographical map of the central Netherlands with sites successively mentioned in this paper: Vechten (1), Wijk bij Duurstede-De Horden (2), Tiel-Medel (3), Nijmegen-Hunnerberg (4), Valkenburg (5) and Velsen 2 (6).

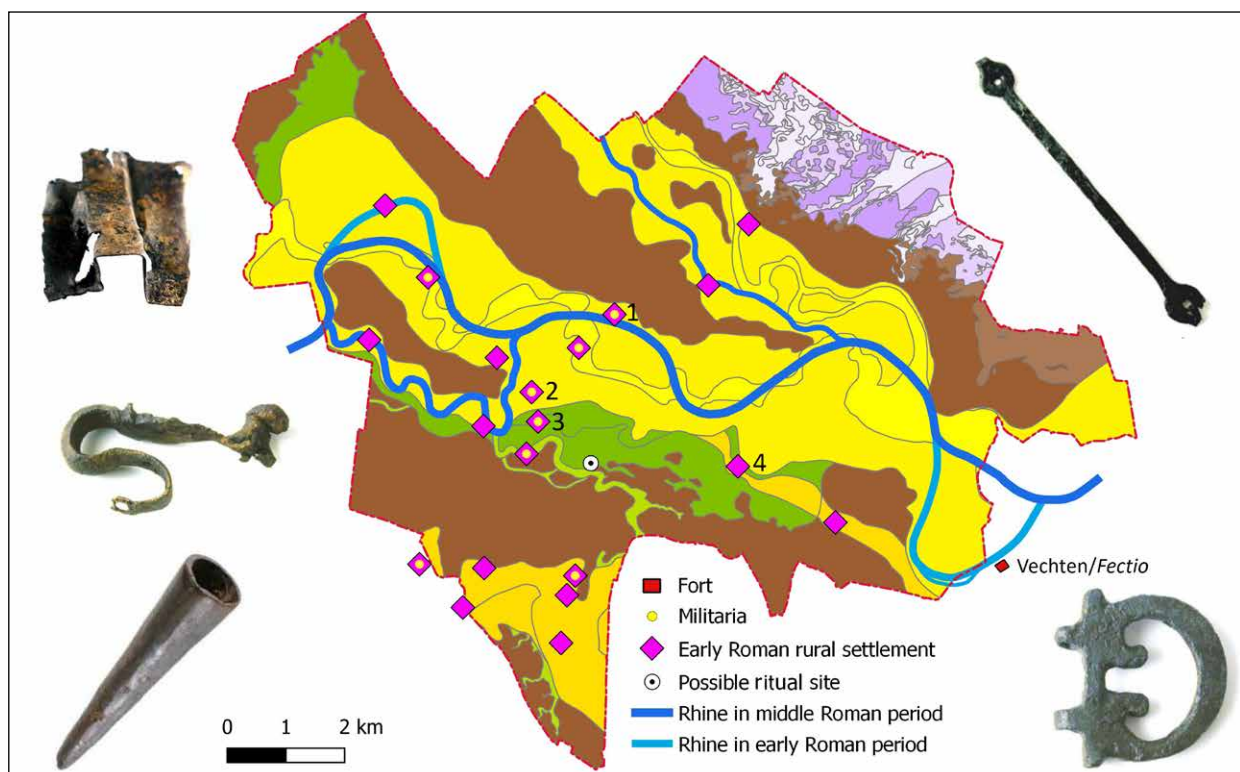


Figure 2. Sites in the Utrecht region, with yellow dots for military finds, a selection of which are shown. Specifically mentioned in this paper are: Hogeweide (1), De Woerd (2), HOV-station (3), Oudenrijnseweg (4), and Amerikalaan (5).



Figure 3. Burnt herbivore dung from the Hogeweide site.

Heeren & Van der Feijst 2017, type 11c1). However, their typo-chronology may see further refinement in the future, while such personal adornments will occasionally have had a longer life than usual or found a second owner as a keepsake. What is significant is that the total collection of brooches from the early sites of the northern group (n = 216) would seem to fit in an AD 1-70 timeframe with few exceptions.

What is interesting is the distribution of militaria (fig. 2). These are found across the study area and represent the familiar range of small military fittings, with a good proportion of cavalry items. A remarkable piece is a highly ornate brow plate of a cavalry helmet with Africa-inspired imagery which had apparently been ripped off its carrier, twice folded and deposited in a well (Langeveld 2010). At the Hogeweide site, too, a substantial number of items relate to cavalry. The strap ends, in particular, represent at least three sets of cavalry harness (Hendriksen 2009, 90-97).

For the Hogeweide site the possibility of a mixed provenance should not be dismissed out of hand, with some items possibly lost by Roman soldiers visiting this somewhat unusual settlement. Its inhabitants appear to have had ready access to Roman material culture, surely through the military interface, as various find categories, but especially the coins (Reijnen 2009, 113), indicate. By and

large, the military finds from our sites seem to conform to a familiar pattern of Roman military items typically found in native house and yard contexts, probably representing personal pieces of equipment taken home by veterans (Nicolay 2007, 91-115).

### Cultural associations

What is striking, at least in the northern zone which has seen more extensive excavation, is the diversity of pottery styles, and their varying presence at the individual sites. Apart from an indistinct 'local' (Taayke 2009a, 59) and a 'Frisian' style group, there are a couple of sites with a significant presence of pottery that is macroscopically indistinguishable from the handmade wares of the north-eastern and adjacent German coastal region – the core area attributed to the *Chauci* (Taayke 2009a; 2009b; 2010; 2012; 2016). The dominance of this style at the Hogeweide site has led Taayke (2016, 67) to conclude that we are looking at actual immigrants from the northern coastal area.

Another surprising aspect of the Hogeweide site is the presence of a so-called wall-ditch house ('zodenwandhuis'), with turf-built walls, a distinctly coastal building tradition. An adjacent, somewhat larger set of curved ditches may belong to a raised house platform – equally foreign (Den Hartog 2016, 39-40 with fig. 3.23 and 3.26). The ditches of both structures produced large amounts of light, slag-like



material (fig. 3). Chemical analysis using a hand-held XRF indicated that these vitrified foamy lumps likely represent herbivore dung used as fuel (Huisman & Van Os 2016). The practice is attested at various sites in the northern coastal area from the neolithic onward, and especially at a number of Roman era *terp* sites in *Frisia* (Huisman 2015, 76). Plinius the Elder (*Historia Naturalis* 16.1.4) famously noted that the *Chauci* “scoop up mud in their hands and dry it by the wind more than by sunshine, and with earth as fuel warm their food and so their own bodies.” This has often been taken to refer to peat, but Huisman (2015, 76) has rightly pointed out that most *terpen* don’t have much peat in their direct environs, while the term used by Plinius the Elder (*lutum*) often has a distinctly ‘dirty’ connotation. Whatever, the presence of burnt animal dung at the Hogeweide site, in the context of an apparent wall-ditch house, suggests a cultural link with the northern coastal area.

The same settlement has produced three fragments of belt hooks (Hendriksen 2009, 73-75), with a fourth specimen coming from another site (Hendriksen 2010, 95). These dress items have a rather different home base from the northern coastal area, their distribution concentrating in the central/eastern Dutch river area (Roymans 2004, 113-118). From another site (fig. 2.3, HOV-station), a finger ring of Celtic form tradition, with most parallels rather to the south (Riha 1990, type 2.29), may be tentatively added to this short survey of cultural associations.

At the same site, typically ‘Chaucian’ pottery is strikingly absent (Stoffels 2011, 88), while at two neighbouring settlements (fig. 2.2 and 2.4) this material accounts for about 10-20 % of the handmade pottery (Taayke 2009, 50). Instead, the site has produced a number of handmade vessels decorated with stripes of paint, probably animal blood, a practice, likely ritual, that is well attested in the western coastal area (Stoffels 2011, 88-89; Van den Broeke 2012, 280, note 721, who notes a few outliers). As stated earlier, it is the sheer variety of ceramic styles across our study area that is the strongest pointer to the varied cultural backgrounds of the early Roman settlers in the Utrecht region.

## Widening the picture

It is time to draw up a few conclusions. Firstly, we have at least some twenty early Roman sites in the western surroundings of Utrecht, most of them apparently starting *de novo*, although a residual Late Iron Age population cannot be excluded, bearing in mind the presence of a thin stratum of glass bracelets, mostly of La Tène D2 date (<https://www.portable-antiquities.nl>, 19-11-2022). Next, we are left with a striking impression of cultural diversity, including a distinctly northern coastal component. At our key site Hogeweide, we are clearly dealing not just with foreign pots, but with foreign people. On account of the

brooch finds, several settlements appear to have been inhabited in the first decades of the Common Era, with a start c. AD 5-15 implied for our three closest datable sites.

It is unlikely that this apparent immigration wave could have happened without the Roman military authority, based at nearby Vechten, at least consenting if not coordinating. From the onset there appear to have been strong links with the Roman military, seeing the spread of militaria across our sites and the occurrence of items like wax tablets, a dice, a hobnailed shoe and a graffito at the Hogeweide site (Den Hartog 2009, 63, 128 and 132-133). The strong impression gained is of a well-known Roman package deal: settlement rights in return for military service, possibly reserved for groups with a friendly track record. With regard to possible settlers from the North, it is worth reminding ourselves that the Roman army was still active, perhaps foraging, in the northern coastal area in the late Augustan/early Tiberian period, as the archaeology of places like Winssum and Bentumersiel indicates (Erdrich 2015). Potentially relevant also are the Chaucian auxiliaries who served with Germanicus around AD 15 (Tacitus *Annales* 1.60.2 and 2.17.5).

The clincher, of course, is the broad synchronicity of this settlement surge with the foundation of the Roman base at Vechten around the start of the Common Era (Rudnick 2006, 56-61; Polak 2014, 262-267). Geographically, this wave of colonisation-by-consent may well have extended to the Kromme Rijn-area southeast of Vechten. Vos’s regional inventory contains a number of candidate sites, like Wijk-bij-Duurstede-De Horden (Vos 2009, 89-91; note the apparent end of occupation at the adjacent site De Geer in the late Augustan period, Heeren 2021, 377-378) and a handful of potentially early 1<sup>st</sup> century sites in the well-researched Houten micro-region, south of Vechten (Vos 2009, 117-182 and 204 with fig. 5.12 for Italian samian and early brooches).

Interestingly, Wijk bij Duurstede-De Horden and Houten-Hofstad have both produced pottery typical of the northern coastal area. At the latter site, an assemblage with a distinctly northern component is datable to the first quarter of the 1<sup>st</sup> century if not the late Augustan period (Van den Broeke *et al.* 2017, 288-293). At the Horden, both ‘Frisian’ and ‘Chaucian’ style elements are present, in marked association with the houses of the first, similarly dated settlement phase. “Without doubt the first settlers at De Horden had strong ties with the inhabitants of the coastal area” (Taayke 2002, 208). Perhaps their relation with the North was even more direct.

Clearly, more work is needed, one of the promising resources being the Portable Antiquities of the Netherlands scheme. Specific brooch types could be relevant in this context. Stijn Heeren has noted (personal comment) that the Almgren 10-14 type is significantly over-represented in the central Dutch river area (<https://www>.

portable-antiquities.nl/pan/#/public/reference-type/01-01-06-05-03#01-01-06-05-03,21-11-2022). On present evidence, an immigrant wave in the Utrecht and Kromme Rijn regions starting around the beginning of the Common Era, including immigrants from the North and monitored from Vechten, seems a viable hypothesis.

## Complex dynamics

The cultural dynamics of colonisation landscapes, and the actual movement of both people and pots, have been vividly brought to light by recent excavations at Tiel-Medel. Here, a house of late Augustan/early Tiberian date (structure 8002) and a pre-existing structure, possibly another wall-ditch house, have produced a rich assemblage of handmade pottery, a large part of which in northern coastal style. Incidentally, a pit close to structure 8002 also produced vitrified animal dung (Van Renswoude *et al.* 2019, 111). Hand-held XRF and petrographic analysis indicated a local origin for part of the pots, but a coastal provenance for others. This suggests that northern immigrants took with them part of their household goods, including a few apparent heirlooms, and continued to produce handmade ware in their native style. A complex of ditches in the vicinity of the enclosure also produced pottery of western coastal provenance, some with stripes of blood paint, as well as non-local wares in early Rhine-Weser Germanic style (Van Kerckhove 2019, 310-330). The latter group now appears to have been largely produced in the Lippe area. Even more surprisingly, part of the material of Lippe provenance reproduces the northern coastal style (Van Kerckhove this volume).

This all serves to underline the complex dynamics and ethnic hybridity hiding behind the Batavian tribal construct (lastly Roymans & Habermehl 2022). The evidence from Tiel-Medel suggests that newcomers may have moved in as single households or in even smaller numbers. It bears emphasising that the 'Frisian' dwellers of house 8002 settled in a community that had existed for a generation (Van Renswoude *et al.* 2019, 112). The delicate processes of community formation, on a settlement and higher level, redefining old identities and forging new ones, may help explain the relative frequency of apparent ritual find assemblages and spaces (e.g. Langeveld *et al.* 2010, 221-222; Weterings & Meijer, 2011, 161-164; Dielemans 2013; Van Renswoude *et al.* 2019, 103-110). With potentially hundreds of people settling in the Kromme Rijn-Utrecht region alone in the first decades of the Common Era, close monitoring and 'support' from an army base like Vechten would seem a prerequisite, certainly if military service was part of the deal.

## A wider pattern?

It is worth considering the *Batavi*, who had been transferred from the right bank of the Middle Rhine somewhere

between c. 50 and 12 BC (Tacitus *Germania* 29.1). Silver staters of the Lith type were once considered a proxy for the new Batavian niche and networks (Roymans & Van der Sanden 1980, 205-212), but it has since become clear that "silver and bronze triquetrum coins were widely distributed across the entire Lower Rhine region, where they were used and probably also minted by various Germanic groups" (Roymans 2019a, 83). This raises the attractive possibility that the transfer of the *Batavi* from Hesse took place somewhat later than hitherto thought. It may well have broadly coincided with the resettlement of the *Ubii*, which Werner Eck (2004, 46-55; Tacitus *Annales* 12.27.1) has convincingly linked with the second governorship of Agrippa in 19-18 BC. This chimes well with Roymans' recent demonstration that the circulation of Roman bronze coinage in rural contexts in the Maas-Demer-Scheldt region (with a marked concentration in the Batavian core area) began around 20 BC, likely marking the start of ethnic recruitment (Roymans in preparation).

We may be looking at a coherent policy, likely Agrippa's, to address the unstable situation on the north-eastern fringe of Gaul that had resulted from Caesar's mass violence. A broad population discontinuity and a marked drop in settlement density after c. 50 BC are in evidence for most of what was to become the province of Lower Germany (Roymans 2019b). The reportedly 40,000 *Sugambri* and *Suebi* that were transferred to the left bank of the Rhine by Tiberius (Suetonius *De vita Caesarum, Augustus* 21.1 and *Tiberius* 9.2) remind us of the potential scale of these operations. The transfer of the *Ubii* and *Batavi* would certainly have been closely monitored by the Roman military. This required a more structural presence on the Lower Rhine which was prepared by the extension of the Agrippan road network to the Rhineland, heralded by the Moselle bridge at Trier of 18-17 BC (Hollstein 1980, 135).

In this light it is worth considering the purpose of the first fortress at Nijmegen. Its foundation has been dated to c. 19 BC, based on coins (Kemmers 2006, 57-62). One of the tasks for this first major base in the Lower Rhine region, apart from deterring unsolicited Germanic immigration or inroads (Polak & Kooistra 2013, 395), would have been to supervise the reconstruction of the settlement landscape on the Lower Rhine – and serve as a big stick, if necessary. It is worth pointing out that its direct precursor (and apparent troop supplier: Kemmers 2006, 66-67), the installation at Trier-Petrisberg, had probably been there for similar internal security work. Nijmegen was perhaps not the best-placed launching pad for operations beyond the Rhine. The Augustan fortress on the Hunnerberg was duly given up after the *clades Lolliana* of 16 BC had moved the German problem to the top of the imperial agenda. What remained was the smaller installation on the Kops Plateau with its wealth of cavalry-related votive depositions. Mark Driessen (2007, 70-76) has made a



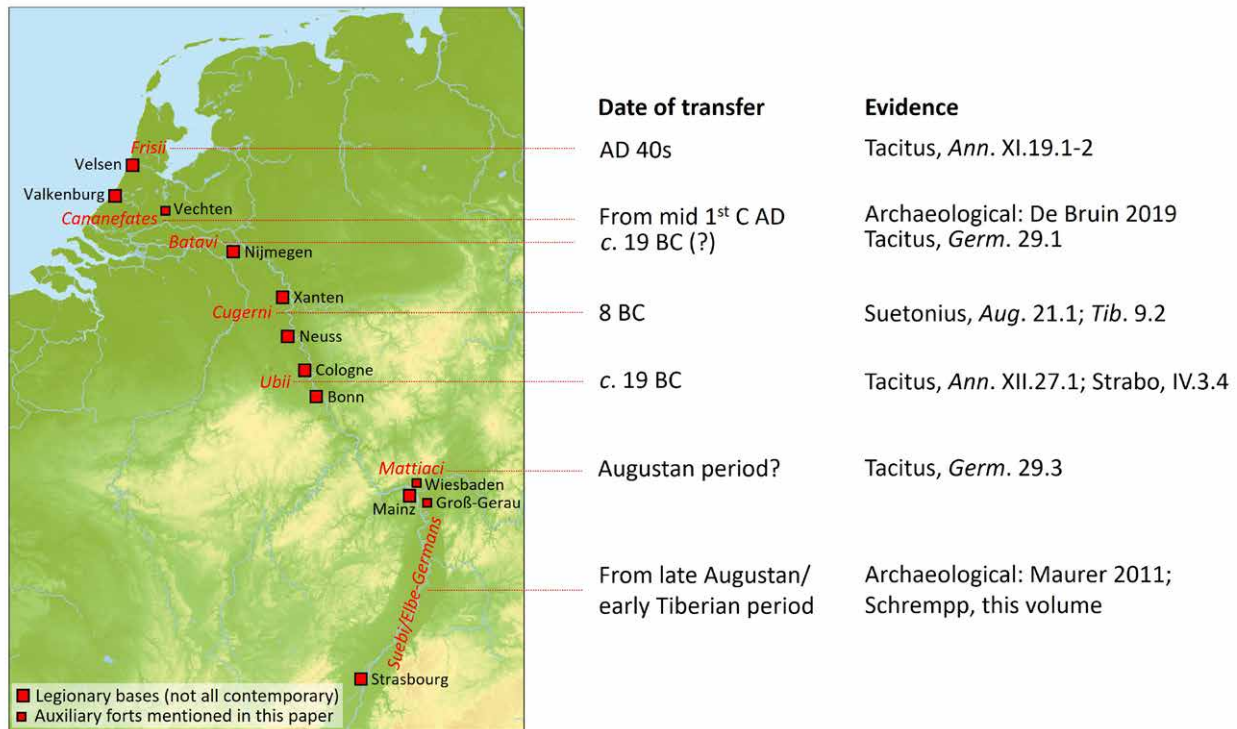


Figure 4. Tribal constructs and early military installations in the Rhine provinces.

strong case for a training centre for Batavian horse riders, exploiting a prime resource of this region.

It is time for a brief look at the western Netherlands where immigration from adjacent coastal areas to the north and south only started in earnest after the first military installations had been built along the Rhine (De Bruin 2019), including a fortress of legionary size at Valkenburg (Vos *et al.* 2021). Two associated dendrochronological dates of AD 39-40 and  $39 \pm 6$  for the latter suggest a relation with Caligula's ill-understood German campaign, with the invasion of Britain of AD 43 being tantalisingly close in time. However, the build-up of troops and supplies for this event would have been a matter of months and hardly require the kind of permanent installation seemingly anticipated by the fortress's defences. Other possible purposes deserve consideration.

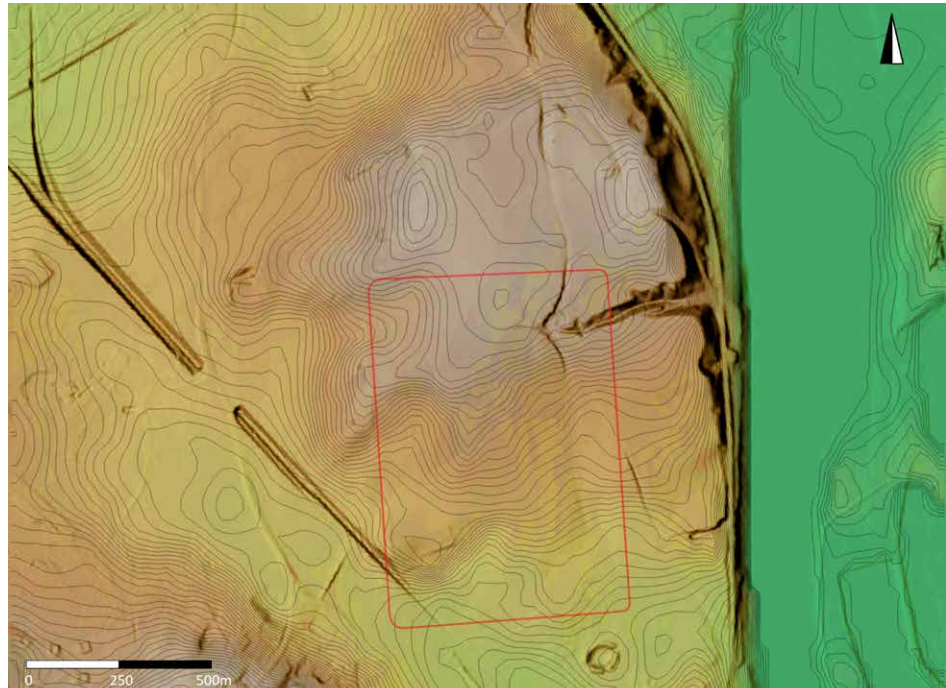
Intriguingly, while the new installation probably could have been operational by AD 43, it is far from clear whether the fortress was ever completed. What we do know is that, by 42-43, construction work was going on at the site of Velsen 2, where another installation of legionary size has now been pieced together (Bosman 2021). Two legionary bases would seem overdone for this backwater. Could Velsen have replaced Valkenburg as the planned fortress for the North Sea coastal region? A change of plan following the death of Caligula, with fresh *mandata* issued by his successor Claudius, might explain the abortive-looking

state of the Valkenburg installation (of course, its defensive enclosure, apparently completed by early 41, would have come in handy as a guarded compound in the context of AD 43, perhaps accommodating tents and supplies). The integration of the *Frisii* appears to have come firmly on the agenda after Gabinius's northern campaign of AD 41 (Cassius Dio *Historia Romana* 40.8.7), with Corbulo soon resettling part of the tribe and about to give them 'a senate, magistrates and laws' (Tacitus *Annales* 11.19.1-2). Velsen may have proved better placed to monitor this delicate process, sitting in the heartland of the *Frisii Minores*, close to one of their cult places (Bosman 2011).

### Facing the interior

If we zoom out still further, we may observe that most of the tribal constructs along the Upper, Middle and Lower Rhine later to become *civitates* have a track record of being partial imports, mostly dating back to the Augustan period (fig. 4). The broad coverage of this zone by substantial military bases is a next point to be noted. In several cases, as we have seen, there is a close correspondence in time and space with Roman-led repopulation programmes. On the Upper-Rhine, the case of Wiesbaden and the *Mattiaci* (Tacitus *Germania* 29.1) comes to mind. A little further to the south, the settlement and integration of Suebian groups in the Groß-Gerau area was monitored from a succession of Roman installations (Maurer 2012, 76-78).

Figure 5. The site of the Claudian-Neronian fortress at Xanten-Fürstenberg, with 1 m contour lines. In Roman times, the Rhine (and the Lippe debouchment) were to the north.



The pattern is replicated on the Lower Danube where the foundation of Oescus was closely connected with the settlement of 50,000 *Getae* in the interior (Ivanov 1998, 504-505) and that of *Novae* almost synchronous with the provincialisation of Thrace (Graafstal 2023, 7).

The message to our community is that we should be alert to our inclination to primarily think of Roman bases as projecting their power to an outside world. The early garrison of Upper and Lower Germany was placed on the left bank of the Rhine, mainly for logistic reasons, but it still had lots of unfinished business to look after at its back. In the troop disposition of AD 23, the Rhine garrison counted as “a support against Germans and Gauls alike” (Tacitus, *Annales* 4.5.1). The largest base in the Roman world, *Castra vetera* at Xanten, formally faced south, occupying a south-facing slope of the Fürstenberg (fig. 5), dropping some 35 m and largely disabling the visual projection of power into the *Barbaricum* (Bödecker & Kunow 2021, fig. 5; Tibbs 2022 for fort orientation).

This brief reconnaissance is capped by the case of *Carnuntum*. Its hinterland, the *deserta Boiorum*, saw the transfer of loyal groups that remained after the collapse of the *Regnum Vannii* around AD 50. Here we have another coupling of a new fortress and a Roman-led resettlement programme, this time sealed by *mandata* from the Emperor Claudius himself, who “wrote instructions to Publius Atellius Hister, governor of Pannonia, that he was to have his legions, with some picked auxiliaries from the province itself, encamped on the riverbank, as a support to the conquered” (Tacitus *Annales* 12.29.2).

## Bibliography

- Bödecker, S. & J. Kunow 2021: Tacitus und seine Beschreibungen Niedergermaniens. War ‘der Schweigsam’ vor Ort?, *Materiały Zachodniopomorskie* n.s. 17, 377-402.
- Bosman, A.V.A.J., 2011: *Velserbroek B6. Een offerplaats gedurende de Romeinse tijd*, Woerden (The Missing Link Rapport 227).
- Bosman, A.V.A.J., 2021: *Velsen 2. Het onderzoek naar de Vroeg Romeinse basis in de periode 1945-2005*, Dordrecht (Military Legacy rapport 38).
- De Bruin, J., 2019: *Border communities at the edge of the Roman Empire. Processes of change in the Civitas Cananefatium*, Amsterdam (Amsterdam Archaeological Studies 28).
- Den Hartog, C.M.W., 2009: *Sportpark Terweide 2. LR41-42. Archeologisch onderzoek Sportpark Terweide*, Utrecht (Basisrapportage Archeologie 18).
- Den Hartog, C.M.W., 2016: *Sportpark Terweide 3. Definitief Archeologisch Onderzoek LR75 Hogeweide/Verlengde Vleutenseweg in Utrecht*, Utrecht (Basisrapportage Archeologie 84).
- Dielemans, L., 2013: *Rituelen in Rijnvliet? LR67 DO Kleiwinning. Definitief archeologisch onderzoek in deelgebied Rijnvliet, gemeente Utrecht*, Utrecht (Basisrapportage Archeologie 82).
- Dielemans, L., 2014: *Graan en greppels. LR1 t/m 4, LR14 en LR87. Proefsleuvenonderzoeken, archeologische begeleidingen en opgravingen van inheemse bewoning ten oosten van castellum De Meern in Langerak, Leidsche Rijn, Utrecht*, Utrecht (Basisrapportage Archeologie 85).

- Dielemans, L. & J.S. van der Kamp, 2012: *IJzertijdbewoning en de limesweg in Kanaleniland (Utrecht)*, Utrecht (Basisrapportage Archeologie 74).
- Driessen, M., 2007: *Bouwen om te blijven. De topografie, bewoningscontinuïteit en monumentaliteit van Romeins Nijmegen*, Amersfoort (Rapportage Archeologische Monumentenzorg 151).
- Eck, W., 2004: *Köln in römischer Zeit. Geschichte einer Stadt im Rahmen des Imperium Romanum*, Köln (Geschichte der Stadt Köln 1).
- Erdrich, M., 2015: Augustan and early Tiberian stations in context: Fishbourne, Bentumersiel, Winsum, Devín, in: D.J. Breeze, R.H. Jones & I.A. Oltean (eds), *Understanding Roman frontiers. A celebration for Professor Bill Hanson*, Edinburgh, 3-26.
- Graafstal, E.P., 2023: Roman 'Grand Strategy' in Action? Claudius and the Annexation of Britain and Thrace, *Britannia* 54, 1-28.
- Haarhuis, H.F.A. & E.G. Graafstal, 1993: *Rijnenburg. Een archeologische kartering, inventarisatie en waardering*, Amsterdam (RAAP-Rapport 81).
- Habermehl, D., J. van Kampen & J. van Renswoude (eds), 2019: *Opgravingen te Tiel-Medel-Hazenkamp en -De Reth. Twee grafvelden uit de Romeinse tijd en nederzettingssporen uit de late ijzertijd, vroeg-Romeinse tijd en laat-Romeinse tijd*, Amsterdam (Zuidnederlandse Archeologische Rapporten 80).
- Heeren, S., 2021: De Romeinse periode, in: J. van Doesburg & S. Heeren (eds), *Graven naar de wortels van Dorestad. Wijk bij Duurstede-De Geer in de Romeinse tijd en vroege middeleeuwen*, Amersfoort (Rapportage Archeologische Monumentenzorg 260), 377-393.
- Heeren, S. & L. Van der Feijst, 2017: *Prehistorische, Romeinse en middeleeuwse fibulae uit de Lage Landen. Beschrijving, analyse en interpretatie van een archeologische vondstcategorie, s.l.*
- Hendriksen, M., 2009: De metalen voorwerpen, in: Den Hartog, 65-109.
- Hendriksen, M., 2010: Metaal, in: C.M.W. den Hartog, *Appellatie. LR55. Een vroegmiddeleeuwse nederzetting aan de Wilhelminalaan bij Vleuten*, Utrecht (Basisrapportage Archeologie 30), 95-116.
- Hollstein, E., 1980: *Mitteleuropäische Eichenchronologie*, Mainz (Trierer Grabungen und Forschungen 11).
- Huisman, H., 2015: Terplagen en verbrande mest onder de loep. Micromorfologisch onderzoek op een terpfank, in: J. Nicolay & G. de Langen (eds), *Graven aan de voet van de Achlumer Dorpsterp. Archeologische sporen rondom een terpnederzetting*, Groningen (Jaarverslagen van de Vereniging voor terpenonderzoek 97), 69-81.
- Huisman, H. & B. van Os, 2016: Het lichte slakmateriaal, in: Den Hartog, 111-112.
- Ivanov, R., 1998: Das römische Verteidigungssystem an der unteren Donau zwischen Durticum und Durostorum (Bulgarien) von Augustus bis Maurikios, *Berichte der Römisch-Germanischen Kommission* 78, 467-640.
- Jansen, B. & E. van der Laan, 2009: *Plangebied Rijnenburg, gemeente Utrecht. Archeologisch vooronderzoek. Een bureau- en inventariserend veldonderzoek*, Weesp (RAAP-Rapport 1867).
- Kemmers, F., 2006: *Coins for a legion. An analysis of the coin finds from the Augustan legionary fortress and Flavian canabae legionis at Nijmegen*, Mainz (Studien zu Fundmünzen der Antike 21).
- Langeveld, M., 2010: Een voorhoofdband van een ruitershelm uit de inheemse nederzetting, in: Langeveld, Luksen-IJtsma & Weterings, 201-208.
- Langeveld, M., A. Luksen-IJtsma & P. Weterings (eds), 2010: *Een goede buur? LR46 en LR49. Definitief archeologisch onderzoek naar de vicus, grafvelden, infrastructuur en een inheemse nederzetting in de omgeving van het Romeinse castellum in De Meern, deelgebied 'De Woerd' (Gemeente Utrecht)*, Utrecht (Basisrapportage Archeologie 19).
- Luksen-IJtsma, A., 2009: *Oudenrijneweg. Archeologisch onderzoek van een inheems-Romeinse nederzetting uit de eerste eeuw na Chr. en een vlasrootcomplex uit de twaalfde eeuw na Chr. in De Meern, Gemeente Utrecht*, Utrecht (Basisrapportage archeologie gemeente Utrecht 25).
- Maurer, Th., 2012: Das Hessische Ried. Archäologie und Geschichte einer Landschaft an der Grenze des Römerreichs, in: F.M. Ausbüttel, U. Krebs & G. Maier (eds), *Die Römer im Rhein-Main-Gebiet*, Stuttgart, 67-90.
- Nicolay, J., 2007: *Armed Batavians. Use and significance of weaponry and horse gear from non-military contexts in the Rhine Delta (50 BC to AD 450)*, Amsterdam (Amsterdam Archaeological Studies 11).
- Polak, M., 2014: An early Roman naval base at Vechten. Facts and fiction, in: Römisch-Germanisches Zentralmuseum (Hrsg.), *Honesta missione. Festschrift für Barbara Pferdehirt*, Mainz (Monographien des Römisch-Germanischen Zentralmuseums 100), 69-98.
- Polak, M. & L.I. Kooistra, 2014: A sustainable frontier? The establishment of the Roman frontier in the Rhine delta 1. From the end of the Iron Age to the death of Tiberius (c. 50 BC-AD 37), *Jahrbuch des Römisch-Germanischen Zentralmuseums* 60, 355-458.
- Reijnen, R., 2009: Munten. De Romeinse muntvondsten van de terreinen LR 41 en LR 42, in: Den Hartog, 111-119.
- Riha, E., 1990: *Der römische Schmuck aus Augst und Kaiseraugst*, Augst (Forschungen in Augst 10).
- Roymans, N.G.A.M., 2004: *Ethnic identity and imperial power. The Batavians in the early Roman Empire*, Amsterdam (Amsterdam Archaeological Studies 10).

- Roymans, N.G.A.M., 2019a: Late Iron Age coin hoards with silver rainbow staters from Graetheide (NL) and the mid-1<sup>st</sup> century BC hoard horizon in the Lower Rhine / Meuse region, *Germania* 97, 65-92.
- Roymans, N.G.A.M., 2019b: Conquest, mass violence and ethnic stereotyping. Investigating Caesar's actions in the Germanic frontier zone, *Journal of Roman Archaeology* 32, 439-458.
- Roymans, N.G.A.M., in preparation: Ethnic recruitment and the genesis of the Batavi as a soldiering people. The numismatic evidence.
- Roymans, N.G.A.M. & D. Habermehl, 2022: Migration and ethnic dynamics in the Lower Rhine frontier zone of the expanding Roman Empire (60 BC-AD 20). A historical-anthropological perspective, in: M. Fernández-Götz, C. Nimura, P. Stockhammer & R. Cartwright (eds), *Rethinking migrations in late prehistoric Eurasia*, Oxford (Proceedings of the British Academy 254), 292-212.
- Roymans, N.G.A.M. & W. van der Sanden, 1980: Celtic coins from the Netherlands and their archaeological context, *Berichten van de Rijksdienst voor het Oudheidkundig Bodemonderzoek* 30, 173-254.
- Rudnick, B., 2006: Terra-Sigillata Stempel aus Haltern. Neufunde 1979-2000, in: K. Roth-Rubi, B. Rudnick, G. Schneider, C. Ellinghaus, B. Tremmel & M. Müller, *Varia Castrensia. Haltern, Oberaden, Anreppen*, Mainz (Bodenaltertümer Westfalens 42), 27-161.
- Stoffels, E., 2011: Handgevormd aardewerk, in: Weterings & Meijer, 73-89.
- Taayke, E., 2002: Handmade pottery from a Roman Period settlement at Wijk bij Duurstede-De Horden, *Berichten van de Rijksdienst voor het Oudheidkundig Bodemonderzoek* 45, 189-218.
- Taayke, E., 2009a: Handgemaakt aardewerk, in: Den Hartog, 53-59.
- Taayke, E., 2009b: Handgevormd aardewerk, in: Luksen-Ijtsma, 47-51.
- Taayke, E., 2010: Het handgevormd aardewerk uit de inheemse nederzetting en de vicus, in: Langeveld, Luksen-Ijtsma & Weterings, 227-236.
- Taayke, E., 2012: Handgemaakt aardewerk, in: Dielemans & Van der Kamp, 77-79.
- Taayke, E., 2016: Het handgemaakt aardewerk, in: Den Hartog, 57-67.
- Tibbs, A., 2022: *Facing the enemy? A GIS study of 1<sup>st</sup> century Roman fortifications in the Scottish landscape*, Oxford (British Archaeological Reports British series 677).
- Van den Broeke, P.W., 2012: *Het handgevormde aardewerk uit de ijzertijd en de Romeinse tijd van Oss-Ussen. Studies naar typonomie, technologie en herkomst*, Leiden (PhD thesis Leiden University).
- Van den Broeke, P., D. Habermehl, J. Van Kerckhove & A. Sinke, 2017: Aardewerk, in: J. van Renswoude & D. Habermehl (eds), *Opgravingen te Houten-Castellum. Bewoning langs een restgeul in de ijzertijd, Romeinse tijd en vroege middeleeuwen*, Amsterdam (Zuidnederlandse Archeologische Rapporten 65), 143-414.
- Van Kerckhove, J., 2019: Het aardewerk uit de Romeinse tijd, in: Habermehl, Van Kampen & Van Renswoude, 245-344.
- Van Renswoude, J., D. Habermehl & J. van Kampen, 2019: Sporen, structuren en fasering, in: Habermehl, Van Kampen & Van Renswoude, 83-224.
- Vos, W.K., 2009: *Bataafs platteland. Het Romeinse nederzittingslandschap in het Nederlandse Kromme-Rijngebied*, Amsterdam (Nederlandse Archeologische Rapporten 35).
- Vos, W.K., E. Blom, B. Cornelisse, J. de Bruin, J. Loopik, A. Ruiter, A. Tol & L. van der Feijst, 2021: A legionary fortress at Valkenburg. Discovering a springboard for the conquest of Britannia?, *Current World Archaeology* 108, 24-31.
- Weterings, P.G.H. & Y. Meijer, 2011: *Op zoek naar de weg. LR60. Onderzoek naar de Romeinse limesweg in De Meern (gemeente Utrecht)*, Utrecht (Basisrapportage Archeologie 33).



# Before the Romans, their coins came

Hoard of Roman *denarii* ending with  
coins of Augustan period in Late Iron Age  
South-Carpathian *Dacia*

Dragoş Măndescu and Ioan-Andi Piţigoi

For several decades, the topic of the abundant influx of Roman coins north of the Danube, in the Dacian lands before the Roman conquest that happened at the beginning of the 2<sup>nd</sup> century AD, has captured attention of different scholars (and still continues to do so), being detailed and debated by numismatists and not only by them. It is a generous, spectacular and challenging subject at the same time, even for the archaeologists having the Late Iron Age as the main field of study.

Despite some inherent uncertainties given by the fragmentation and incompleteness of some hoards in unclear conditions of discovery, the figures put together reveal, however, an impressive amount of Roman silver coinage north of the Danube in the two centuries before the Roman conquest of *Dacia*. It is beyond any doubt that with the 27,000 *denarii*, mostly republican and discovered in hoards, coming from about 600 places (Moisil & Depeyrot 2003; Părpăuţă 2006, 138 and 319-404), today's territory of Romania in pre-Roman times represents one of the largest destinations of Roman coins outside Italy (Lockyear 1996, 140, table 7.2). The significant amount of autochthonous imitations after Roman *denarii*, sometimes the copies being extremely difficult to differentiate from the original (Chiţescu 1981; Davis 2006), does not in any way diminish this predominant position in the influx of Roman *denarii* held by the north-Danube territory.

In this paper we will refer to a small segment of this huge quantity of Roman coins, namely to the hoards having the closing date in the times of Augustus. They count around 3,400 *denarii*, representing only 13 % of the around 25,500 *denarii* in all hoards of Roman coins north of the Danube before the Roman conquest. Two recent discoveries will be introduced to begin with.

In recent years, finds of coin hoards (and we limit ourselves only to this kind of discovery, given the topic of the paper) made with metal detectors by enthusiast treasure seekers, non-archaeologists, have constantly increased in Romania in the absence of a quite clear and applicable legislation regarding the use of this type of device in the field of archaeological heritage. The situation seems not to be unique, only in Romania, since also in other Eastern European countries massive discoveries of numismatic and archeological artifacts made with metal detectors still is a common practice.

**Dragoş Măndescu /**

**Ioan-Andi Piţigoi**

Argeş County Museum,

44 Armand Călinescu Street,

110047, Piteşti, Romania,

dragos\_mandescu@yahoo.

com / andi\_piti66@yahoo.com





Figure 1. The youngest coin (almost uncirculated) in the Roman *denarii* hoard from Furești (Argeș County Museum's coins collection).

Two such discoveries occurred recently in the hilly forested region of Argeș County, about 4 km away one from another (Valea Nenii, in 2019, and Furești, in 2020), attract attention. They are two monetary deposits of Roman republican *denarii* having the closing date in the times of Augustus, the latest issues being, in both cases, from 13 BC. Apparently, judging by the very good execution of the coins, we have no reason to consider the presence of *denarii* local imitations in either of the two hoards. Both detector findings, fortunately immediately handed over to the authorities, were followed shortly by archaeological surveys and some small-scale excavations that led to the recovery of the entire batches of coins and to the clarification of the contexts.

The hoard from Valea Nenii (Măndescu *et al.* 2020) clearly belonged to a pre-Roman Dacian settlement. Initially, the first batch of coins discovered with metal detector consisted of 15 *denarii*, found not together, not grouped, but spread over an area of 15x25 m. The deposit was probably being destroyed by the annual plowing on that place used today as an agricultural lot at the edge of the forest.

Our excavation on the findspot revealed the existence of a settlement with a single layer, located on an elongated terrace exposed to the sun, above a watercourse – certainly good living conditions in the Late Iron Age, as well as today. In the small test trench performed there, two archaeological features were highlighted: a dwelling with traces of arson and a pit next to it. The pottery found, mostly hand-modelled, is typical for the autochthonous settlements of the 1<sup>st</sup> century BC-1<sup>st</sup> century AD. Also, two other coins found in this survey and which certainly belonged to the deposit, raised the number of coins in the hoard to 17. The earliest coin is a republican *denarius* from Maenius Antiaticus from 132 BC, and the latest is a *denarius* from Augustus, issued in 13 BC. The coins are in a good state of preservation, traces of wear being more obvious on the older specimens. Except for one coin of Marcus Antonius struck in Athens, the rest of the coins are struck in Rome.

The other hoard, found the following year, in 2020, and at only 4 km north of the hoard (and the settlement) from Valea Nenii, has been discovered over an area of about 50m<sup>2</sup>, at a shallow depth of about 30 cm, on top of a wooded hill in the village of Furești (Măndescu & Pițigoi 2021). The initial lot found with the metal detector had 15 coins, and our subsequent excavations led to the recovery of another 10 coins. The hoard was therefore composed of 25 coins. The coins range from 120 BC to 13 BC. While some coins were fragmentary, others were in a very good state of preservation, with traces of low circulation or almost uncirculated. The last coin, from Augustus, almost uncirculated, belongs to a very rare type RIC Augustus 401 (fig. 1).

The archaeological survey that followed the discovery revealed no form of habitat in that place, no settlement, no fortification or any trace of this kind. But the area is furrowed by a row of ten barrows, typical of the Bronze Age funerary customs in this region, and another group of seven similar barrows is found in close proximity to the hoard's findspot. The alignment of these tumuli, their roughly linear arrangement on the forested hill's ridge, like many others similar prehistoric burial sites in the area, marks an old road, used by pastoral communities in the Bronze Age, perhaps even the junction of two routes that converge towards the point where the coins were found. It is not at all excluded that the monetary hoard can be connected to this road also used during the Late Iron Age and in the Roman era, and even to this day, on the route of the current forestry exploitation road. The batch of Roman *denarii* may have been lost on this road or perhaps hidden by its owner, a member of one of the Dacian communities existing in the area at the turn of the eras, who never recovered it.

The overall picture of the hoards having the closing date in the Augustan times found north of the Danube (Chițescu 1981; Preda 1998, 320; Moisil & Depeyrot 2003, 143-175; Părpăuță 2006, 137-146 and 319-405; Stan 2014) increases adding the two recently discovered ones. There are known currently more than 3,374 *denarii* grouped in 35 hoards. The hoards are scattered throughout the entire territory of present-day Romania (Preda 1998, fig. 22-25; Moisil & Depeyrot 2003, 23, map; Părpăuță 2006, plate 23-25), but the large concentration in the south of Moldova (fig. 2) is clearly visible (Mihailescu-Bîrliba 1990, 148-160; Munteanu *et al.* 2015, 37-28). Of the 35 hoards, 12 were discovered in settlements, so about a third, also containing about a third of the total number of *denarii*, namely 924 coins. The nucleus of the four hoards discovered in the same settlement, at Poiana, totaling over 400 coins (so almost half of the quantity of *denarii* in the hoards found in the settlements) was noted, which reinforces the great significance of the relations of this important settlement with the Roman world during



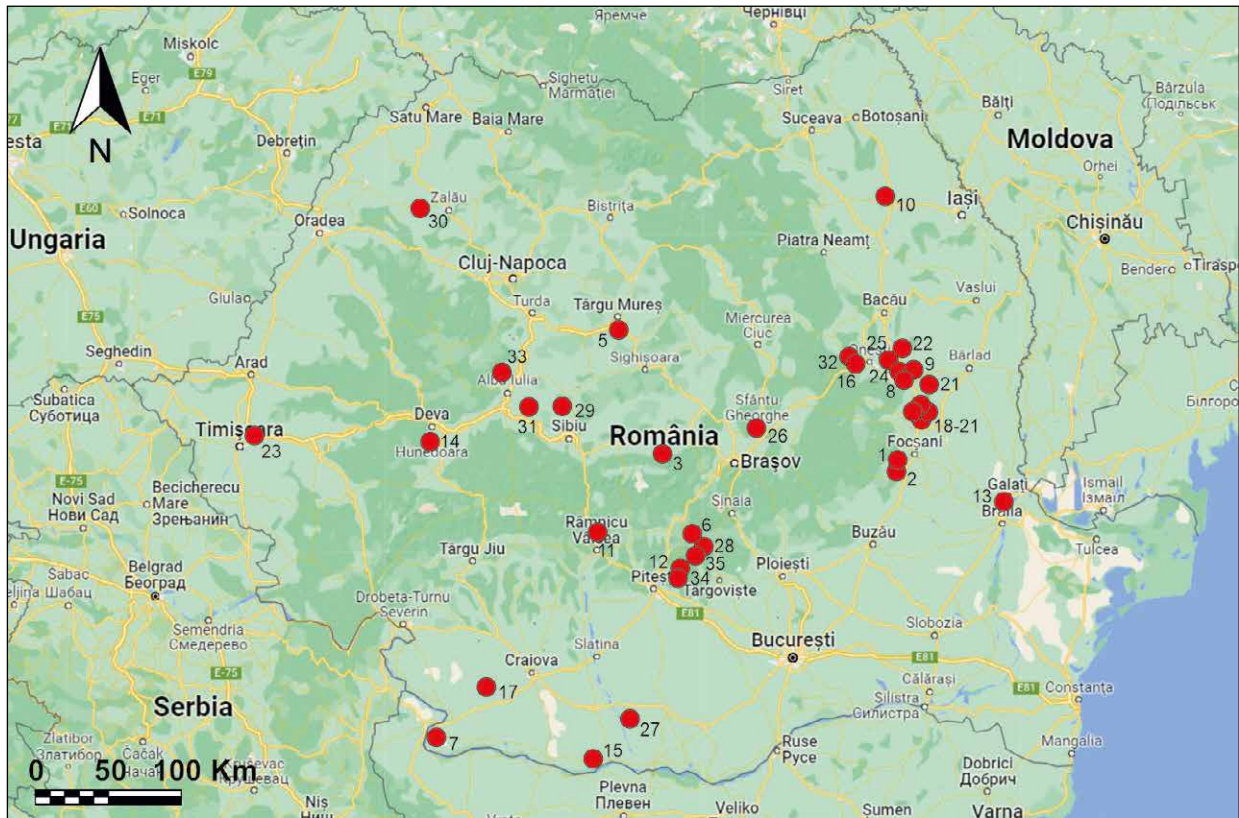


Figure 2. Map showing the distribution north of the Danube of the Roman *denarii* hoards ending with Augustan emissions.

1. Bonțești-Arva-Odobesti (58 *denarii*); 2. Bordești (44); 3. Breaza (132); 4. Buda (21); 5. Budiu Mic (145); 6. Cetățeni (127); 7. Ciupercenii Noi (161); 8. Conțești (147); 9. Cornii de Sus (113); 10. Cucuteni (11); 11. Dăești (100); 12. Furești (25); 13. Galați (368); 14. Hunedoara (16); 15. Orlea (5); 16. Pângărești (6); 17. Plopșor (60); 18. Poiana 1928 (152); 19. Poiana 1939 (23); 20. Poiana 1949 (35); 21. Poiana 1950 (194); 22. Răcățoi (71); 23. Remetea Mare (176); 24. Sascut (73); 25. Scurta (14); 26. Sfântu Gheorghe (61); 27. Sprâncenata (18); 28. Strâmba (250); 29. Șeica Mică (348); 30. Șimleu Silvaniei (50); 31. Șpring (50); 32. Târgu Ocna (15); 33. Tibru (194); 34. Valea Neniei (17); 35. Voinești (94).

the 1<sup>st</sup> century BC-1<sup>st</sup> century AD. These close relationships maintained by the local center of Poiana with the Romans is clearly expressed by plenty of imports revealed in the old excavations, such as personal adornments, brooches, coins, glassware, pottery, etc. (Spânu 2012, 164-174, fig. 2, 7; Popescu 2013, 200-202, map 12-14; Croitoru 2011, 90-121, cat. nos 1222-1637, fig. 47-65).

Chronologically, the peak given by the last coin in the hoards is recorded in the decade 19-10 BC, when over 60 % of the hoards end, followed by a new peak in 4 AD (fig. 3). The peaks will remain roughly the same if we look towards the quantity of coins in these hoards. More than half of the total number of coins (1853 coins, representing 55%) is divided between the group of hoards that close with coins issued in the period 13-10 BC (1403 coins, representing 42%), and the group of the mentioned second peak from 4 AD (450 coins, representing 13 %).

If we were to briefly compare this north-Danube statistic with the situation of monetary hoards ending

in the Augustan era found south of the Danube [understanding here Bulgaria (Paunov & Prokopov 2002; Paunov 2013, 332-344; 2021) and Dobrudja in Romania (Custurea & Talmațchi 2011)], where soon, in the first half of the 1<sup>st</sup> century AD, the provinces of *Moesia* and *Thracia* would be established, we would see a somewhat different overall picture (fig. 4). The amount of coins is roughly equal south of the Danube, but coming from significantly fewer hoards, at most 20 hoards south of the Danube compared to 35 north of the Danube. Large hoards were discovered south of the Danube, containing no less than 500 coins, such as Zverino and Aprilovo, and even 1000 coins, such as Mihaylovo, which is never found north of the Danube. However, medium and small hoards predominate north of the river, with no more than 150 coins, while south of the Danube they have a smaller share.

The nucleus of hoards ending with Augustan coins concentrated in the south of Moldova (almost 900 pieces,

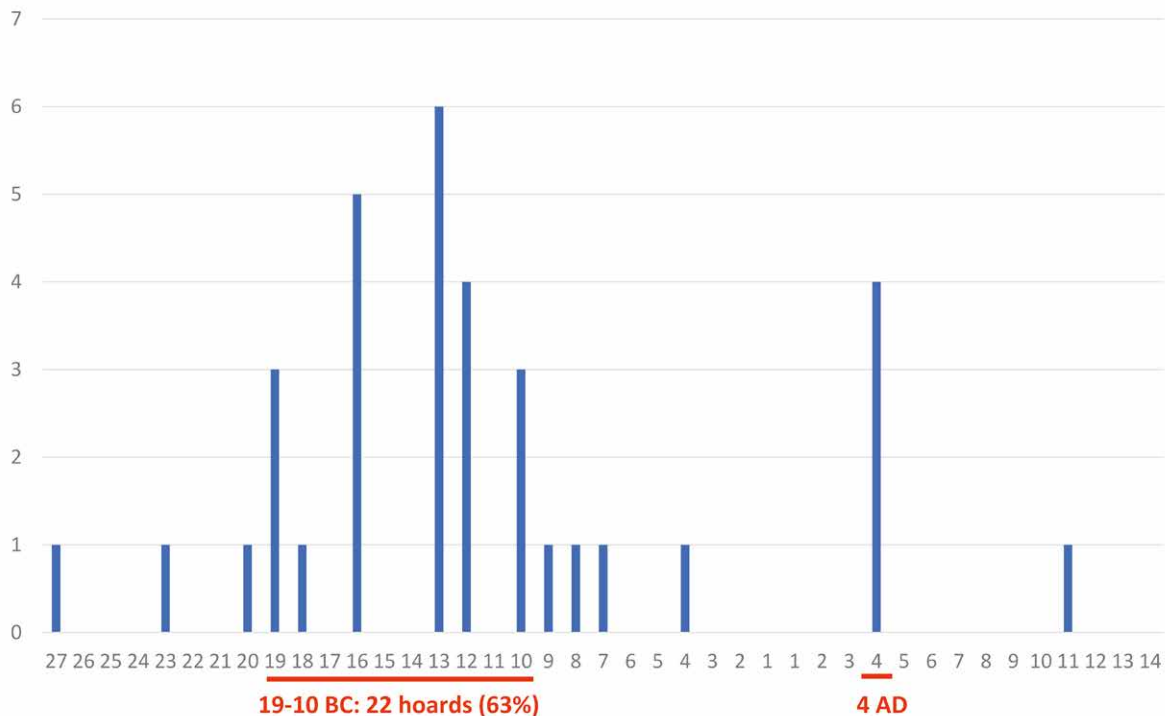


Figure 3. The hoards north of the Danube grouped according to the year of the last emission (Augustus). 27 BC: one hoard (Șeica Mică); 23 BC: one (Poiana 1949); 20 BC: one (Sascut); 19 BC: three (Dăești, Plopșor, and Strâmba); 18 BC: one (Cornii de Sus); 16 BC: five (Bordești, Scurta, Sprâncenata, Târgu Ocna, and Voinești); 13 BC: six (Furești, Cetățeni, Pârgărești, Poiana 1928, Sfântu Gheorghe, and Valea Nenii); 12 BC: four (Ciupercenii Noi, Conțești, Hunedoara, and Șpring); 10 BC: three (Poiana 1939, Poiana 1950, and Tibru); 9 BC: one (Remetea Mare); 8 BC: one (Răcățău); 7 BC: one (Breaza); 4 BC: one (Budiu Mic); 4 AD: four (Buda, Cucuteni, Galați, Șimleu Silvaniei); 11 AD: one (Bonțești-Arva-Odobești); unknown year: one (Orlea) – not figured.

grouped in 12 hoards, sometimes even more hoards in a locality, such as the four hoards from Poiana), were predominantly interpreted as an expression of the existing stipendiary relations between the Roman state and the local power centers of southern Moldova, represented by the autochthonous tribes on river Siret (Mihailescu-Bîrlița 1980, 42-43, 68-74 and 236-243; Mihailescu-Bîrlița 2011, 478 and 480, plate 1). Over time, the scholars' interpretations of this influx of Roman *denarii* north of the Danube have been diverse, from payments made in the slave trade (Crawford 1977) to the payment of mercenary services or even through the robberies periodically carried out by the Dacians south of the Danube (Chițescu 1971). Furthermore, as seen above, the date of the last coin in a great majority of the hoards (almost two thirds of them) falls in the period 19-10 BC (and mainly 13-10 BC). This remarkably fits with the invasion of the Dacians in the Pannonian area during the winter of 11/10 BC, followed by the campaign of punishment lead by Marcus Vinicius (or, according to different opinion, by Gnaeus Cornelius Lentulus Augur), in 10/9 BC (Benea 2015, 435-437; Visy 2015, 165-166; Colombo 2022, 383; for a little bit later chronology, namely in the period 9-6 BC Strobel 2004,

153-154; Nemeth 2017, 135; for some other even later dates, see a concise discussion at Lica 2000, 129-131). Similarly, the second chronological peak of the hoards (4 AD) coincides equally remarkably with the most likely year of the Roman campaign led by Sextus Aelius Catus north of the Danube (Petolescu 2010, 73-75), but again the very precise chronology of this military event is still disputed one (Lica 2000, 131).

The two newly discovered hoards introduced here, Valea Nenii and Furești, contribute to shaping a situation south of the Carpathians that is more and more similar to the one in southern Moldova. Firstly, the two deposits of Roman republican *denarii* found at Valea Nenii and Furești join three other similar discoveries in the proximity, on the river Dâmbovița valley, all of these ending with coins from Augustus, previously known: Cetățeni with 127 coins (Mitrea & Rosetti 1972; 1974), Strâmba with 250 coins (Mitrea 1958), and Voinești with 94 coins (Știrbu 1978, 90, no. 4).

The unitary nature of these monetary hoards is obvious, the five hoards merged on an area of less than 200 km<sup>2</sup> closing with issues from 16-9 BC. More than this, the hoards from Cetățeni, Valea Nenii and Furești end with Augustan coins issued in the same year, namely 13 BC

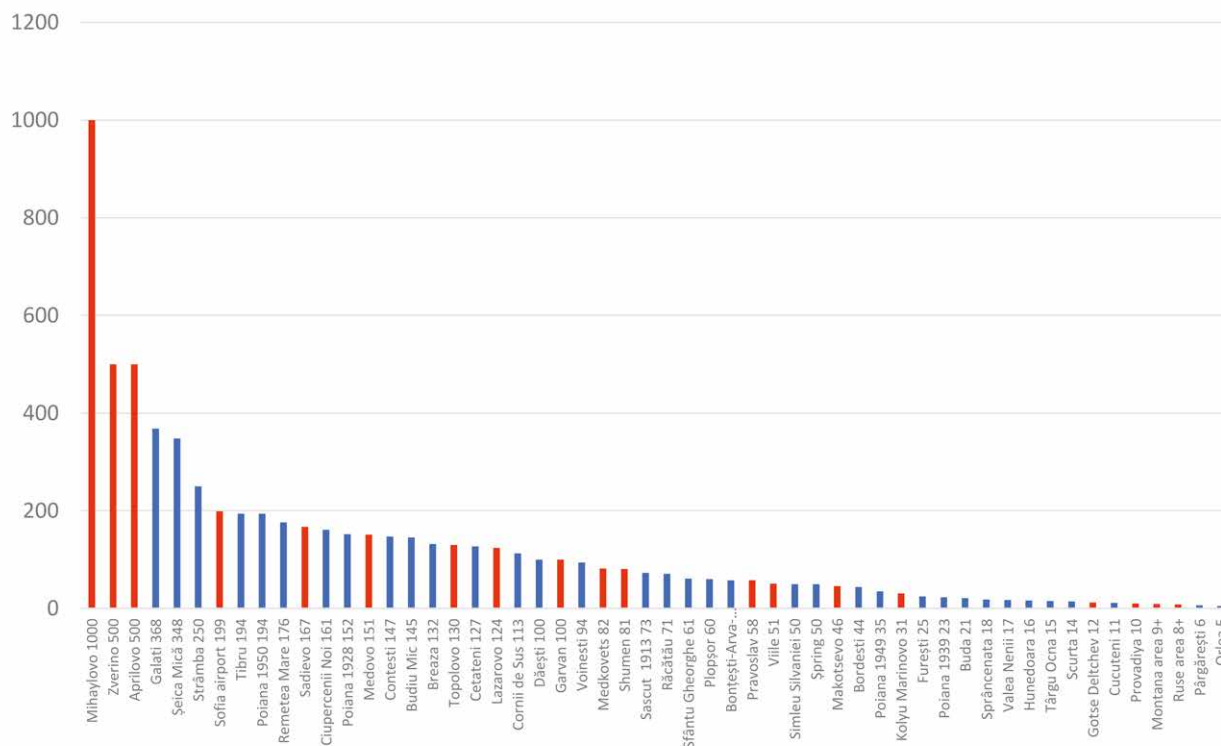


Figure 4. Roman *denarii* hoards ending with Augustan emissions north of the Danube (in blue) vs. south of the Danube (in red). In total 54 hoards containing more than 6,633 coins. The hoards north of the Danube were established following the confrontation and collation of (sometimes uneven and not consistent with each other) data from Chițescu 1981; Mihailescu-Bîrliaba 1990; 2011; Părpăuță 2006; Moisil & Depeyrot 2003; Munteanu *et al.* 2015; Preda 1998; Stan 2014. The result (at least 3374 coins in 35 hoards) is as follows: Galați (368 *denarii*), Șeica Mică (348), Strâmba (250), Tibru (194), Poiana 1950 (194), Remetea Mare (176), Ciupercenii Noi (161), Poiana 1928 (152), Conțești (147), Budiu Mic (145), Breaza (132), Cetățeni (127), Cornii de Sus (113), Dăești (100), Voinești (94), Sascut 1913 (73), Răcățiu (71), Sfântu Gheorghe (61), Plopsor (60), Bontesti-Arva-Odobesti (58), Șimleu Silvaniei (50), Spring (50), Bordești (44), Poiana 1949 (35), Furești (25), Poiana 1939 (23), Buda (21), Sprâncenata (18), Valea Nenii (17), Hunedoara (16), Târgu Ocna (15), Scurta (14), Cucuteni (11), Părgărești (6), Orlea (5). The hoards south of the Danube were counted considering Paunov 2013; 2021; Paunov & Prokopov 2002 for the territory of Bulgaria, and Custurea & Talmațchi 2011 for Romanian Dobrudja. The result (at least 3259 coins in 19 hoards) is as follows: Mihaylovo (1000 *denarii*), Zverino (500), Aprilovo (500), Sofia airport (199), Sadievo (167), Medovo (151), Topolovo (130), Lazarovo (124), Garvan (100), Medkovets (82), Shumen (81), Pravoslav (58), Ville (51), Makotsevo (46), Kolyu Marinovo (31), Gotse Deltchev (12), Provadiya (10), Montana area (9), Ruse area (8).

(Mitrea & Rosetti 1974, 32, no. 124, plate 6/124; Măndescu *et al.* 2020, 65, no. 17, plate. 4/17; Măndescu & Pițigoi 2021, 24, no. 25, plate 7/25). Even more, in two of these three cases (Cetățeni and Valea Nenii), the last coin belongs to the same Augustan issue minted by the magistrate Antistius Reginus (RIC 410, Sutherland 1984, plate 4, fig. 17). So, these monetary hoards close to each other both chronologically and territorially, seem to have had their origin in a common source and to have taken the path of the Dacian lands in the high hills of Muntenia under the same circumstances, probably as already formed lots (Preda 1998, 286, 295 and 320). If we consider that these batches of coins originate south of the Danube, then these unitary discoveries are able to attest a nucleus of Dacian communities in the South-Carpathian region being in close connectivity and

relationship with the Roman authority just installed on the south bank of the Lower Danube. And all these right in the wake of vigorous Roman military interventions north of the river that finally led to the cessation of Dacian centers of power from Muntenia (i.e. Popești, Tinosu, Zimnicea, Piscu Crăsani). The best example is the military campaign north of Danube led by Sextus Aelius Catus in the first years of the new era, concluded with the extinction of the local old power centers and the transfer of 50,000 *Getae* in *Moesia* (referred to as *ripa Thraciae*, Petolescu 2010, 73-75). As it happened in other places, as the Romans advanced towards the barbarian areas, not all indigenous communities adopted the same hostile attitude of 'blind opposition' as a block, unitary, but the interactions took on much more nuanced and complex forms (Dzino 2012; Visy 2015, 166).

However, regarding the quantity of coins, the situation of this nucleus of Augustan monetary hoards from the hills south of the Carpathians is far from that reflected by the much more numerous hoards from the south region of Moldova. This nucleus of five hoards from south of the Carpathians barely adds up to 513 coins, which is not enough to speak of a stipendiary relationship with Roman power. And this all the more since the hoard in the settlement of Cetățeni, one of the most prosperous of the pre-Roman Dacia, controlling an important route between the Lower Danube and the Carpathians on the river Dâmbovița valley (Măndescu 2006), is not necessarily grandiose, as we would have expected, counting only 127 coins (two silver local fibulae were also found together with the *denarii*). Also, the slightly over 500 coins accumulated in the five hoards hardly support the theory of the slave trade, a market where revenues should have been much higher (Scheidel 2005). Perhaps the presumption of the mercenary services (Chițescu 1971, 166) supplied by the Dacians from the Subcarpathian hills to the new military and political power that imposed itself more and more authoritatively south of the Danube might be a track worth exploiting.

Although it is difficult (if not impossible indeed) to reconstruct or at least to estimate the real monetary value of the mercenary services that the indigenous populations would make available to Rome in certain circumstances, we could recognize in these batches of *denarii* fractions of military stipendium. The most appropriate values to which such purely theoretical proportions should be reported for now remain the annual incomes of the auxiliaries. The three *stipendia* per year, counting in total between 750 and 900 *sestertii* (in the beginning of the Principate), or even a little more (Alston 1994, 119 and 122), that is c. 200 *denarii* per year, were the main pecuniary instrument through which the *miles*, respectively *eques cohortis*, were paid (Speidel 2009, 357, 359, 380, tables 3 and 7; Speidel 2014, 56, table 1). The constitutive defining element of these monetary lots, the *denarius* itself, is another important clue. Even if the military *stipendia* values were expressed in *sestertii*, the *denarius* was always maintained as the basic unit of military service payments (Speidel 2014, 55). Therefore, silver (and not bronze) always constituted, starting from the middle of the 2<sup>nd</sup> century BC (Wolters 2000/2001, 579-581 and 587), the 'raw material' that took the way of payments with which Rome rewarded its men-at-arms.

## Bibliography

- Alston, R., 1994: Roman military pay from Caesar to Diocletian, *Journal of Roman Studies* 84, 113-123.
- Benea, D., 2015: Augustus și organizarea provinciei Moesia. Unele observații privind teritoriile nord-dunărene, *Classica et Christiana* 10, 425-442.
- Chițescu, M., 1971: Câteva tezaure monetare romane din Moldova, *Carpica* 4, 159-166.
- Chițescu, M., 1981: *Numismatic aspects of the history of the Dacian State. The Roman republican coinage in Dacia and Geto-Dacian coins of Roman type*, Oxford (British Archaeological Reports International Series 112).
- Colombo, M., 2022: Marcus Vinicius, Gnaeus Cornelius Lentulus e i Daci. Una revisione della dottrina corrente, *Nuova Antologia Militare* 3/10, 359-401.
- Crawford, M., 1977: Republican denarii in Romania. The suppression of piracy and the slave trade, *Journal of Roman Studies* 67, 117-124.
- Croitoru, C., 2011: *Roman discoveries in the East Carpathian Barbaricum (1<sup>st</sup> century BC-5<sup>th</sup> century AD)*, Brăila (Bibliotheca Archaeologica Moldaviae XIV).
- Custurea, G. & G. Talmațchi, 2011: *Repertoriul tezaurelor monetare din Dobrogea*, Constanța.
- Davis, Ph., 2006: Dacian imitations of Roman Republican denarii, *Apulum* 43, 321-356.
- Dzino, D., 2012: Bellum Pannonicum. The Roman armies and indigenous communities in southern Pannonia 16-9 BC, in: M. Hauser, I. Feodorov, N.V. Sekunda & A.G. Dumitru (eds), *Actes du symposium international Le Livre. La Roumanie. L'Europe, 4<sup>ème</sup> édition, Bucarest, 20-23 Septembre 2011, Tome III, Troisième section (Latinité Orientale)*, București, 461-480.
- Lica, V., 2000: *The coming of Rome in the Dacian World*, Konstanz (Xenia 44).
- Lockyear, K., 1996: *Multivariate money. A statistical analysis of Roman Republican coin hoards with special reference to material from Romania*, London (PhD thesis University of London).
- Măndescu, D., 2006: *Cetățeni. Stațiunea geto-dacă de pe valea Dâmboviței superioare*, Brăila.
- Măndescu, D. & I.-A. Pițigoi, 2021: Tezaurul monetar de la Furești, județul Argeș, *Cercetări Numismatice* 27, 35-53.
- Măndescu, D., I.-A. Pițigoi, I. Dumitrescu & M. Păduraru, 2020: Tezaurul monetar de la Valea Neniei, județul Argeș, *Cercetări Numismatice* 26, 61-80.

- Mihailescu-Bîrlița, V., 1980: *La monnaie romaine chez les Daces orientaux*, București (Bibliotheca Historica Romaniae Monographies XXIII).
- Mihailescu-Bîrlița, V., 1990: *Dacia răsăriteană în secolele VI-I î.e.n. Economie și monedă*, Iași.
- Mihailescu-Bîrlița, V., 2011: New data concerning the hoard of roman denarii from Buda, in: I. Piso, V. Rusu-Bolindeț, R. Varga, S. Mustăț, E. Beu-Dachin & L. Ruscu (eds), *Scripta classica. Radu Ardevan sexagenario dedicata*, Cluj-Napoca, 475-480.
- Mitrea, B., 1958: Legături comerciale ale geto-dacilor din Muntenia cu Republica romană, reflectate în descoperiri monetare (Tezaurul de la Strâmba, r. Târgoviște), *Studii și Cercetări de Numismatică* 2, 123-238.
- Mitrea, B. & D.V. Rosetti, 1972: Un tezaur de denari romani republicani și imperiali de început descoperit la Cetațeni Muscel, *Studii și Comunicări. Muzeul Pitești* 4, 221-228.
- Mitrea, B. & D.V. Rosetti, 1974: Date noi cu privire la tezaurul de la Cetățeni, Muscel, *Studii și Cercetări de Istorie Veche și Arheologie* 25/1, 19-33.
- Moisil, D. & G. Depeyrot, 2003: *Les trésors de deniers antérieurs à Trajan en Roumanie*, Wetteren (Moneta 33).
- Munteanu, L., S.-P. Boțan & A.-E. Apostu, 2015: Some Roman coin finds from Southern Moldavia, *Studia Antiqua et Archaeologica* 21/1, 25-36.
- Nemeth, E., 2017: Augustus, Tiberius und die Daker, in: P. Kovács (ed.), *Tiberius in Illyricum. Contributions to the history of the Danubian provinces under Tiberius' reign (14-37 AD)*, Budapest/Debrecen (Hungarian Polis Studies 27), 133-138.
- Părpăuță, T., 2006: *Moneda în Dacia preromană (Secolele IV a.Chr.-I p.Chr.)*, Iași (Bibliotheca Archaeologica Moldaviae II).
- Paunov, E.I., 2013: *From koine to romanitas. The numismatic evidence for Roman expansion and settlement in Bulgaria in Antiquity (Moesia and Thrace, ca. 146 BC-AD 98/117)*, Cardiff (PhD thesis Cardiff University).
- Paunov, E.I., 2021: Early Roman coin hoards from Moesia inferior and Thrace (from Augustus to Hadrian), in: V. Varbanov & N. Rusev (eds), *Coin hoards in Southeastern Europe (1<sup>st</sup>-6<sup>th</sup> century AD). Proceedings of an International Symposium, 20-23 June 2019, Ruse, Bulgaria*, Ruse, 23-58.
- Paunov, E.I. & I.S. Prokopov, 2002: *An inventory of Roman Republican coin hoards and coins from Bulgaria (IRRCHBulg)*, Milano (Glaux 15).
- Petolescu, C.C., 2010: *Dacia. Un mileniu de istorie*, București.
- Popescu, M.-C., 2013: *Hellenistic and Roman pottery in pre-Roman Dacia (2<sup>nd</sup> c. BC-1<sup>st</sup> c. AD)*, București (Biblioteca Musei Napocensis XL).
- Preda, C., 1998: *Istoria monedei în Dacia preromană*, București (Biblioteca Băncii Naționale 25).
- Scheidel, W., 2005: Real slave prices and the relative cost of slave labor in the Greco-Roman world, *Ancient Society* 35, 1-17.
- Spănu, D., 2012: Zur Transformation der Bestattungssitten östlich der Karpaten im Kontext der römischen Eroberung Dakiens, *Prähistorische Zeitschrift* 87/1, 161-188.
- Speidel, M.A., 2009: *Roman army pay scales*, in: M.A. Speidel, *Heer und Herrschaft im Römischen Reich der Hohen Kaiserzeit*, Stuttgart (Mavros Roman Army Researches 16), 349-380.
- Speidel, M.A., 2014: Roman army pay scales revisited. Responses and answers, in: M. Reddé (ed.), *De l'or pour les braves! Soldes, armées et circulation monétaire dans le monde romain. Actes de la table ronde organisée par l'UMR 8210 (AnHiMa) à l'Institut national d'histoire de l'art (12-13 septembre 2013)*, Bordeaux (Scripta Antiqua 69), 53-62.
- Stan, M. G., 2014: The phenomenon of Roman Republican coinage in Pre-Roman Dacia. A reexamination of the evidence, *Journal of Ancient History and Archeology* 1/4, 44-67.
- Strobel, K., 2005: Dakien, der Donauraum und Rom. Ein spannungsreiches Wechselverhältnis, in: L. Ruscu, C. Ciongradi, R. Ardevan, C. Roman & C. Găzdac (eds), *Orbis Antiquus. Studia in honorem Ioannis Pisonis*, Cluj-Napoca (Bibliotheca Musei Napocensis XXI), 146-158.
- Știrbu, C., 1978: Noi tezaure monetare intrate în patrimoniul Muzeului de Istorie al R. S. România, *Cercetări Numismatice* 1, 89-92.
- Sutherland, C.H.V., 1984: *The Roman imperial coinage I. From 31 BC to AD 69*, London (revised edition).
- Visy, Zs., 2015: Noch einmal über die Feldzüge von Augustus im Karpatenbecken, *Acta Antiqua Academiae Scientiarum Hungaricae* 55, 155-166.
- Wolters, R., 2000/2001: Bronze, silver or gold? Coin finds and the pay of the Roman army, *Zephyrus* 53-54, 579-788.





# The development of a border zone in a desert environment

The example of *Tripolitania*

Michel Reddé

This paper, presented as part of a session devoted to the formation of Rome's early frontiers and their effects on the indigenous populations, is presented as an African counterpoint to our European experience. I will not draw on new fieldwork as the most important research was undertaken between 1978-1989 by the UNESCO Libyan Valleys Survey (ULVS). This was carried out by a British team and a French team, of which I was the deputy director, which gives me some legitimacy to revisit *Tripolitania*. Although, for the most part, it is the British research that has been published (Reddé 1988; Barker *et al.* 1996), our conclusions coincide. The current situation in Libya makes a return to the field unlikely in the foreseeable future and so further study may not be possible for a long time.

Let us begin by examining the geography, both physical and human, of this region, which extends from the Gulf of Gabes to the Gulf of Sirte (fig. 1). The isohyet map shows that only the coastal plain between Sabratha and the Leptis Magna region receives enough rainfall to allow Mediterranean-type agriculture without irrigation. This constraint excludes the whole of the central Gefara but there are also small coastal oases, such as the one in the region of Gabes (Tacape) which was celebrated by Plinius the Elder (*Historia Naturalis* 18.188) for its fertility. Outside this favoured area the semi-desert or desert landscape only allows for marginal agriculture, and only where water control is sufficient. This is particularly the case in the three large wadis explored by the ULVS, the Soffegin, the Zem Zem and the Kebir, where the improvement of the soil by hydraulic installations allowed the establishment of small agricultural or agro-pastoral holdings, the nature of which is examined below. In the region of Sirte, on the other hand, the low rainfall and the absence of any significant watercourses only allowed the coastal plain to be occupied. Here, the pre-desert reaches the sea. Further south, isolated oases such as Bu Ngem, Gheriat and *Ghadames* allow for occasional occupation and small-scale subsistence farming, but only around the waterholes. Outside of these places, there are immense areas of total desert such as the sandy erg or the stony hamada. Towards Tunisia, sectors such as Remada are already Saharan.

In terms of human geography, ancient sources allow us to locate the *Nasamones* in the centre of the Syrtes, towards the east, straddling *Tripolitania* and *Cyrenaica*, the

**Michel Reddé**

Paris Sciences et Lettres  
University/École pratique des  
Hautes Études,  
michel.reddé@ephe.psl.eu

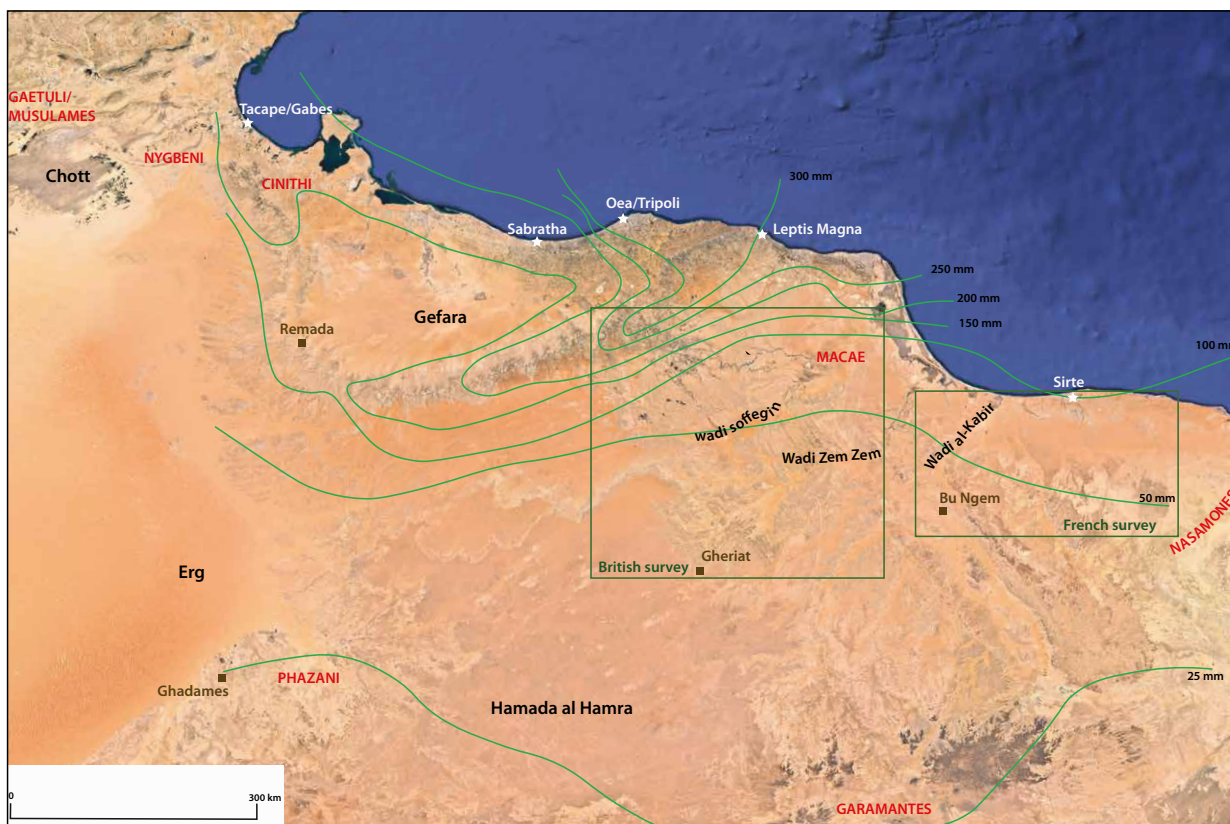


Figure 1. General map of the study area. Isohyets are shown in green (M. Reddé).

*Phazani*, to the south-west, in the region of *Ghadames*, the *Macae*, in the region of the great wadis, to the south of *Leptis Magna*, and the *Garamantes* further inland. The latter constitute the great Saharan power of this vast region and their relations with Rome, sometimes hostile, sometimes peaceful, are one of the keys to its history. But this history, according to our sources, is also linked to the name of the *Gaetuli*, a group of peoples that inhabited the southern regions of proconsular Africa, as far west as the Tell. It could be a generic name for several *gentes*, of which the *Musulames* are the best known because of the revolt of Tacfarinas (Desanges 1962; Mattingly 1995; 2023).

### The historical framework of the Roman occupation

The three Punic trading cities on the coast (*Sabratha*, *Oea* and *Leptis Magna*) were incorporated into the Empire after the civil war between Caesar and Pompey though precisely when remains unclear. The first Roman military expedition towards the Great Sahara was that of Cornelius Balbus against the *Garamantes*, in 20 BC (Desanges 1957). It was not a real attempt at conquest, but an armed *exploratio*, which set out from *Sabratha* to reach *Garama*, via *Ghadames*. It earned Balbus the last triumph granted to a senator who was not a member of the imperial family

which he celebrated in 19 BC. This campaign was not followed by an occupation or the installation of garrisons in *Tripolitania* itself. During the conflicts, rather poorly documented by textual sources, which pitted the Empire against the *Gaetuli* in the years 3 BC-6 AD (Cassius Dio *Historia Romana* 55.28; Florus *Epitome* 2.31; Velleius Paterculus *Historia Romana* 2.6; Guéron 2018, 61-65), the region of *Leptis Magna* was affected, as testified by an inscription in honour of consul Cossus Lentulus. Nevertheless, there is no archaeological evidence for the installation of a garrison following these conflicts. This does not seem to have been the case either during the construction of the road between *Ammaedara* (Haidra, in the Tunisian south, seat of *Legio III Augusta*) and *Tacape* (Gabes) early in the reign of Tiberius as attested by milestones (CIL VIII.10018 and 10023; AÉ 1905, 177). This operation has often been considered as a *limitatio* imposed on the movements of the southern Tunisian tribes, reputedly nomadic, a policy that could have caused the revolt of Tacfarinas under Tiberius (Mattingly 1995, 70-71). This interpretation is not, however, certain, as Stéphanie Guéron (2018, 73) has shown, and it is part of a very traditional historiographical vision of Roman politics in Africa, that opposes sedentary and nomadic people. However, we should not forget the request of the

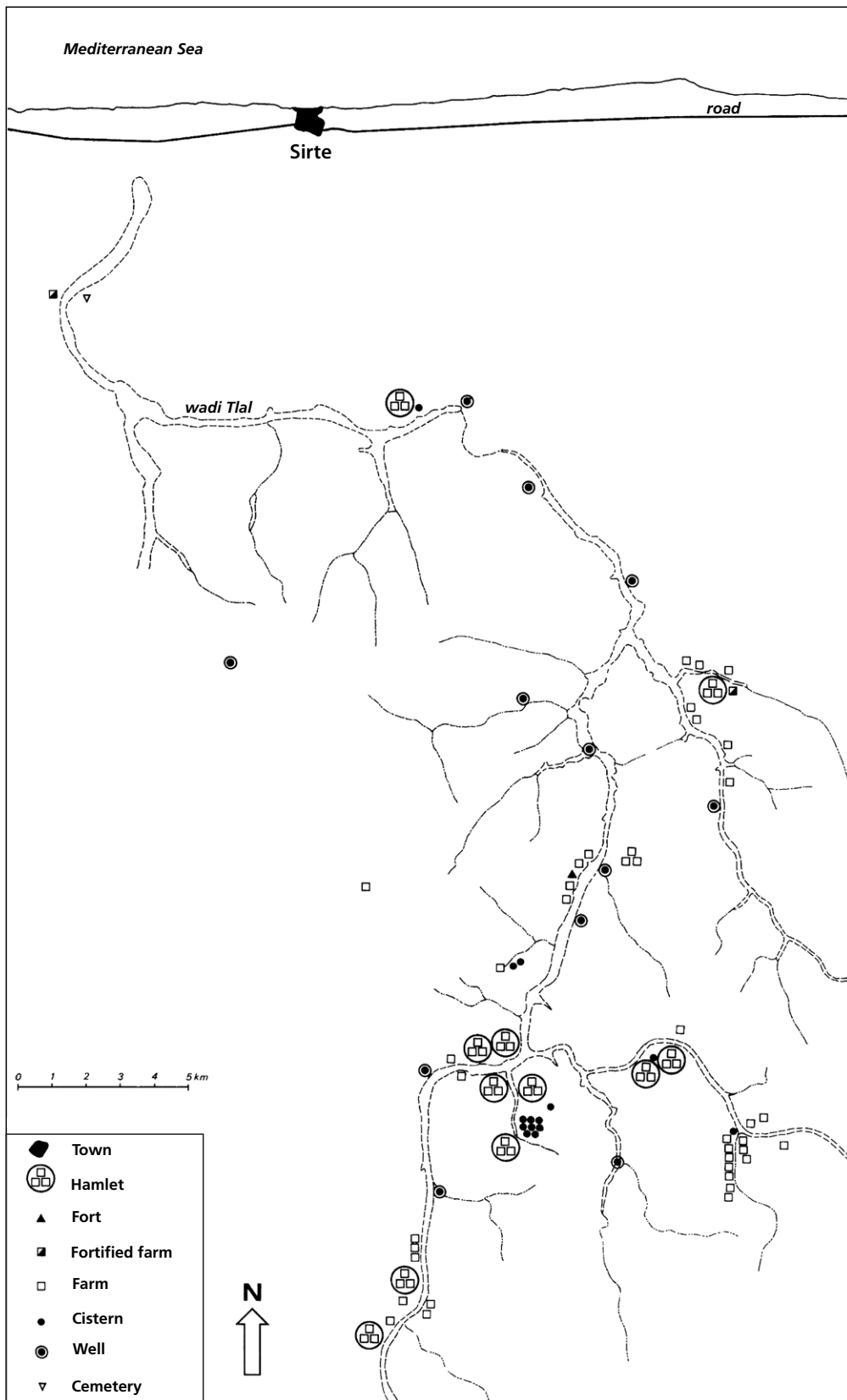


Figure 2. Map of human occupation in Wadi Tlal (M. Reddé).

ambassadors sent by the *Musulames* to Tiberius to ask for peace at the same time as a *concessio agrorum*, in the words of Tacitus, which still implies, if we follow the Latin text, that Roman policy in these regions was encroaching on the tribes' territory. In any case, the *Leptis Magna* region was seriously threatened, as two inscriptions (AÉ 1961, 107-108) and Tacitus' (*Annales* 3.74) testify. It was after this uprising that a major survey of the *Nybgeni* lands south of the Chott el-Fejaj took place, the markers of which were laid down between 29 and 30 AD (Troussset 1978; 1997). It should be noted, however, that no colonial settlement, no occupation of the land is attested in this arid steppe sector, neither by epigraphy nor by archaeology. It may therefore only be a typically Roman operation of control and delimitation of tribal territories, on the southern borders of this part of Africa.

A new uprising of the *Musulames* and *Mauri*, attested under Claudius seems to have affected more western regions rather than inland *Tripolitania* proper (Cassius Dio *Historia Romana* 60.9; Aurelius Victor *Epitome de Caesaribus* 4.4; *Liber de Caesaribus* 4.2). But the years 69-70 saw another incursion against *Leptis Magna* by the *Garamantes* at the request of the inhabitants of Tripoli (*Oea*), during a territorial dispute between the two cities. It required the intervention of *Legio III Augusta*, still based at that time in Haidra, to repel the *Garamantes* (Tacitus *Historiae* 4.50.4). This episode shows once more, in my opinion, the absence of local garrisons in the whole area. The legate Valerius Festus led an expedition into the heart of the *Garamantes* country, which from then on maintained peaceful relations with the Empire (Plinius the Elder *Historia Naturalis* 5.38).

The last major military operation in this region followed the revolt of the *Nasamones* in the early 80's AD. The reason for this was probably taxation, according to a passage in Zonaras (*Annales* 11.19). The repression, apparently violent, was led by Cn. Suellius Flaccus, who came once more with the Third Legion Augustan from *Theveste* (Tebessa), in 86-87. A territorial demarcation operation carried out by the same legate in 87 (IRT 854), concerned tribes that David Mattingly convincingly interprets as subsets of the *Macae*, around the city of Sirte (Mattingly 1995, 32).

During the period of over a century that saw Roman authority established in *Tripolitania*, from the expedition of Cornelius Balbus to the *Nasamones* revolt, military operations against the Saharan populations were frequent. But, if we are to believe our sources, both epigraphic and textual, they always seem to have been conducted from the *hiberna* of the Third Legion Augusta, located between 700 and 1000 km to the north-west, a considerable distance. In addition, we have no archaeological evidence of military bases in the entire region at that time, neither in the present-day southern Tunisia nor in inner

*Tripolitania*. It is possible, of course, that some have escaped the attention of archaeologists, especially in cities such as *Leptis Magna* but this is probably not the most likely hypothesis, given the intensity of ancient research in this region and the number of inscriptions. This Saharan frontier does not, therefore, seem to have been translated into the physical establishment of fortifications.

## Land use

We must now examine the forms of land settlement beyond the fertile territory of the three Tripolitan trading cities, which was the mission of the ULVS. The survey area of the British team was centred on the Soffegin and Zem Zem basins, that of the French team on the Wadi Bayy al-Kabir and the small coastal wadis around Sirte. The main difficulty encountered was how to date from surface collection only and without extensive excavation the numerous ruins that are dotted across this region. Another difficulty lies in locating the archaeological remains in the coastal plain around Sirte, where the sites are often masked by a grassy steppe vegetation, whereas they are easily spotted in the inland valleys, where vegetation is largely absent.

The first point that can be highlighted is the absence of stone-built 'villa' type settlements outside of a coastal zone that does not exceed a few kilometres when approaching the coast and in the sector explored by the British team south of *Leptis Magna*, up to the Zem Zem basin. Around Sirte the French team was able to identify some agricultural settlements whose architecture clearly evokes Mediterranean influences, in particular porticoed buildings centred around a courtyard with a series of annexes, as at ar-Rumiyah. The mausoleums that accompany these small villas are ashlar towers with a neat white mortar core. The presence of a clearly visible oil press in one of these farms, leaves little doubt as to the agricultural economy of this sector, limited to the coastal strip, which was only just sufficiently watered to allow the cultivation of olive trees. The pottery, which is not very abundant on the surface, suggests that cultivation took place towards the end of the 1<sup>st</sup> century AD.

Inland, south of Sirte, the situation is very different. Most of the settlements are situated on the slopes of the different wadis, most often grouped in hamlets around underground cisterns that were supplied by the channeling of run-off water by impluvium effect, as is the case, for example, at Majin Ali Lubaz, in the wadi Tlal (fig. 2 and 3). The courses of the wadis were controlled by lateral dry stone bunds that probably formed terraces, and by small dams at the bottom of the watercourse, to trap silt and water. The farmsteads are of a very different type from the previous ones. For the most part, they are dry-stone buildings centred around a courtyard (an 'open farm' in the British ULVS typology) which exploited the water

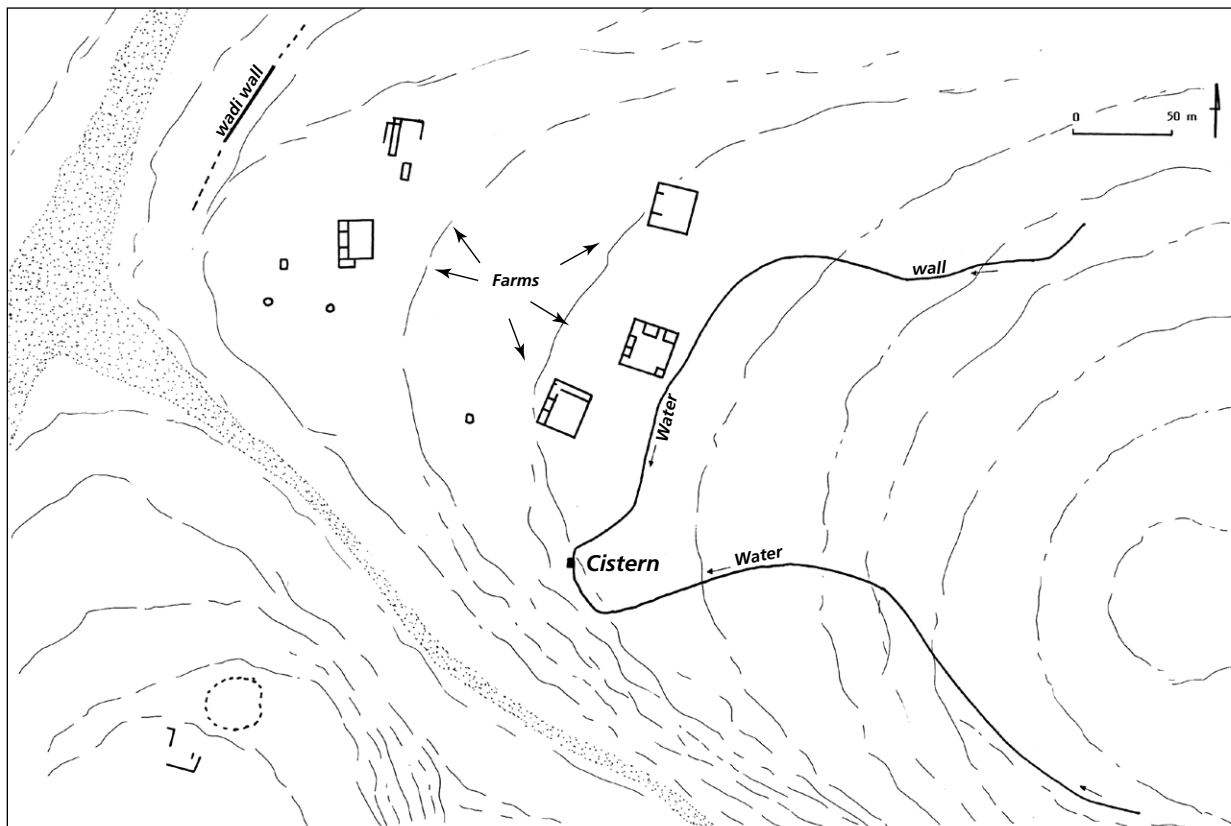


Figure 3. The hamlet of Majin Ali Lubaz in Wadi Tlal. Note the presence of long dry stone bunds leading runoff water to an underground cistern (M. Reddé).

resources of arid valleys (fig. 4). These farmsteads yielded Italic or Gaulish *sigillata*, but only in small quantities, and later African Red Slip Ware. During this early period, no fortified settlements were found.

In the Soffegin and Zem Zem basins, which were explored by the British team, and where rainfall is slightly more abundant, the same systems are found. The use of stone harps (*opus Africanum*) in masonry constructions is a characteristic and widespread building technique in North Africa during the Roman period (Barker *et al.* 1996, fig. 6.3). Mausoleums, the best known of which are those at Ghirza (Barker *et al.* 1996 fig. 6.13), are much more common here than in the plain or the small coastal wadis near Sirte. There are also a significant number of olive presses in the region (Barker *et al.* 1996, fig. 6.10) but it cannot be said that this was a large-scale and profit-oriented agriculture without more archaeological studies that allow a precise evaluation of production. Furthermore, the chronological evolution of these settlements is poorly known. The 'open farmsteads' type coexists with the *opus africanum* type. The British surveys also documented very well the role and importance of the bunds installed by the desert populations to channel water and retain silt (fig. 5). Overall, there is a decreasing

development gradient from north-west to south-east which undoubtedly corresponds to that of rainfall and water resources.

### Which scenario?

The archaeological evidence of a great abundance of rural settlements in these semi-arid or arid areas has revolutionised our vision of the Roman conquest in Libya, but unfortunately it has not led to other research of the same nature in the various countries of North Africa. To date, our reflection on the evolution of the relations between the Empire and the populations of the Roman frontier in these semi-desert regions is therefore based mainly on this one project. Similar research in southern Tunisia or on the southern flank of the Algerian Atlas, in the Negrine region, would therefore be essential to confirm or, on the contrary, qualify our assessment.

The usual conclusion deriving from the ULVS surveys is based on the idea that the inhabitants of the Tripolitan pre-desert settled in the Flavian period, following the great military campaigns conducted against the *Getuli*, *Garamantes* and *Nasamones* throughout the 1<sup>st</sup> century AD. They did so, it seems, outside of any territorial advance marked by a physically discernible frontier and outside

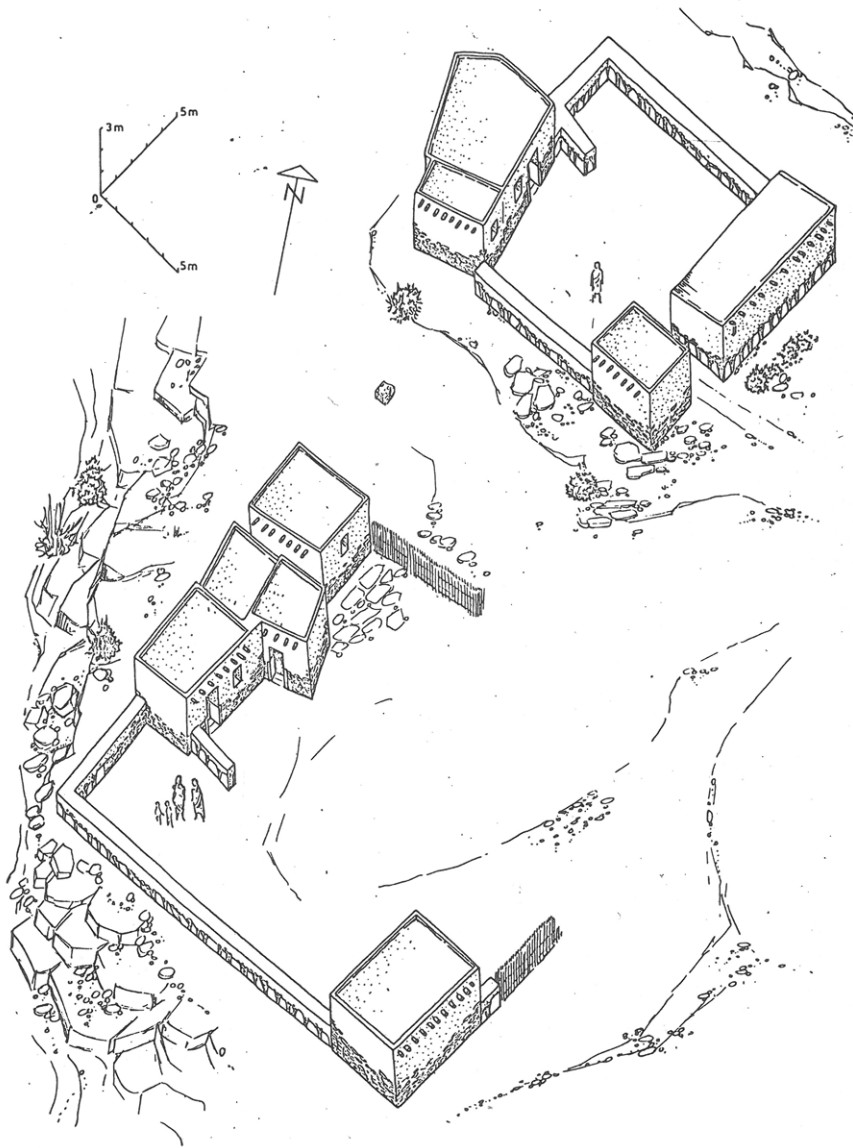


Figure 4. Architectural reconstruction of a farm in Wadi Bayy al-Kabir (after Rebuffat 1988).

of any nearby military presence. The existence of 'open farmsteads' in these valleys obviously does not reveal the presence of Mediterranean 'settlers' who came to occupy new lands to produce oil for the *annona*, but rather an agriculture of the desert margins, which was probably random and fragile, undoubtedly accompanied by a pastoral or semi-pastoral lifestyle. The general peace would therefore have led by itself to the sedentarisation of the Tripolitanian tribes, which European historians cannot imagine as anything other than nomadic before this period (Rebuffat 1982). It was much later, a century or a century and a half after the beginning of this development of the pre-desert territories, that the Roman army settled at the southern limit of the exploitable agricultural zone, with the construction, under Septimius Severus, of the forts of Bu Ngem and

Gheriat, and probably also of another one at *Ghadames* although no evidence for that has yet been found. We are therefore quite far from the traditional historical scenario of African archaeology, which is focused on the opposition between sedentary farmers protected by the army and hostile nomads. In the current state of knowledge, nothing is likely to upset this interpretation and it is clear that this is a model of relations between the conquering power of Rome and the outside peoples that is very different from the one that can be understood on European frontiers.

Nevertheless, we cannot fail to ask ourselves some questions. The research carried out by David Mattingly in the Fezzan, after that of the ULVS, has clearly shown that the populations of these Saharan regions were perfectly capable of developing an efficient agriculture



## WADI MANSUR, TRIPOLITANIA

SHOWING MAJOR ARCHAEOLOGICAL & GEOMORPHOLOGICAL FEATURES

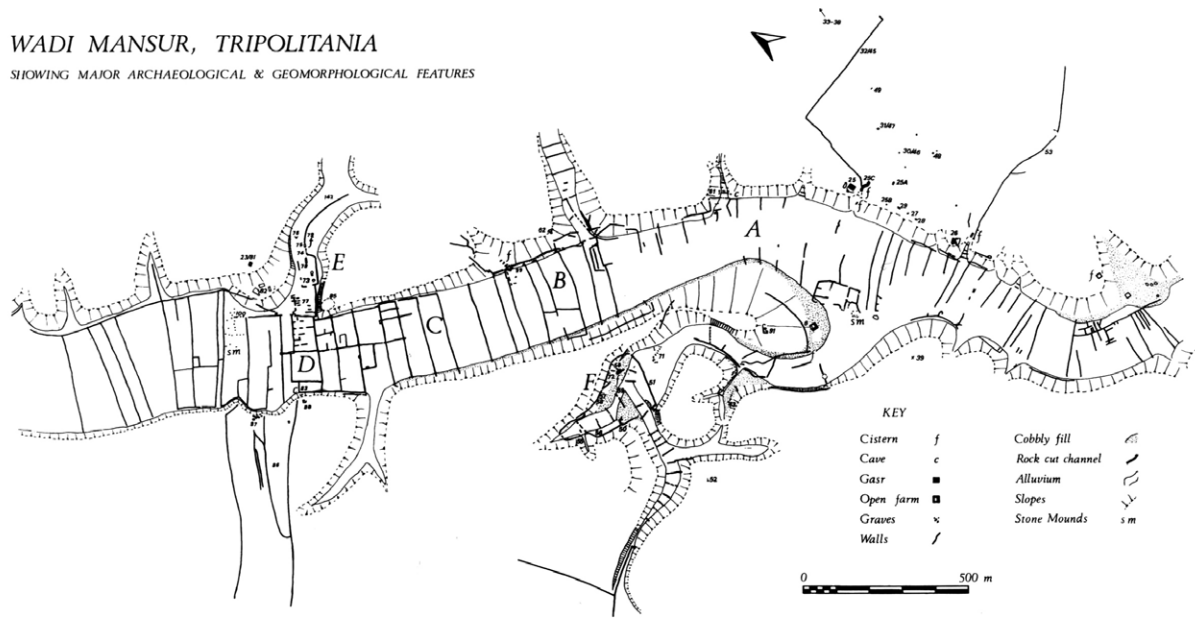


Figure 5. Agricultural systems and settlement in Wadi Mansur (after Mattingly 1995, fig. 7.10).

that was well adapted to the ecology of these desert areas, well before the Roman period and then after it. The excavations also reveal the presence of Mediterranean pottery in these regions from the Flavian period onwards. This is clearly evidence of the political and probably also commercial contacts that the Empire had with these regions beyond its direct sphere of influence, but it is not these contacts that are at the origin of a local agricultural economy based on the mastery of water as its techniques are obviously not Roman (Mattingly 2003; 2023). Under these conditions, one must ask oneself if our vision of a sedentarisation of the tribes of *Tripolitania* in the Flavian period is not also a figment of our imagination. Nothing, in fact, definitively dates the first rural settlements in these regions to the end of the 1<sup>st</sup> century AD, except the absence of Campanian ware and some of them might well be earlier. Indeed, it seems unlikely that the invention of a water control system such as the one we identified was the product of a rapid and spontaneous discovery that we have long attributed to Roman peace and techniques when it had been known for centuries in the East and elsewhere (Reddé 2012). The presence of Roman pottery on the surface of these Tripolitan wadi farms therefore proves nothing other than that they existed at the same time. Only new and more thorough research would allow progress to be made. Despite the importance of the research carried out by the ULVS and the scientific renewal brought about by these missions, many questions continue to be asked about the relations between the Roman world and the populations located on its periphery.

## Abbreviations

AE: *L'Année Épigraphique*

CIL: *Corpus Inscriptionum Latinarum*

IRT: *Inscriptions of Roman Tripolitania*

## Bibliography

- Barker, G., D. Gilbertson, B. Jones & D. Mattingly, 1996: *Farming the desert. The Unesco Libyan Valleys Archaeological Survey*, Paris/Tripoli/London.
- Desanges, J., 1957: Le triomphe de Cornelius Balbus (19 a.C.), *Revue africaine* 101, 5-43.
- Desanges, J., 1962: *Catalogue des tribus africaines de l'Antiquité classique à l'ouest du Nil*, Dakar.
- Guédon, St., 2018: *La frontière romaine de l'Africa sous le Haut-Empire*, Madrid.
- Mattingly, D., 1995: *Tripolitania*, London.
- Mattingly, D., 2003: *The archaeology of Fazzan I. Historical synthesis*, London/Tripoli.
- Mattingly, D., 2023: *Between Sahara & Sea. Africa in the Roman Empire*, Ann Arbor, Michigan.
- Rebuffat, R., 1982: Recherches dans le désert de Libye, *Comptes Rendus des Séances de l'Académie des Inscriptions et Belles-Lettres* 126/2, 188-199.
- Rebuffat, R., 1988: Les fermiers du désert, *L'Africa romana* 5, 33-68.
- Reddé, M., 1988: *Prospection des vallées du nord de la Libye (1979-1980). La région de Syrte à l'époque romaine*, Paris (Cahiers du groupe de recherches sur l'armée romaine et les provinces IV).

- Reddé, M., 2012: Entre Afrique et Égypte. Les installations hydrauliques dans le désert et le prédésert à l'époque romaine, in: S. Guéron (ed.), *Entre Afrique et Égypte. Relations et échanges entre les espaces au sud de la Méditerranée à l'époque romaine*, Bordeaux, 145-156.
- Trousset, P., 1978: Les bornes du bled Segui. Nouveaux aperçus sur la centuriation romaine du Sud tunisien, *Antiquités africaines* 12, 125-177.
- Trousset, P., 1997: Un nouveau document sur la limitatio de C. Vibius Marsus (Sud tunisien), in: W. Groenman-van Waateringe, B.L. van Beek, W.J.H. Willems & S.I. Wynia (eds), *Roman Frontier Studies 1995. Proceedings of the XVI<sup>th</sup> International Congress of Roman Frontier Studies*, Oxford (Oxbow Monographs 91), 3-11.

# Indigene und exogene Bevölkerungsgruppen im Alpenvorland und die Organisation der Provinz *Raetia et Vindelicia* während des 1. Jahrhunderts nach Chr.

Bernd Steidl

Mit der Okkupation des mittleren Alpenraums durch die kaiserlichen Stiefsöhne Drusus und Tiberius im Sommer 15 vor Chr. tritt die autochthone Bevölkerung dieser Region bis zur Donau erstmals in das Licht der schriftlichen Überlieferung. Am vollständigsten erscheinen die zahlreichen Stämme in einer Aufzählung der unterworfenen Völkerschaften des Alpenbogens auf der Inschrift des *tropaeum Alpium* bei La Turbie, des vom Senat für Augustus errichteten Siegesdenkmals aus den Jahren 7/6 vor Chr. (Dietz 2004). Der kulturellen Zweiteilung des eroberten Gebietes entsprechend, führte die nach der Annexion neu geschaffene Provinz den Namen *Raetia et Vindelicia*. Erst seit der Mitte des 1. Jahrhunderts wurde die Bezeichnung zu *Raetia* verkürzt. Die zumindest sprachlich mit den Etruskern verwandten *Raeti* bewohnten den inneralpinen Raum, während die keltischstämmigen *Vindelici* und einige andere Gruppen im Alpenvorland zu lokalisieren sind. Es wird uns hier in erster Linie letztgenannter Raum zwischen Alpenrand und Donau interessieren.

**Bernd Steidl**  
Archäologische  
Staatssammlung,  
Lerchenfeldstraße 2,  
80538 München, Bernd.  
Steidl@archaeologie.bayern

## Archäologische Kontinuitätslücke und die frühkaiserzeitliche Heimstettener Gruppe

Archäologisch betrachtet ist die Überlieferungslage für die Lokalbevölkerung der Okkupationszeit sehr schütter. Während sich die Fundsituation im Alpenraum und am unmittelbaren Nordfuß der Gebirgsregion in den vergangenen 25 Jahren erheblich verbessert hat (Zanier 1999; 2016; 2017, 215-222; 2019), sind zwischen Alpenrand und Donau kaum Nachweise vorhanden. Aufgrund der weitgehenden Fundlücke zwischen dem Zusammen-

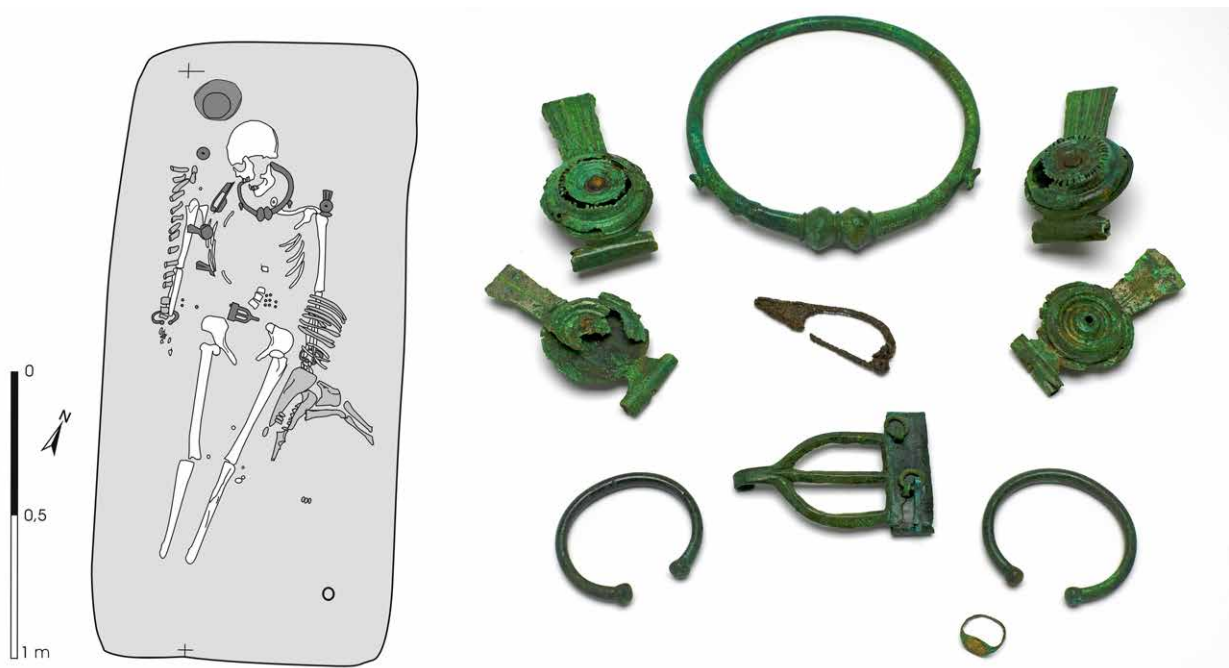


Abbildung 1. Grablagebefund und Inventar des Frauengrabes 8250 von Heimstetten, Lkr. München.

brechen der keltischen Oppidakultur um 80/70 vor Chr. (Steidl in Vorbereitung) und der meist erst um die Mitte des ersten nachchristlichen Jahrhunderts fassbaren kaiserzeitlicher Besiedlung, geht ein bedeutender Teil der Fachwissenschaft noch immer von einer weitgehenden Entvölkerung des Alpenvorlandes in dieser Zeit aus (siehe Steidl 2019, 317, Anmerkung 3).

Vorstellungen von großräumiger Bevölkerungsleere sind ein immer wieder in der archäologischen Forschung vertretenes Postulat, das aber geradezu topischen Charakter trägt und deshalb grundsätzlich in Frage gestellt werden sollte. Für den hier betrachteten Raum gilt das umso mehr, als er im Schnittpunkt zentraler europäischer Verkehrsachsen gelegen ist: Den Routen aus dem Süden über die gut gangbaren mittleren Alpenpässe nach Norden sowie in West-Ost-Richtung mit der Donau als Leit- und Verbindungslinie zwischen West- und (Süd)Osteuropa.

In einem DFG-geförderten Projekt konnte in den vergangenen Jahren die Frage der Bevölkerungskontinuität auf breiter Grundlage archäologisch und naturwissenschaftlich untersucht werden (Peters *et al.* 2017, 49-74). Die inzwischen erzielten Ergebnisse widerlegen im Einklang mit der antiken Überlieferung die Annahme eines Siedlungsabbruchs und zeigen zahlreiche Traditionslinien auf, welche die Siedlungs- und Lebensweise der Lokalbevölkerung von der Spätlatène- bis in die Kaiserzeit hinein kennzeichnen (Steidl 2019).

Schon lange spielt in der Diskussion um die Frage einer einheimischen Bevölkerung die so genannte 'raetische Skelettgräbergruppe' eine wichtige Rolle, von Erwin Keller

als 'Heimstettener Gruppe' benannt (Keller 1984). Etwa zwei Generationen nach dem Alpenfeldzug lässt sich mit den markanten Körpergräbern eine unrömisch erscheinende ländliche Bevölkerung fassen, die durch zahlreiche Auffälligkeiten gekennzeichnet ist. Weit überwiegend handelt es sich um Bestattungen von erwachsenen Frauen. Nur knapp ein Viertel sind Gräber erwachsener Männer. Die Frauen besitzen eine eigenwillige und sehr uniform wirkende Trachtausstattung, zu der regelhaft ein breiter, ganzflächig mit Buckelnieten besetzter und mit einem großen Sprossenhaken verschlossener Gürtel gehört, ferner steht ein Paar gegossener Armringe (Abb. 1). Mehrmals treten dazu schwere, gegossene Halsringe, die sich an keltischen Vorbildern orientieren sowie Ketten mit Bernstein- oder Glasperlen. Als Gewandverschlüsse dienten vier bis fünf Fibeln, zumeist übergroße Exemplare lokaler Formen, aber auch gallische Typen, daneben vereinzelt Aucissa- und Augenfibeln.

Insgesamt sind die Menge und das hohe Metallgewicht des Schmucks hervorzuheben. Markant erscheinen ferner die üppigen Speisebeigaben in Form meist mehrerer und großer Körperpartien vom Schwein, nur selten von anderen Tieren (Trixl 2019, 307-308). Geschirr aus Keramik oder Metall erscheint nur vergleichsweise selten in den Gräbern. Doch gibt es Hinweise auf hölzerne Gefäße bzw. Fleischplatten. In den Ausstattungsbestandteilen der Toten mischen sich keltische und alpin-raetische Elemente. Zu letzteren gehören die charakteristischen Messer, die wohl am Körper getragen wurden und in der Tradition der Griffplattenmesser der Fritzens-Sanzeno-Kultur stehen.

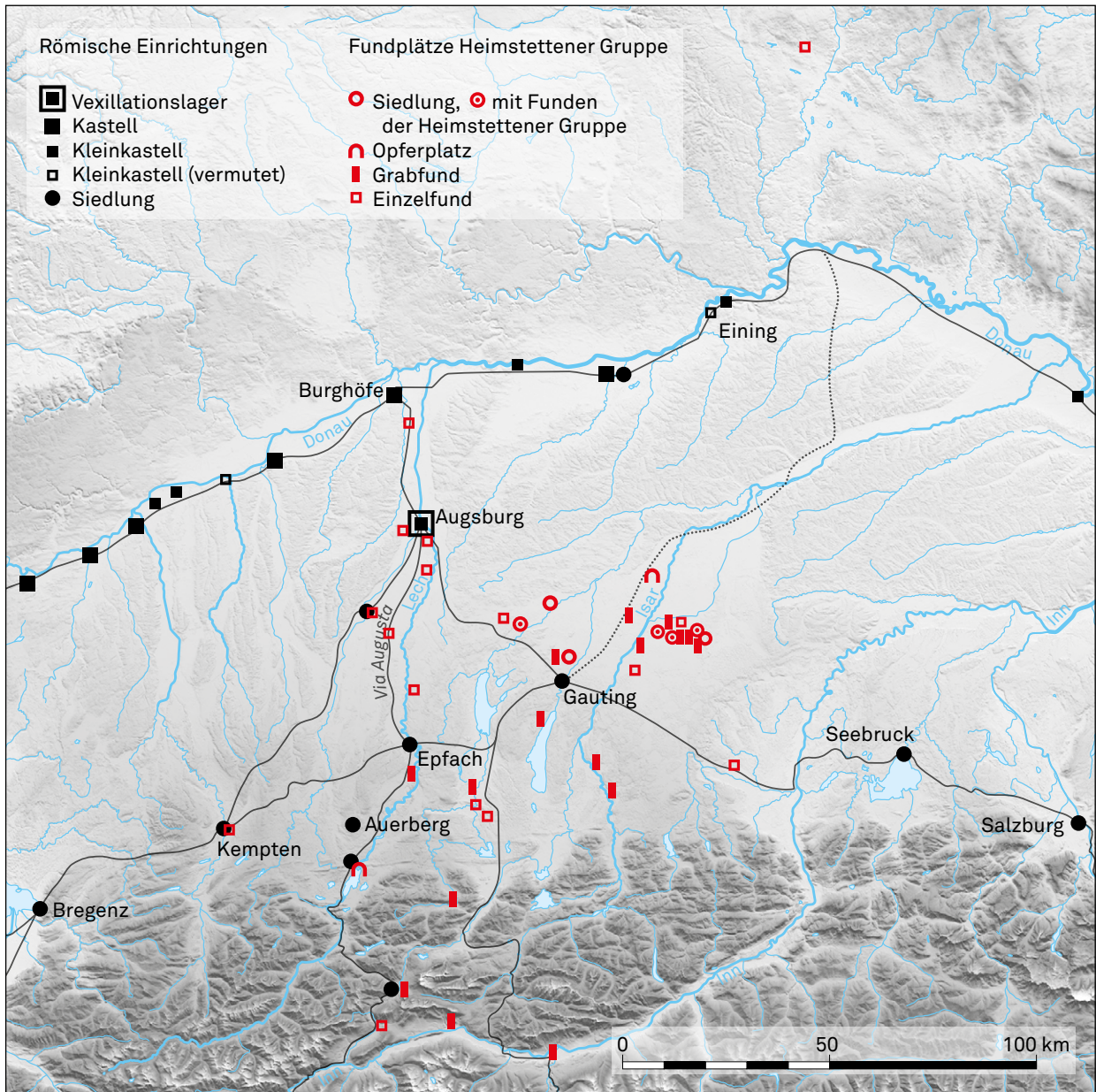


Abbildung 2. Fundstellen der Heimstettener Gruppe ca. 40/60 nach Chr. im Zentrum der Provinz Raetia.

Die Messer sind offensichtlich im Zusammenhang mit den reichen Fleischbeigaben und einer vermutlich insgesamt fleischreichen Ernährung zu sehen.

Die Fundstellen der Heimstettener Gruppe verteilen sich im Zentrum der Provinz, im wesentlichen von der nordsüdlich verlaufenden *via Claudia Augusta* und der Provinzhauptstadt Augsburg bis in die östliche Münchner Schotterebene (Abb. 2). Es ist bemerkenswert, dass die Plätze sowohl im keltischen Alpenvorland wie auch im kulturell raetisch geprägten Tiroler Inntal liegen. Die Gruppe ist an den ländlichen Raum gebunden und fast nur abseits der römischen Neugründungen und Militärlager anzutreffen.

E. Keller sah seinerzeit einen eindeutigen Zusammenhang zwischen den Fundplätzen der Heimstettener Gruppe und dem frühen römischen Straßensystem. Da Vorläufer für die Tracht und das Bestattungsverhalten im Alpenvorland fehlten, nahm er Ansiedlungen von inneralpinen Gruppen durch die römische Ordnungsmacht im Umfeld der neuen Verkehrsverbindungen an.

Inzwischen haben Großgrabungen vor allem im Raum München für das Alpenvorland entscheidende neue Aufschlüsse gebracht. Dadurch ist es jetzt möglich, Gräber der Heimstettener Gruppe mit einem bestimmten ländlichen Siedlungstyp zu verbinden. Diese Siedlungen sind durch



reine Holzarchitektur in Pfostenbauweise sowie durch ausgedehnte Zaunsysteme gekennzeichnet. Die Zäune orientieren sich an lokalen, nicht ausgebauten Wegen und bisher in keinem Fall an befestigten römischen Straßen.

Als Wirtschaftsgrundlage der Bewohner dieser ländlichen Siedlungen konnte die Rinderzucht nachgewiesen und die Pferdezucht zumindest wahrscheinlich gemacht werden (Trixl 2019, 109 und 210-211). Die Wirtschaftsweise steht damit in alter, auf die natürlichen Ressourcen abgestimmter Tradition. Die schlechten Böden und klimatischen Verhältnisse vor allem der Münchner Schotterebene und der glazialen Moränenlandschaft begünstigen die Viehhaltung und setzen dagegen dem Ackerbau enge Grenzen.

Durch die Analyse von Strontium- und Bleisotopen aus dem Skelettmaterial kann inzwischen die fremde Herkunft der Menschen der Heimstettener Gruppe eindeutig widerlegt werden (Toncala in Vorbereitung). Vielmehr decken sich die Isotopenwerte vollständig mit den prähistorischen Referenzen desselben Raumes, weshalb zumindest die in den Gräbern fassbare Generation lokaler Herkunft sein muss. Neben der Isotopie sowie der bruchlos fortgeführten, an das Ökosystem angepassten Wirtschaftsweise trägt auch die Hausbautradition deutliche Merkmale der

vorrömischen Zeit. Das betrifft die archaische Pfostenbauweise ebenso wie die Grundrisstypen. Vor allem die um ein tragendes Kerngerüst konstruierten Gebäude stehen in direkter Fortsetzung spätlatènezeitlicher Bauformen (Abb. 3). Nur die feststellbare Monumentalisierung, die zu Bauwerken von bis zu 28,3 × 19,0 m Grundfläche geführt hat (Volpert 2012, 77), scheint ein im wesentlichen erst kaiserzeitliches Phänomen zu sein.

Die in der bisherigen Diskussion postulierte Besiedlungslücke von der Spätlatènezeit in die frühe Kaiserzeit erweist sich bei näherer Betrachtung als ein Problem fehlenden oder extrem spärlichen Fundniederschlags an den Siedlungsplätzen. Gräber fehlen wie generell in der süddeutschen Spätlatènezeit bis zum Auftreten der Heimstettener Körpergräber vollständig. Man kann in diesem Phänomen geradezu ein weiteres Indiz für Kontinuität sehen. Mit relativen Abfolgen von Baubefunden seit der Spätlatènezeit (Steidl 2019, 324) und mit <sup>14</sup>C-Daten beginnt sich die vermeintliche Lücke zunehmend zu schließen.

Die Errichtung der Zaunsysteme und zugehöriger Brunnen innerhalb dieser Einhegungen fällt zeitlich mit dem Aufkommen sehr großer Rinder zusammen. Hier ist ein ursächlicher Zusammenhang anzunehmen. Anfangs

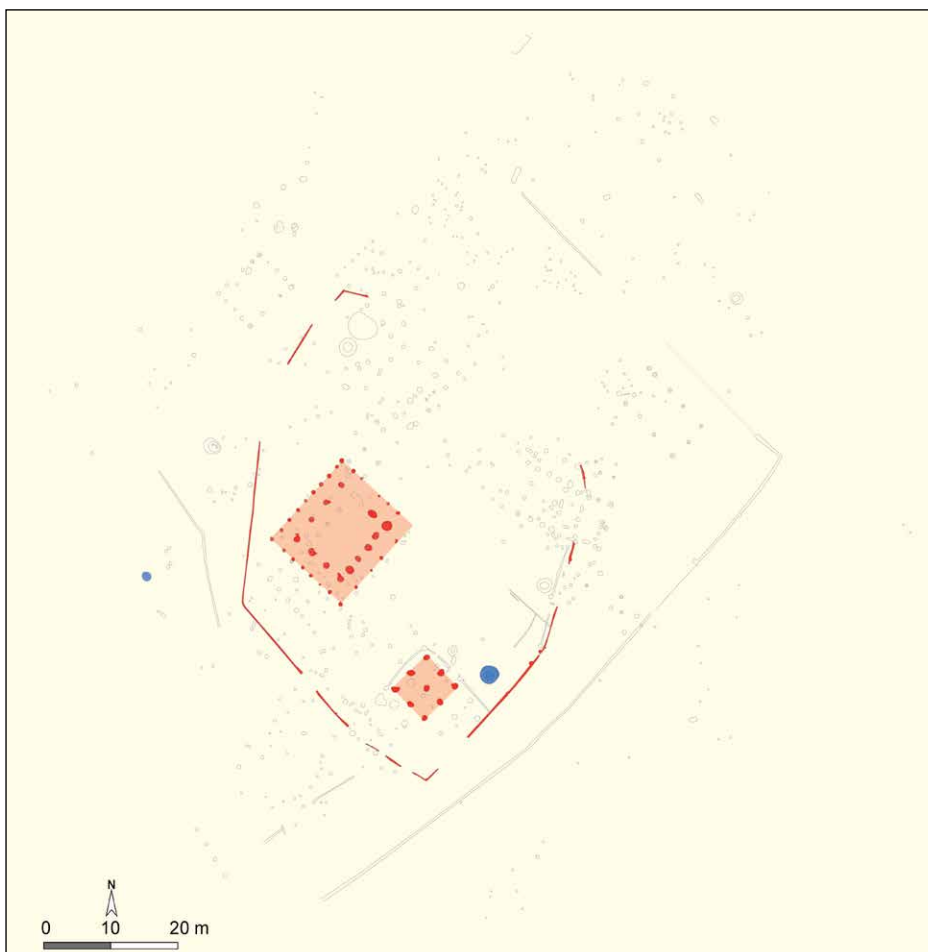


Abbildung 3.  
Bergkirchen, Lkr.  
Dachau. Ländliche  
Siedlung aus der Mitte  
des 1. Jahrhunderts  
nach Chr. mit  
monumentalem  
Kerngerüstbau in  
Spätlatènetradition als  
Hauptgebäude.



erschien uns der Import großer Zuchttiere als naheliegende Erklärung. Inzwischen wird die Befundsituation von Simon Trixl (2019, 257-259) eher im Sinne einer Auswahlzucht aus heimischen Tierschlägen interpretiert. Der auffällige Größenindex der Rinder wird dabei in erster Linie von Ochsen bestimmt. Die plötzlich einsetzende gezielte Zucht großer und starker Tiere deutet auf neue Absatzmärkte hin. Diese wird man auf römischer Seite zu suchen haben.

Wir denken angesichts der großen Tiere übrigens weniger an verstärkte Fleischproduktion, sondern an die Gewinnung und Abrichtung von Zugochsengespannen. Es gibt in Heimstetten sogar einige Hinweise auf Zuggeschirrherrstellung und vielleicht sogar Wagenbau. Hiermit scheint sich eine Spezialisierung in der Landwirtschaft und im Handwerk abzuzeichnen, die den Wohlstand zu erklären vermag, der in der Ausstattung der Heimstettener Gräber entgegentritt. Als Datierungsanhalt für den Beginn dieser Intensivierung der traditionellen Tierhaltung liegen aus der Region um München sechs Dendrodaten von Brunnenhölzern vor. Alle fallen in die Jahre um oder kurz vor 40 nach Chr. (Volpert 2012, 79; Herzig 2012/2013).

### Konservatismus der Lokalbevölkerung

Trotz der Kontakte zur römischen Ordnungsmacht mit regen Handelsbeziehungen, die sich im Absatz der erzeugten Rinder und umgekehrt im Zufluss an Buntmetallen und einzelnen 'Luxusgütern' wie Glasgefäßen manifestieren, zeigte die autochthone Gesellschaft überraschenderweise nur wenig Interesse an der Übernahme römischer Lebensart. So fehlen alle Hinweise auf die Ausbildung einer Stammeselite. Die schon auf dem *tropaeum Alpium* aufgeführten Stämme des Alpenvorlandes, die *Brixenetes/Brigantii*, die *Vindelicorum gentes quattuor*, die *Cosuanetes* und *Rucinales*, *Licates* und *Cattenates*, können – gegenwärtig noch mit Ausnahme der *Cosuaneten* – bis teilweise über die Mitte des 2. Jahrhunderts hinaus epigraphisch als weiter fortbestehende kaiserzeitliche *civitates* verfolgt werden. Dennoch fehlen im gesamten Ostteil des nordalpinen Raetien sämtliche Hinweise auf urbane ausgestaltete Stammeszentren vollständig. Dass demgegenüber die im Westen gelegenen Orte *Brigantium* (Bregenz) und *Augusta Vindelicum* (Augsburg), die namentlich mit den *Brigantii* und den *Vindelici* verbunden sind, eine andere Entwicklung genommen und noch im ersten Jahrhundert ein städtisches Erscheinungsbild erhalten haben, ist allein der römischen Militärpräsenz an diesen Orten (Kopf 2020; Gairhos *et al.* 2022, 49-54) und dem damit verbundenen starken Zustrom an Fremdbevölkerung zuzuschreiben. Römischer Initiative ist auch der urbane Ausbau von *Cambodunum* (Kempten), dem Hauptort der *Estiones* zuzuschreiben (Weber 2000). Diese *gens* erscheint interessanterweise nicht in der Liste der

unterworfenen Stämme des *tropaeum Alpium*. Ob der urbanen Entwicklung wie in Bregenz eine Militäranlage voranging oder die Sonderstellung darauf basiert, dass der Stamm freiwillig unter Roms Herrschaft getretenen ist und etwa als *civitas libera* eine andere Entwicklung nehmen konnte: Entscheidend ist die nachweisbare Zuwanderung zahlreicher Bevölkerung aus romanisierten Gebieten, die mediterrane Lebensart und Ansprüche ins Land brachten, welche sich unter anderem in der Stadtanlage niederschlugen.

Von Seiten der Okkupationsmacht initiiert war auch die Stadtgründung auf dem Auerberg, die von der Örtlichkeit, der Architektur und im Fundstoff keinerlei Bezug zur Lokalbevölkerung zeigt. Ob sie als der offizielle Vorort der *Licates*, das von Ptolemaios genannte *Damasia*, gelten kann, ist umstritten (Sommer 2015, 504). Auffällig ist jedenfalls die frühe Auffassung bereits in claudischer Zeit, ohne dass bisher ein Nachfolgeort sicher identifiziert worden wäre.

Die Entwicklung im raetischen Alpenvorland hinsichtlich der Urbanisierung unterscheidet sich damit grundlegend von den Verhältnissen in Gallien und selbst von den gegenüber Gallien wesentlich bescheideneren Stadtanlagen im rechtsrheinischen Obergermanien. Aber auch das östlich anschließende Noricum zeigt mit seiner systematischen Munizipalisierung seit claudischer Zeit ein im Vergleich zu Raetien erheblich abweichendes Geschehen an.

Zur fehlenden urbanistischen Selbstdarstellung der meisten Stämme des Alpenvorlandes tritt die Ablehnung von steinernen Grabdenkmälern und von Weihesteinen. Bild- und Inschriftensteine sind auf das Umfeld der römischen Gründungssiedlungen und auf die nördliche Militärzone an der Donau bzw. entlang des Limes beschränkt. Vereinzelt auftretende Steine im Hinterland, vor allem unweit der Grenze zu Noricum entlang des Inns (Ulbert 1971, Beilage IV-V), wurden erst in mittelalterlicher Zeit an den Auffindungsort verschleppt. Sie dienten als Baumaterial in Kirchen, vor allem aber als *stipes* oder *mensa* früh- bis hochmittelalterlicher, christlicher Altäre.

Wie bereits angeführt, dokumentiert sich auch in der fortgesetzten Pfostenbauweise bis in das 3. Jahrhundert das fehlende Interesse der einheimischen Bevölkerungen an den bautechnischen Neuerungen Roms. Steinbau und mediterran beeinflusste Grundrisstypen setzten sich nur bei den Villenanlagen der Eliten im weiteren Umfeld der Provinzhauptstadt Augsburg (Sorge 1999, 318-320) und in Regionen durch, die durch Fremde aufgesiedelt wurden. Dazu gehören die gesamte Limeszone im Norden sowie das niederbayerische Isartal (Fischer 1990; Moosbauer 1997; Pfahl 1999; Schafitzl 2012, 102-104). Für die übrigen Räume ist ein Gefälle in Richtung Osten festzustellen: Sind im westlichen Flachlandraetien vor allem nördlich des Bodensees und in der Nähe der Pro-

vinzgrenze zu Obergermanien noch in Stein ausgebaute Gehöfte vergleichsweise häufig nachweisbar (Meyer 2010, 94-129 und 350), werden entsprechende Fälle nach Osten hin immer seltener (Sommer 2013, 135, Abb. 1). Vereinzelt können grundrissgleiche Trockenmauersockel von Erneuerungsphasen über älteren Pfostengrundrissen nachgewiesen werden. Außerdem kommt es gelegentlich zum späteren Einbau von beheizbaren Räumen, Kellern oder kleinen Badetrakten in Pfostenbauten. Mehrfach sind zudem einzelnstehende, sehr kleine Thermenbauten bekannt geworden, mit denen sich ab dem fortgeschrittenen 2. Jahrhundert wenigstens auf dem Sektor der Körperpflege und Freizeitbeschäftigung ein gewisses Maß römischer Beeinflussung fassen lässt.

Anders verhält es sich bei den Speisegewohnheiten und den Tischsitten. Amphoren fehlen in den autochthonen Siedlungen fast vollständig, und zwar Gefäße für Fischsaucen und Olivenöl ebenso wie Weinamphoren. Die Terra sigillata ist nur mit einem eingeschränkten Spektrum vertreten, das vor allem die Soßennäpfe (*acetabula*) vermissen lässt. Reliefschüsseln Dragendorff 37 sind dagegen durchaus vorhanden, gleichfalls Tellerformen. In mediterraner Tradition stehendes irdenes Kochgeschirr fehlt weitgehend. Dafür sind einheimische eiförmige, freigeformte Töpfe, sogenannte Kämpfe, vorhanden. In diesen wurden vermutlich vor allem Breie gekocht. Eine besondere Auffälligkeit ist das weitgehende Fehlen von Hühnern

unter den Tierknochenbeständen aus Siedlungen der Lokalbevölkerung, während diese Wirtschaftstiere in den römischen Vici und Militäranlagen gut vertreten sind (Trixl 2019, 109 und 292).

Aus diesen Beobachtungen lässt sich rückschließen, dass Rom für den Aufbau und die Versorgung der neu geschaffenen Infrastruktur besonders innerhalb der ersten einhundert Jahre wohl kaum modern nicht ausreichend auf die wenig entwicklungsbereite autochthone Bevölkerung zurückgreifen konnte. Dies erklärt den Zuzug mediterraner bzw. stark romanisierter gallischer Gruppen, die in den Stationen und Vici vor allem entlang der nordsüdlichen Erschließungsstrasse, der *via Claudia Augusta*, nachgewiesen werden können (Sommer 2015, 500). Die Neuankömmlinge unterscheiden sich im Konsumverhalten und insgesamt im Fundniederschlag grundlegend von der Lokalbevölkerung, wie beispielsweise sehr große Mengen an Terra sigillata, Amphoren, Münzen und Schreibzeug zeigen (Peters *et al.* 2017).

Gleiches gilt für die von römischer Seite initiierten Stadtgründung auf dem Auerberg und in Kempten und natürlich ebenso für die frühen Militärstandorte wie Augsburg, Bregenz und Aislingen. Deutliche Unterschiede zwischen den beiden Kulturmilieus drücken sich von Anfang an in divergierenden Bautechniken aus. Auch wenn man auf römischer Seite während des 1. Jahrhunderts fast ausschließlich in Holz baute, verwendete man doch die entwickeltere Gräbchen- bzw. Schwellbalken-

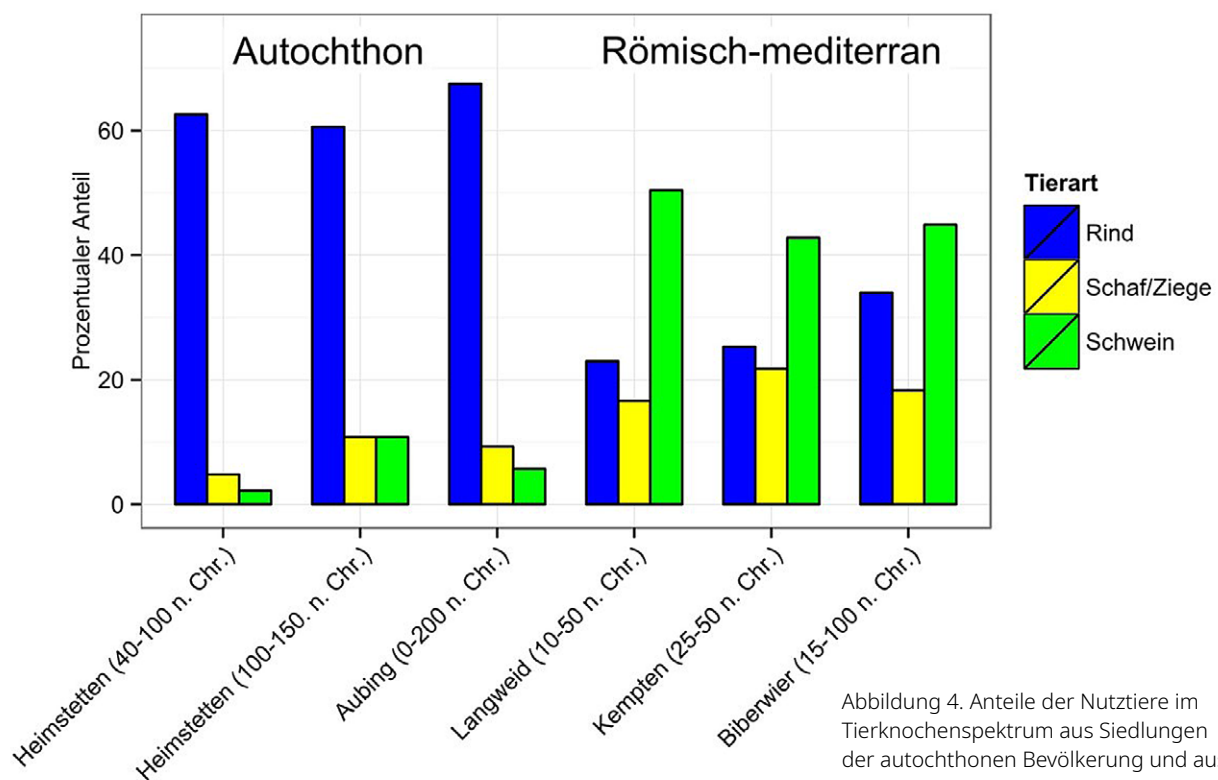


Abbildung 4. Anteile der Nutztiere im Tierknochenspektrum aus Siedlungen der autochthonen Bevölkerung und aus römischen *vici* (S. Trixl).

bauweise (Ulbert & Zanier 1997, *passim*; Sieler 2009). Hierfür fehlen im autochthonen Umfeld alle Hinweise.

Es gibt einzelne Indizien für Versuche von Seiten der römischen Administration, den ländlichen Raum entlang der Hauptverkehrswege aufzusiedeln – vielleicht mit Veteranen. Diese Bemühungen endeten aber bereits nach kurzer Zeit wieder. Ein einphasiges kleines Gehöft spät-augusteisch-tiberischer Zeit bei Eching, Lkr. Freising, mit Schwellbalkenbauten bildet gegenwärtig das beste Beispiel hierfür (Hüssen 2004, 81-87). Der Fundbestand unterscheidet sich überdeutlich von dem der einheimischen Plätze, indem er mit einer Münze, einer Aucissafibel, Pferdegeschirrbeschlagen und einer Ölamphore gerade jene Fundgruppen liefert, die an den anderen Orten bezeichnenderweise fehlen.

Die archäologisch erschlossenen unterschiedlichen Herkunft der Bevölkerungsgruppen dokumentieren sich auch in der Isotopie. Während die Heimstettener Bevölkerung ein enges, lokales Cluster bildet und deren Rinder auf einen größeren Einzugsbereich weisen, ist es im städtischen *Cambodunum* (Kempten) genau umgekehrt. Die Leichenbrände aus den ältesten Bestattungen des Gräberfeldes 'Keckwiese' zeigen, dass die Toten aus sehr unterschiedlichen Regionen stammen. Die vor Ort geschlachteten Tiere weisen dagegen eng begrenzte, lokale Signaturen auf (Toncala in Vorbereitung). Das Schlachtvieh kommt demnach aus dem Umfeld des Ortes und nach den Phänotypen aus den Beständen der Lokalbevölkerung (Trixl 2019, 203-204).

Sehr bemerkenswert sind die völlig unterschiedlichen Nutztierspektren in den Siedlungen der autochthonen Bewohnerschaft und den römischen Neugründungen (Abb. 4). Die hohen Rinderanteile (blau) im autochthon-ländlichen Raum verweisen auf die wesentliche Wirtschaftsgrundlage dieser Gruppen. In den römischen Vici wurden dagegen Schaf/Ziege und vor allem Schwein (gelb/grün) bevorzugt, wie es für das mediterrane Milieu typisch ist. Die Alter- und Geschlechtsverteilung sowie die Skeletteilspektren belegt übrigens, dass die Schweine auch in den Vici selbst gehalten worden sind (Trixl 2019, 203).

Die Lokalbevölkerung wendet sich in claudischer Zeit, zwei Generationen nach dem Alpenfeldzug, nativistischen bzw. revivalistischen Verhaltensformen zu. In diesem Sinne ist das Phänomen der Heimstettener Gruppe mit dem auffälligen Erscheinungsbild der Frauen zu deuten (Steidl 2019, 337). Hintergrund für den Nativismus mit soziokulturellem und/oder sozioreligiösem Ausdruck sind offenbar die als massiver Umbruch empfundenen Umwälzungen dieser Zeit, vor allem durch die überall fassbaren, verstärkten Infrastrukturmaßnahmen Roms. Hier ist an den Ausbau der *via Claudia Augusta* 46 nach Chr., die Truppenstationierungen an der Donau ca. 45/50 nach Chr. und die administrative Neuorganisation, vielleicht auch

Durchdringung der Provinz infolge der Einführung der prokuratorischen Statthalterschaft ca. 37/41 vor Chr. zu erinnern (Dietz 1995, 70-71). Sich ausweitende Handelskontakte könnten ebenfalls dazu beigetragen haben. Noch gar nicht abzusehen sind die Auswirkungen einer von Rom ins Land gebrachten germanischen Fremdbevölkerung (siehe unten). Das Phänomen Heimstetten endet nach längstens einer Generation um etwa 60 nach Chr. ebenso unvermittelt, wie es entstanden war. Die daran beteiligten Bevölkerungsgruppen fanden zu unauffälliger Lebensform zurück.

## Sueben in Raetien

Zu den beiden dargestellten Bevölkerungsgruppen, den Autochthonen und den romanisierten Zuwanderern, kommt eine dritte, erst neuerdings auch durch Grab- und Siedlungsbefunde erfasste hinzu. Es handelt sich um Sueben oder, archäologisch gesprochen, um Elbgermanen.

Dass es sich bei deren unvermitteltem Erscheinen in der Provinz um von römischer Seite gesteuerte Ansiedlungen handelt, kann nicht bezweifelt werden. Die Chronologie der Funde spricht für zwei Ansiedlungswellen. Die erste ist charakterisiert durch 'klassische Augenfibeln' Almgren 45, die ihre Hauptverbreitung im *regnum* des Marbod in Böhmen und in den davon abhängigen Gebieten hatten. Das Auftreten in Raetien fällt in das 2. oder 3. Jahrzehnt des 1. Jahrhunderts nach Chr. Es kann ein Zusammenhang mit dem Zusammenbruch des Marbodreiches und der Exilierung seiner Gefolgschaften 19 nach Chr. angenommen werden (Steidl 2013).

In Raetien zeigen diese Augenfibeln einen Verbreitungsschwerpunkt im östlichen Lechtal bei und nördlich von Augsburg und ansonsten eine enge Bindung an das früheste römische Straßensystem der Provinz. Nach dieser Verteilung könnten die Germanen als Milizen eingesetzt gewesen sein. Dafür sprechen auch die vielen germanischen Funde vom Militärplatz Burghöfe, der Kopfstation der *via Claudia Augusta* an der Donau (Ortisi 2002; Franke 2009). Die erst jüngst bekannt gewordene älteste Befestigung dort (Mackensen & Schimmer 2013, 53-60) könnte von einem irregulären Germanenkontingent besetzt gewesen sein.

Eine zweite germanische Ansiedlungswelle ist durch Fibeln Almgren 57-61 gekennzeichnet, den sogenannten 'Preussischen Augenfibeln'. Das Verbreitungsgebiet in Raetien ist für diese Form wesentlich begrenzter. Wiederum liegt der Kernraum im östlichen Lechtal – neben einer massiven Konzentration im Westteil der Provinzhauptstadt *Augusta Vindelicum* (Pauli 2021). Offensichtlich knüpft die erneute Ansiedlung räumlich an die erste an, erreicht aber nicht mehr deren Umfang.

Der Fundstoff besitzt jetzt starke Bezüge in die Westslowakei. Ein historischer Zusammenhang mit dem Ende des *regnum Vannianum* 50 nach Chr.

und dem literarisch überlieferten Übertritt der Gefolgschaft des Vannius auf römischen Boden (Tacitus *Annales* 12.39.1-30, 2) erscheint zum gegenwärtigen Stand der Bearbeitung naheliegend.

Die in Raetien sesshaft gewordenen Sueben siedelten zunächst nach germanischem Muster. Erst im Jahr 2019 konnte bei Todtenweis-Sand, 14 km nördlich von Augsburg, ein Gehöft mit Wohnstallhaus und dazu teilweise das nahegelegene Gräberfeld ausgegraben werden (Steidl 2022). Die Bestattungsformen folgen ganz germanischer Tradition mit Brandgruben-, Urnen- und Bausarggräbern. Fast alle Gräber enthalten sehr reiche, meist aber auf dem Scheiterhaufen stark zerstörte Beigaben, darunter bis zu neun Bronzegefäße (Abb. 5). Die Siedlung kann dendrochronologisch anhand der Hölzer aus einem zugehörigen Brunnen ab 46 +/- 6 nach Chr. datiert werden.

Für die Zeit um 100 nach Chr. oder den Anfang des 2. Jahrhunderts zeichnet sich eine Wende im Siedlungsgeschehen ab. So zumindest darf es modellhaft auf Basis der gegenwärtigen Befundlage angenommen werden. Damals endeten beispielsweise das Gräberfeld von Sand und wohl auch die Siedlung. Gleichzeitig entstanden neue Siedlungspunkte in repräsentativen Posi-

tionen entlang der Ränder des Lechtales und der östlich anschließenden Lössgebiete.

Es ist wohl kein Zufall, wenn germanische Funde in den frühesten Horizonten dieser *villae* begegnen. Das eindrucksvollste Beispiel stammt aus Wehringen, neun römische Meilen von Augsburg an der *via publica* nach Kempten gelegen. In der dort 1961 aufgedeckten reichsten Gutshofnekropole Raetiens (Nuber & Radnóti 1969; Nuber 2000) zeigen die ältesten Gräber vom Anfang des 2. Jahrhunderts noch germanische Reminiszenzen wie Waffen, Gürtelteile und Trinkhorn (Nuber 1985). Mit der Deponierung des Leichenbrandes in Glasurnen und mit den sonstigen Beigaben bemühte man sich aber, römische Lebensart demonstrativ zur Schau zu stellen. Badeutensilien einschließlich eiserner Klappstühle, Parfümfläschchen und Öllampen heben hervor, wie aufgeschlossen diese Personen gegenüber den Errungenschaften der mediterranen Welt waren. Nach etwa der Mitte des 2. Jahrhunderts sind keine Anzeichen germanischer Abkunft der Familie mehr in den Gräbern festzustellen.

Nach gegenwärtigem Kenntnisstand integrierten sich die Sueben schnell im provinzialen Umfeld. Schon Anfang des 2. Jahrhunderts bildeten sie einen Teil der Provinzeli-



Abbildung 5. Todtenweis-Sand, Lkr. Aichach-Friedberg. Germanisches Urnengrab 23 in ovaler Grabgrube. Um die Urne Scheiterhaufenrückstände mit verbrannten Metallgefäßteilen.

te, wie vor allem das Gräberfeld von Wehringen nahelegt. Das unterscheidet sie stark von der Lokalbevölkerung, die keine solche Entwicklung erkennen lässt. Die übrigen Teile der munizipalen Eliten Augsburgs seit Hadrian scheinen dem epigraphischen Befund zufolge vor allem aus dem Kreis der Zuwanderer gekommen zu sein, darunter viele aus dem gallischen Raum (Dietz & Weber 1982).

## Fazit

Insgesamt ergibt sich für Raetien ein vielschichtiges Bild von den Bevölkerungsverhältnissen in der frühen Kaiserzeit. Es ist geprägt von fortbestehender autochthoner Grundbevölkerung, mediterranen bzw. romanisierten Zuwanderern, den Soldaten der Auxilien und von angesiedelten, dem Römischen aufgeschlossenen germanischen Exilanten. Zwischen allen Gruppen sind Kontakte feststellbar. Die Grenzen verschwimmen mit der Zeit, verschwinden aber nicht vollständig. Das mediterrane Element verliert noch im 1. Jahrhundert an Bedeutung, die Autochthonen im ländlichen Umfeld wandeln sich wenig. Die Germanen sind spätestens nach der Mitte des 2. Jahrhunderts nur noch durch die fortbestehende Trinkhornsitte nachweisbar.

## Bibliographie

- Dietz, K., 1995: Okkupation und Frühzeit, in: W. Cyszcz, K. Dietz, Th. Fischer & H.-J. Kellner, *Die Römer in Bayern*, Stuttgart.
- Dietz, K., 2004: Zur vorrömischen Bevölkerung nach den Schriftquellen, in: Hüssen, Irlinger & Zanier, 1-23.
- Dietz, K. & G. Weber, 1982: Fremde in Rätien, *Chiron* 12, 409-443.
- Fischer, Th., 1990: *Das Umland des römischen Regensburg*, München (Münchner Beiträge zur Vor- und Frühgeschichte 42).
- Franke, R., 2009: *Römische Kleinfunde aus Burghöfe 3*, Rahden (Frühgeschichtliche und Provinzialrömische Archäologie. Materialien und Forschungen 9).
- Gairhos, S., A. Hartmann, S. Ortisi & G. Weber, 2022 (Hrsg.): *Das römische Augsburg. Militärplatz, Provinzhauptstadt, Handelsmetropole*, Darmstadt.
- Herzig, F., 2012/2013: Dendroarchäologische Untersuchungen an Hölzern eines Brunnens der frühen Kaiserzeit aus Aschheim, *Jahrbuch der Bayerischen Denkmalpflege. Forschungen und Berichte* 66/67, 9-20.
- Hüssen, C.-M., 2004: Besiedlungswandel und Kontinuität im oberbayerischen Donaauraum und in der Münchner Schotterebene von der Okkupation unter Augustus bis in tiberisch-claudische Zeit, in: C.-M. Hüssen, W. Irlinger & W. Zanier (Hrsg.), *Spätlatènezeit und frühe römische Kaiserzeit zwischen Alpenrand und Donau*, Bonn (Kolloquien zur Vor- und Frühgeschichte 8), 73-91.
- Keller, E., 1984: *Die frühkaiserzeitlichen Körpergräber von Heimstetten bei München und die verwandten Funde aus Südbayern*, München (Münchner Beiträge zur Vor- und Frühgeschichte 37).
- Kopf, J., 2020: *Römische Soldaten in Brigantium. Das militärische Fundmaterial und die Chronologie der Militäranlagen der frühen Kaiserzeit*, Horn (Vorarlberger Museum Schriften 54).
- Mackensen, M. & F. Schimmer, 2013: *Der römische Militärplatz Submuntorium/Burghöfe an der oberen Donau. Archäologische Untersuchungen im spätrömischen Kastell und Vicus 2001-2007*, Wiesbaden (Münchner Beiträge zur Provinzialrömischen Archäologie 4).
- Meyer, M.G.M., 2010: *Die ländliche Besiedlung von Oberschwaben zur Römerzeit*, Stuttgart (Materialhefte zur Archäologie in Baden-Württemberg 85).
- Moosbauer, G., 1997: *Die ländliche Besiedlung im östlichen Raetien während der römischen Kaiserzeit*, Espelkamp (Passauer Universitätsschriften zur Archäologie 4).
- Nuber, H.U., 1985: Waffengräber in Wehringen, in: Bayerisches Landesamt für Denkmalpflege (Hrsg.), *Die Römer in Schwaben. Jubiläumsausstellung 2000 Jahre Augsburg*, München (Arbeitshefte des Bayerischen Landesamtes für Denkmalpflege 27), 52-53.
- Nuber, H.U., 2000: Eine Grabanlage reicher Landbesitzer in Wehringen, in: L. Wamser (Hrsg.), *Die Römer zwischen Alpen und Nordmeer. Zivilisatorisches Erbe einer europäischen Militärmacht. Katalog-Handbuch zur Landesausstellung des Freistaates Bayern, Lokschnuppen Rosenheim vom 12. Mai-5. November 2000*, Mainz (Schriftenreihe der Archäologischen Staatssammlung 1), 166-170.
- Nuber, H.U. & A. Radnóti, 1969: Römische Brand- und Körpergräber aus Wehringen, Ldkr. Schwabmünchen, *Jahresberichte der Bayerischen Bodendenkmalpflege* 10, 27-49.
- Ortisi, S., 2002: Die früh- und mittelkaiserzeitlichen Fibeln, in: S. Ortisi & Ph.M. Pröttel, *Römische Kleinfunde aus Burghöfe 2*, Rahden (Frühgeschichtliche und Provinzialrömische Archäologie. Materialien und Forschungen 6), 9-58.
- Pauli, M., 2021: "Germanische" Fibelschmiede in Raetien? Preußische Augenfibeln aus Augusta Vindelicum/Augsburg, *Bericht der Bayerischen Bodendenkmalpflege* 62, 339-346.
- Peters, J., M. Gschwind, F. Neuberger, B. Steidl & S. Trixl, 2017: Early Roman transfer of animals across the Alps. Setting the stage for interpreting the results of isotope fingerprinting, in: G. Grupe, A. Grigat & G.C. McGlynn (eds), *Across the Alps in Prehistory. Isotopic mapping of the Brenner Passage by bioarchaeology*, Cham/CH, 49-74.



- Pfahl, S.F., 1999: *Die römische und frühalamannische Besiedlung zwischen Donau, Brenz und Nau*, Stuttgart (Materialhefte zur Archäologie in Baden-Württemberg 48).
- Schafitzl, A.A., 2012: Der römische Gutshof von Möckenlohe, Lkr. Eichstätt, *Bericht der Bayerischen Bodendenkmalpflege* 53, 85-229.
- Sieler, M., 2009: *Die frühkaiserzeitlichen Holzbauten im Bereich der kleinen Thermen von Cambodunum-Kempton*, Kallmünz/Opf. (Cambodunumforschungen 8 / Materialhefte zur Bayerischen Vorgeschichte A 93).
- Sommer, C.S., 2013: Futter für das Heer. Villae rusticae. Ländliche Siedlungsstellen und die Versorgung der römischen Soldaten in Raetien, in: A. Zeeb-Lanz & R. Stupperich (Hrsg.), *Palatinus Illustrandus. Festschrift für Helmut Bernhard zum 65. Geburtstag*, Mainz/Ruhpolding (Mentor 5), 134-144.
- Sommer, C.S., 2015: Hat der Auerberg sein Geheimnis gelüftet? Überlegungen zur Funktion des Auerberges in (der Provinz) Raetien, in: G. Ulbert (Hrsg.), *Der Auerberg IV. Die Kleinfunde mit Ausnahme der Gefäßkeramik sowie die Grabungen von 2001 und 2008*, München (Münchner Beiträge zur Vor- und Frühgeschichte 63), 487-526.
- Sorge, G., 1999: Die römische Villa suburbana von Friedberg bei Augsburg, *Bayerische Vorgeschichtsblätter* 64, 195-326.
- Steidl, B., 2013: Die Augenfibeln Almgren 45-46 in Raetien und den Nordwestprovinzen. Eine Sachform als Spiegel historischer Vorgänge?, in: G. Grabherr, B. Kainrath & Th. Schierl (Hrsg.), *Verwandte in der Fremde. Fibeln und Bestandteile der Bekleidung als Mittel zur Rekonstruktion von interregionalem Austausch und zur Abgrenzung von Gruppen vom Ausgreifen Roms während des 1. Punischen Krieges bis zum Ende des Weströmischen Reiches. Akten des internationalen Kolloquiums, Innsbruck 27. bis 29. April 2011*, Innsbruck (IKARUS 8), 154-175.
- Steidl, B., 2019: Kontinuität der vorrömischen Bevölkerung und die Heimstettener Gruppe. Neue Forschungen zum 1. Jahrhundert n. Chr. in Raetien, in: W. Zanier (Hrsg.), *Kulturwandel um Christi Geburt. Spätlatène- und frühe Römische Kaiserzeit in den mittleren Alpen zwischen Südbayern und Gardasee. Akten des Kolloquiums in Innsbruck am 18. und 19. Oktober 2017*, München (Münchner Beiträge zur Vor- und Frühgeschichte 67), 317-339.
- Steidl, B., 2022: Suebische Migranten im Lechtal, *Bayerische Archäologie* 2, 24-27.
- Steidl, B., in Vorbereitung: Eine harmonisierte Spätlatène-Chronologie für Süddeutschland, in: S. Trixl, J. Horvath, H. Krause, Ch. Later, B. Steidl & G. Wieland, *New insights into chronology and economy of the final La Tène Period between Rhine and Salzach*.
- Toncala, A., in Vorbereitung: Zwischen der Spätlatène- und Römischen Kaiserzeit. Heimstettener Gruppe und die Siedlungskontinuität in Bayern (Süddeutschland), (Arbeitstitel).
- Trixl, S., 2019: *Zwischen Wandel und Beständigkeit. Die Entwicklung der späteisenzeitlich-frührömischen Viehwirtschaft im Alpenraum und dem nördlichen Alpenvorland*, Rahden (Documenta Archaeobiologicae 14).
- Ulbert, G., 1971: Zur Grenze zwischen den römischen Provinzen Norikum und Raetien am Inn, *Bayerische Vorgeschichtsblätter* 36, 101-123.
- Ulbert, G. & W. Zanier, 1997: *Der Auerberg. Besiedlung innerhalb der Wälle*, München (Münchner Beiträge zur Vor- und Frühgeschichte 46).
- Volpert, H.-P., 2012: Römische Holzbaubefunde des 1. Jahrhunderts n. Chr. im Gewerbegebiet "Hasenheide Nord" in Fürstfeldbruck, *Das archäologische Jahr in Bayern* 2011, 77-79.
- Weber, G., 2000 (Hrsg.), *Cambodunum – Kempton. Erste Hauptstadt der römischen Provinz Raetien?*, Mainz.
- Zanier, W., 1999: *Der spätlatène- und römerzeitliche Brandopferplatz im Forggensee (Gde. Schwangau)*, München (Münchner Beiträge zur Vor- und Frühgeschichte 52).
- Zanier, W., 2016: *Der spätlatène- und frühkaiserzeitliche Opferplatz auf dem Döttenbichl südlich von Oberammergau*, München (Münchner Beiträge zur Vor- und Frühgeschichte 62).
- Zanier, W., 2017: Siedelwesen der späten Latènezeit und frühen römischen Kaiserzeit im Landkreis Garmisch-Partenkirchen, in: W. Zanier (Hrsg.), *Die frühromische Holz-Kies-Straße im Eschenloher Moos*, München (Münchner Beiträge zur Vor- und Frühgeschichte 64), 215-230.
- Zanier, W., 2019 (Hrsg.): *Kulturwandel um Christi Geburt. Spätlatène- und frühe Römische Kaiserzeit in den mittleren Alpen zwischen Südbayern und Gardasee. Akten des Kolloquiums in Innsbruck am 18. und 19. Oktober 2017*, München (Münchner Beiträge zur Vor- und Frühgeschichte 67).



# Evidence for immigration in the Batavian region in the pre-Claudian Era

The study of large handmade pottery assemblages  
using a combination of traditional and  
science-based techniques

Julie Van Kerckhove and Gerard Boreel

This article presents the results of a pilot study on pottery research, which combines traditional and scientific techniques to contribute to the study of migration and mobility during the earliest phases of the Roman period in the Tiel region (fig. 1) of the Dutch river area (Van Kerckhove *et al.* in press). The pottery research is part of a larger project that includes the study of written sources, coins, house architecture, metal, and strontium isotope analyses of faunal skeletal remains (Habermehl *et al.* in press). The study focuses on the period between c. 50/30 BC and 50 AD and discusses the pottery from four rural settlements in the Batavian region.

Late Iron Age pottery in the Dutch river area is characterized by handmade pottery embedded in strong regional frameworks following ancestral traditions. Pottery style groups and regional typologies are used to identify the pottery characteristics of each region. In the Dutch river area, the regional style is characterized by abundantly decorated, mainly oxidized pottery, closed forms with everted rounded rims and grog tempering. However, from c. 50/30 BC onwards, there is a sudden and significant break in the pottery characteristics. The vessels are mainly reduced, and there is an introduction of organic tempering. The majority of the forms are closed, and some vessels have specific characteristics in common with the northern coastal area, known as the 'Frisian' examples (Taayke 1996). The vessels usually have small rims that can be round, pointed, or faceted, and fewer sherds are decorated. Nevertheless, some old characteristics seem to persist, as evidenced by an Early-Roman vessel from the Tiel region that fit typologies of the west-coast area and the Dutch river area of the Late Iron Age (Van Heeringen 1992; Van den Broeke 2012).

Due to the abrupt changes in the pottery assemblage and the abundance of sherds available for analysis, the pottery exhibits significant potential for the debate on migration and the mobility of people and goods. The research aims to determine whether the pottery was imported, and if so, where it was from, which networks were used, and why it was imported. Alternatively, the vessels may be local imitations, and the old characteristics may point to a certain continuity and the indigenous population's presence.

**Julie Van Kerckhove /  
Gerard Boreel**

Aardewerk & Archeologie,  
IJsselkade 15, kamer 8,  
7201HC Zutphen, julie@  
aardewerkenarcheologie.  
nl / gerard@  
aardewerkenarcheologie.nl

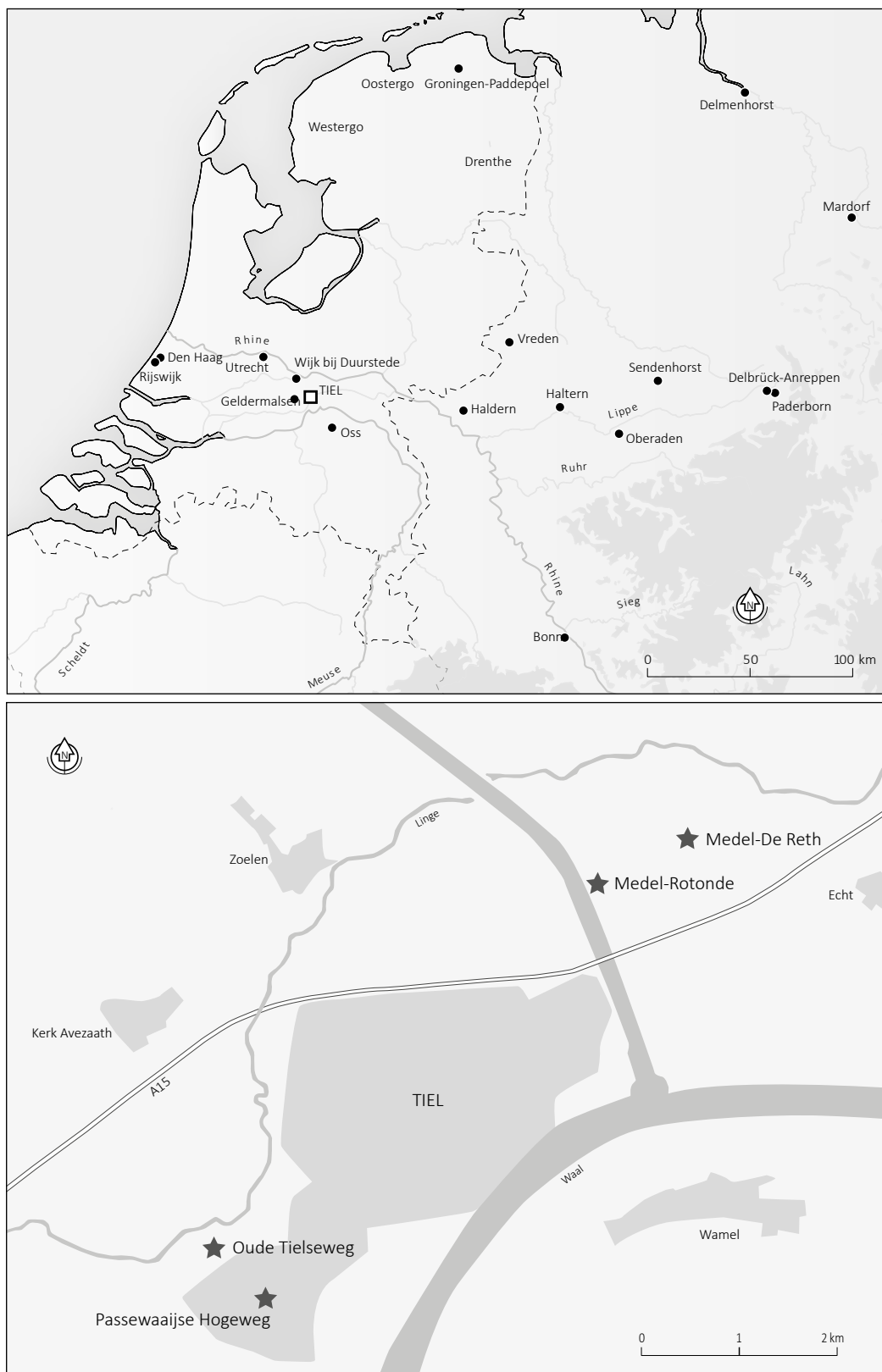


Figure 1. Location of the Tiel region and the four selected rural settlements within this region.

Table 1. Number of samples selected from the four rural settlement in the Tiel region and from the material used as reference.

site or region	number of samples	
	from consumption material	as reference material
Tiel-Medel De Reth	31	
Tiel-Medel De Ronde	8	
Tiel-Passewaaij	15	
Tiel-Oude Tielseweg	20	
South-Holland: The Hague-Rotterdamsebaan		3
North-Holland: Schagen-Witte Paal, Uitgeesterbroek 54		8
Friesland: Oostergo-Westergo		8
Groningen: Paddepoel		8
local (Late Iron Age): Medel-De Reth, Geldermalsen-Hondsgemet		9

Despite these changes and possibilities, the current Dutch approach for the earliest phases of the Roman period continues the use of pottery style groups, linked to assumed provenances. Moreover, ethnical labels are often used, such as Batavian or Chaukian pottery, suggesting that these pottery style groups are directly related to ethnically homogeneous groups of people. However, there are very few science-based integrated provenance studies available to demonstrate that the underlying assumptions no longer apply during demographically dynamic periods, such as the early Roman period.

The aim of this study is to investigate the potential of a multidisciplinary approach that combines scientific methods with traditional stylistic and technological analysis. The approach aims to contribute to the understanding of immigration and mobility in the earliest phase of the Roman period. In the following sections, we will discuss our methodology in more detail and present the results of our study.

## Materials and methods

The present pilot study conducted an investigation utilizing a combination of traditional and scientific methods to analyse pottery assemblages from pre-Claudian rural settlements from the Tiel region. A total of 20 well-dated and undisturbed contexts containing a significant amount of pottery were selected, yielding 12,064 sherds that were thoroughly documented and quantified. From this assemblage, 74 samples were chosen for scientific analysis based on the completeness of the pottery profile. In addition, 27 pottery samples were collected from various supposed regions of provenance in the Netherlands, while nine reference samples were selected from Late Iron Age contexts (table 1).

The traditional methods employed in this study involved the registration and quantification of various pottery characteristics, including wall and rim finishing,

decoration, firing atmosphere, tempering, vessel shape, and regional type. Petrography, Matrix Grouping by Refiring (MGR), WD-XRF, and SEM-EDS were the scientific methods used for compositional and technological analysis. Petrography involved the microscopic analysis of thin sections, which allowed for the classification of pottery based on clay matrix, voids, and inclusions. MGR is based on the assumption that the chemical and mineralogical composition of the clay mixture used for the pottery is reflected in its thermal behaviour during firing. The samples were refired and classified based on colour variation and texture at different temperatures (1000 °C, 1100 °C and 1200 °C). SEM-EDS was used to analyse the major chemical elements of the matrix, while bulk chemical analysis was conducted using WD-XRF to determine the major, minor, and trace elements present.

The results were treated as a multivariate dataset consisting of qualitative and quantitative data. Fabric classes were established based on the scientific analyses, comparison to reference samples, the geology of northwestern Europe, and published data, resulting in hypothetical pottery provenance groups. The established fabric classes and provenance groups were consistent with the chemical data. The final pottery provenance groups and their fabric classes were compared with documented vessel types, stylistic and technological characteristics, resulting in insights into the distribution of certain 'style characteristics'.

In summary, this pilot study effectively combined traditional and scientific methods to analyse pottery assemblages from pre-Claudian rural settlements. Innovative to our approach is that stylistic information is no longer taken as a primary criterion in the classification process but used as part of a more integrated methodology. The thorough documentation and quantification of the pottery assemblages, coupled with the scientific analyses, yielded significant insights into pottery provenance and

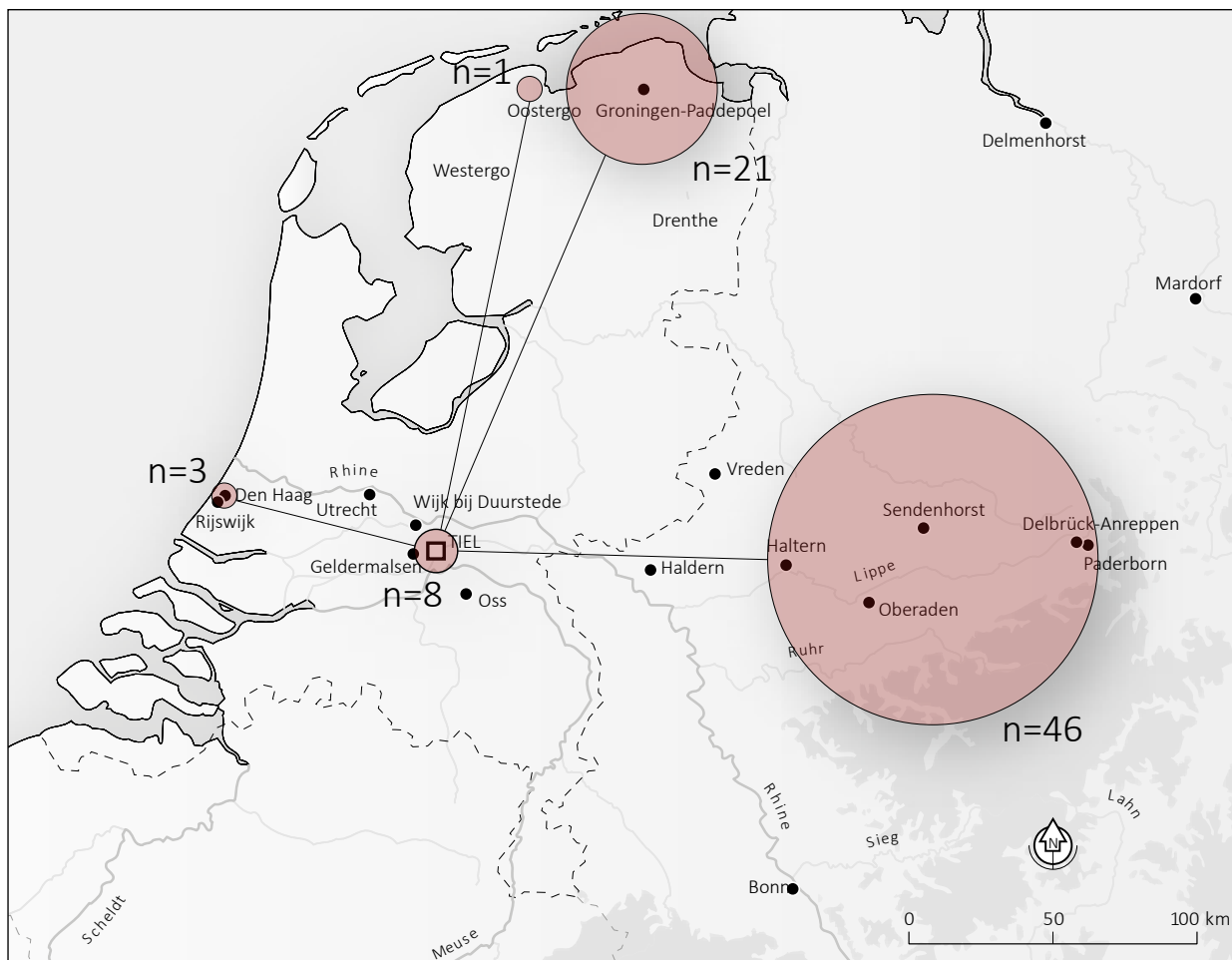


Figure 2. Proportional dot map of pottery provenance for the Tiel region.

production, as well as the complex and heterogeneous traditions in which it was embedded.

## Results

One significant finding of this study is the ability to distinguish between reference groups and link them to provenance groups. Specifically, the pottery samples from consumption sites in the Tiel region were able to be classified into five distinct provenance groups (fig. 2 and table 2). Notably, the Lippe region was identified as a provenance based on unique inclusions in the pottery, such as oolites, calcite fragments, and basalt, despite the lack of reference samples from the region. The thin section proved to be crucial in this case, as it matched the geological characteristics of the Lippe region.

The pottery assemblages from the four sites in the Tiel region exhibit considerable heterogeneity, with specific vessel types showing similarities to those from previously assigned 'pottery style groups' from various geographic regions or even culture groups. However,

these vessel types also exhibit decoration styles typical of other regions, and within the assemblages, there is significant variation in vessel types. Therefore, the most prominent vessel types and styles were grouped and generally described to allow comparison with parallels from other regions and confrontation with the results of the science-based fabric analysis, while avoiding bias.

The study also revealed a discrepancy between stylistic characteristics and provenance. For instance, a jar that fits typologies from the Groningen region is shown in figure 3a, while a vessel that stylistically belongs to the Late Iron Age tradition of the west-coast of the Netherlands and the local Betuwe region is shown in figure 3b. In literature, these 'Iron Age' vessels are described as imports from the west-coast of the Netherlands. However, both the jar and the vessel were actually produced in Groningen. These findings suggest that, in this dynamic period of change, mobility and migration, it is difficult to assign a single provenance based on stylistic characteristics alone. Two vessel groups are

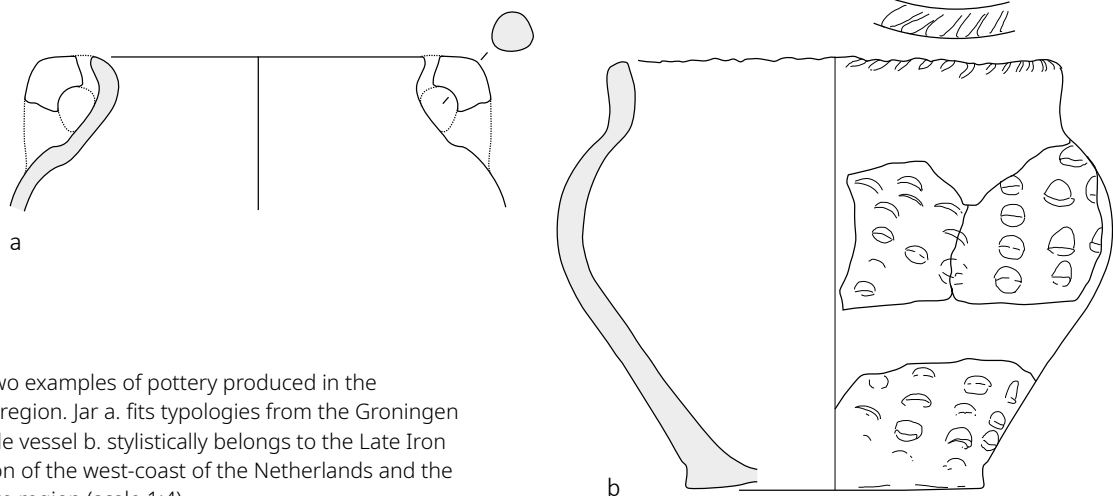


Figure 3. Two examples of pottery produced in the Groningen region. Jar a. fits typologies from the Groningen region, while vessel b. stylistically belongs to the Late Iron Age tradition of the west-coast of the Netherlands and the local Betuwe region (scale 1:4).

presented here, together with a specific type of decoration, to exemplify the research findings that style does not necessarily correspond to provenance: the ‘Frisian’ vessel group, the ‘neckless bowls with developed rims’, and the ‘standing hatched triangles’ decoration.

### The ‘Frisian’ vessel group

The first group of vessels presented in this study is produced in the style of pottery commonly found in the coastal regions of the Netherlands, such as South- and North-Holland, Friesland, Groningen, as well as in northwestern Germany. This pottery style is often referred to as ‘Frisian’ in literature and is assumed to be imported or locally imitated by immigrants from the coastal regions (Taayke 2002; Van den Broeke 2018). The vessels in this group show five different fabrics, including imports from the north and west coasts of the Netherlands, local imitations, and the largest group from the German Lippe region. Although the high number of vessels originating from the German region are surprising, we knew from literature that they were also present in sites like Haltern and the Flottenlager in Cologne (Carrol 2001). The ‘Frisian’ vessel group is an excellent example of the mismatch between stylistic characteristics and provenance (fig. 4).

### The ‘neckless bowls with developed rims’

The second group of vessels presented is referred to as ‘neckless bowls with developed rims’. These vessels are prevalent across a broad area spanning the Netherlands and Germany, with the core region believed to be where the later Rhein-Weser-Germanic style emerged around 50 AD. In particular, the Lippe region (Westphalia, Germany) should be mentioned where it was found at Delbrück-Anreppen (Eggenstein 2003, plate 46.17.8-9), Bergkamen-Oberaden (*ibid.*, plate 20.9-11) and

provenance group	number of samples
local	8
South-Holland	3
Friesland	1
Groningen	21
Germany (Lippe region)	46

Table 2. Number of samples for each of the five provenance groups recognised in the Tiel region pottery assemblage.

Haltern (*ibid.*, plate 61h). German literature suggests that the earliest Roman camps attracted immigrants from various regions, as evidenced by the diverse characteristics of handmade pottery from that time (Meyer 2009). The resulting hybridity of styles gave way to the more stabilized, though hybrid Rhein Weser Germanic-style. By analysing the provenance of vessels from the Tiel region, the study concludes that they likely originated from the Lippe region, which includes several production sites exhibiting different fabric classes. The variations in form (some are more biconical, like the Von Uslar (1938) I and II-forms, rim (some are faceted), and decoration seen within this vessel group are reflective of the pre-Rhine Weser Germanic hybridity. While there is evidence of imported hybridity, the example of the ‘neckless bowls with developed rims’ demonstrates again that a specific style cannot be easily linked to a place of origin.

### The ‘standing hatched triangle’ decoration pattern

A third example concerns a specific type of decoration pattern that consists of upward pointing or ‘standing hatched triangles’ (fig. 5). This pattern is primarily found on pottery from the 1<sup>st</sup> century AD in the coastal region

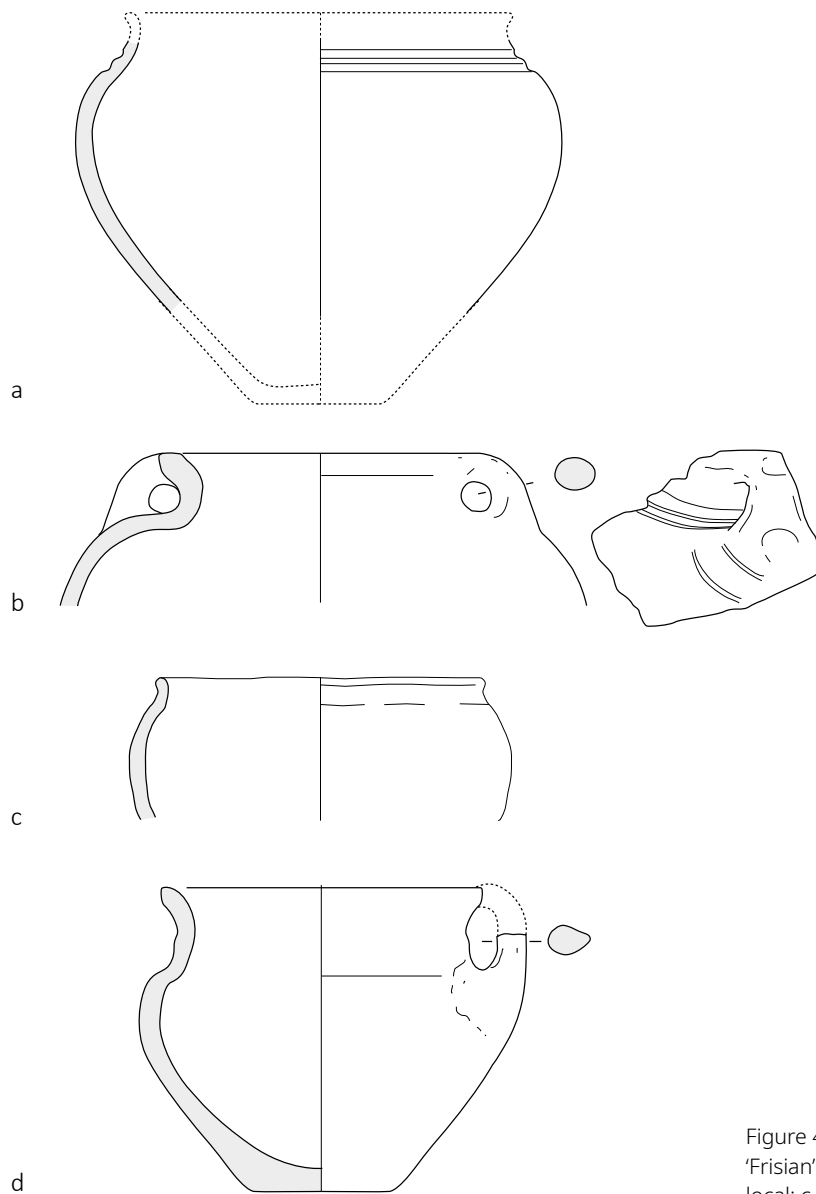


Figure 4. Four examples of pottery from the 'Frisian' vessel group. Provenance: a. Frisian; b. local; c. South-Holland; d. German (scale 1:4).

of Groningen and northwestern Germany (Taayke 2017, 66). However, in northern Dutch regions, the triangles are pointing downwards instead of upwards. Additionally, small wall sherds with similar geometrical decorations have been discovered in Mardorf in Hessen (Meyer 2000, 148, fig. 8.19, 21 and 24) and Haldern in the Lower Rhine area (Von Uslar 1949, fig. 16.6-7). On the other hand, fabric analysis reveals that the vessels from the Tiel region, with this type of decoration, were produced in west-central Germany (the Lippe region). Although parallels for this decoration type have not yet been discovered in the region, the article highlights the importance of continuing research to better understand the distribution and origins of this specific type of decoration.

## Discussion

This pilot study proposes a multivariate and integrative approach to investigate pottery provenance, production, exchange, and import in the Tiel region. The study combines several scientific methods (petrography, Matrix Grouping by Refiring, SEM, WD-XRF) with traditional methods (such as the study of vessel types, decorations, temper). Our approach challenges the constraints of a predominantly stylistic approach and yields promising results and offers great potential for gaining better insight into the much debated themes of human mobility, cultural interaction and migration.

One significant finding of this exploratory study is the ability to distinguish between reference groups and link them to provenance groups using the new approach.



The use of all different kinds of data as factors with equal weighing in an iterative classification process enabled the researchers to distinguish between samples with hardly differentiated geological background originating from the Northern European sedimentary basins. The study shows that the handmade pottery has enormous potential to reveal information about provenance, production, exchange, and import.

The study also reveals an unexpected but anticipated result that style does not necessarily correspond to provenance. By releasing the constraints of a predominantly stylistic approach, this study unlocks never expected research potential, giving a prospect of a highly complex and heterogeneous world of pottery provenance, production, exchange, and import.

The results presented in this paper specifically apply to the Tiel region. Care must be taken to extrapolate the results to other regions without further research. However, the method proposed in this study is not constrained by any geographical border, and it is applicable to other regions. A lot of potential, for example, is discerned in the Dutch Kromme Rijn and The Hague region, but also in the early military sites like Vechten and Valkenburg. Anyway, the study builds up a large dataset on which further research can be based, using it as a reference and to put new studies in a larger context.

The new approach proved to be successful and a valuable tool for ceramic research. The limited scale study of the Tiel region already produced results concerning themes related to immigration and mobility of people, goods, and ideas. The most prominent result is the confirmation of the observed break with locally produced Late Iron Age pottery. Most of the 12,000-plus sherds show non-local fabric characteristics, which is confirmed by scientific compositional research analysis. The study tentatively interprets these findings as the result of first-generation settlers who brought most of their household, including their pottery, with them. The imported pottery proved to originate from different locations, reflecting a mixed population of residents, a portfolio of styles and fabrics caused by large scale movements of people, exchange and imports, and probably a combination of these.

The study suggests that the observed hybridity of styles, whereby different ‘cultural’ traditions of form and decoration are combined into new pots, could have been caused by the same processes. Comparable indications of hybridity though were also observed in house architecture and the development of the Rhine Weser Germanic pottery, opening up the possibility of imported hybridity from the German Lippe region to Tiel. Disentangling these differences and hybridity in more detail can only reveal a rich and highly nuanced picture of a society during a dynamic period. Overall, this study demonstrates the potential of a multivariate and integrative approach

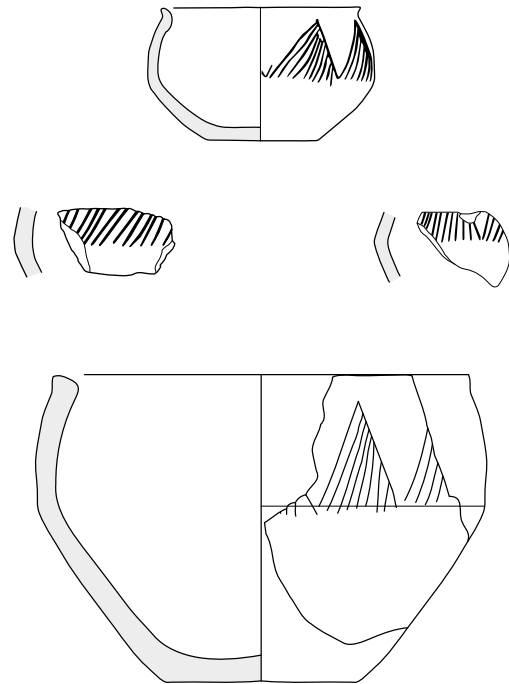


Figure 5. Four examples of the ‘standing hatched triangle’ decoration pattern from the site Tiel-Oude Tielseweg (scale 1:4).

to reveal important insights into pottery provenance, production, exchange, and import and related themes such as immigration and mobility.

## Conclusions

Traditionally, pottery style and typology have been used to determine the origin and attribution of pottery. This pilot study proposes a multivariate and integrative approach to investigating pottery provenance, production, exchange, and import in the Tiel region. The study uses a combination of scientific methods and traditional methods to challenge the constraints of a predominantly stylistic approach and gain better insight into human mobility, cultural interaction, and migration. The approach yields promising results and shows that handmade pottery has enormous potential to contribute to these themes. One significant finding of the study is the ability to distinguish between reference groups and link them to provenance groups using the new approach. The study shows that style does not necessarily correspond to provenance. The results presented in the paper specifically apply to the Tiel region, but the method is applicable to other regions.

The new approach proved to be successful and a valuable tool for ceramic research. The limited scale study of the Tiel region already produced results concerning themes related to immigration and mobility of people,

goods, and ideas. It confirmed the observed break with locally produced Late Iron Age-pottery. It appears that first-generation settlers brought most of their household, including their pottery, with them to the Tiel region. The study suggests that the observed differences between sites and the hybridity of styles could have been caused by processes related to immigration and mobility.

Overall, this study demonstrates the potential of a multivariate and integrative approach to reveal important insights into pottery provenance, production, exchange, and import and related themes such as immigration and mobility. The study builds up a large dataset on which further research can be based, using it as a reference and to put new studies in a larger context.

The study conducted a pilot analysis of over 12,000 sherds from the Tiel region and found that most of the pottery was non-local, with a diverse range of provenance regions and styles. This suggests a high degree of mobility and a diverse composition of society across a wide region. The authors propose that the non-local pottery was likely brought to the Tiel region by immigrants who brought their entire household with them. The small number of locally-produced samples showed a mix of style elements, indicating the mobility of ideas and traditions introduced by immigrants. Comparable indications of hybridity were also observed in house architecture. This study challenges the constraints of a predominantly stylistic approach to pottery analysis and highlights the potential of a multidisciplinary approach to understanding the mobility and diversity of pre-Roman societies in the Batavian region.

## Acknowledgements

The authors wish to express their gratitude to the Nederlandse Organisatie voor Wetenschappelijk Onderzoek (NWO), Vrije Universiteit Amsterdam (VU), and the provinces of Gelderland and Noord-Holland, for providing funding and support for the larger project 'Tiel-Medel as a key site for innovative research into migration and ethnogenesis in the Roman Northwest frontier'. The provenance study of the handmade pottery from the Tiel region, presented in this article, forms a part of this project. The authors would like to extend their sincere thanks to their colleagues who participated in the project: Stijn Heeren, Diederick Habermehl, Nico Roymans, Henk van der Velde, Lisette Kootker. The pottery study was carried out by the authors with the valuable assistance of Diederick Habermehl and Alline Sinke. For their help with the science-based techniques, we thank Dennis Braekmans, and Pieter Vroon. The authors would also like to express their gratitude to all the individuals who generously provided samples and information for this study. Their

enthusiastic participation and support were invaluable to the successful completion of this project.

## Bibliography

- Carrol, M., 2001: Supplying the Roman fleet. Native Belgic, Frisian and Germanic pottery from Cologne, *Journal Roman Archaeology* 14, 310-324.
- Eggenstein, G., 2003: *Das Siedlungswesen der jüngeren vorrömischen Eisenzeit und der frühen römischen Kaiserzeit im Lippebereich*, Mainz am Rhein (Bodenaltertümer Westfalen 40).
- Habermehl, D., G.L. Boreel, D. Braekmans, S. Heeren, L.M. Kootker, N. Roymans & J. Van Kerckhove in press: Investigating migration and mobility in the Early Roman frontier. The case of the Batavi in the Dutch Rhine delta (c. 50/30 BC-AD 40), *Germania* 100.
- Meyer, M., 2000: Keramik der römischen Kaiserzeit aus der Siedlung Mardorf 23, Krs. Marburg-Biedenkopf, in: S. Biegert, S. von Schnurbein, B. Steidl & D. Walter (eds), *Beiträge zur germanischen Keramik zwischen Donau und Teutoburger Wald*, Bonn (Kolloquien zur Vor- und Frühgeschichte 4), 139-150.
- Meyer, M., 2009: Der Deutsche Mittelgebirgsraum um die Zeitwende, in: St. Berke & M. Zelle (eds), *2000 Jahre Varusschlacht. Mythos*, Stuttgart, 58-66.
- Taayke, E., 1996: *Die einheimische Keramik der nördlichen Niederlande, 600 v. Chr. bis 300 n. Chr.*, Groningen (PhD thesis University Groningen).
- Taayke, E., 2002: Handmade pottery from a Roman period settlement at Wijk bij Duurstede-De Horden, *Berichten van de Rijksdienst voor het Oudheidkundig Bodemonderzoek* 45, 189-218.
- Taayke, E., 2017: Handgemaakt aardewerk, in: C.W.M. den Hartog (ed.), *Sportpark Terweide 5, LR84. Definitief archeologisch onderzoek aan de Hogeweide in Leidsche Rijn Centrum*, Utrecht (Basisrapportage Archeologie 106), 61-68.
- Van den Broeke, P.W., 2012: *Het handgevormde aardewerk uit de IJzertijd en de Romeinse tijd van Oss-Ussen. Studies naar typochronologie, technologie en herkomst*, Leiden (PhD thesis University Leiden).
- Van den Broeke, P.W., 2018: Pierenpaté? Fries aardewerk ten zuiden van de Nederrijn, in: A. Nieuwhof, E. Knol & J. Schokker (eds), *Fragmenten uit de rijke wereld van de archeologie*, Groningen (Jaarverslagen Vereniging Terpenonderzoek 99), 77-87.
- Van Heeringen, R.M., 1992: *The Iron Age in the western Netherlands*, Amsterdam (PhD thesis Vrije Universiteit Amsterdam).
- Van Kerckhove, J., G.L. Boreel & D. Braekmans in press: Evidence for immigration into the Batavian region

in the pre-Claudian era through a multi-analytical approach (petrography, pottery refiring, SEM-EDS and WD-XRF), *Journal of Archaeological Science*.

Von Uslar, R., 1938: *Westgermanische Bodenfunde des ersten bis dritten Jahrhunderts nach Christus aus Mittel- und Westdeutschland*, Berlin (*Germanische Denkmäler der Frühzeit* 3).

Von Uslar, R., 1949: Die germanische Siedlung in Haldern bei Wesel am Niederrhein, *Bonner Jahrbücher* 149, 105-125.



PART 2

**RECENT RESEARCH INTO  
THE ROMAN MILITARY  
ACTIVITIES DURING THE  
REPUBLIC**

ARCHAEOLOGICAL EVIDENCE





# Roman troops in high mountains

The challenge of establishing Roman hegemony in the Poenine Alps

## Romain Andenmatten

Office cantonal d'Archéologie  
/ RAMHA association,  
Route de la Piscine 10C,  
CH-1950 Sion, Switzerland,  
romain.andenmatten@admin.  
vs.ch / info@ramha.ch

## Tristan Allegro / Gwenaël Bertocco

Institut d'Archéologie et  
des Sciences de l'Antiquité,  
Université de Lausanne,  
Bâtiment Anthropole,  
CH-1015 Lausanne,  
Switzerland, tristan.allegro@  
unil.ch / tallegro97@gmail.com  
/ gwenaël.bertocco@unil.ch /  
gwenaël.bertocco@gmail.com

## Alessandra Armirotti

Regione autonoma Valle  
d'Aosta, Soprintendenza per  
i beni e le attività culturali  
Valle d'Aosta, Piazza Roncas,  
12, 11100 Aosta, Italy,  
a.armirotti@regione.vda.it

## Fabien Langenegger

Office du patrimoine et de  
l'archéologie de Neuchâtel-  
section Archéologie,  
Laténium, Parc et musée  
d'archéologie, Espace Paul  
Vouga, CH-2068 Hauterive,  
Switzerland/Suisse, fabien.  
langenegger@ne.ch

## Michel Aberson

Institut d'Archéologie et  
des Sciences de l'Antiquité,  
Université de Lausanne,  
Bâtiment Anthropole,  
CH-1015 Lausanne, Suisse,  
michel.aberson@unil.ch

Romain Andenmatten, Tristan Allegro, Alessandra Armirotti, Gwenaël Bertocco, Fabien Langenegger and Michel Aberson

## The project

The RAMHA and 'Siti d'alta quota' project has been conducted since 2018 through a partnership between the Archaeological Structure of the Superintendence for Cultural Heritage and Activities of the Valle d'Aosta (Italy) and the RAMHA's scientific team from Valais (Switzerland, Armirotti 2019, 46). The two teams set up a multidisciplinary investigation methodology developed by the RAMHA team, which was perfected over the years. Currently, 25 similar sites between the altitudes of 2385 m and 3059 m above sea level have been identified between the Valle d'Aosta and the Valais. These high mountain sites have similar general characteristics in terms of altitude, topography, type of remains, location near or on transit paths and natural defences with a large field of vision (fig. 1).

## Sites and methodologies

In Valle d'Aosta, the first investigations started as early as 1970 on the Mont Tantané site, after which other sites were identified and some have been the subject of limited fieldwork by superintendence, while at the same time others have been explored by amateurs without authorisation (Armirotti *et al.* 2023, 10). On the Valais side, research started in 2006, on the Mur (dit) d'Hannibal site, and have then been pursued until today with the RAMHA team, which is also focused on other sites from 2016 onwards. The first constraint is ethical, by carrying out operations on sites which are not in imminent danger. Our aim is to study these sites through limited investigations in order to understand the context while preserving most of their substance as archaeological reserve (Andenmatten 2020, 135-138). A second constraint is the repeated reoccupation of the site and the stratigraphy characterised by strong erosion and weak to non-existent sedimentary deposits. Therefore, excavations rarely allow a relative chronology of the structures to be established. Finally, small material remains are not preserved in moraines that have had their fine matrices washed out.

The positive aspects of high-altitude environment are the good preservation of metal objects and perishable material. Furthermore, the fact that extensive occupations



Figure 1. Col d'Annibal, 2995 to 3059 m. In the foreground, part of the wall quite well-preserved, which continues on the ridge and blocks the access to the pass. In the background, wide field of view. Picture taken towards the south. (© R. Andenmatten/ RAMHA, 2016).

at these altitudes were necessarily seasonal and often linked to specific events makes it possible to consider the occupation's layers within the structures as 'almost' closed ensembles. An observation that also emerged is the systematic old wood effect that occurs in  $^{14}\text{C}$  dating on selected charcoal in contrast to plant macroremains. Discrepancies sometimes reach more than a century in the same structure, forcing a reflection on the use of charcoal  $^{14}\text{C}$  dating and the need to consider these only as *terminus post quem*.

### Catalogue of sites

Of the 25 sites recorded (fig. 2), 16 have undergone varying degrees of fieldwork, (prospection and/or fieldwork Andenmatten 2020), 12 probably belong to the same phenomenon dated between the late Republican and early Augustan periods and four are currently of an uncertain date in the La Tène or Roman period (Plan de Tcholeire, Bonhomme du Tsapi, Mont de la Tza) or are in the process of being dated (Pas de Lona). Among these 16 sites, seven, located on both sides of the Col du Grand St-Bernard (except the Col Pierrey), are equipped with fortifications (enclosure or barricade wall).

### Equipment on a regional scale

A particularity of the archaeological material briefly described in this article is that it is composed of objects from Roman and La Tène traditions (fig. 3), which are associated and found on the same site, in the same occupation's layer (Andenmatten 2020). Among the *militaria*, offensive throwing weapons with no visible signs of use are the most represented (5 arrowheads, 4 points [known as] *Numantia* type, 16 lead slingshots, more than 1000 slingstones). Offensive infantry weapons and defensive weaponry are less frequent (one scabbard bridge, two spear-butts, three possible shield nails, a shield edging, two scales of armour and part of a helmet crest holder). They are all dated from the 1<sup>st</sup> century BC.

Among the remaining findings, two categories of objects can be directly associated with military equipment from the second half of the 1<sup>st</sup> century BC. These are belt elements and hobnails. Although the debate on the dating of the hobnails remains open, the observation of diameters seems to allow us to propose a *terminus ante quem* of 16/15 BC for nails with a diameter larger than 15 mm; similarly, cross trademarks would tend to disappear at this time (Volken *et al.* 2011, 338-340; Istenic 2019 276-279;



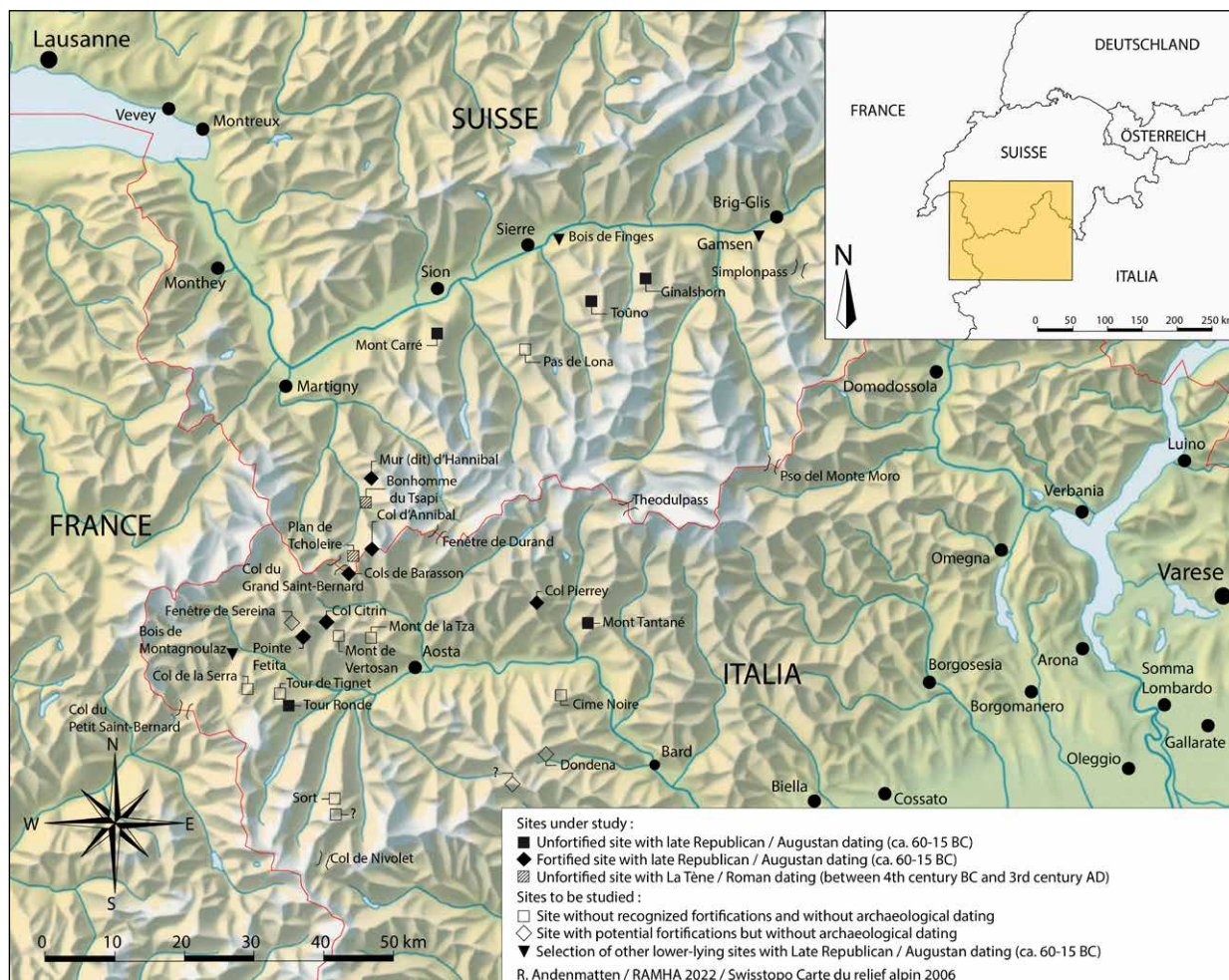


Figure 2. Location of sites under study and to be studied (© R. Andenmatten/RAMHA, 2022).

Martin-Kilcher 2021, 179 and 184-185). Furthermore, one can highlight the number of hobnails found, which vary greatly depending on the site.

Almost all the brooches found (9 out of 11) are made of iron and of the regional La Tène finale pattern, except one Roman bronze hinge brooch (Alésia type) and an iron brooch with a globe which comes from the Middle Rhine area (Schulze-Forster 2002, 28-30). With four blue-green glass beads and a belt ring with a button, these are the three types of elements, found on these high-altitude sites, whose best parallels are located in the Middle Rhine (Schade-Lindig 2020, 63-68; Schäfer 2020, 114-115; Schallmayer 2020, 263-285). Three iron rings with *intaglio* of Roman tradition, which is a male ornament frequently occurring in contexts where a Roman military presence or, at least links with the Roman army, is assumed (e.g. in Switzerland: Rageth 2006, 124; Demierre 2009, 310-312), were also found.

Among the tools and utensils, iron sewing needles are the most frequent with 4 specimens. The spindle

and weight, both made of soapstone, are probably tools used for maintenance or repair work, to ensure a certain amount of autonomy for the occupants of the sites. Whole functional tools are scarce (a fire shovel, a hatchet-hammer and a billhook). The former can also be a casual weapon. They are difficult to date precisely, although their presence between the late Republican and Augustan periods is plausible. On the other hand, fragments or parts of tools are more frequent but these elements are only a testament of activity. They do not possess characteristics that would allow a further interpretation.

The numismatic study has not yet been completed and the coins are presented as preliminary result. Three republican Roman coins were found, including one with a 36 BC *terminus post quem*. Numerous indigenous (so-called) 'Valaisan' coins from La Tène D2b were also collected (Geiser 1984, 55-125; 2009, 213-223). If these coins do not definitely indicate the presence of people from the Valaisan's Celtic tribes on the site, they could,



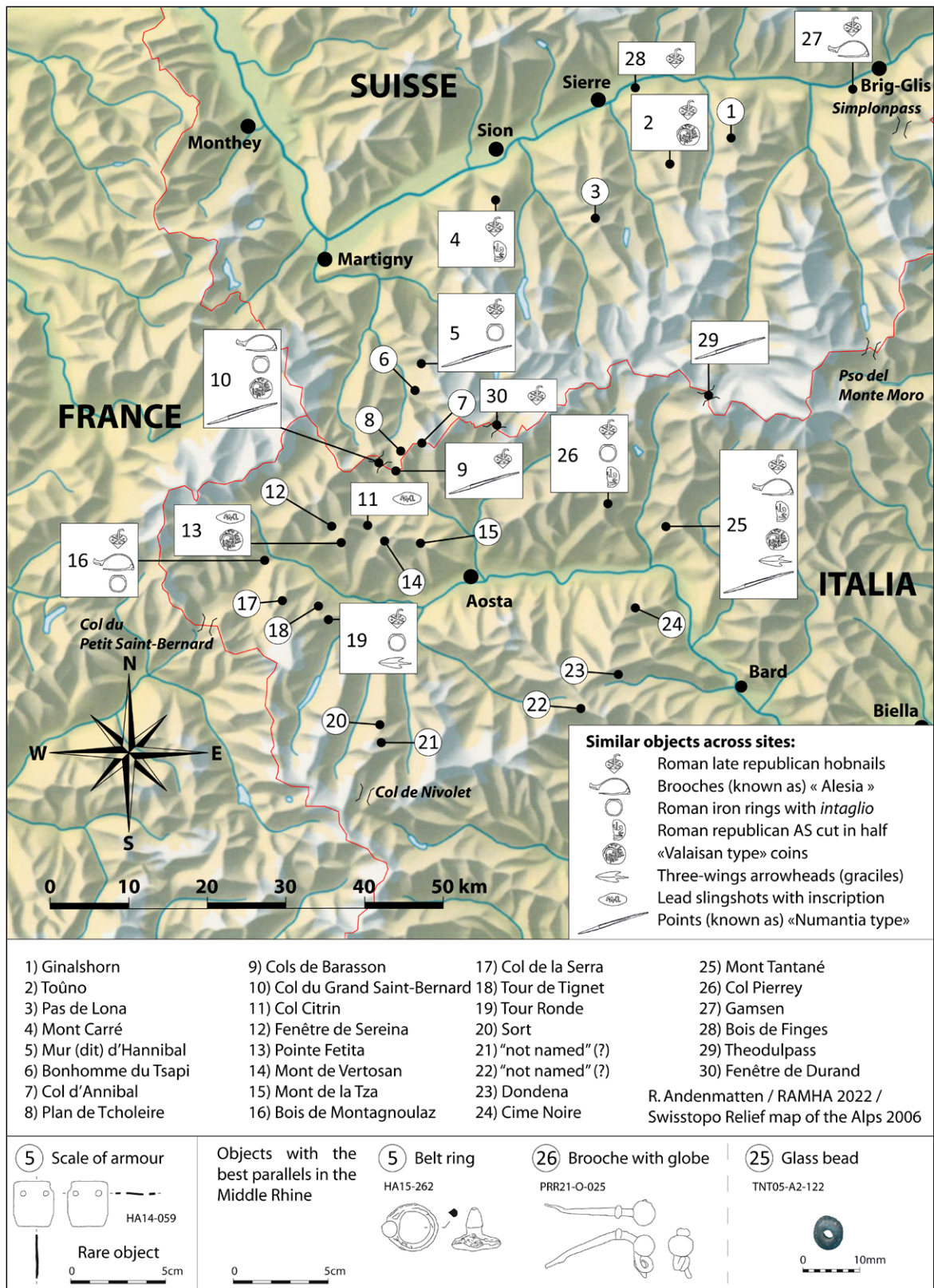


Figure 3. A selection of characteristic objects that can be found on different sites of the corpus (© R. Andenmatten/ RAMHA 2022).

in contrast, be an indication of a possible transit through Valais by those who occupied those sites.

Ceramic material is poorly represented on all sites studied, with the exception of Mont Tantané. This result clearly depends on the methodological choices made. Pottery sherds reveal the repetition of associations of categories and productions that mirror the picture offered by the regional contexts of the late Republican and early Augustan periods located at lower altitudes. Alongside the rare importations of Italic tradition, mostly intended for the consumption and service of food and drink, regional products used for food preparation and cooking are very well represented. Among the fine tableware are very rare fragments of black-glazed pottery, *terra sigillata* and thin-walled ceramics.

As far as materials are concerned, it is impossible to enter into quantitative reflections due to the seasonal and event-related nature of the studied sites, but also due to limited amount of investigations conducted with the exception of the Mont Tantané site. Here, only the qualitative aspect, in terms of presence/absence, can be taken into consideration. The latter must, however, be treated carefully, as in the context of these short-term occupations, logistical constraints limit the amount of material that can be transported to higher altitudes and, as far as possible, only a small part of it, is left *in situ* at the time of abandonment. Archaeologists are therefore only left with material whose loss is tolerated or unavoidable, rubbish, or parts of objects that can no longer be repaired, as well as rare forgetfulness or voluntary deposits. The latter, however, remain difficult to characterise with certainty.

### **When were the locations occupied?**

The observation of the *post* and *ante quem* dates offered by the material helps to provide an answer. The sites taken as a whole can therefore be attributed to a chronological span between 60 and 15 BC, a timeframe that also includes dating obtained on almost all the studied contexts (fig. 4). In addition, some objects do, however, testify to later passages on these emplacements, which have long retained their interest in their function as passageways and observation points for traders, travellers, shepherds, soldiers and hunters. Complementary absolute dating will be necessary to assess the occupations chronologically more precisely, while only dendrochronology, and possibly dendro-anthracology, will perhaps be able to answer the difficult question of the contemporaneity or succession of use of the different sites. It is necessary to ask whether we are dealing with a succession of isolated events or a large-scale territorial control network with a succession of phases, or a mix of the two.

### **Who occupied the sites?**

None of the locations have returned a stratigraphic deposit that would allow us to clarify whether the successive occupations identified can be attributed to different

groups of people. The recurring presence of weapons and other military-related objects on all the sites allows us to deploy the hypothesis that they may have been occupied by troops in the service of Rome. The presence of elements of exogenous origin could also be read in this sense. The pottery can't help to answer the question in the absence of chemical analyses, because of the technical and morphological homogeneity of the pottery from Valle d'Aosta and Valais. Lastly, the absence of elements that would affirm a sure and exclusive indigenous presence as well as any evidence for conflict on the various sites identified is highlighted.

A presence of Alpine, German or even more distant auxiliary contingents can instead be suggested and will be re-evaluated in a broader regional framework. The considerable homogeneity in the organisation of the sites and the repetition of the same number of habitation structures could depend on the presence on these sites of troops with a common organisational base, perhaps benefiting from the same type of training. One would almost be tempted to propose different military corps on the different positions: infantry, archers, slingers. However, although the concept of task-forces already existed in Antiquity, an overly restrictive view of the phenomenon must be advanced with caution.

### **What types of organisation and for which functions?**

An attempt of categorisation of the explored sites has already been suggested (Andenmatten & Aberson 2019, 220; Andenmatten 2020, 159-160). Regarding the general characteristics, some sites would be in the category of fortified enclosures. There are also barricade walls at crossing points and unfortified settlements. However, it is not yet possible to explain the variety of locations that could depend on a variety of occupants, missions, chronologies or the morphology of the sites that did not require fortifications (naturally defended location).

Altitudes, as well as the 'tactical' locations of the sites, have been considered as criteria to evoke a manoeuvre of penetration into the territory of Valle d'Aosta conducted from several directions. All these variants have been and still are the subject of reflection, but only the exploration of further locations will allow us to implement our global understanding of the phenomenon. The preliminary resumption of the study of the early settlements at the Plan de Jupiter site, on the Col du Grand Saint-Bernard, carried out on the basis of the published material, also enable us possible to consider the presence of Roman soldiers between 60 and 15 BC in this place, which logically seems to be impossible to exclude from the list of sites already identified (Deschler-Erb 2008, 257-309; Frumusa 2008, 329-354; Geiser 2008, 109-118; Rey-Vodoz 2008, 311-328). The Bois de Montagnoulaz site, on the easiest road to

Group	Dating corresponding to a group of sites (without indication = BC)	Terminus post quem on the basis of the coins (BC)	Archaeological site	Date from historical events according to written sources (without indication = BC)	slingshot without inscription	slingshot with moulded inscription (■ officer's name)	catapult tip, large pyramid	arrowhead with cannon shaft, with 1 single-sided pin	Hobnails with a diameter > 1.5 cm	Hinge brooch (Alesia type)	javelin tip or pilum with 1 unilateral pin	branded slingshot	slingshot with only the name of the legion	three-wings arrowhead (gracile)	Hobnails with a diameter < or = 1.5 cm	Hinge brooch (Aucissa type)	three-wings arrowhead (foliated)	pyramid (or turret-shaped) pilum ferrule	Type of occupation	V = clothing accessories
A 100-70			92 Carceres al Viejo / E																Roman military camp	
			77 Valencia / E																city, battlefield	
			80/72 Caminreal / E	75	X														city, battlefield	
B 60-40			54 Alesia / F	52	X	■	●	●	●	●	●	●	●	●	●	●	●	●	oppidum, Roman siege	
			Uxellodunum / F	51			●	●	●	●	●	●	●	●	●	●	●	●	oppidum, Roman siege	
			Limburg, Gröfenberg / D	55-53			●	●	●	●	●	●	●	●	●	●	●	●	Roman military camps	
			La Cloche (near Marseille) / F	49	X		●	●	●	●	●	●	●	●	●	●	●	●	oppidum, battlefield	
			Osuna / E	46/45	X	■	●	●	●	●	●	●	●	●	●	●	●	●	oppidum, Roman siege	
			Munda / E	45	X	■	●	●	●	●	●	●	●	●	●	●	●	●	oppidum, Roman siege	
			Mutina / I	43	X	■	●	●	●	●	●	●	●	●	●	●	●	●	city, battlefield	
			Perusia / I	41	X	■	●	●	●	●	●	●	●	●	●	●	●	●	city, battlefield	
C 40-20			Lyon, "Cybèle" hor. 1+2 / F	post 43			●	●	●	●	●	●	●	●	●	●	●	●	colonia from 43 BC	
			near Agen / F	38		■	●	●	●	●	●	●	●	●	●	●	●	●	oppidum, battlefield	
			45 Andagoste / E	36/33 ?	X		●	●	●	●	●	●	●	●	●	●	●	●	oppidum, battlefield	
			56/46 Grad near Reka / S	35 ?	X		●	●	●	●	●	●	●	●	●	●	●	●	altitude site above a road	
C / D			Ste-Croix, Col des Étroits / CH	35-25 ?		■	●	●	●	●	●	●	●	●	●	●	●	●	altitude site above a road	
			Avise, Col Cibrin / I	35-25 ?	X	■	●	●	●	●	●	●	●	●	●	●	●	●	high mountain fortified camp	
			La Magdeleine, Mont Tantané / I	35-25 ?			●	●	●	●	●	●	●	●	●	●	●	●	unfortified high mountain camp	
			Liddes, Mur (del) d'Hannibal / CH	35-25 ?			●	●	●	●	●	●	●	●	●	●	●	●	high mountain fortified camp	
			Nus, Col Pierrey / I	35-25 ?			●	●	●	●	●	●	●	●	●	●	●	●	high mountain fortified camp	
			Bourg-St-Pierre, St-Rémy-en-Bosses and St-Oyen, Cols de Barasson / CH and I	35-25 ?			●	●	●	●	●	●	●	●	●	●	●	●	blocking site	
			Bourg-St-Pierre, Plan de Tcholeire	35-25 ?			●	●	●	●	●	●	●	●	●	●	●	●	short-term camp	
			Avise, Tour Ronde / I	35-25 ?			●	●	●	●	●	●	●	●	●	●	●	●	unfortified high mountain camp	
			Nendaz, Mont Caré / CH	35-25 ?			●	●	●	●	●	●	●	●	●	●	●	●	unfortified high mountain camp	
			Amnèviens, Le Toulou / CH	35-25 ?			●	●	●	●	●	●	●	●	●	●	●	●	unfortified high mountain camp	
			Bourg-St-Pierre, Bonhomme du Tsap / CH	35-25 ?			●	●	●	●	●	●	●	●	●	●	●	●	unfortified high mountain camp	
			dd 29-26 Bourg-St-Pierre and Étrobles, Col d'Amnèviens / CH and I	29-25			●	●	●	●	●	●	●	●	●	●	●	●	blocking site	
			55-46/45 Bivio, Septimerpass / CH		X	?	●	●	●	●	●	●	●	●	●	●	●	●	Roman military camp	
			Riom-Parsonz, Cap Sas-Schlucht / CH		X		●	●	●	●	●	●	●	●	●	●	●	●	Septimerpass road, clashes?	
			31 Schanis, Biberkopf / CH				●	●	●	●	●	●	●	●	●	●	●	●	watchtower	
D 20 BC - 10 AD			19/18 Oberammergau, Döttenbichl / D	15 ?	X		●	●	●	●	●	●	●	●	●	●	●	●	sanctuary? battlefield	
			17 Dangstetten / D				●	●	●	●	●	●	●	●	●	●	●	●	Roman military camp	
			Lyon, "Cybèle" hor. 3 / F		X		●	●	●	●	●	●	●	●	●	●	●	●	colonia	
			dd 11-8/7 Oberaden / D	From 12-11	X		●	●	●	●	●	●	●	●	●	●	●	●	Roman military camp	
			Haltm / D		X		●	●	●	●	●	●	●	●	●	●	●	●	Roman military camp	
			1 Kalkriese / D	9 AD	X		●	●	●	●	●	●	●	●	●	●	●	●	battlefield	

dd = dendrochronological dating

Figure 4. Summary of weapons and clothing accessories characteristic of dated sites and parallels in the Central Alps region, with *terminus post quem* of the coins, based on Martin-Kilcher 2011, 54; 2015, 244; the Döttenbichl site from Zanier 2016; sites under study, implemented or updated based on Andenmatten 2020, 160 (© R. Andenmatten/RAMHA, T. Allegro/RAMHA 2022).



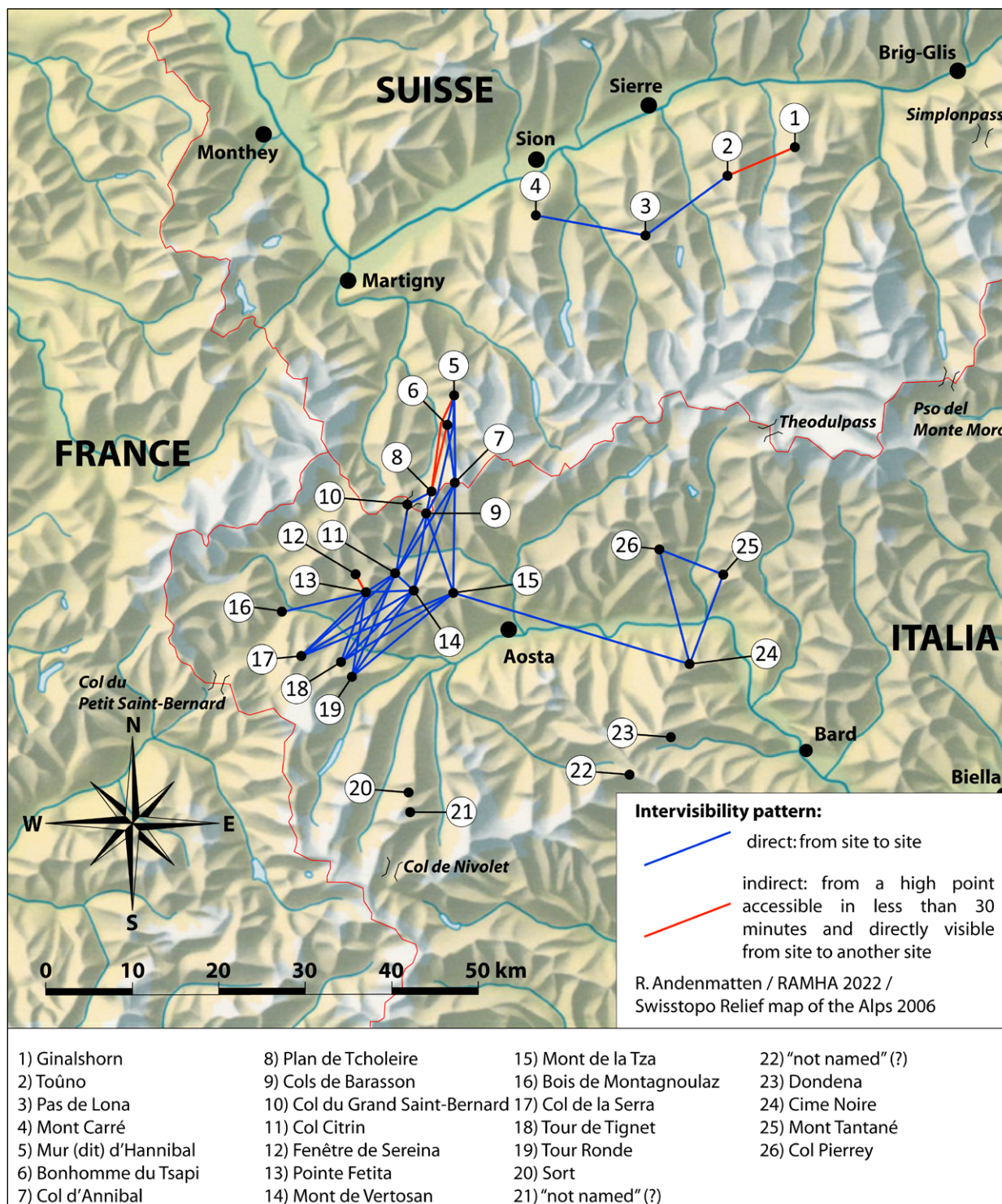


Figure 5. Direct and indirect intervisual links between the sites of the corpus (© R. Andenmatten, 2022).



the Col du Petit Saint-Bernard would also fit in very well (Framarin *et al.* 2011; Armitotti & Framarin 2012).

Indeed, the currently available dates are still too wide to attempt an association of several sites to a single known or unknown event (except dendrochronological dating on the Col d'Annibal: 29-26 BC), and only the evidence of identical material allows us to assume this. The majority of the sites explored could therefore have been occupied or frequented by Roman troops between 35 and 25 BC, during a period of instability and almost permanent conflict between Rome and the *Salassi*. Indeed, these events alone provide a plausible explanation for such a deployment of forces in the high mountains (Andenmatten & Aberson 2019, 221-223). The blockade put in place by C. Antistius Vetus in 35-34 BC around the territory of the *Salassi* is one of the events taken into consideration, but the operations of M. Valerius Messala Corvinus between 30 and 28 BC or of Terentius Varro in 25 BC, the tactical details of which we don't know much about, may equally have required such infrastructure (Aberson & Andenmatten 2021, 74-79). A division between many of these events or the attribution of some sites to events not handed down by the sources remain two plausible possibilities. Certainly, the intervisibility between many of the sites studied is an aspect to be emphasised (fig. 5); contacts between different sites were therefore possible, as was any long-distance communication via multiple sites. The sites in the Grand Saint-Bernard sector could therefore have transmitted a simple message as far as the sites near the Petit Saint-Bernard, some 30 km away, via only two intermediaries. Sites such as Mont-Carré, Toûno or Ginalshorn could in this context be useful as waypoints when moving via lateral valley side passes from Grand Saint-Bernard region in the direction of the Theodulpass, which leads from Valais to Valtournenche. It is therefore plausible to consider the high altitude sites as part of one or more tactical territorial control network occupied by Roman troops during the turbulent decades that led to the entry of the Valle d'Aosta into the *Imperium Romanum*, between 35 and 25 BC, probably following the integration of the Central and Lower Valais (Andenmatten & Aberson 2019, 223-226; Aberson & Andenmatten 2021).

### A new reading of events

The comprehensive studies, which started just over a decade ago on high-altitude sites in Valle d'Aosta and Valais, are far from over and should continue over the next years with fieldwork, but also with specialised studies, new absolute dates and with the reassessment of data from previous investigations, with the aim of publishing a collection of volumes dedicated to the research conducted on the Mur (dit) d'Hannibal and related sites. One of the points of interest of these activities is to have questioned

some of the old interpretative hypotheses put forward and sometimes accepted without careful critical reflection. The new proposed interpretation therefore sees in the populations of the Central and Lower Valais (*Seduni*, *Veragri* and *Nantuates*) not so much the forces opposing Rome, which in the traditional Swiss historiography would have resisted until 16/15 BC, but more probably some of the groups that took part, or whose territories were used as a base, in the operations aimed at subjugating the *Salassi*; it was certainly, partly from their territory, at least from 35 BC, that these manoeuvres were conducted. The so-called 'villaggi dei *Salassi*', considered until today to be the refuge of the natives in the face of Rome's military advance, would therefore seem, in the light of the new data that have emerged, to be more like the offensive support and fortification points used by the occupiers during the *Salassi* quagmire.

### Acknowledgements

The RAMHA scientific team is supported by the RAMHA association (Recherches Archéologiques du Mur (dit) d'Hannibal, [www.ramha.ch](http://www.ramha.ch)). Our thanks to Cécile van Rickstal, Mark Dowling and Nelson Dumas for their close and critical review.

### Bibliography

- Aberson, M. & R. Andenmatten, 2021: L'entrée du Valais dans l'imperium Romanum. Indices archéologiques et témoignages historiques, in: G.L. Gregori & R. Dell'Era (eds), *I Romani nelle Alpi. Storia, epigrafia e archeologia di una presenza. Atti del Convegno internazionale (Losanna, 13-15 maggio 2019)*, Rome, 67-104.
- Andenmatten, R., 2020: Autour du Mur (dit) d'Hannibal. Appréhender un "dispositif militaire" du premier siècle av. J.-C. dans les Alpes pennines (Valais, Suisse et Vallée d'Aoste, Italie), *Treballs d'Arqueologia* 24, 133-164.
- Andenmatten, R. & M. Aberson, 2019: Passer, occuper ou contrôler les Alpes poenines à la transition entre l'âge du Fer et l'époque romaine, *Bulletin d'Études Préhistoriques et Archéologiques Alpines* 29/30, 219-227.
- Armirotti, A. & P. Framarin, 2012: Frequentazione e insediamenti d'altura in età romana. Aggiornamenti e nuovi dati dai siti della Valle d'Aosta, in: S. Armanini, A. Braganti, A. De Guili & E. Poletti Ecclesia (eds), *Inter Alpes. Insediamenti in area alpina tra preistoria ed età romana. Atti del Convegno in occasione dei quarant'anni del Gruppo Archeologico Mergozzo (23 ottobre 2010)*, Mergozzo, 147-160.
- Armirotti, A., 2019: Il progetto Siti d'alta quota. Un approccio preliminare, *Bollettino Soprintendenza per i beni e le attività culturali* 15, 46.

- Armirotti, A., R. Andenmatten, T. Allegro & G. Bertocco, 2023: Caratterizzare una rete di siti di alta montagna di età tardo-repubblicana/augustea tra Valle d'Aosta (IT) e Vallese (CH). Metodo, risultati limiti, interpretazioni e prospettive, in: D. E. Angelucci, E. Croce, M. Migliavacca & F. Saggioro (eds), *Montagne e Archeologie*, Sesto Fiorentino, 9-30.
- Demierre, M., 2009: St-Croix VD, Col des Étroits, Passage d'Entre Roches, *Annuaire d'Archéologie Suisse* 92, 310-312.
- Deschler-Erb, E., 2008: Instrumentum et militaria du Grand Saint-Bernard, in: L. Appolonia, F. Wiblè & P. Framarin (eds), *Alpis poenina, Grand-Saint-Bernard. Une voie à travers les Alpes. Séminaire de clôture (Fort de Bard, 11-12 avril 2008)*, Aosta, 257-309.
- Framarin, P., C. De Davide & D. Wicks, 2011: Indagini preliminari al Bois-de-Montagnoulaz nel comune di Pré-Saint-Didier, *Bollettino Soprintendenza per i beni e le attività culturali* 8, 74-82.
- Frumusa, G., 2008: Le gemme et gli anelli della Collezione del Museo del Gran San Bernardo, in: L. Appolonia, F. Wiblè & P. Framarin (eds), *Alpis poenina, Grand-Saint-Bernard. Une voie à travers les Alpes. Séminaire de clôture (Fort de Bard, 11-12 avril 2008)*, Aosta, 329-354.
- Geiser, A., 1984: Un monnayage celtique en Valais. Les monnaies de Vétrages, *Revue Suisse de Numismatique* 63, 55-89.
- Geiser, A., 2008: Les monnaies gauloises recueillies au Plan-de-Jupiter. Des dépôts laténiens tardifs?, in: L. Appolonia, F. Wiblè & P. Framarin (eds), *Alpis poenina, Grand-Saint-Bernard. Une voie à travers les Alpes. Séminaire de clôture (Fort de Bard, 11-12 avril 2008)*, Aosta, 109-118.
- Geiser, A., 2009: Les monnaies des sépultures sédunes (fouilles récentes), in: P. Curdy, F. Mariéthoz, L. Pernet & A. Rast-Eicher (eds), *Rituels funéraires chez les Sédunes. Les nécropoles du second âge du Fer en Valais central (IV<sup>e</sup>-I<sup>er</sup> siècle av. J.-C.)*, Lausanne (Cahiers d'Archéologie Romande 112 / Archeologia Vallesiana 3), 213-223.
- Istencic, J., 2019: Caligati in the eastern hinterland of Aquileia up to the Early Augustan period, in: H. Dolenz & K. Strobel (eds), *Chronologie und vergleichende Chronologien zum Ausgang der Römischen Republik und zur Frühen Kaiserzeit. Tagungsband des internationalen Kolloquiums anlässlich 70 Jahre Archäologische Ausgrabungen auf dem Magdalensberg. Zugleich Festgabe für Eleni Schindler Kaudelka*, Klagenfurt am Wörthersee, 271-296.
- Langenegger, F., 2021: Étude dendrochronologique et xylogologique, *col d'Annibal* (VS), (unpublished).
- Martin-Kilcher, S., 2011: Römer und gentes Alpinae im Konflikt. Archäologische und historische Zeugnisse des 1. Jahrhunderts v. Chr., in: G. Moosbauer & R. Wiegels (Hrsg.), *Fines imperii – imperium sine fine? Römische Okkupations- und Grenzpolitik im frühen Principat. Beiträge zum Kongress 'Fines imperii – imperium sine fine?' in Osnabrück vom 14. bis 18. September 2009*, Rahden (Osnabrücker Forschungen zu Altertum und Antike-Rezeption 14), 27-62.
- Martin-Kilcher, S., 2015: Archäologische Spuren der römischen Okkupation zwischen Alpen und Hochrhein und die städtische Besiedlung der civitas Helvetiorum im 1. Jh. v. Chr., in: G.A. Lehmann & R. Wiegels (Hrsg.), *Über die Alpen und über den Rhein... Beiträge zu den Anfängen und zum Verlauf der römischen Expansion nach Mitteleuropa*, Göttingen (Abhandlungen der Akademie der Wissenschaften zu Göttingen Neue Folge 37), 235-281.
- Martin-Kilcher, S., 2021: La présence romaine dans les Alpes au premier siècle avant J.-C. L'apport des données archéologiques, in: G.L. Gregori & R. Dell'Era (eds), *I Romani nelle Alpi. Storia, epigrafia e archeologia di una presenza. Atti del Convegno internazionale (Losanna, 13-15 maggio 2019)*, Rome, 158-186.
- Paccolat, O. & F. Maret, 2015: *Projet Interreg 2013-2015. Prospections Valais-Vallée d'Aoste (2013-2014). Voie du Grand St-Bernard, Cols de Barasson, Cols Ferret, Fenêtre de Durand* (unpublished).
- Paccolat, O., Ph. Curdy, E. Deschler-Erb, M.-A. Haldimann & L. Tori, 2019: *L'habitat alpin de Gamsen (Valais, Suisse). Le mobilier archéologique*, Lausanne (Cahiers d'Archéologie Romande 180/181/182).
- Providoli, S., 2015: Zwischen Steinbeil und Konservenbüchse, in: S. Provioli, Ph. Curdy & P. Elsig (eds), *400 Jahre im Gletschereis. Der Theodulpass bei Zermatt und sein "Söldner"*, Baden (Reihe Geschichtsmuseum Wallis 13), 43-104.
- Rageth, J., 2006: Zeugnisse des Alpenfeldzuges des Kaiser Augustus von 15 v. Chr. aus dem bündnerischen Oberhalbstein, *Helvetica Archaeologica* 148, 118-134.
- Rey-Vodoz, V., 2008: Les fibules du Grand Saint-Bernard, in: L. Appolonia, F. Wiblè & P. Framarin (eds), *Alpis poenina, Grand-Saint-Bernard. Une voie à travers les Alpes. Séminaire de clôture (Fort de Bard, 11-12 avril 2008)*, Aosta, 311-328.
- Schade-Lindig, S., 2020: Eine ländliche Siedlung der ausgehenden Latènezeit und militärische Anlagen römischer Zeitstellung, in: S. Schade-Lindig (Hrsg.), *Archäologie am Greifenberg bei Limburg a.d. Lahn. Spuren von der Jungsteinzeit bis zur Römischen Republik*, Darmstadt (hessenArchäologie Sonderband 4), 50-105.
- Schäfer, A., 2020: Kleinfunde aus Metall und Glas, in: S. Schade-Lindig (Hrsg.), *Archäologie am Greifenberg bei Limburg a.d. Lahn. Spuren von der Jungsteinzeit bis*

- zur *Römische Republik*, Darmstadt (hessenArchäologie Sonderband 4), 106-123.
- Schallmayer, E., 2020: Caesar in "Germanien". Die spätlatènezeitliche Siedlung und die römischen Militärlager im historischen Kontext, in: S. Schade-Lindig (Hrsg.), *Archäologie am Greifenberg bei Limburg a. d. Lahn. Spuren von der Jungsteinzeit bis zur Römische Republik*, Darmstadt (hessenArchäologie Sonderband 4), 250-292.
- Schulze-Forster, J., 2002: *Die Latènezeitlichen Funde vom Dünsberg*, Marburg.
- Volken, M., O. Paccolat & S. Volken, 2011: Les clous de chaussures du site de Pfyngut. Les bases d'une typochronologie, in: O. Paccolat (ed.), *PFYN/FINGES, évolution d'un terroir de la plaine du Rhône. Le site archéologique de "Pfyngut" (Valais, Suisse)*, Lausanne (Cahiers d'Archéologie Romande 121), 315-387.
- Zanier, W., 2016: *Der Spätlatène- und Frühkaiserzeitliche Opferplatz auf dem Döttenbichl südlich von Oberammergau*, München (Münchner Beiträge zur Vor- und Frühgeschichte 62).

# The archaeological remains of the Cimbrian Wars

The Lampourdier site and the  
Battle of Arausio (105 BC)

Loïc Buffat, Yahya Zaaraoui and Alexandre Gravier,  
in collaboration with Nathalie Ginoux,  
Marion Gourlot, Marie-Laure Le Brazidec  
and Audrey Renaud

## General context

The Lampourdier hill is located 5 km south of the ancient city of Orange on the banks of the Rhone. A limestone massif, it is bordered to the west by a fossilised arm of the Rhone. The sloping edge of its summit once provided a useful flat surface of about 10 ha. Today, half of this area has been eroded by quarries (fig. 1).

Steep slopes that incline between 30 and 50 % provide the hill with a natural defence. To the south, the massif reaches its end at a cliff and a sheer drop of around 20 m. The archaeological site was spotted in the 1970's but discoveries have been rare. Numerous coins were found, including Roman *denarii* from the second half of the 2<sup>nd</sup> century BC, as well as militaria from the Roman army and some older objects dating back to the Iron Age. In the 1990's, the French Association for National Archaeological Excavations (L'Association pour les fouilles archéologiques nationales – AFAN) made some observations whilst exploring then surveying the area. Not many discoveries were made at that time, with the exception of a significant amount of Italic amphora fragments.

However, in 2014 Alain Deyber took a renewed interest in the site. Together with Thierry Luginbühl, he launched a research project to confirm his initial hypothesis that the Lampourdier could very well be one of the camps used at the Battle of Arausio that took place in 105 BC. Following Deyber's momentum, two excavation operations were carried out, the first for the purposes of preventive archaeology in 2016 and the second as part of scheduled archaeology between 2018 and 2021.

## 2016 preventive excavation, northern sector. Existing knowledge and new contributions

As an introduction, we will offer a review of existing knowledge and an update of the data from the 2016 excavation, without focusing too closely on the metallic or monetary material that was discovered and already presented at length and published during a round table held in Paris on 13 November 2017, directed by Michel Reddé (Deyber *et al.* 2018, 31-36).

**Loïc Buffat / Yahya  
Zaaraoui / Alexandre  
Gravier**  
Mosaïques Archéologie,  
ZA de la Barthe,  
34660 Cournonterral,  
France, l.buffat@  
mosaïquesarcheologie.com

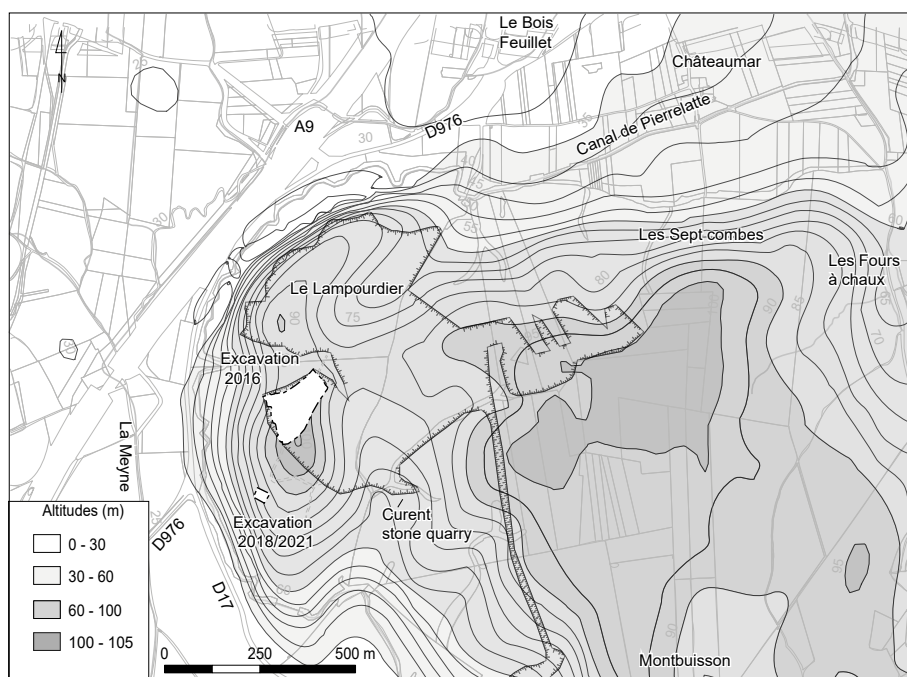
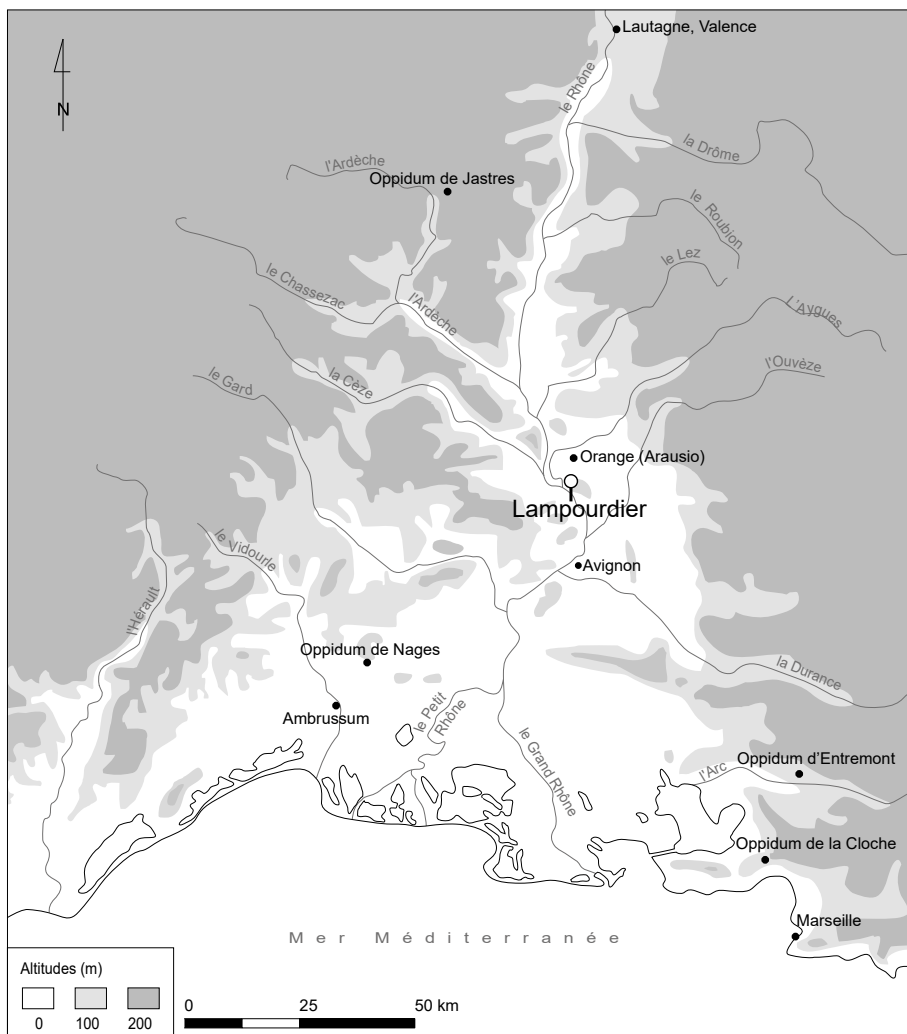


Figure 1. Location of the Lampourdier hill in the Rhone Valley and the excavation areas superimposed on a cadastral map (Y. Zaaraoui).

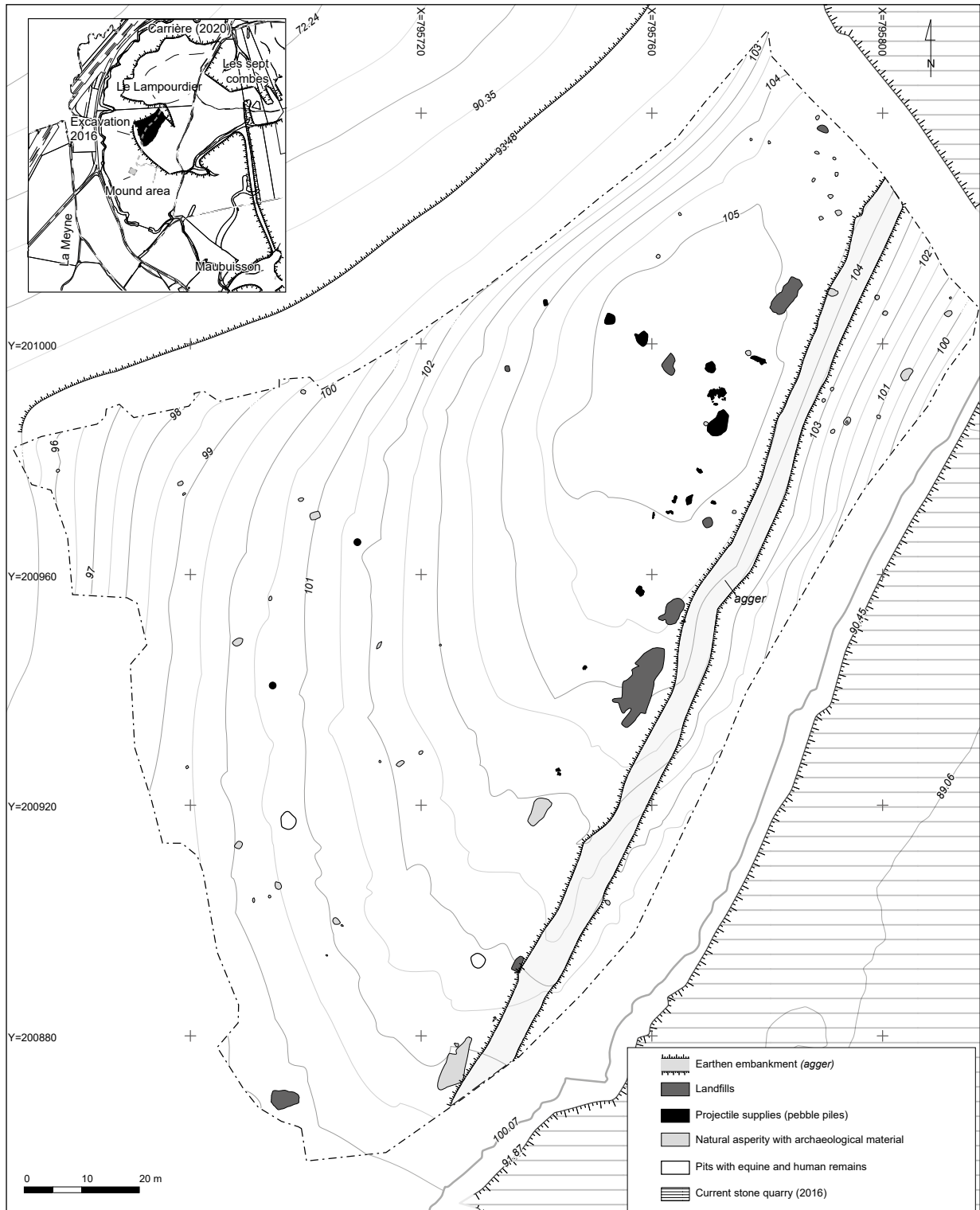


Figure 2. Map of the remains from the 2016 preventive excavation (Y. Zaaraoui).

The results of the 2016 preventive excavation, published in 2018 (Deyber *et al.* 2018, 19-43), can be viewed in light of new knowledge acquired through the recommencement of the documentation and complementary fieldwork conducted as part of the Arausio 105 collaborative research project. The excavation data was re-examined in order to delve deeper into the considerations outlined above for the purposes of producing a monograph (currently being published) and preparing future research. The most significant structural remains have been grouped into four categories consisting of an earthen rampart, projectile stores, pits containing equine and human remains, and layers of landfills containing various types of material such as millstone fragments, remnants of wildlife predation and late-Republican ceramic fragments (fig. 2).

The earthen rampart, a defence system probably used to organise the occupation, was observed to the east of the area over a length of 170 m. It is preserved over a width of 11 m and a height of 0.6 m. This anthropogenic feature of stone and earth consists of a simple mound with no related man-made structure or wooden post. Comparative research into the defensive structures built during Caesar's conquest of Gaul has enabled comparisons to now be made between the embankment uncovered at the site and the stone and earthed embankment discovered at Camp B in *Alesia*. However, the embankment here is not lined with a ditch as is the case at *Alesia*. At Lampourdier, as at *Alesia*, the same type of material was used in the construction of the defensive embankments (Reddé & Von Schnurbein 2001, fig. 106 and 109), and both were built somewhat quickly; the materials were extracted from the immediate vicinity in order to construct a simple bank of earth.

When we look at the general topography of the Lampourdier site, the position of the embankment appears consistent. To the west of the excavation area, toward the Rhone, the massif has cliffs and slopes that are very difficult to access. The occupants did not consider it necessary to protect this steep face. To the east of the earthen embankment, the relief has been partly destroyed by limestone mining. However, aerial photographs taken before the quarries were created show slopes that are less steep than those to the west and potentially crossable by small groups of people. At the foot of these slopes, the valley floors are still used as hunting trails to this day. These tracks lead across the hillside and directly to the banks of the Rhône. In view of this data, the position of the embankment appears consistent. The earthen embankment defended this strategic height by fortifying its eastern part, the most exposed and vulnerable, with the high position providing a panoramic viewpoint from which surveillance of the banks of the Rhône and the pathways leading toward it could be carried out.

At the foot of the rampart, several thousand perfectly sized ovoid sling stones were uncovered in

nineteen clusters, some containing only a few items, others several hundred. Importantly, they were grouped together in piles rather than scattered separately. The way these objects were concentrated indicates three alignments: western, eastern and northern. The longest, 122 m in length, is located to the east and runs parallel to the defensive embankment and the eastern ridge line (fig. 2). These clusters have contributed significantly to our understanding of the defensive system employed at the time. These ammunition supplies have helped us to establish the major strategies of the ancient occupation. Moreover, due to the absence of interference from later periods and the preserved condition of the supplies, an analysis of the ballistic and selection criteria of the pebbles was proposed. Examination of the stones revealed that they are extremely consistent in size, with an average length and width of 5.4 cm and 4.0 cm respectively. The petrographic (macroscopic) analysis revealed a clear predominance of granitoid rocks (42.99 %) and quartzites (40.43 %) with a few very rare clay and limestone pebbles. This proportion, which is visible both within a single cluster and over the entire collection, confirms that extraction took place in a specific alluvial terrace. Pebbles from the various possible extraction areas were sampled and analysed. The alluvial material from the upper terrace of Châteauneuf-du-Pape and that of the projectile supplies are a perfect match. The nearest terraces, or fragments of terrace, are located to the east in the place known as Les Fours à Chaux (the Lime Kilns). These are natural layers of pebbled colluvium (known as quartzite colluvium). It is really in the Montredon area, a little farther east (about 1 km from Les Fours à Chaux) that the western limits of the Châteauneuf du Pape terrace can be seen. From this point eastwards, the pebbles begin to outcrop in large numbers over several thousand hectares. These pebble soils are well known in the region, and are emblematic of the *terroir* of the Châteauneuf-du-Pape vineyards.

The excavation of the southern sector of the area revealed a third category of structure, two oval-shaped, medium-sized pits with very atypical fillings, both consisting of equid remains and one also yielding human remains. The first pit (FS2218), located farther north, is 1.24 m long and 0.84 m wide (fig. 3).

It contains the remains of three equids with both asinine and caballine (male or female mule) morphological criteria, as well as human bones (skull, *pelvis*, *femur*, *tibia*, *tarsus* and *metatarsus* fragments). The fragments showed no signs of having been cut. However, there is evidence of partial exposure to fire of varying depths on each of the identified equids, pertaining to the medial side of left trapezoid of *equus* 1, the right femur of *equus* 2 and a tooth of *equus* 3. The material associated with this structure consists of fragments from Campania and Italic amphora,





Figure 3. Image of the pit with equine and human remains, FS2218 (C. Garcia and A. Ayasse).

a few *caligae* hobnails and a bronze coin from Marseilles with a charging bull to the right. This material can be placed in the second half of the 2<sup>nd</sup> century BC.

Farther east, a second equid burial site was uncovered (FS3511). The smaller structure was much flatter than its neighbouring structure and was preserved to a depth of only 7 cm. Both structures contained the same type of filling. The pit also yielded several equid bones. The fragments of a horse (*equus* 4) and a hybrid (male or female mule, *equus* 5) were identified. No traces of fire were observed here, but the right *radius* of *equus* 5 was marked with a striation halfway up the *diaphysis* on the lateral side. This marking implies that a sharp object cut into this part of the animal. Typochronologically speaking, these findings can be traced back to the very end of the 2<sup>nd</sup> century BC, meaning the items uncovered in these two pits are contemporary.

The archaeozoological study (A. Renaud) and the anthropological analysis (M. Gurlot) both raised an inconsistency in the arrangement of the anatomical sets. The flexion of the equine bones, for example, appears to be forced, with certain elements clearly disjointed from their theoretical position. The hypothesis that

decomposing corpses were buried in pit FS2218 could explain these discrepancies as well as the various ways in which the remains were deposited, and the significant flexions observed on some anatomical segments. The burial of several equid parts following dismemberment by humans or simple natural decomposition, leaving only part of the tendinous and cartilaginous connections, could explain these inconsistencies. The human remains located in the upper part of pit FS2218 underwent the same process as the equid carcasses. The pits were then filled in with sediment in a fairly rapid manner, as demonstrated by the preservation of the anatomical joints and the low level of percolation of small bone elements (Renaud *et al.* in preparation).

The age of the animals was estimated to be between two and ten years. The presence of cadavers that died in their prime leads us to explore their potential cause of death. The fact that pit FS3511 is located in a manoeuvring area for sling-shooters and artillerymen also raises the question of the time scale of these deposits. The combination of the (hybrid and horse) equine and human remains and the way the remains were deposited are reminiscent of the 'Massengrüber', a mass burial pit at the Oberesch site on the

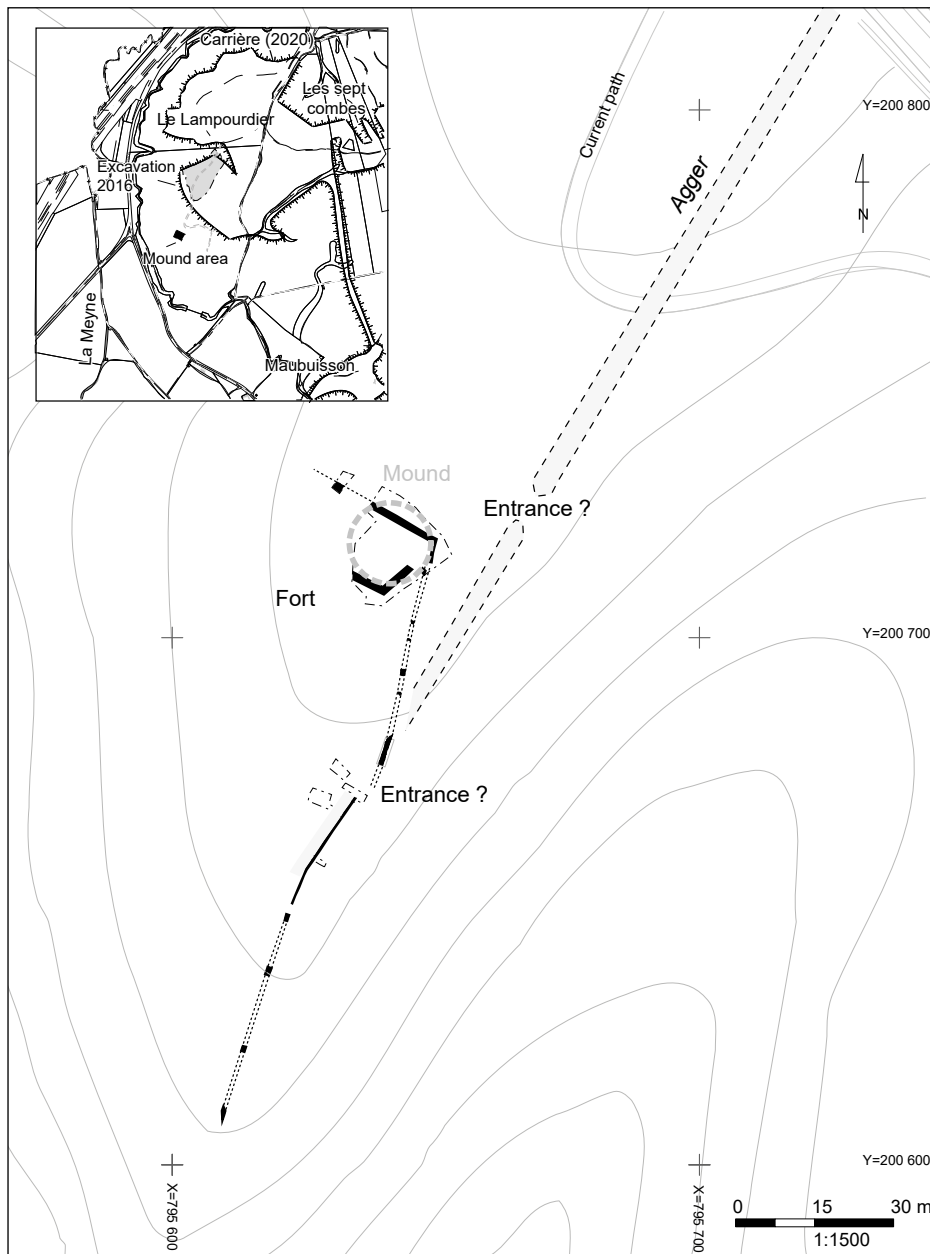


Figure 4. Map of the scheduled excavation under way since 2018 (L. Buffat).

Kalkriese hill in Germany. This site is commonly believed to be the location of the Battle of Teutoburg, the scene of one of the greatest defeats of the Roman armies against the Germans in AD 9. Since 1992, German archaeologists have uncovered several pits containing equid and human bones (Wilbers-Rost 2009, 81-82; Wilbers-Rost *et al.* 2012, 94-101). Some structures are reminiscent of those at Lampourdier, whether by their size, the presence of human or equid remains (mainly mules), or the ways in which the bones were entangled.

At Lampourdier, a final category of remains provides information about the site's occupants. It consists of concentrations of material containing fragments of

ceramics, fauna, metal artefacts or grindstones. Analysis of these remains has made it possible to distinguish two principal types of waste. The first features the fragments of ceramics and metal items in a long line over large areas. The ceramic material has a very high fragmentation rate and the shards are highly eroded. These concentrations are located to the east at the foot of the defensive embankment and are parallel to the eastern axis formed by the pebble clusters. Also notable is the consistent presence of caligae nails within these layers. These concentrations seem to indicate the location of a circulation area.

The second group of disposed materials is more varied and concentrated. In addition to the ceramic

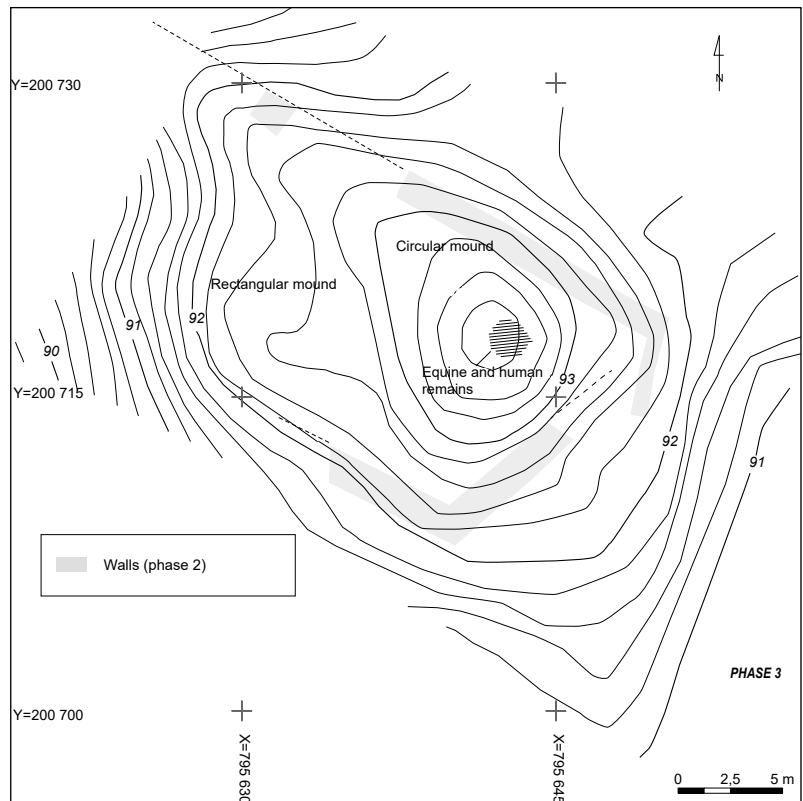
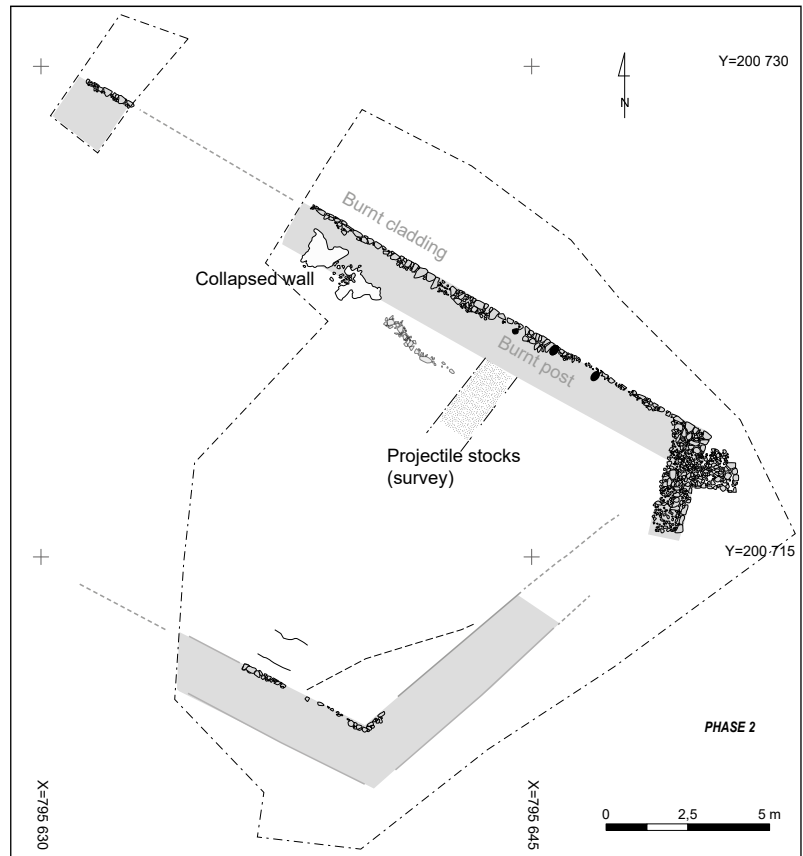


Figure 5. Map of phase 2 and 3 (L. Buffat, A. Gravier and Y. Zaaraoui).

and metal materials, fragments of grindstones and rare faunal elements were uncovered. The material is hardly fragmented and less worn. The area appears to have been a rubbish tip. Seven fragments from small manual rotary grindstones were found at the site. These are essentially basalt grindstones, except for a fragment from an andesite mill of Italic inspiration similar to the manual *catillus* of variety 112b.VI and VII (Longepierre 2012, 450-451, or 12b in Longepierre 2014). This stone is similar to the one discovered in Aix-en-Provence during the Terrain Coq excavations of ancient layers dated back to 125-75 BC (Maza & Nin 2003, 220-222).

### **Scheduled excavations from 2018 to 2021. The southern sector**

Since 2018, there have been new excavations to the south of the preventive dig carried out in 2016. They are being conducted in collaboration with Nathalie Ginoux (Sorbonne University). This work is ongoing and so there are many uncertainties surrounding the interpretation of the excavated remains. This sector contains the continuation of the defensive bank (embankment) that was examined in 2016. The bank has the particular feature of having been lined with a mortar-bound wall. It continues over a length of 200 m and extends to the cliffs to the south of the massif. The excavations took place in an area of a few hundred square metres, on the site of a mound c. 10 m in diameter with a height of no more than 2 m (fig. 4).

Several phases have been identified here. The oldest is marked by a single structure, a depression in the rock 4 to 5 m wide that appears at first glance to be a geological fault. We do not know exactly how deep it is, but a geophysical survey has shown that it is definitely greater than 3 m. The lower part of its filling contains a layer of material from the 5<sup>th</sup> century BC, Massalian amphora, Attic ceramics and grey monochrome. The items are evidence of an occupation prior to that of the Roman army, which had been presumed until then but not decisively proven. From the second phase come several mortar-bound constructions that form a building 11.5 m wide with an unknown total length. To the north, the building is enclosed by a wall around 1.5 m wide. A collection of sling bullets was uncovered inside the structure. The pebbles are the same size as the sling bullets discovered in 2016 (see above) with an average measured length of 5.25 cm. These constructions bear the traces of fire, particularly visible on the northern wall, where the facing shows signs of rubification. Furthermore, part of the wall has turned into lime because of the heat. Similarly, four wooden members on the facing were charred. The fire evidently reached a high temperature (fig. 5).

The items linked to this structure are similar to those found during the 2016 preventive excavation and date broadly to the late 2<sup>nd</sup> century BC. They primarily match the fragments of type Dressel 1a Italic amphora and sling bullets. Three *denarii* were also found to the north of the building, the most recent of which was struck in 120 BC (Marcus Tullius). During a third phase, the building was covered by a mound composed of two parts, the first circular and located to the east, the second rectangular and located to the west.

We have only excavated the circular part of the mound at present. Under the mound and roughly in the centre, remains consisting equally of human and equine bones were discovered over an area of c. 2 m<sup>2</sup>. Several of them were marked by alterations such as erosion of the cortex or splintering of the dental surfaces. At least two bodies have been identified among the human remains, one of which was aged between 14 and 20 years. A single joint between *tibia*, *fibula* and *talus* was found. The equine remains reveal two different bodies with a single *tibia* and *femur* joint. Overall, these bones appeared to be arranged indiscriminately. This configuration was indicative of remains in a very advanced state of decomposition.

What do these findings mean? It is difficult to be certain at this stage of the study, although the excavation is ongoing. However, we are examining the hypothesis that these items were a kind of memorial made by the Roman army sometime after the battle. Such leavings are known to us through ancient sources, particularly Teutoburg, the site of the famous route of the Roman armies against the Germans. Tacitus (*Annales* 1.61-62) tells us that six years after the battle, Germanicus returned to the site, collected bones and covered them with a burial mound.

As we have seen, the Lampourdier site is of great interest to researchers of ancient battlefields, and this is only one piece of a larger puzzle. Several other sites have yielded evidence that may relate to the battle of 105 BC such as Piolenc, where a Germanic sword was found, Montfaucon, and the Saint-Eutrope Hill where other Roman army camps could have been present. The Arausio battlefield therefore has undeniable historical and heritage potential and certainly deserves further attention.

### **Acknowledgements**

We would like to thank the people and institutions that have supported this project: Alain Deyber, who has rekindled research into the battle of Arausio; Xavier Delestre and David Lavergne (SRA PACA), who were responsible for the scientific and technical monitoring for the project; the city hall of d'Orange, for providing financial support for the scheduled excavation; LafargeHolcim, for the full access it granted us to Lampourdier Hill so we could conduct our investigations, and Alain Rico from 2ASM, our fund manager.

## Bibliography

- Deyber, A., Y. Zaaraoui & L. Buffat, 2018: Le Lampourdier, un camp romain républicain contemporain de la bataille d'Orange (6 octobre 105 av. n.è.), in: M. Reddé (ed.), *Les armées romaines en Gaule à l'époque républicaine. Nouveaux témoignages archéologiques*, Glux-en-Glenne (Bibracte 28), 19-43.
- Longepierre, S., 2012: *Meules, moulins et meulières en Gaule méridionale du II<sup>e</sup> siècle avant J-C au VII<sup>e</sup> siècle après J-C.*, Montagnac (Monographies Instrumentum 41).
- Longepierre, S., 2014: Les moulins de Gaule méridionale (450-1 av. J.-C.). Types, origines et fonctionnement, in: N. Alanso Martinez (ed.), *Reunio. Molins i molta al Mediterrani occidental durant l'edat del ferro*, Lleida (Revista d'Arqueologia de Ponent 24), 289-309.
- Maza, G. & N. Nin, 2003: Le fossé du Terrain Coq, in: P. Arcelin & J.L. Brunaux (eds), *Cultes et sanctuaires en France à l'âge du Fer*, Paris (Gallia 60), 220-222.
- Reddé, M. & S. von Schnurbein, 2001: *Alésia. Fouilles et recherches franco-allemandes sur les travaux militaires romains autour du Mont Auxois (1991-1997)*, Paris (Mémoires de l'Académie des Inscriptions et Belles Lettres 22).
- Renaud, A., M. Gurlot & Y. Zaaraoui, in preparation: Les fosses à restes équins et humains du Lampourdier, in: Y. Zaaraoui & L. Buffat (eds), *Arausio 1. Les recherches archéologiques menées sur la colline du Lampourdier, 2014-2017*.
- Wilbers-Rost, S., 2009: Hinterhalt zwischen Berg und Moor. Ein archäologischer Zwischenbericht zur Varusschlacht in Kalkriese, in: *Varusschlacht im Osnabrücker Land. Museum und Park Kalkriese*, Mainz, 71-87.
- Wilbers-Rost, S., B. Grobkopf & A. Rost, 2012: The ancient battlefield at Kalkriese, in: M. Harbeck, K. von Heyking & R. Schwarzbach (eds), *Sickness, hunger, war, and religion. Multidisciplinary perspectives*, Munich (RCC Perspectives 2012/3), 91-111 (DOI:10.5282/rcc/5593).
- Zaaraoui, Y. (ed.), 2018: *Occupation d'époque tardo-républicaine sur la colline du Lampourdier. Présence de l'armée romaine sur le territoire d'Arausio à la fin du II<sup>e</sup> av. J.-C. (Orange, Vaucluse). Rapport final d'opération*, Cournonterral.





# Basque Country (Iberian Peninsula), rearguard of Rome in the Cantabrian Wars?

Jagoba Hidalgo-Masa

## The Basque rearguard and its context

The Basque Country is located in the western most area of the Pyrenees, in the Iberian Peninsula (fig. 1), bordered by the Atlantic Ocean to the north and to the south by the river Ebro. The main characteristic of this area is the heterogeneity of its geo-environmental and climatic zones. Depending on these, two main zones can be identified, the northern or Atlantic zone and the southern or Mediterranean zone. The northern zone, on which this study will focus, is characterised by a very abrupt orography with very steep valleys, covered with a dense vegetation. This area, unlike the southern area, has been less studied and its Iron Age, 8<sup>th</sup>-19<sup>th</sup> century BC (Jordá *et al.* 2009, 88) is less well represented, although the presence of 19 fortified settlements and 3 open settlements confirmed (fig. 1).

The network of fortified settlements around the Atlantic Basque Country or Basque coast is fully articulated in the Late Iron Age (Cepeda & Unzueta 2020, 146). This supposes that the establishment of fortified sites as the main centres for settlement was created later than in other atlantic territories, such as Asturias (Marín 2004, 88) or Galicia (González 2008, 909; Parceró *et al.* 2017, 17), among others. This may be explained, along with many other factors, by a higher prevalence of Bronze Age social mounds. A reflection of this can be seen in the continued occupation of megalithic elements in the Iron Age, such is the case of the cromlechs (Edeso *et al.* 2016, 195). This all places us in a social reality that, although it follows the general dynamics or tonics, has a series of local peculiarities.

These peculiarities did not affect the creation of a dynamic social metabolism (Cepeda & Unzueta 2020) that was fully integrated with the main processes of the period. Proof of this is the discovery of several objects made of blue glass Hallstatt influenced beads (Torres *et al.* 2013, 91), as we will see later. Or the numerous Ebro valley pottery productions other ones from the Duero valley (Sánchez 2016, 19), that were found on the Basque coast. On the other hand, the urban morphology of some sites in the Atlantic Basque Country is similar to some cases located in the Iberian and Celtiberian world (Lorrio 2008, 578), where the houses are articulated according to the wall and clustered together to form streets, as is the case in Arrola (Arratzu, Bizkaia, Unzueta 2014) or Bolunburu (Zalla, Bizkaia, Cepeda *et al.* 2009, 886).

**Jagoba Hidalgo-Masa**

Universidad del País Vasco/  
Euskal Herriko Unibertsitatea  
(UPV/EHU), jagoba.hidalgo@  
ehu.eus

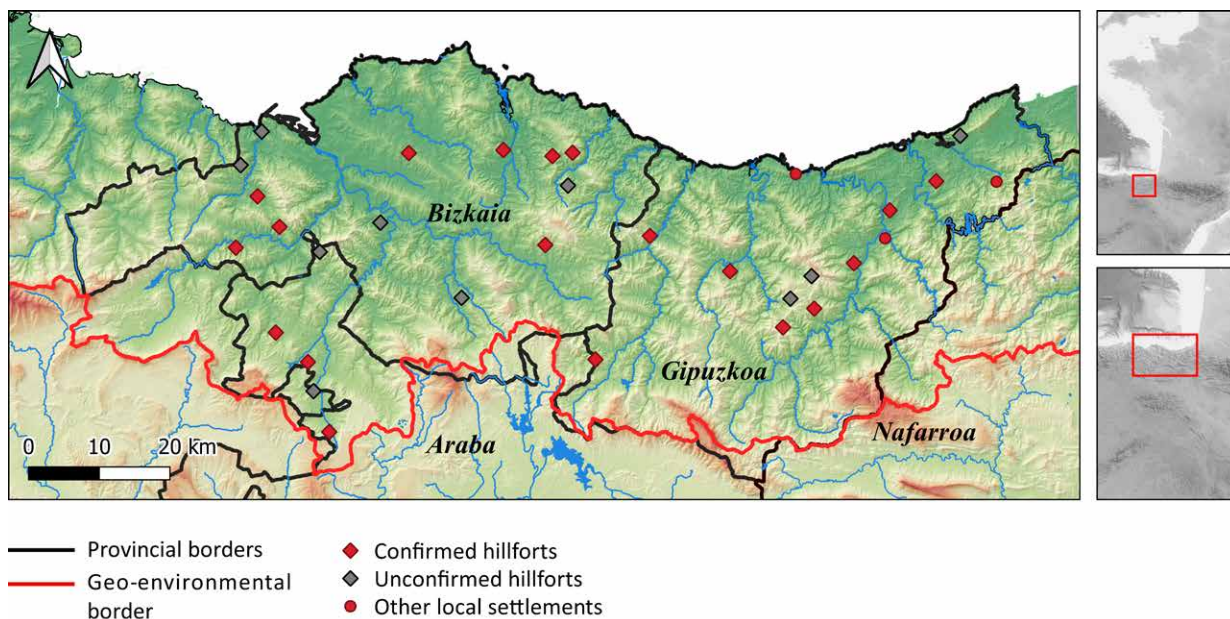


Figure 1. Iron Age sites in the Atlantic Basque Country.

Among all the possible contacts, the influence of the Ebro Valley stands out, a valley that functioned as an entry highway from the Mediterranean into the peninsular inland and the surrounding areas of the Basque Country (Moreno 1990, 280). This valley acquired a singular commercial dynamism with the arrival of the Late Iron Age (Faro 2015, 1308). As a result, a series of orientalising objects can be found in the nearby territory of Nafarroa, such as the Egyptian scrabs recovered in the necropolis of El Castillo (Castejón, Nafarroa, Faro 2015, 1450).

It is not surprising, therefore, that the Ebro Valley acquired a unique role in the Roman colonization process of *Hispania* (Lanz 2020). This process began in the context of the Second Punic War (218-201 BC), when Roman army landed in 218 BC on the Mediterranean coast of the peninsula in an attempt to cut the Carthaginian logistical lines (Lanz 2020, 23). The conflict that ended with the Roman victory enabled them to begin the process of colonisation throughout the peninsula. The Roman conquest of the Iberian Peninsula lasted two centuries and posed many difficulties for Roman power. Due to the abundant sympathy and suspicion that Rome generated in the local communities (Lanz 2020, 24). Reticence and disagreements that led to constant warlike conflicts such as the Celtiberian Wars (188-133 BC), between certain communities of the northern plateau and the Ebro Valley, and Rome (Jimeno & Chaín 2017, 240). Gradually, however, the peninsula became part of the political life of Rome, turning into the scenario of the late Republican internal conflicts, such as the First Republican Civil War or Sertorian Wars (Morillo & Sala 2019, 59) and the Second Republican

Civil War (Lanz 2020, 34). As well as the battlefield of the Cantabrian Wars (29-19 BC), a conflict with which Rome completed the conquest of *Hispania*, defeating the Cantabrian and Asturian communities. But this served mainly for propaganda purposes for the new imperial regime, since part of the late Republican elite still had doubts about Augustus and he wanted to exalt his figure with a great victory (Costa 2015, 97). In fact, the emperor personally arrived on the peninsula and classical authors were strongly influenced by this propaganda, deforming numbers, events and local communities (Woolf 1995, 182; Eck 2007, 124; García & Costa 2014). This conflict lasted for ten years and was concentrated in the present-day regions of Cantabria, Asturias, Palencia and Burgos. In it Rome suffered setbacks and the emperor decided to open the gates of the temple of Juno, declaring Rome at war and giving the conflict great significance (Costa 2015, 105). After several unsuccessful manoeuvres Rome managed to get in, thanks to the victories at *Bergida*, Mount Vindus and the city of *Lancia* (Ramirez 2008, 102). Although these victories were followed by some attempts of revolt, these were palliated and Rome celebrated the triumph in the capital in a remarkable way.

The Roman conquest of the Atlantic Basque Country is considered to end with the Cantabrian Wars. Although it is not possible to specify a specific date, several authors have suggested that it may be after the Sertorian Wars and the beginning of the Cantabrian Wars (Juanes 2014, 131). When Octavianus launched a series of campaigns to quell the last resistance in his provinces and to secure certain rearguards for future actions (Lanz 2020). Thus,

in 39 BC, Octavianus sent Marcus Agrippa to put down some Aquitanian Celts. In 38 BC the Battle of Andagoste (Amela 2015, 58) took place, a skirmish against a small Roman camp not far from the Atlantic Basque Country. Moreover, it has been interpreted that due to the location of this camp there was some Roman interest in controlling the passes towards the Atlantic valleys (Amela 2015, 59; Martínez Salcedo 2020, 181). Finally, Marcus Valerius Messala, following Octavianus' orders, fought against the Aquitanian *Tarbelli Pyrene* in 28 BC (Lanz 2020), located very close to the Basque coast, which is why several authors have suggested that he also carried out actions against them (Bost *et al.* 2005). For all these reasons, there are sufficient parallels to ensure the conquest of our area at this time that preceded the Cantabrian Wars, especially bearing in mind that the territory played a fundamental logistical role for future actions against the Cantabrians and Asturians.

### The keys of the process

In order to understand the role played by the Atlantic Basque Country during the Cantabrian Wars, it is necessary to understand the keys to the Roman conquest process in this territory. For this purpose, we will deal with three of these keys: contact and mutual knowledge before the war, the evidence of conflict and the characteristics of the new Roman social metabolism in the territory.

### Contact and mutual knowledge

Contact and mutual knowledge were the main elements to build an effective diplomatic instrument and, thanks to this, it was possible to reach alliances, negotiations, *etc.* In the case of the Atlantic Basque Country, its geographical location, close to the Ebro valley and the Aquitanian peoples, facilitated contact with Rome and other Mediterranean colonial powers. An example of this is the relations that communities near the Basque coast established with the Carthaginians, *i.e.* case of the Suesetans (Lanz 2020, 24). These fought alongside them against the Romans, defeating them in the Guadalquivir Valley. But shortly they fought alongside the Romans, showing the deep dynamism of these peoples and their external contacts (Lanz 2022, 215). This dynamism not only originated with the arrival of Mediterranean powers but seems to have been a general trend among the peoples of the Ebro Valley area. Proof of this are the six hospitality pacts (*tesserae hospitalis*) between the peoples of southern Navarre immortalised on metal plates, known as *tésseras*, found at the site of La Custodia (Viana, Navarre, Labeaga & Untermann 1993, 47). Perhaps, one of the best-portrayed alliances is the one formed by several Aquitanian communities to confront Rome in the 1<sup>st</sup> century BC. To create this alliance, they sent delegations to many villages, such as the Cantabrians, located to the west of the Basque coast (Lanz 2022, 213).

All these contacts have been immortalised in the material culture found in the settlements of these communities. Examples of this are the blue glass beads and bracelets (Torres Martínez *et al.* 2013, 91), found in Intxur (Albistur, Gipuzkoa), Basagain (Anoeta, Gipuzkoa), Bolunburu (Zalla, Bizkaia), Munoaundi (Azpeitia/Azkoitia, Gipuzkoa) and Santiagomendi (Astigarraga, Gipuzkoa), which have been related to the Central European world (Peñalver & Uribarri 2022, 210). Another noteworthy element is the so-called 'Celtiberian' pottery from the northern plateau and the Ebro Valley, with fine fabric painted in many cases (Lorrio 2008, 578). This pottery appears, to a greater or lesser extent, in many of the excavated sites in the Basque Country (Llanos 1999).

Taking advantage of this dynamism, as soon as Rome arrived on the Iberian Peninsula (218 BC), in the context of the Punic Wars, it developed an intense diplomatic activity (Lanz 2020, 23), intending to destabilise the network of local Carthaginian alliances, thus gaining many local friendships which would be favourable to it in the conflict. In other words, it is not at all unreasonable to suggest that almost 200 years before the end of the Cantabrian Wars, the peoples of the Basque coast could have come into direct or indirect contact with Rome, as Martínez Salcedo (2020), among other authors, points out. This hypothesis gains strength with the evidence of pieces of Roman material culture found in the habitats of these local communities.

An example of this is a black gloss sherd from Cales, belonging to the Middle Calena I variant (200-130/120 BC) of the S-166 typology, found in the fortified settlement of Berreaga (Mungia/Zamudio/Gamiz-Fika, Bizkaia, Martínez Salcedo 2020, 181). This ceramic type has been documented in the Roman military camps of *Numancia* (Garray, Soria) as well as in the city founded by Gracchus in the context of the conquest of the Ebro Valley, Gracurris (Martínez Salcedo 2020, 180). Another example is a mill fragment identified as Roman in the *oppidum* of Arrola (Arratzu, Bizkaia, Unzueta & Fuldain 2001, 69). There are also remarkable pottery fragments attributable to common Roman ceramic typologies from the fortified settlement of Basagain (Andoain, Gipuzkoa, Peñalver & Uribarri 2022, 168). Finally, it is worth mentioning several *denarii*, from the Bashkun mint, recovered in the hillforts of Kosnoaga (Gernika, Bizkaia) and Basagain and in the cave of Amalda (Zestoa, Gipuzkoa) or Usategi (Ataun, Gipuzkoa, Martínez Salcedo 2020, 180; Peñalver & Uribarri 2022, 179) among other locations. These Iberian *denarii*, which include the Baskunes mint, have been associated with the Roman military world. These *denarii* stand out because they were made to subsidise the wars of Sertorius (Gozalbes 2009, 84). As a result, these contacts made possible a very early mutual

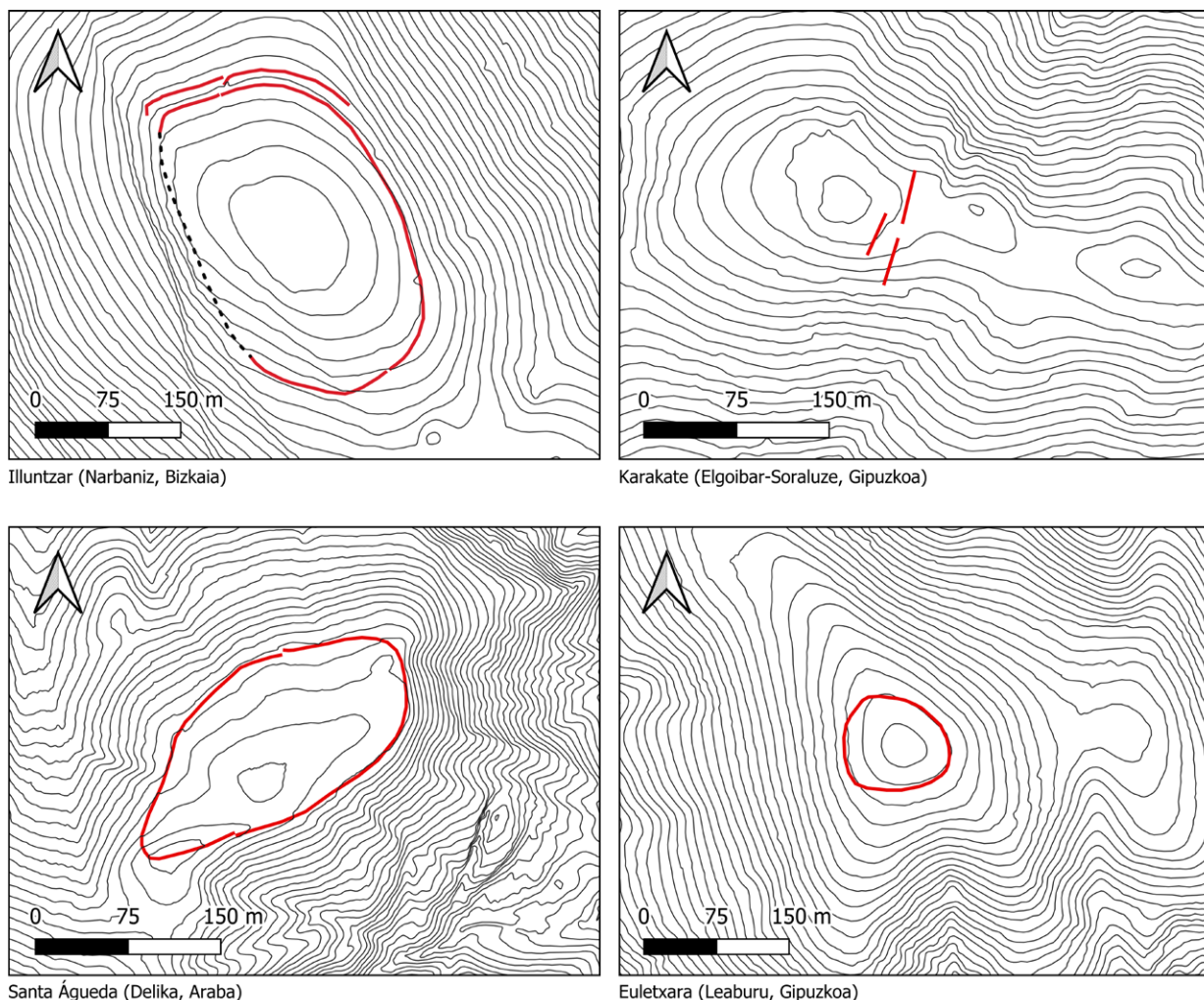


Figure 2. Roman military camps in the Atlantic Basque Country.

knowledge that opened the door to closer relations in the future. All of this was based on the dynamic social metabolism of the local societies.

### Evidence of conflict

The evidence of direct conflict is another of the keys to analysing the possible Basque rearguard since, in the event of a conflict, the rearguard would be articulated in a particular martial way. The Roman military camps directly indicate these possible military actions (Menéndez *et al.* 2020, 3). Four possible Roman military camps have been identified in the Atlantic Basque Country (fig. 2): Euletxara (Leaburu, Gipuzkoa), Illuntzar (Narbaniz, Bizkaia), Santa Águeda (Delika, Araba) and Karakate (Elgoibar, Gipuzkoa).

These four sites are scattered throughout the Basque geography, i.e. they are not concentrated in the same place as in other areas of war activity (Menéndez *et al.* 2020, 4), such as *Pallantia* (Palenzuela, Palencia), *Numantia*

(Garray, Soria), Cerro de Castarreño (Sasamón, Burgos) or Monte Bernorio (Villarén, Burgos). On the other hand, these four camps present highly differentiated features that could serve different moments or functions. Although castramentation was a highly regulated practice, it tended to adapt to the military's needs and the time's geography (Costa 2013, 16). In our case we have two large camps, Santa Águeda (10 ha) and Illuntzar (6 ha), which offer great possibilities for the cantonment of troops. Illuntzar, although studied by means of sampling and surveying, provided little to no evidence of troop's cantonment (Bolado & Martínez 2007, 69; Martínez 2008, 288). This situation has made it impossible to assign it a specific chronological date. If the nature of the site is fully confirmed, it would be located in a dominant position over the pre-Roman *oppidum* of Arrola (Arratzu, Bizkaia). It is also a key point on the Cantabrian coastal route, which Octavius employed to bring troops in the Cantabrian Wars (Roldán 2001, 26). In the case of Santa Águeda, something



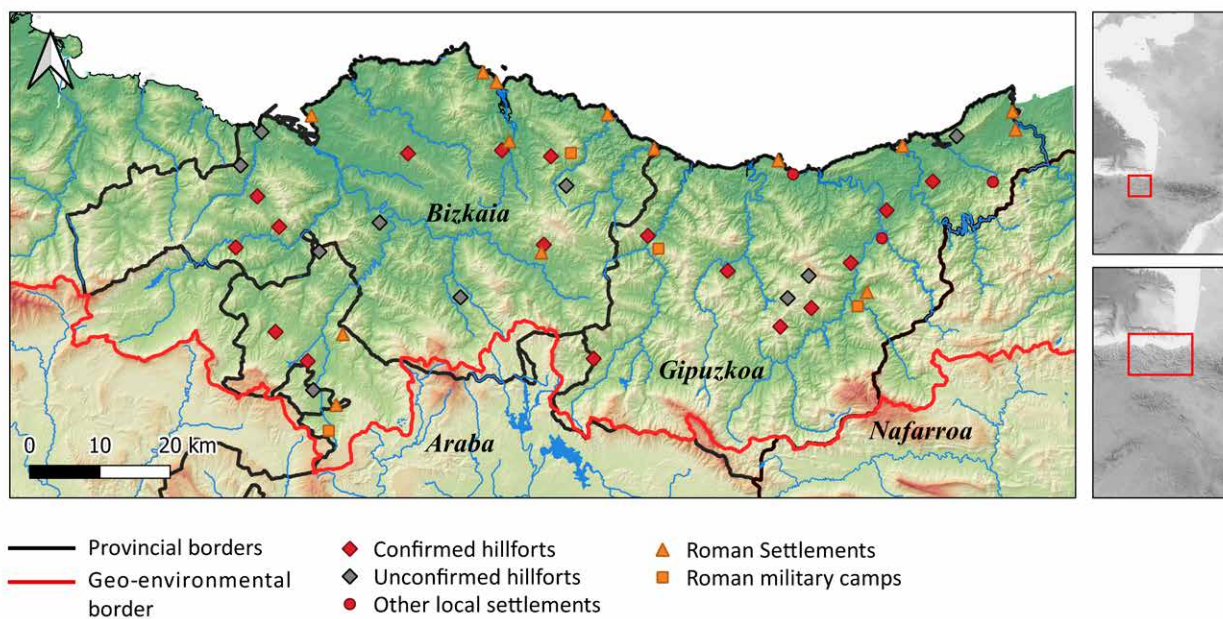


Figure 3. Roman and pre-Roman sites in the Atlantic Basque Country.

similar occurs; it has not been possible to define its specific chronological attribution (Martínez 2010, 30). At this site, habitat structures related to the pre-Roman world have been documented (Martínez 2010, 32), as well as military cantonments from the 19<sup>th</sup> century which seem to place the defensive structures of the site in other coordinates. Only one possible *pilum* point has been recorded as a representative element of the Roman world. On the other hand, two smaller camps have been identified, Euletxara (0.6 ha) and Karakate (1.0 ha). The Euletxara site, recently discovered and currently under investigation, has been dated to the 1<sup>st</sup>-2<sup>nd</sup> century AD and has yielded a fragment of *pilum* (Ceberio 2020, 442). Finally, the Karakate camp, identified as a *castra aestiva*, has not yielded any Roman material, therefore no basis for chronological assesment. Although its morphology of *agger*, *fossa* and *contra agger* seems consistent (Martínez 2017, 415). For all these reasons, we consider that this materiality is still in the study phase. However, the installation of this type of site cannot be ruled out, judging by the Roman military materiality described above.

Together with the military camps, it is necessary to analyse the different levels of destruction caused by military actions. On the Basque coast, no remains of this type have been recorded in any of the local settlements excavated. It is therefore logical to think that there were no episodes of siege and that the Roman conquest process in this territory was established at other coordinates. This, together with the fact that some of the materials found in the local settlements are related to the Roman military world, has led several researchers to point to the

possibility of the existence of auxiliary troops made up of these people (Martínez Salcedo 2020, 181), although this is still a hypothesis to be confirmed.

### New Roman social metabolism

Finally, it is necessary to analyse the reorganisation of the territory after the implementation of the Roman world in the Basque Atlantic area, to have another proxy that allows us to evaluate in what terms this transition took place. The arrival and establishment of the Roman world on the Basque coast substantially altered the pre-existing social metabolism. Thus, from the middle areas of the Atlantic valleys, they moved on to occupy the areas along the coastline (fig. 3). This may be due to the coastal shipping route that Rome established on the Atlantic coast, leading to the occupation of natural harbours or protected estuaries, as in our case (Ruiz 2021, 348). These locations, although in some cases are located on or near the previous sites, this does not seem to be the general trend (fig. 3). Therefore, in the absence of new data, the Roman nuclei seem to be located in new locations, or perhaps in secondary spaces for Iron Age societies. Even so, there are certain areas of aggregation where pre-Roman settlements and Roman nuclei are concentrated, such as the region of Urdaibai (Bizkaia) or the initial section of the Nerbioi valley (Araba-Bizkaia). In other words, the reconfiguration of the territory, although with a new metabolism, follows previous dynamics.

As for the chronology of this process, it must be dated to the 1<sup>st</sup> century AD, as indicated by the data

from the excavations of the main Roman sites such as Aloria (2<sup>nd</sup>/1<sup>st</sup> century BC-4<sup>th</sup> century AD) (Orduña, Bizkaia), Elexazar (1<sup>st</sup>-3<sup>rd</sup> century AD) (Amurrio, Araba), Forua (1<sup>st</sup>-4<sup>th</sup> century AD) (Forua, Bizkaia) and Oiasso (1<sup>st</sup>-4<sup>th</sup> century AD) (Irun, Gipuzkoa). This is a relatively rapid process, since some of the local sites were abandoned between the 1<sup>st</sup> century BC and the 1<sup>st</sup> century AD, with examples such as Arrola, Bolunburu, Basagain, Munoaundi or Berreaga (Cepeda & Unzueta 2020, 147). In other words, after a brief period of coexistence between the two settlement patterns, the Roman system of organisation was consolidated in barely two generations. More remarkable than the rapidity of the process is its success since once the network of coastal settlements was established, the preceding hillforts were not reoccupied. Contrary to what happens in Galicia (Parcero *et al.* 2017, 22) or Asturias (Villa 2002, 59) where some hillforts remain occupied in the High Empire and some specific ones during the Low Empire, as is the case of Vilandonga (4<sup>th</sup> century BC-6<sup>th</sup>/7<sup>th</sup> century AD) (Castro do Rey, Lugo) or A Lanzada (8<sup>th</sup> BC-4<sup>th</sup> AD) (Tejerizo 2019, 289). This existence, in the absence of evidence of direct conflict on a large scale, can be related to direct or indirect local participation in the process, which would guarantee its existence. This, together with a solid mutual knowledge prior to the Cantabrian Wars, could also explain the relative speed of the process. Moreover, certain data bring us closer to this hypothesis; the pre-Roman *stelae* of Bizkaia (Unzueta 1990), give a good account of this. These elements belong to the local symbolic world and in some cases are reused in Roman contexts (Peralta 1995, 326). In Forua (Forua, Bizkaia) they are inserted as a constructive feature, in visible and notable places. On the other hand, the *stelae* of Elorriaga (Lemoa, Bizkaia), with forms typical of these communities, are re-signified by adding epigraphs and anthropomorphic forms (Unzueta 1990, 58). All of this shows a continuity in the use of *stelae* that could be marked by the attachment of these societies to their previous symbolic world, which was readapted with the arrival of Rome.

For all these reasons, the X-ray of local societies shows a Roman conquest process marked by the geographical location that made contact between the two worlds possible two hundred years before the actual conquest of the territory. Contact, which thanks to the negotiating tradition and local dynamism (Lanz 2020, 65; 2022, 210), could have facilitated a certain level of mutual knowledge on which to develop diplomatic ties. Perhaps these negotiations and contacts could have resulted in a certain cordiality that avoided direct conflict, perhaps through the use of diplomatic formulas such as *deditio*, *foedus* or *amicitia* (Sanz 2013, 155), among others. This hypothesis acquires greater depth if we consider the diplomatic context near the Basque coast, where this type of formula was

constantly used as a means of conflict resolution. Thus, among the abundant examples in the western Pyrenees area, the case of the pre-Roman community of *Tarraca* (Los Bañales, Uncastillo, Zaragoza) stands out, which is mentioned in the classical sources as a *foederata*, which is why it has been suggested that it collaborated with Rome from the very beginning (Lanz 2020, 63). Another example is the process of conquest of the local communities of southern Aquitaine. A process that Julius Caesar settled in 56 BC, when the community of the *Sotiates*, being besieged by Crassus, sent *legati* before the final assault to accept the conditions of the *deditio* (Lanz 2020, 28). After this, the *Vocates* and *Tarusates*, also from these lands, tried to form an anti-Roman coalition, in which the *Cantabri*, from present-day Cantabria (Spain), took part (Lanz 2022). However, after putting up a fight, they were defeated and the rest of the communities of southern Aquitaine contacted Rome and accepted the *deditio*. These forms of contact, diplomacy or conflict resolution had mixed results, guaranteeing in some cases lasting mutual loyalty and, in other cases ephemeral ones, which in some cases would lead to new conflicts (Sanz 2013, 159). This is the case of the *Sussetani* of the present-day regions of Huesca and Saragossa, who, although they allied with Carthage to fight against Rome, are later mentioned as *socii* (Lanz 2020, 62). Although, for some unknown reason, they later rose against their allies, a fact that shows the dynamism of the contacts between these societies and the importance of negotiation. For our study area, these possible contacts could have led to certain diplomatic figures that achieved a particular success, judging by the lack of military action or by the locals' possible participation in the territory's reorganisation.

## Conclusions

The reality of the Atlantic Basque Country during the last stages of the Iron Age was part of a complex and dynamic world, which may have come into contact with Rome, generating a diplomatic figure aimed at reaching an understanding. For this reason, and with the outbreak of the Cantabrian Wars, the prevailing panorama in these lands would be similar to that of other peoples of the Ebro valley or southern Aquitaine, *i.e.* a climate of colonisation and social reorganisation based on negotiation. This may have allowed Rome to establish a logistical rear-guard to secure supply lines and facilitate naval warfare operations. Operations such as the landing of troops from Aquitaine, ordered by Augustus to break the deadlock (Roldán 2001, 26). This maritime route would be condemned to pass off the Basque coast and refuel in various ports, judging by the coastal navigation system. It is therefore not surprising that Rome would have secured this logistical front by that date.



In short, the role of the Atlantic Basque Country in the Cantabrian Wars would have been defined by a flexible and dynamic boundary, set in the colonisation process of *Hispania*. As a result of all this, a stable logistical rear-guard necessary for the Roman Empire was articulated. This rear-guard could have been controlled by the establishment of camps, although this is still under study.

## Bibliography

- Amela, L., 2015: La batalla de Andagoste, *Panta Rei* 9, 51-61.
- Bolado, R. & A. Martínez, 2007: El recinto fortificado de Illuntzar (Narbaniz, Bizkaia) y el alto de Motrollu (Munitibar, Bizkaia), *Nivel Cero* 11, 65-78.
- Bost, J.P., M. Martín & J.M. Roddaz, 2005: L'Aquitaine et le nord de l'Hispanie sous les empereurs julio-claudiens, *Aquitannia* 13, 17-50.
- Ceberio, M., 2020: Fortificación de Euletxara, *Arkeoikuska* 2019, 440-443.
- Cepeda, J.J. & M. Unzueta, 2020: Poblados fortificados de la Edad del Hierro en Bizkaia. Un balance de la investigación de campo, *Kobie Anejo* 20, 143-175.
- Cepeda, J., J.I. Jiménez, F. Teichner & M. Unzueta, 2009: El Cerco de Bolunburu. Un recinto fortificado de la Edad del Hierro en Bizkaia, in: A. Llanos (ed.), *Medio siglo de arqueología en el Cantábrico Oriental y su Entorno. Actas del Congreso Internacional*, Vitoria-Gasteiz, 883-894.
- Costa, J.M., 2015: Las campañas augusteas en el NO peninsular. Acción militar y propaganda, *Arkeogazte* 5, 95-111.
- Costa, J.M., 2013: *Arqueología de los asentamientos militares romanos en la Hispania Altoimperial (27aC-ca 280 dC)*, Santiago de Compostela.
- Eck, W., 2007: *The age of Augustus*, Oxford.
- Edeso, J.M., I. Goikoetxea, A. Lopetegi, E. Arévalo, I. Orue, L.M. Zaldúa & J.A. Mujika, 2016: Contribution to the study of the geographical distribution of Pyrenean funerary stone circles (baratzte, cromlech) in the western Pyrenees, *Zephyrus* 77, 193-205.
- Faro, J.A., 2015: *Ritos funerarios en el valle medio del Ebro (s. VI-III a. C.). Necrópolis de El Castillo (Castejón, Navarra)*, Madrid.
- García, J. & J.M. Costa, 2019: El Oppidum Del Cerro de Castarreño, Olmillos de Sasamón. Historiografía y arqueología de un hábitat fortificado de la segunda Edad Del Hierro, *Boletín de la Institución Fernán González* 258, 9-45.
- González, A., 2008: Los pueblos del noroeste, in: F. Gracia Alonso (ed.), *De Iberia a Hispania*, Madrid, 899-930.
- Gozalbes, M., 2009: Circulación y uso de los denarios ibéricos, in: M. Campo (ed.), *Ús i circulació de la moneda a la Hispania Citerior XIII. Curs d'història monetària d'Hispania*, Barcelona, 83-103.
- Jimeno, A. & A. Chaín, 2017: *La guerra numantina. Cerco y conquista de Numancia*, Madrid.
- Jordá, J.F., J.R. Castiñeira, I. Picón, E. Abad & C. Marín, 2009: Radiocarbon and chronology of the Iron Age hillforts of Northwestern Iberia, in: R. Karl & J. Leskovar (eds), *Interpretierte Eisenzeiten. Fallstudien, Methoden, Theorie. Tagungsbeiträge der 3 Linzer Gespräche zur interpretativen Eisenzeitarchäologie*, Linz, 69-86.
- Juanes, J.V., 2014: Los procesos históricos como factores modificadores de los paisajes antiguos. El caso de la Sonsierra riojano-alavesa, *Caun* 16, 119-148.
- Labeaga, J.C. & J. Untermann, 1994: Las téseras del poblado prerromano de la Custodia, Viana (Navarra), *Trabajos de arqueología Navarra* 11, 45-53.
- Lanz, J., 2022: En defensa del territorio. Las coaliciones militares antirromanas en el Pirineo occidental (siglos II-I a. C.), in: A. Grzelak & M.J. Wozniak (eds), *Roma y la Península Ibérica. Inspiraciones y vinculaciones a través de los siglos*, Łódź, 199-234.
- Lanz, J., 2020: *Los vascones y sus vecinos (siglos II a.C.-d.C.)*, Iruña.
- Lorrio, A.J., 2008: Los Celtíberos, in: F. García Alonso (ed.), *De Iberia a Hispania*, Madrid, 553-647.
- Llanos, A., 1999: ¿La presencia celtibérica como impulsora del comercio?. Un caso concreto en el Alto Ebro. El poblado de la Hoya (Laguardia, Alava), in: F. Burillo (ed.), *IV Simposio sobre celtiberos*, Zaragoza, 351-361.
- Marín, C., 2004: Historiografía de la Edad del Hierro en Asturias, *Complutum* 15, 75-97.
- Martínez, A., 2017: Monte Karakate (Elgoibar, Soraluze), *Arkeoikuska* 2016, 413-416.
- Martínez, A., 2010: Santa Águeda (Delika), *Arkeoikuska* 2009, 30-32.
- Martínez, A., 2008: Illuntzar, *Arkeoikuska* 2007, 287-289.
- Martínez Salcedo, A., 2020: Bizkaia en la antigüedad. Arqueología e historia, *Kobie Anejo* 20, 175-205.
- Menéndez, A., J. García, J.M. Costa, J. Fonte, D. González & V. Vicente, 2020: Following the Roman army between the southern foothills of the Cantabrian Mountains and the northern plains of Castile and León (North of Spain). Archaeological applications of remote sensing and geospatial tools, *Geosciences* 10, 485-485.
- Moreno, F.J., 1990: Notas al contexto de Arroyo Manzanas (Las Herencias, Toledo), in: *Actas del I Congreso de Arqueología de la Provincia de Toledo*, Toledo, 277-308.
- Morillo, A. & F. Sala-Sellés, 2019: The Sertorian Wars in the conquest of Hispania. From data to archaeological assessment, in: A.P. Fitzpatrick & C. Haselgrove (eds), *The archaeology of Caesar in Britain and Gaul*, Oxford/Philadelphia, 49-72.
- Parcero, C., X.L. Armada & X.M. Ayán, 2017: Castros en la escalera. El Noroeste entre la normalidad y la

- indiferencia, in: S. Celestino (ed.), *La protohistoria en la península Ibérica*, Madrid, 813-878.
- Peralta, E.J., 1995: Las estelas discoideas gigantes de Cantabria, in: *La Arqueología de los Cántabros. Actas de la Primera Reunión sobre la Edad del Hierro en Cantabria*, 313-341.
- Peñalver, X. & E. Uribarri, 2022: *Basagain. Un poblado fortificado indígena de la Edad del Hierro (Anoeta, Gipuzkoa)*, Donostia-San Sebastián.
- Ramírez, J.L., 2008: La dinámica de la guerra, in: J.R. Aja, M. Cisneros & J.L. Ramírez (eds), *Los cántabros en la antigüedad. La historia frente al mito*, Santander, 101-104.
- Roldán, J.M., 2001: Las Guerras Cántabras y la fundación de Mérida, *Militaria* 15, 19-38.
- Ruiz, A., 2021: Puertos y ciudades portuarias de Cantabria en época romana, in: J.M. Campos & J. Bermejo (eds), *Del Atlántico al Tirreno. Puertos hispanos e itálicos*, Huelva, 331-335.
- Sanz, A.M., 2013: *La république romaine et ses alliances militaires. Pratiques et représentations de la societas de l'époque du foedus cassiamun à la fin de la seconde guerre punique*, Paris.
- Sánchez, A., 2016: *La cerámica celtibérica meseteña. Tipología, metodología e interpretación cultural*, Madrid.
- Tejerizo, C., C. Rodríguez & M. Fernández, 2019: ¿Continuidad o discontinuidad en los castros del Noroeste? Una revisión de la secuencia del yacimiento de Viladonga (Castro do Rei, Lugo), *SPAL* 28/2, 279-313.
- Torres, J.F., A. Martínez & S. De Luis, 2013: Cuentas de pasta vítrea del oppidum de Monte Bernorio (Villarén, Palencia). Relaciones comerciales en el cantábrico en la Edad del Hierro, *Sautuola* XVIII, 79-94.
- Unzueta, M., 2014: Recinto fortificado de Arrola (Arratzu, Mendata, Nabarniz), *Arkeoikuska* 2013, 253-255.
- Unzueta, M. & J.J. Fuldáin, 2001: Castro de Arrola (Arratzu, Mendata, Nabarniz), *Arkeoikuska* 2000, 67-69.
- Unzueta, M., 1990: Bizkaia prerromana. Últimas investigaciones e interpretación arqueológica, *Kobie* 19, 55-73.
- Villa, A., 2002: Sobre la consecuencia cronoestratigráfica de los castros asturianos (siglos VIII a.C.-II d.C.), *Trabajos de Prehistoria* 59, 149-162.
- Woolf, G., 1995: Roman peace, in: J. Rich & G. Shipley (eds), *War and society in the Roman world*, London, 171-194.

# **The internal layout of a Roman camp of the mid-1<sup>st</sup> century BC. Concerning camp F at Lautagne (Valence, Drôme, France)**

Magalie Kielb Zaaraoui, Loïc Buffat  
and Yahya Zaaraoui

To the south of the city of Valence, the triangular-shaped plateau of Lautagne dominates the Rhone valley, located a few hundred metres to the west. Located opposite the first foothills of the Massif Central, its flat land, impressive breadth and steep slopes to the north and west make it an easily defensible vantage point. The site has been the subject of numerous surveys and explorations since the early 1990's. To date, more than 37 of the plateau's 80 ha have been surveyed, and the presence of Roman camps was revealed from the very start. The successive archaeological operations have led to the identification of no less than half a dozen defensive systems of different sizes and positions (fig. 1), dated to the end of the 1<sup>st</sup> and 2<sup>nd</sup> centuries BC (Kielb Zaaraoui *et al.* 2018a).

The Roman army considered Lautagne to be an excellent strategic position. This viewpoint overlooking the Rhone valley was ideally situated to carry out panoramic surveillance. Located 70 m above the city of Valence, it was the perfect spot for observing the confluence of the rivers Rhone and Isère, 9 km away. It formed a blocked headland with a northern point and movements could be observed from the north, west and east.

The excavation carried out between late 2013 and early 2016 was extensive, covering a total area of just over 12 ha, and enabled the partial exploration of the last three camps identified on the Lautagne plateau, E, D and F, and through which we were able to learn about their relative chronology (fig. 1). Here we will address only the results relating to the largest of them, camp F, excavated between 2014 and 2015 by the Mosaïques Archéologie and ACTER teams (Kielb Zaaraoui *et al.* 2018b).

**Magalie Kielb Zaaraoui  
/ Loïc Buffat / Yahya  
Zaaraoui**

Mosaïques Archéologie,  
92 rue Roussanne,  
84100 Orange,  
France, m.kielb@  
mosaïquesarcheologie.com

## **The enclosure, ditches and entrance of camp F**

**Dimensions and dating** The excavation enabled the exploration of over 8 ha of the camp, including the south-east corner and southern section of the enclosure and the east and south entrances. The overall dimensions of the camp are unknown, and no ditch marking its northern border has been identified (fig. 1). If the precise dimensions are still not known, the camp cannot be easily dated either; <sup>14</sup>C analyses have provided a

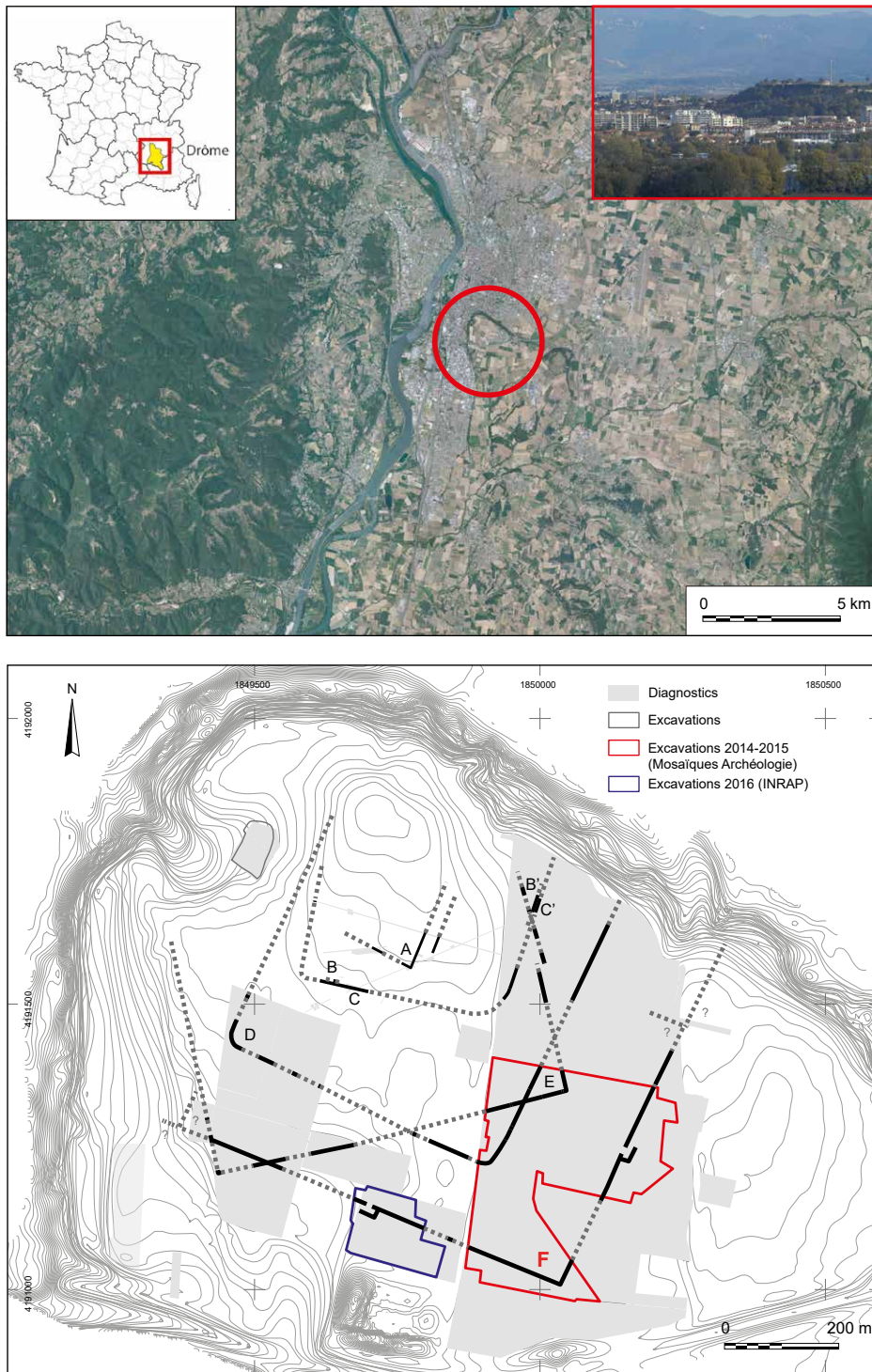


Figure 1. Location of the Lautagne plateau in the city of Valence, photograph of the north-western tip of the plateau and general map of the various known camps on the Lautagne plateau (respectively <https://www.geoportail.gouv.fr>; M. Georges; Conjard Réthoré & Ferber 2013, 203).

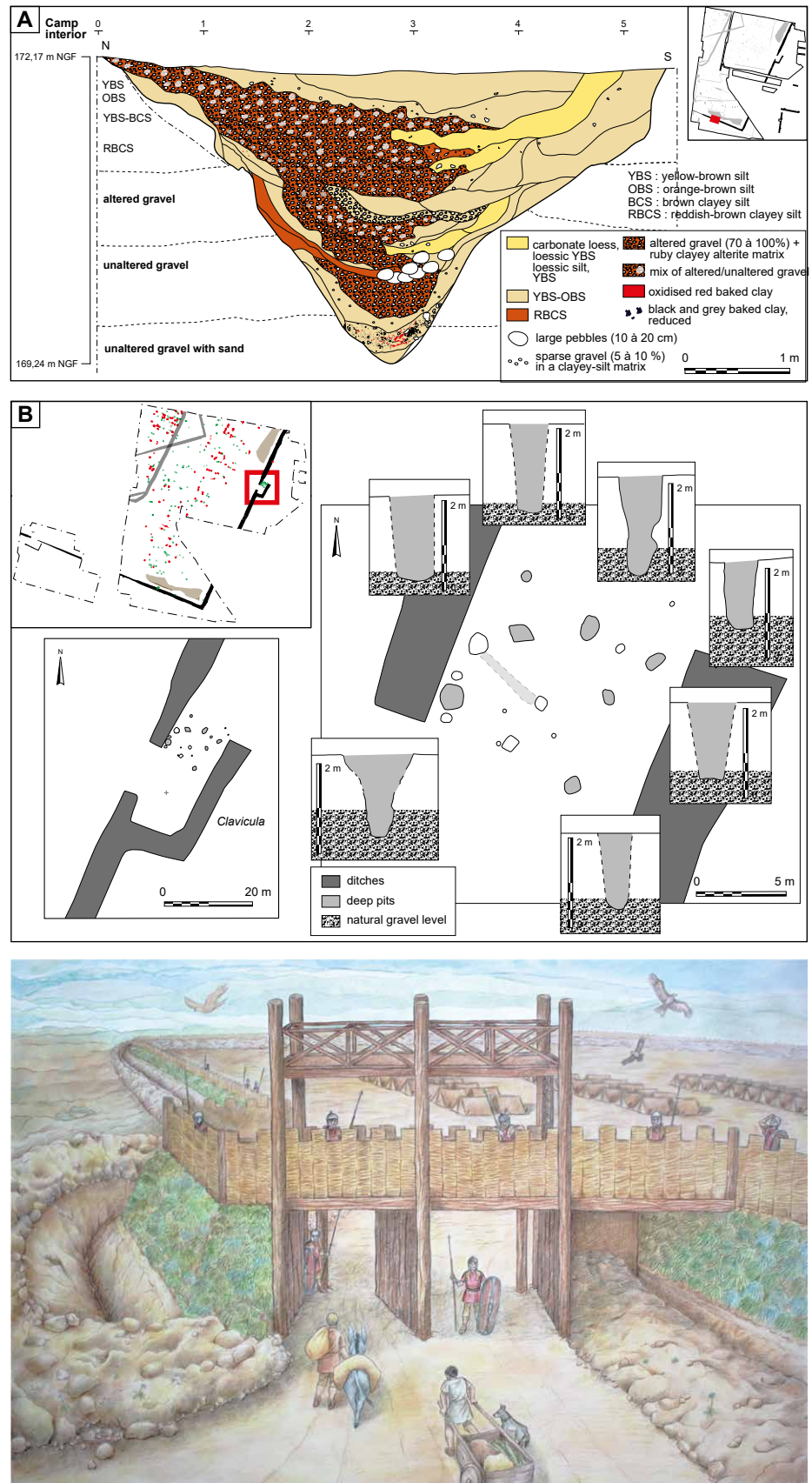


Figure 2. A. Cross-section of the southern ditch, geoarchaeological reading; B. Map of the eastern *clavica*, map and cross-sections of the postholes discovered at the entrance, and a suggested restoration of the eastern gate (respectively M. Kielb Zaaraoui & J.L. Brochier; B. Y. Zaaraoui, L. Buffat & G. Lefebvre).

range of between 200 and 20 cal BC and the twenty-two coins collected from the camp, including twenty-one small and very small Marseilles bronzes, have been dated very broadly between 150 and 50 BC.

Amongst the metal items found, various elements afford a somewhat tighter chronology, around 70/50 BC, thanks to the numerous parallels established with the documents from the Caesarean campaigns in Gaul (Feugère *et al.* 2020). Finally, the ceramics from Camp F (7817 shards for an NMI of 111 vessels) are mostly made up of amphorae with a few common ceramics and fine ceramics that are compatible with items in use in the 1<sup>st</sup> century BC. Among the amphorae is an overwhelming proportion of Italic amphorae, more than half of which are Dressel 1C, with some Dressel 1B that are slightly more numerous than the Dressel 1A. This predominance of the Dressel 1B items indicates a chronology between 70 and 50 BC. A *terminus ante quem* is also provided by the absence of Italian Pascual 1 and Dressel 2-4 amphorae, which were distributed from the third quarter of the 1<sup>st</sup> century BC, so by cross-checking these dating ranges we can place Camp F in the second quarter of the 1<sup>st</sup> century BC.

**The defensive ditch** The enclosing perimeter ditch forms a particularly imposing defensive line, with an opening width of 5 m and a depth of 3 m and a V-shaped profile (fig. 2A). On the surface, the defensive embankment has completely disappeared but the absence of any trace of post markings on the ground and the way the ditch was filled in suggest that it was an earthen rampart. Observing the levels of the pit gives us a fairly precise picture. The stratigraphy shows a pattern of repetitive filling with voluminous sediment, a deliberate depositing of alternating layers of gravel and loess silt, the former being dumped from inside the camp and the latter from outside. This implies that two groups would simultaneously backfill the enclosure ditch and that the gravel and loess silt were carefully separated and stored when the ditch was being dug. The gravels were selected during excavation to form the earthen embankment over a width of around 6 m (between the edge of the pit and the first internal remains of the camp), while the loess was stored outside the camp, presumably to form an advanced defensive barrier. This is a very interesting feature, which – to our knowledge – had never been observed in the military camps of Gaul. However, it has been confirmed on several occasions in Great Britain and Spain, where researchers interpreting as a counterscarp device (Peralta Labrador 1999, 238).

At *Alesia*, the earthen embankment had been restored to a height of 12 Roman feet (*pes monetalis*, 3.5/3.6 m), as indicated by Caesar (*De Bello Gallico* 7.72), with an encroachment of 5.29 m and a 6 feet (1.76 m) wide walkway, allowing two people to pass each other, in accordance with the indications of Vitruvius (*De Architectura* 1.5.3;

Reddé & Von Schnurbein 2001, 518-520). The distance observed at Lautagne between the inner edge of the ditch and the spreading of the gravel of the *via sagularis* (6 m) is compatible with this restoration, while ensuring the vertical stability of the embankment with mud bricks, the presence of which has been relatively well identified in the pit filling. Thus, the elevation of the rampart at Lautagne could easily reach the same dimensions as that of *Alesia*.

A second observation can be made concerning the ditch filling, which is that the stratigraphical studies have proven the presence of almost no colluvial or aeolian layers. Geoarchaeological analysis has refuted any incidents of clearing, proving that the pit remained open for a relatively short period of time, from a few weeks to a few dry months.

**The eastern entrance system, a *clavicula*** A clear interruption was observed along the course of the eastern ditch of about 12 m; perpendicular and parallel ditches secured the access to the camp by forming an external, very angular-looking *clavicula* (fig. 2B). In addition, a series of pits dug within this feature was also uncovered. A total of twelve postholes were found, eight of which were very deep, located at the northern end of the *clavicula* and forming a perfect square of 9 m on each side across the width of the entrance. The deep postholes reach as far as the gravel terrace in order to securely embed the posts. They would have supported a sizeable wooden structure, probably a gate tower. This allowed us to propose a first reconstruction of the Manning-Scott Ib gate (Manning & Scott 1979). The system is similar to the one discovered at the Roman fort at the Lunt, Baginton (Hobley 1989).

Another entrance was uncovered to the south of the camp by the French National Institute for Preventive Archaeological Research (Institut national de recherches archéologiques préventives (INRAP) team led by C. Ronco in 2016 (fig. 1); it presents the same physiognomy, an angular external *clavicula*, but no postholes and some significant differences in height observed on each side of the gate (Ronco *et al.* 2018, 54-57).

## Internal features

Inside the camp, 290 structures have been preserved over c. 9 ha: ash pits, amphora pits and a total of 119 cooking ovens. These structures invariably have the same morphology. They are excavated earthen ovens with an oval heating area opening onto a working pit (fig. 3A). The filling of this pit shows that the oven was not abandoned and did not collapse naturally but rather the cooking chambers were deliberately destroyed at the time of decampment; a large part of the waste was also thrown into the pits. The fillings of the oven pits therefore yielded a variety of archaeological material including ceramics, pebbles, metal utensils, seeds, charcoal and grindstones. A great deal of information has been gathered on the function



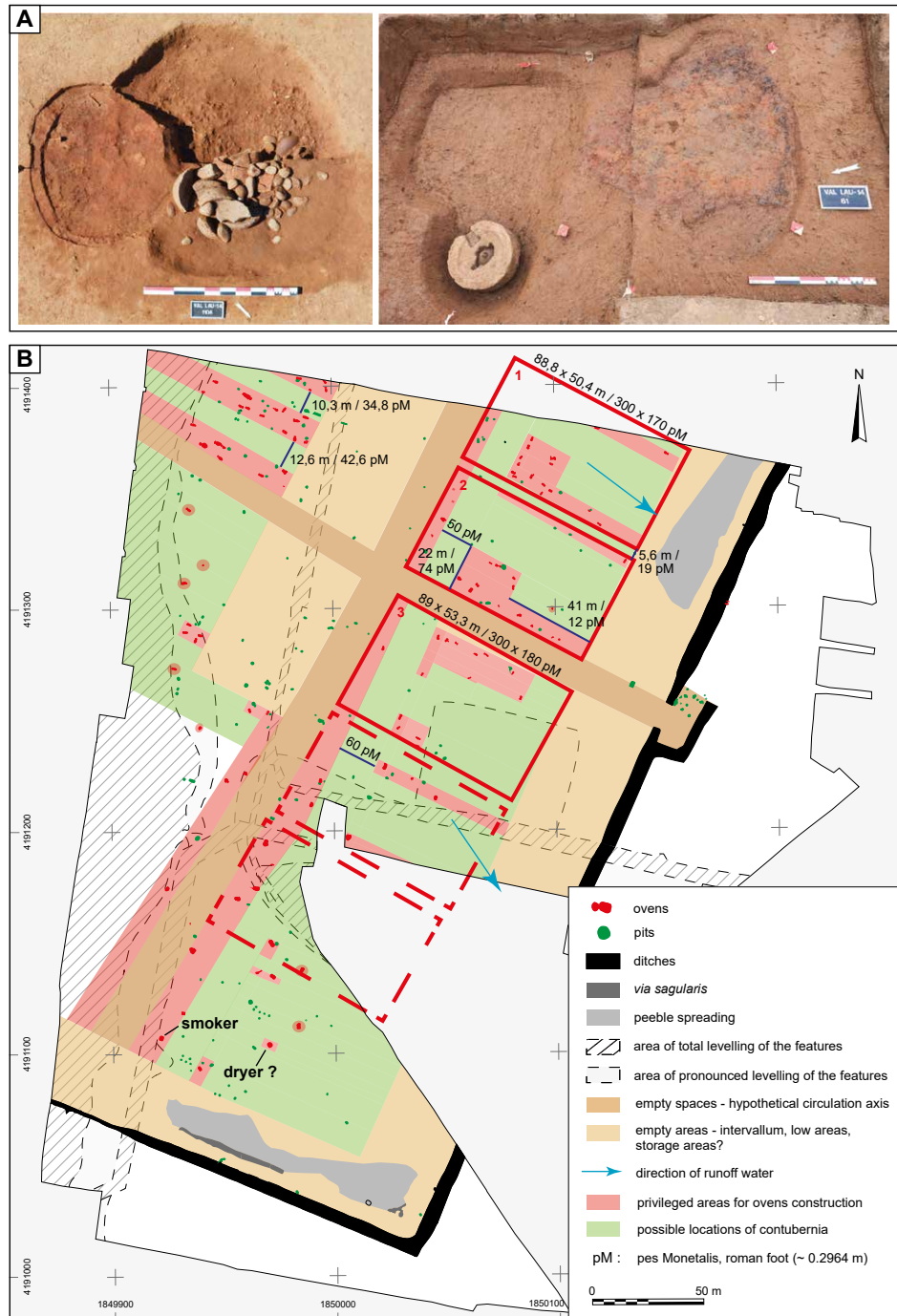


Figure 3. A. Images of FR4030 and FR1024 ovens; B. General map of the 2014-2015 excavation showing the camp's internal areas as deduced from the archaeological structures (respectively M. Kielb Zaaraoui and M. Gagnol).

of the ovens and on the life and diet of the soldiers in general, particularly with regard to the consumption of cereals. At Lautagne, the diet was mainly a mixture of hulled barley and naked wheat at an approximate ratio of 60/40, although proportions varied according to oven (J. Ros study).

Finally, two of the structures that underwent heat-induced rubification raised many questions because of their unique morphology on this site and their specific

location near to the fortification's south-east corner. Following analysis of the walls of one of the pits, the structures are thought to have been used for drying/smoking perishable goods in order to preserve them.

This raises the question of how the preparation of meat was managed in the camp. The position of these two structures suggests that a geographical area of the camp could have been reserved for the processing of foodstuffs, particularly smoking, in order to relieve the other parts

of the camp from unpleasant smoke or odours. This then brings us to the matter of the rubified structures and their geographical location within the fortified enclosure, the quantity and distribution of these remains giving us a sense of the internal organisation of the temporary camp.

### The internal organisation of camp F

The remains discovered inside the camp at the Lautagne site are unevenly distributed, sometimes as a result of erosion and sometimes because of medieval and modern exploitation of gravel, sand and loess. However, the well-preserved areas feature distinctive groups of structures that are organised in a certain way. Despite any gaps in knowledge, the map clearly shows that the ovens and other structures form north-west/south-east alignments that are parallel or perpendicular to the axis of the enclosure and the paleovalley. We posit that this is the negative trace of the internal organisation of the camp and the arrangement of separate areas (fig. 3B).

**Intervallum and via sagularis** The first feature to stand out is the absence of structures in a wide area of 30 to 40 m between the enclosure ditch and the interior of the camp. This is the location of the fortification embankment and a buffer space between the early human settlements and the enclosure, called the *intervallum* (Pseudo-Hyginus *De Munitionibus Castrorum* 14). The *intervallum* here measures between 40 m wide to the north-east and 30-35 m to the south (c. 101-135 Roman feet), a much smaller area than the 200 feet given by Polybius (*Historiai* 6.31) (59.3 m), but larger than Pseudo-Hyginus's 60 feet (17.8 m) and the 3-29 m of the *Numantia* camps (Dobson 2008, 109).

Within this space, in addition to the embankment, is the *via sagularis*, the internal peripheral road of the camp that ran along the defensive rampart. It was identified in various places, 6 m from the edge of the enclosure ditch by the presence of pebbles and gravel on the surface. The materials, separated during the excavation of the enclosure ditches from which this circulation area is made, were clearly selected. This track is a heterogeneous whole, difficult to delimit. The area closest to the enclosure embankment is the best developed overall. It is made up of a pavement whose width varies between 2 and 3 m. The gravel levels become more diffuse as the distance from the embankment increases. This means that there is either a difference in the quality of the track, which varies according to the proximity of the earthen embankment, or it relates to a spreading of sediment caused by continual trampling of the track edges. To the south-west, in the area where it was most visible, the maximum total width was c. 15 m. Within the space demarcated by the fortification and the *intervallum*, the way the structures are aligned allows us to extrapolate different circulation and camp areas between the axes formed by the ovens and the pits.

**Internal circulation areas indicated by the oven-lines** From the gate and on the axis of the eastern entrance to the camp, we can see the location of another corridor devoid of structures between two oven-lines facing north-west/south-east; restoration of a major circulation axis of the camp seems logical. This empty space, with a maximum width of 13.5 m (45.5 Roman feet), is slightly off-centre when the slope of the paleovalley is reached to the west. It is also evident that this axis is intersected perpendicularly by another corridor with no archaeological structures, generally facing north-east/south-west. Its maximum width is around 17 m (between 57 and 58 feet), which is close to the 60 feet (17.8 m) width given by Pseudo-Hyginus (14) for the large tracks of the camp. We have, therefore, an intersection of circulation areas facing the eastern entrance to Camp F. Unfortunately, an attempt to name the areas using the information provided by the ancient texts would not be reliable while details of the north and west parts of the camp are unknown.

Finally, two other areas have been found with almost no structures. They are located at the bottom of the slope of the paleovalley, west of the point where the internal tracks of the camp intersect, on either side of the track leading to the eastern entrance of the camp. They are quadrangular and measure 74 × 48 m, or c. 250 × 162 Roman feet. If we assume that the ovens represent the locations of human settlements, it is evident that the soldiers did not pitch their tents in these spots. Because these areas are located at the foot of the slope, did the inhabitants prefer to use them to collect runoff water? The fact that a small drainage ditch ends at this point seems to support this hypothesis, but they could also have been used as storage and/or parking/penning areas.

**The living areas** In addition to these empty spaces, the rest of the site is divided into small corridors that either contain ovens or are almost empty. This is how we were able to determine which areas were preferred for the construction of large ovens: it would seem, therefore, that the remaining areas were used by the Roman soldiers to set up their tents away from the risk of starting a fire and avoiding the various inconveniences associated with the use of ovens. Thanks to the colouring of these different areas, we can observe a certain symmetry and repetition in the succession of oven corridors and open spaces. This suggests the presence of large modules on the eastern side of the main north/south road of the camp, where the same series of spaces and spacings can be seen. The most distinguishable of the rectangular modules on the northeast side measure 300 Roman feet in length and 170 to 180 feet in width (89 × 50 to 53 m) (fig. 3B modules 1-2). This pattern is repeated in mirror image on the other side of the route leading to the camp entrance (fig. 3B module 3). If we restore modules of

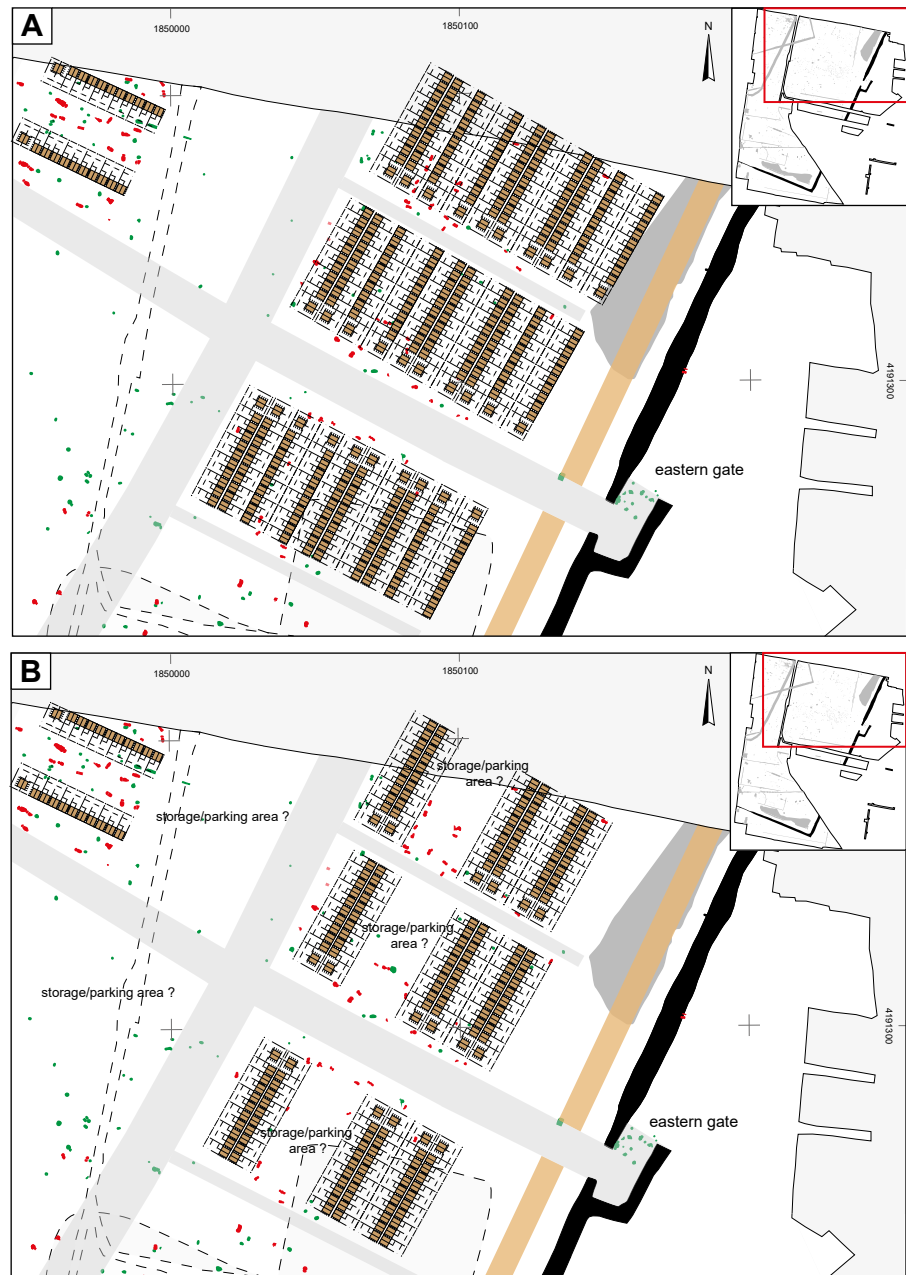


Figure 4. Suggested restoration of the internal organisation and living quarters of Camp F (M. Kielb Zaaraoui & M. Reddé).

the same size to the south, despite the significant gaps in the map, the hypothesis remains consistent with the archaeological remains and the dimensions of the camp. Each module is separated by an empty structure-free space measuring c. 19 Roman feet (5.6 m). It can be assumed that this could have facilitated the circulation and drainage of rainwater between the human encampments. To the north-west of the excavation area, the distances between the oven-lines differ; the layout of the modules located to the east is not visible in this part of the site, even though the oven-lines are facing the same way. This could be due to degradation of the

remains or an indication that a different installation system was used.

### Restoration assumptions

**The encampments** At this stage of our reasoning, we can attempt to ascertain if the location occupied by the Roman centuries as offered by the ancient texts is compatible with our archaeological observations of Lautagne F. We will start from the standard position that a cohort was composed of six centuries, c. 480 men. This implies rows of ten *contubernia* (shared barrack rooms) with eight men apiece and a place for the centurion, equivalent to the

length of two *contubernia*. We will also apply the hypothesis of a single mule per *contubernium*, and a mule and a horse or two mules for each centurion, so twelve horses per unit. According to Pseudo-Hyginus (*De Munitionibus Castrorum* 1), a *contubernium* could be 30 Roman feet long and 12 wide (c. 9 × 3.5 m). The area allocated to a century, with ten tents placed side by side in the same row, would therefore be 120 feet long by 30 feet wide, excluding the centurion's tent, *a priori* larger than the legionaries' tents.

The intention was to draw on this basic information to envisage how the soldiers could have set up their tents at Lautagne F between the circulation spaces and the *intervallum*, highlighted by the lack and also the alignment of structures, without encroaching on the areas reserved for the ovens, located outwith the tents for obvious reasons. We will start from the two north-western modules mentioned earlier (upper section fig. 3B modules 1-2). The interior of these 300-foot modules could theoretically contain ten to twelve rows of tents and 800 to 960 men (fig. 4A). However, in view of the structures that were uncovered, particularly the ovens, this arrangement poses some questions regarding the storage of materials and equipment and the penning of animals as well as its suitability for an army organised into cohorts of six centuries.

Another hypothesis supposes that each module was reserved for a single cohort of six centuries. This seems extremely generous in terms of space, significantly more than the literature suggests. In practice, the dimensions allocated to the centuries in the camps of the imperial period, especially the width between the rows of *contubernia*, vary from one site to another and do not fully match to the data cited in the *De Munitionibus Castrorum*. This can be seen at Oberaden, Dangstetten, Rödgen or Friedberg in Germany (Morel 1991, 379-381) or in the hypotheses formulated for the camps of Inchtuthil, Exeter, Colchester or Caerleon in Great Britain (Henderson 1991). At Inchtuthil a cohort appears to have been placed in a square measuring 280-300 Roman feet on a side.

As such, figure 4B illustrates one solution for placing six centuries in areas of c. 300 feet in length by 170-180 feet in width. The centuries are placed back-to-back in pairs, as in Oberaden, to allow space for ovens and any circulation, leaving 1 m behind the tents for facilities and caretaking. This configuration would allow six centuries placed in lines facing north/south to fit widthways with room in the centre of the cohort for storing various foodstuffs and materials or building an oven, perhaps. The configuration would accommodate 486 men in a module of around 4500 m<sup>2</sup> (excluding tracks and fortifications); including roads and fortifications, 553 men and 160 mules could theoretically be accommodated per hectare.

Our final observation concerns the latrines and landfills. There is a notable absence of any sanitary facilities on the excavated plot. No structure with the

potential to have served such a function was found in the areas specific to the *contubernia* or in the *intervallum* (as is mostly the case in the Imperial period (Ebeling 2006, 124-127). Was waste discarded from the top of the northern and western cliffs? Were pits dug out but located away from the area? These questions remain open.

**Dimensions and numbers** As mentioned, the question of the total size of the camp is difficult to address as the northern boundary was not recognised during the various archaeological operations (fig. 5). The northern and western cliffs of the plateau, with the addition of a palisade at the edge, may have served as a boundary (Conjard Réthoré & Ferber 2013, 205). However, a diagnostic survey carried out in June 2017 at the theoretical location of the ditch's route to the north of the camp's gate was unable to ascertain this. Two hypotheses are put forward by Ronco (2017): either the plot of the ditch was misaligned when approaching the northern edge of the plateau, or the ditch changed direction before these diagnostic surveys took place. This would result in a camp of 740 × 520 m, or c. 38 ha. However, the presence of a small hill to the north-west, which in this hypothesis would remain outside the camp, suggests a less regular trapezoidal layout. This would bring the dimensions of the camp to about 46 ha, implying, *a priori*, two legions. At this stage of the research, it is impossible to settle on either of these possibilities. For the moment, it is worth noting that between 10,000 and 15,000 men could occupy Lautagne for a summer campaign, depending on the size of the auxiliary forces.

## Conclusion

The hypothetical basis of this work is evident, and the many uncertainties from the very outset render a theoretical reconstruction of the fortress difficult to achieve, with each hypothesis posing a number of problems. Nevertheless, we have formulated those hypotheses in order to stimulate reflection and to identify several issues that should be taken into account during future excavations.

The question remains as to how the Roman army came to set up a military camp on the Hill of Lautagne, a site it was already using, as evidenced by the presence of several earlier fortifications. At the time in question, we might consider the problems that marked the various wars with the *Allobroges*, in particular their last uprising in 62 BC, without excluding other hypotheses, for example at the beginning of the Gallic War, when it was apparently necessary to block the Rhone valley in the face of the threat of invasion from the *Helvetii*. The position of Lautagne, south of the confluence of the Isère and the Rhone was, from this point of view, ideal, but this is obviously nothing more than speculation. All the more reason, then, for future excavations on the plateau to take into account the assessment that has been attempted

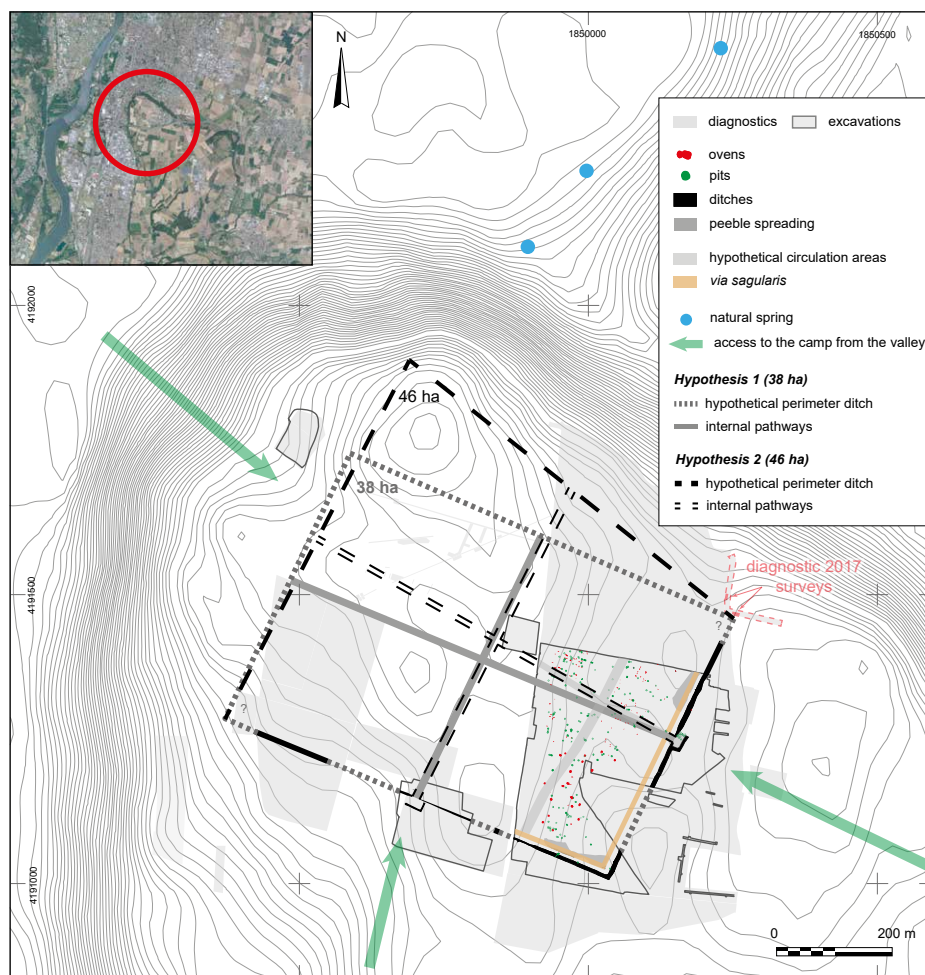


Figure 5. General map of Camp F on the Lautagne plateau, hypotheses for the location of the enclosure to the north and west (M. Kielb Zaaraoui, Y. Zaaraoui & C. Ronco).

herein and that, despite the uncertainties that remain, constitutes an important milestone in our understanding of the Roman army at the end of the Republic.

## Acknowledgements

We would like to express our thanks to Michel Reddé who worked with us on reconstructing the camp at Lautagne F and proofreading this article. We have also been supported by numerous specialist colleagues, each of whom has contributed from their own field: Jacques Léopold Brochier, Marie Gagnol, Michel Feugère, Anaïs Roumégous, Jérôme Ros, Christophe Vaschalde and Audrey Renaud.

## Bibliography

Conjard Réthoré, P. & E. Ferber, 2013: Les camps romains du plateau de Lautagne à Valence (26). État de la question, *Revue Archéologique de Narbonnaise* 46, 201-220.

Dobson, M., 2008: *The army of the Roman Republic. The second century BC, Polybius and the camps at Numantia, Spain*, Oxford.

Feugère, M., M. Gagnol & L. Buffat, 2020: Roman Republican camps at Lautagne (Valence, F). Light from small finds in context, *Journal of Roman Archaeology* 33, 331-340.

Henderson, C.G., 1991: Aspects of the planning of the Neronian fortress of legio II Augusta at Exeter, in: V.A. Maxfield & M. Dobson (eds), *Roman frontier studies 1989. Proceedings of the XVth international congress of Roman frontier studies*, Exeter, 73-83.

Hobley, B., 1989: The evidence for the form and appearance of turf and timber defences of Roman forts in the late first century based on experiments at the Lunt Roman fort, in: P. Bidwell, R. Miket & B. Ford (eds), *Portae cum turribus. Studies of Roman fort gates*, Oxford (British Archaeological Reports British Series 206), 25-61.

Kielb Zaaraoui, M., C. Ronco, M. Gagnol, M. Feugère & L. Buffat, 2018a: Les camps militaires tardo-républicains de Lautagne (Valence, Drôme), in: M. Reddé (ed.), *L'armée romaine en Gaule à l'époque républicaine. Nouveaux témoignages archéologiques*, Glux-en-Glenne (Bibracte 28), 45-72.

- Kielb Zaaraoui, M., Y. Zaaraoui & L. Buffat (eds), 2018b: *Camps de l'armée romaine et occupations diachroniques sur le plateau de Lautagne, Valence (Drôme). Rapport Final d'Opération archéologique préventive*, Montpellier.
- Manning, W.H. & I.R. Scott, 1979: Roman timber military gateways in Britain and on the German frontier, *Britannia* 10, 19-61.
- Morel, J.-M., 1991: Tents or barracks? in: V.A. Maxfield & M. Dobson (eds), *Roman frontier studies 1989. Proceedings of the XVth international congress of Roman frontier studies*, Exeter, 376-386.
- Peralta Labrador, E., 1999: Los castros cántabros y los campamentos romanos de Toranzo y de Iguña. Prospecciones y sondeos (1996-97), in: M. Almagro Gorbea, J.M. Blázquez, J. González Echegaray, M. Reddé J.L. Ramírez Sádaba & E. Peralta Labrador, *Las guerras Cántabras*, Santander, 203-276.
- Reddé, M. & S. von Schnurbein, 2001: *Alésia. Fouilles et recherches franco-allemandes sur les travaux militaires romains autour du Mont Auxois (1991-1997)*, Paris (Mémoires de l'Académie des Inscriptions et Belles Lettres 22).
- Ebeling, C., 2006: Les latrines, in: M. Reddé, M., R. Brulet, R. Fellmann, J.K. Haalebos, S. von Schnurbein & P. Aupert (eds): *Les fortifications militaires. L'architecture de la Gaule romaine*, Paris (Documents d'Archéologie Française 100), 124-127.
- Ronco, C., 2017: *Rue Pierre Méchain et Chemin du Plateau de Lautagne (Valence, Drôme, Rhône-Alpes). Rapport de diagnostic*, Auvergne.
- Ronco, C., 2018 (ed.): *Plateau de Valence (Drôme, Rhône-Alpes). Rapport Final d'Opération archéologique préventive*, Auvergne.



# Ulaka site complex

## Late Republican and Augustan Roman military earthworks and small finds

Boštjan Laharnar and Janka Istenič

The Romans exercised control over northern Italy from the end of the 3<sup>rd</sup> century onwards. The colony of *Aquileia*, founded in 181 BC in the north-eastern part of the Venetian-Friulian Plain, was the centre of military command and commerce, and also a stepping stone for Roman economic and territorial expansion towards the east. The territory immediately to the east, i.e. the south-eastern Alpine region (roughly present-day Slovenia), is strategically positioned between the Apennine Peninsula, on one side, and the middle Danube Basin and the Balkan Peninsula, on the other.

The first to be integrated into the Roman state was the littoral and its hinterland. In the 2<sup>nd</sup> century BC, Roman military camps were set up at San Rocco (Koromačnik in Slovenia) and Grocciana piccola (Mala Gročanica in Slovenia) in the eastern hinterland of Trieste (Trst in Slovenia); they were also garrisoned in the first or second third of the 1<sup>st</sup> century BC (Bernardini 2019; Bernardini *et al.* 2021; 2023).

The Roman conquest further inland followed the trade routes. The easiest route (fig. 1) led across the Razdrto Pass (*Ocra*) to the Postojna Basin (Horvat & Bavdek 2009, 144-146). The Razdrto area was of interest to several Iron Age communities – ancient texts mention the *Carni*, *Taurisci* and *Iapodes* – and also to the Romans. The central pre-Roman settlement in this area was the hillfort at Grad near Šmihel (fig. 1). It was fortified with a rampart, in the debris of which c. 500 Roman weapons were discovered around 1890. In the last few decades, slingshot, artillery bolts and arrowheads were found scattered in the settlement and on the slopes outside it. They indicate a Roman assault and conquest of the settlement in the 2<sup>nd</sup> century BC. It seems the Romans conquered not only the settlement, but rather the whole Razdrto area (Laharnar 2015, 11-14; 2022, 324-327; 2023; Laharnar & Lozić 2016, 60-65), where they established their earliest settlement in the late 2<sup>nd</sup> or early 1<sup>st</sup> century BC (Horvat & Bavdek 2009, 93-96; Horvat 2015, 276-277).

The main eastbound route from the Postojna Basin led to *Nauportus* (Vrhnika), a pre-Roman settlement and later a Roman *emporium* at the western fringes of the Ljubljana Marshes (Ljubljansko barje). Further east, the passage by land from *Nauportus* to *Emona* (Ljubljana) was highly limited by the marshy terrain. Therefore, the most convenient continuation of the route was along the river Ljubljanica, which is very suitable for upstream and downstream navigation in the stretch across the Ljubljana Marshes. Strabo (*Geographica* 4 and 7) reveals the great importance of transport along the river in the last two centuries BC. He relates that merchandise from *Aquileia* was conveyed in wagons across *Ocra* to *Nauportus* and from there down the rivers as far as the Danube. The study of Roman military finds from the river has shown the great importance of the traffic

**Boštjan Laharnar / Janka Istenič**

Narodni muzej Slovenije,  
SI-1000 Ljubljana, janka.  
istenic@nms.si

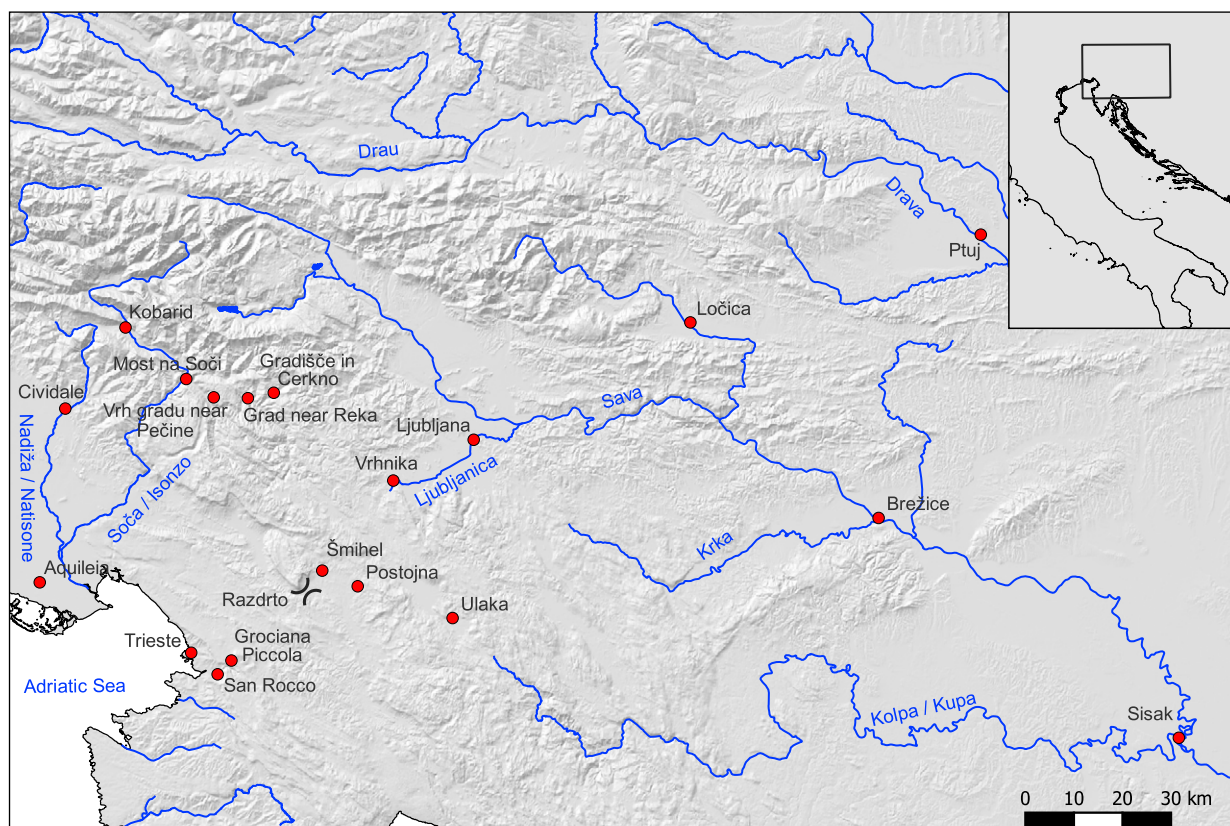


Figure 1. Map of the south-eastern Alpine region and its surroundings indicating the sites mentioned in the text.

along the Ljubljanica between the two transport hubs, *Nauportus* and *Emona*, for provisioning the Roman army engaged in conquering new territories and imposing the Roman rule in the south-eastern Alps, northern Balkans and central Danube Basin. The peaks of traffic fall in the last years of the Republic and even more in the Middle and Late Augustan periods; historically, they may be correlated with the Illyrian Wars of 35-33 BC, the Pannonian Wars of 11-9 BC and the Pannonian-Dalmatian rebellion of AD 6-9 (Istenič 2019a).

Archaeological evidence from several hillforts south of the *Ocra-Nauportus* corridor indicates Roman military activities in the period from Caesar's proconsulship in *Galliae* and *Illyricum* (59-49 BC) to the Middle Augustan period (Laharnar 2015, 24; 2022, 358-360). The hobnails of Roman military footwear with a characteristic pattern on the underside of the head (Types Alesia A-D), dated between the late 2<sup>nd</sup> century BC and c. 15 BC, suggest that the Roman army also used the route that led along the valley of the river Nadiža (Natisone in Italian) to Breginjski kot (northwest Slovenia) and onwards to the valley of the river Soča (Isonzo in Italian) to Kobarid, possibly a Republican *emporium* (Laharnar *et al.* 2015). From Kobarid, the route may have continued towards the southeast, to Most na Soči and further to the mountainous

Tolmin-Cerkno area. Roman missiles, hobnails and other small finds from Vrh gradu near Pečine, Grad near Reka with its environs, and Gradišče in Cerklje indicate a Roman military assault on this area in the fourth decade BC. The Tolmin-Cerkno area probably lay within the territory of the *Carni*, whose central settlement area was the northern Adriatic, from the river Livenza (Italy) in the west to the Alps in the north. Appianus Alexandrinus (*Illyrike* 16.46) mentions the *Carni* among the tribes that Octavian defeated in the Illyrian Wars. We assume the three sites are related to a Roman military campaign at the beginning of the Illyrian Wars, when it was vital to pacify the hinterland of the Soča Valley before campaigning further towards the Balkans, in the territories of the *Iapodes*, *Segestani* and *Delmatae* (Istenič 2005; 2015; 2023; Šašel Kos 2005, 464-469).

Excavations over the past three decades unearthed evidence of the extensive Roman operations in the Middle-Late Augustan period, especially the remains of military camps in Ljubljana (Istenič 2019a, 242, with references, esp. Gaspari 2010; 2014; Gaspari *et al.* 2014; Bekljanov-Zidanšek *et al.* 2022), in the strategically important Brežice Gates (Mason 2006; 2008; Guštin 2015; Tomaž 2022) and in Ptuj (*Poetovio*). Regarding Ptuj, the recently excavated remains of the presumed fortress cannot be dated more narrowly than the first half or middle of the 1<sup>st</sup> century AD (Horvat 2023,

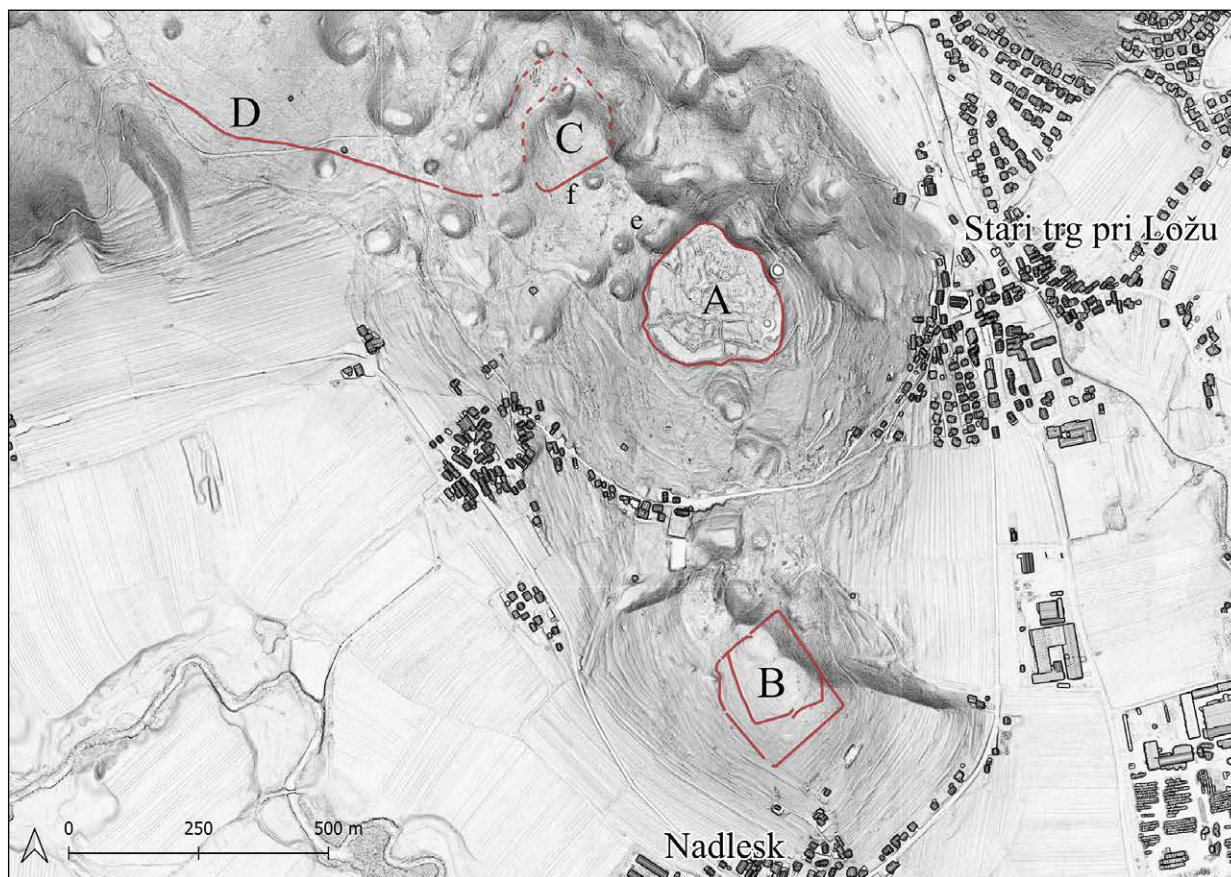


Figure 2. Ulaka-Nadleški hrib site complex. Archaeological interpretation of the LiDAR-derived digital elevation model. A. Ulaka (hillfort); B. Nadleški hrib (Roman camps); C. Ulaka-tabor (Roman camps); D. Roman linear earthwork; e. ridge between A and C; f. south rampart at Ulaka-tabor (visualisation Matic Zupan: National Museum of Slovenia; LiDAR data source: ARSO).

25-32), but literary sources and the geopolitical situation indicate a fortress here from the Middle-Late Augustan period onward (Saria 1951, 1170).

Present evidence indicates that the Roman military conquest and pacification of the south-eastern Alpine region ended with the Augustan or perhaps the Early Tiberian period. A legion was stationed in Ptuj until the end of the 1<sup>st</sup> century AD. No further Roman military garrisons are known from the region between the Tiberian period and the Marcomannic Wars (c. 166-180 AD), when a fortress was built at Ločica (Lazar 2015; Groh 2018). We can conclude that major Republican and Early Principate activities of the Roman army in the south-eastern Alps were carried out in (the middle of) the 2<sup>nd</sup> century BC, during Octavian's Illyrian Wars and in the Middle-Late Augustan period.

### The Ulaka site complex

**The hillfort at Ulaka** (figs 1-2 and 5) The hillfort (683 m above sea level) lies on a plateau that rises c. 100 m above the valley and occupies a strategically dominant position in the north-western fringes of Loška dolina (Lož Valley),

a karst valley in southern Slovenia (figs 1 and 2A and 5A). It was the central prehistoric settlement (from c. 1000 BC) in the area, and later a Roman settlement. The site was not occupied after the 5<sup>th</sup> century AD (Gaspari 2020, 141-171; Laharnar 2022, 220-233, plates 43-47, with references).

**Roman camp at Nadleški hrib** (figs 2B and 5B) Saria (1935a, 745; 1935b; 1939, 118-119) was the first who wrote of the Roman military camp at Nadleški hrib, south of the hillfort at Ulaka. The site lies on a plateau (642 m above sea level) above the present-day village of Nadlesk. According to Saria, the camp was 127 m long and 159 m wide; it covered an area of around 2 ha and featured an 8.5 m wide entrance in the shape of an inner *clavicula*. Saria dug a trench through the earthwork rampart, which only revealed an 'atypical' ceramic fragment. He believed the camp was related to the period of Roman conquest, during the Illyrian Wars in 35-33 BC or later, and mentioned the possibility of the Romans using it to lay siege to the Ulaka hillfort.

Research of the site continued in the last decade with geophysical surveys, archaeological interpretation of



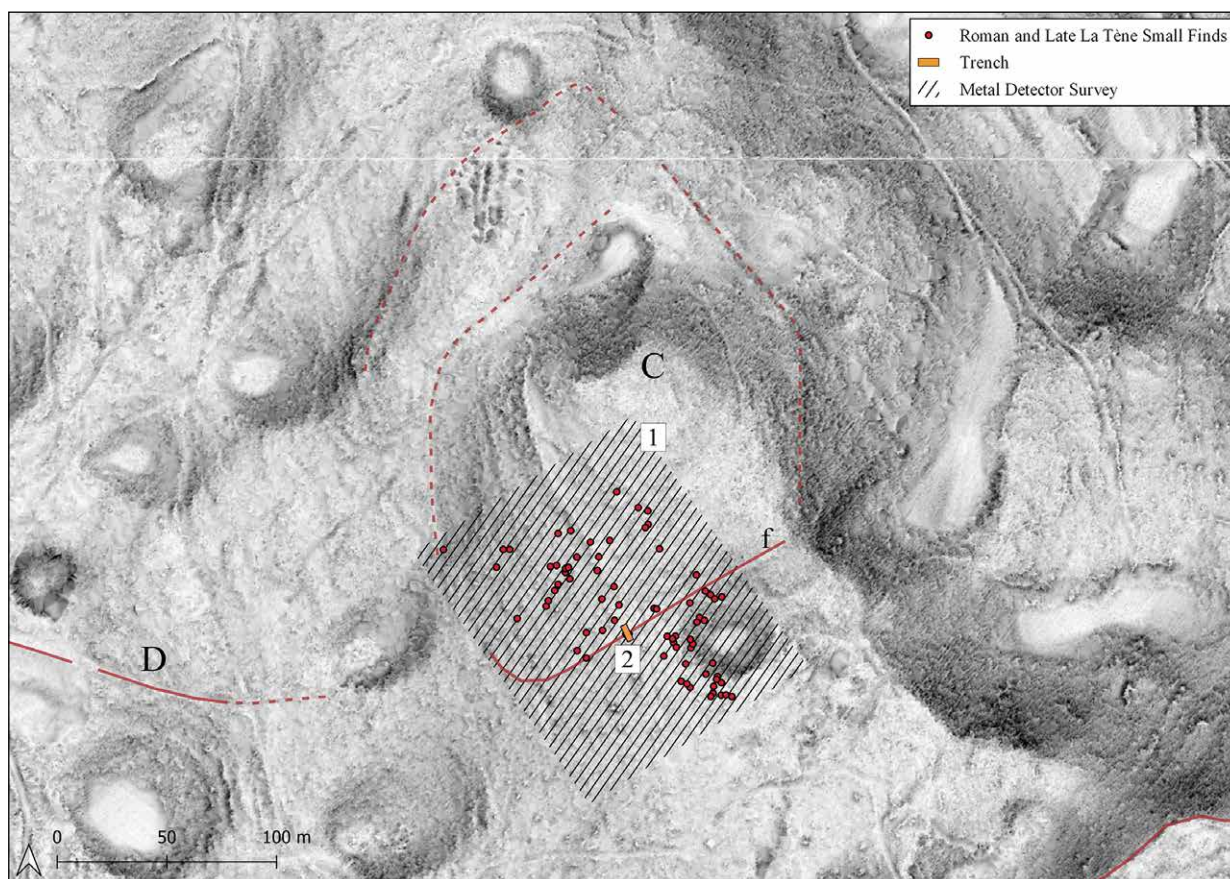


Figure 3. Ulaka-tabor and its surroundings. Archaeological interpretation of the LiDAR-derived digital elevation model. C. Ulaka-tabor (Roman camps); D. Roman linear earthwork; f. Ulaka-tabor, south rampart; 1. metal-detecting survey area; 2. Trench; red dots = find spots of Roman and Late La Tène small finds (visualisation: Matic Zupan, National Museum of Slovenia; LiDAR data source: ARSO).

LiDAR-derived data and evaluation of recently acquired small finds. This provided new evidence indicating there were two successive camps at Nadleški hrib: the early, pre-Augustan and the later, Middle or Late Augustan. They are of different sizes. The smaller camp had two *clavicula* entrances (approximately in the middle of the north and the south rampart) and an irregular outline covering a surface of c. 2.4 ha. The larger camp occupied the same surface as the smaller one and an additional area to the west and south, thus extending across c. 4.1 ha (Laharnar 2013; 2015; 2022, 234-237, fig. 3.118 and plates 48-49; Laharnar & Lozić 2016, 65-66). It has been suggested that the smaller camp was earlier (Laharnar 2022, 234; Laharnar & Lozić 2016, 66), but for now there seems to be no convincing evidence or argument regarding the time sequence of the two camps.

**Roman camp at Ulaka-tabor** (figs 2C, 3C and 5C) On the hill (summit at 670 m above sea level.) c. 220 m northwest of the Ulaka hillfort (fig. 2C, 5C), LiDAR-derived data revealed earthworks that we thought might be the remains of a Roman military camp; we named the site

Ulaka-tabor. It is situated in a karst landscape with a thin layer of soil and protruding bedrock. The available information suggests the site was never used for arable farming and is nowadays covered with a forest. The easiest path between the camp and the hillfort is along the ridge, delimited by two sinkholes (fig. 2e). In 2017, we carried out a metal-detecting survey (total collection of metal finds) in a rather small area (fig. 3.1) and excavated a trench across the earthwork (fig. 3.2). Surveys in 2020 revealed an earthwork south-west of the camp (figs 2D, 3D and 5D).

Preliminary results indicated a camp of an irregular outline, delimited with earthworks that enclosed a surface of c. 3 ha, as well as a linear bank about 800 m long leading from the southwest corner of the camp and barring the access to Loška dolina from the north. The recovered small finds related to Roman soldiers (fig. 3.1) suggested a military conflict involving the Roman army. The camp would be contemporaneous with the early camp at Nadleški hrib, *i.e.* from the time of Caesar's proconsulship in *Illyricum* or Octavian's Illyrian Wars, and both camps

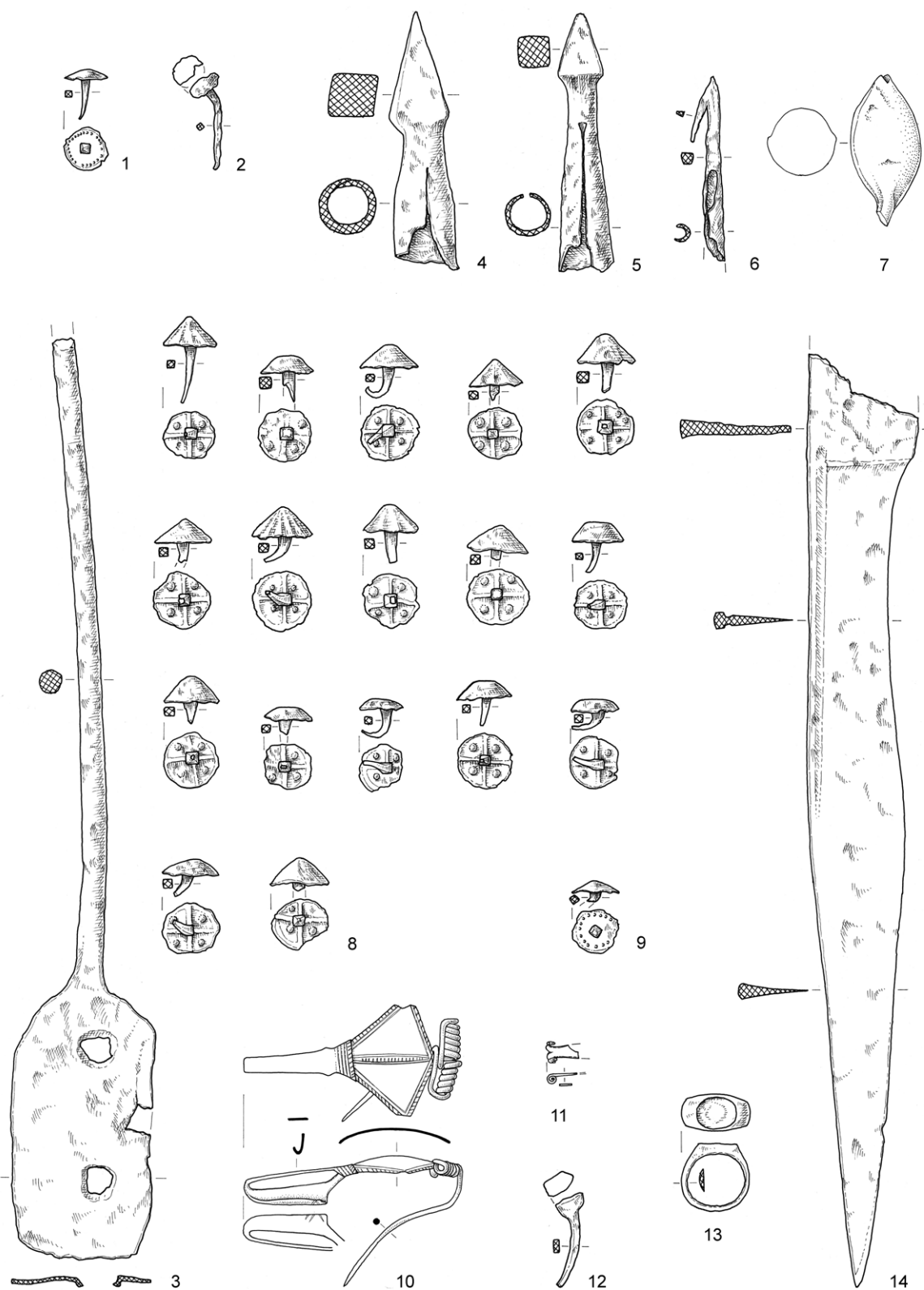


Figure 4. Select small finds from Ulaka-tabor. 1-6, 8-9 and 12-14 iron; 7 lead; 10-11 silver. Scale 1 : 2 (Ida Murgelj, National Museum of Slovenia).

would be related to the supposed siege of the hillfort at Ulaka (Laharnar 2022, 222-225, figs. 3.112-113 and 118). Later, more detailed analysis produced results outlined below.

The most obvious feature derived from the LiDAR data is the c. 120 m long and straight NEE-SWW bank that ends in a rounded southwest corner (figs 2f and 3f). There are several other features that may be related to the Roman military earthworks, but their interpretation is difficult and uncertain (figs 2 and 3). The rampart (f) in figures 2 and 3 appears on the ground as a slightly elevated bank. A small (6.4 × 1.3 m) trench excavated across the rampart (fig. 3.2) revealed it survives as a layer of earth (c. 60 %) and small unworked stones (c. 40 %), maximum 20 cm high and about 3 m wide, and differing from the natural karst terrain. The bedrock (limestone and clay earth) lies 35 to 55 cm below the present-day ground. It seems there was no ditch along the rampart, which is not surprising given the karst terrain.

The small finds from the rampart consist of a hobnail (fig. 4.1), a nail (fig. 4.2), few small pieces of iron slag and sporadic pieces of charcoal. The only chronologically diagnostic item is the hobnail, which has parallels in contexts that do not predate the Middle and Late Augustan period (Istenič 2019b, 276). The survey produced also several small finds, of which Roman militaria constitute a clear majority. They include a part of a Roman *pilum* (fig. 4.3), catapult bolts (fig. 4.4-5), an arrowhead (fig. 4.6), a slingshot (fig. 4.7), hobnails (fig. 4.8), and perhaps also a falcata-like knife (fig. 4.14). A seal ring (fig. 4.13) and a large bronze coin can also be linked to Roman soldiers.

A flat tang (85 mm long and 45 mm wide) with two rivet holes and a large part of a round-sectioned shank survive of the *pilum* (fig. 4.3). The sides and the end of the tang do not seem to have been broken away. It has a parallel in the heavily corroded *pilum* with a pyramidal head and flat tang from *Libisosa* (Lezuza, southern Spain), which is presumably related to the Sertorian Wars (Quesada Sanz & Uroz Rodríguez 2020, 28, fig. 5c and 40, no. 20). Slightly more distant parallels are three *pila* from Spain that have longer and more pronounced rectangular tangs with two rivets featuring large square heads. They were found at La Caridad, Caminreal (north-eastern Spain; c. 17 cm long), probably related to the destruction of the town during the Sertorian Wars (c. 80-72 BC; Vicente *et al.* 1997, 167, 181, 183-184, figs 24 upper one and 25 on the right), in Valencia (eastern Spain; c. 14 cm long), from a context dated to 75 BC (Ribera i Lacomba 1995, 28-30 and 34, figs. 9-11 and 15.4; Connolly 1997, 45, fig. 3G), and in *Ullia* (Montemayor, southern Spain), where only a part of the heavily corroded tang with a rivet survives, presumably dating to 48 or 45 BC (Quesada Sanz & Moralejo Ordax 2020, 230-235 and 246, fig. 12a).

The socketed catapult bolts with a pyramidal head similar to that in figure 4.4-5 are known from several Republican sites and differ from the Early Principate catapult bolts

primarily in their narrower heads (Istenič 2005, 81; 2015, 54, with references; Poux 2008, 354-357, figs 37-38; Rueda Galán *et al.* 2015, 298-302, fig. 11.CR-83). Socketed arrowheads with one lobe such as that in figure 4.6 are among the Roman weapons from the time of the Gallic Wars in 58-52 BC, the Illyrian Wars of 35-33 BC, and the Cantabrian Wars of 29-19 BC (Istenič 2015, 56, 69 and plate 3.19; Peralta Labrador *et al.* 2009, 279-283, fig. 2.1; Poux 2008, 363-365, fig. 44; Fernández Ibáñez 2015, 331, fig. 6.1 and 4).

The slingshot in figure 4.7 corresponds in form (Völling II type) and weight (94 g) to the slingshot unearthed in the hillforts in south-western Slovenia, presumably from the middle or second half of the 1<sup>st</sup> century BC and the Late Augustan period (Laharnar 2011, 353-356). Most of the hobnails from Ulaka-tabor are of the Alesia D type (fig. 4.8) that is well-represented in contexts from the end of the 2<sup>nd</sup> century (Kielb Zaaraoui 2018) to 20-15 BC (Istenič 2019b, 276-279). In the south-eastern Alpine region, such hobnails are very common among the small finds from the three sites in the Tolmin-Cerkno area that revealed traces of a Roman military attack during the Illyrian Wars (Istenič 2005, fig. 5; 2015 and plates 2.5-14 and 5.9-21; 2019b, 272-173, fig. 2 and list 1.1-3). The hobnail found in the rampart (fig. 4.1) and one of the hobnails collected during surveying (fig. 4.9) are of a type dated from the Middle Augustan period onwards (Istenič 2019b, 276). The coin is probably an *as* from the end of the 3<sup>rd</sup> or the 2<sup>nd</sup> century BC (Kos & Šemrov 1990, nos 28, 42, 45, 47, 49, 51-52, 58 and 66).

Some 17 m south of the rampart (fig. 2.3f), an iron nail (fig. 4.12) was found together with a silver brooch of the Middle La Tène construction (fig. 4.10) characteristic of the LT D1 (c. 150/130-70/60 BC) local female attire (Laharnar 2022, 274-276, fig. 4.9), and a tiny silver fragment in the form of ram's horns (fig. 4.11). The last item is probably a foot terminal fragment of a Jezerine type brooch (Adam & Feugère 1982, 152-156, fig. 14; Feugère 1985, type 12, 253-258, no. 1171). Brooches of this type are well-represented in military contexts related to the Illyrian Wars (Istenič 2015, 48, 49, 58 and plates 2.2-3 and 5.6). It seems that the Roman soldiers did not wear Jezerine brooches during the war in Gaul 58-52 BC, nor after c. 20-15 BC, as they are not common at the military sites from the period. Several come from LT D2 (c. 70/60-15 BC) sites (Laharnar 2022, 292).

The blade (268 mm long) and a small part of the handle survive of the falcata-like battle knife (fig. 4.14). Similar weapons were used by indigenous warriors from several regions, including the Balkan and Pyrenean Peninsulas (Quesada Sanz 1997, 61-172), and they probably also occur among the weapons ascribed to Roman allies and mercenaries (Bishop & Coulston 2006, 56; Ulbert 1984, 109, plates 25 and 62.201; Vicente *et al.* 1997, 187, fig. 32.193-194).



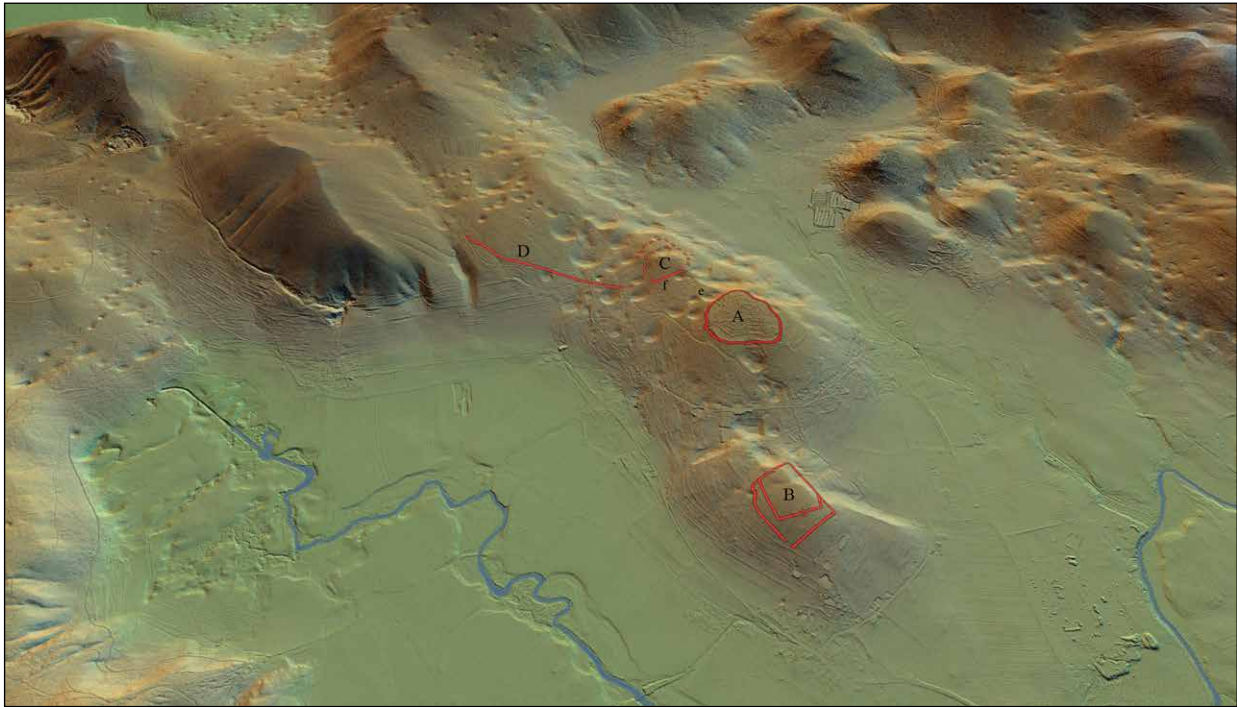


Figure 5. Ulaka site complex. 3D archaeological interpretation of the LiDAR-derived digital elevation model (visualisation Matic Zupan, National Museum of Slovenia; LiDAR data source: ARSO).

## Conclusion

To conclude, a closer look at the small finds from Ulaka-tabor reveals that most of the narrowly dated small finds were Late Republican, but that there are also some later Roman military items, including the Middle Augustan or later hobnail from the rampart. This leads us to hypothesise that the Roman army used the site on two occasions and that the earthwork features revealed by the LiDAR data belong to two phases of Roman military presence, *i.e.* to two camps. The working hypothesis is that the relatively easily traceable south rampart, ending in the southwest corner, and the west rampart, which is not easy to discern, are from the late phase; the hobnail (fig. 4.1) would suggest it was not earlier than the Middle Augustan period. As for the early phase and the Late Republican military presence at the site, it may be associated with several of the less clear features indicated in the LiDAR-derived data and with most small finds from the site, as well as with the earlier camp at Nadleški hrib and the siege of the hillfort at Ulaka. The dating suggested by the small finds and the geopolitical situation lead us to assume the early phase is related to the Roman military actions during Caesar's proconsulate in *Galliae* and *Illyricum* in 59-49 BC or to Octavian's Illyrian Wars in 35-33 BC.

With regard to the early dating, we should mention the plundering attack on *Aquileia* and *Tergeste* (Trieste/Trst) that the *Iapodes* reportedly (Appianus Alexandrinus *Illyrike* 18.52; Caesar *Commentarii de Bello Gallico* 8.24)

carried out in the time of Caesar's proconsulship in *Illyricum*, probably in 52 BC (Vedaldi Iasbez 1994, 406-407), which may have caused retaliatory action on the part of Caesar. On the other hand, two considerations speak in favour of a later dating connected with Octavian's Illyrian Wars. The first one is the strategic location of the Ulaka hillfort on one of the routes leading from Italy to the territory of the *Iapodes* (Laharnar 2016, 94, fig. 1), where the fiercest battles were fought, and to *Segestica/Siscia* (Sisak), which was an important *emporium* and among the main targets of Octavian's endeavours (Šašel Kos 2005, 437-438). The second consideration is that Ulaka lay in the sphere of interest of the *Taurisci* and perhaps also *Carni* (Laharnar 2016, 94; 2022, 356), both of whom Appianus Alexandrinus (*Illyrike* 16.46) mentions among the peoples that Octavian defeated in the Illyrian Wars.

For the alleged Augustan camp at Ulaka-tabor, a connection with Roman war activities during the Pannonian-Dalmatian revolt of AD 6-9 seems reasonable. There was an immense concentration of Roman forces in the wider region at the time (Keppie 1998, 163 and 166) and we presume the Roman army occupied the key strategic positions that would include the Ulaka complex. Further research is planned in order to obtain more data and consequently gain a better understanding of the site complex and its role in the time of the Roman conquest of the south-eastern Alpine region.

## Acknowledgement

The authors acknowledge the financial support from the Slovenian Research Agency (as part of the J6-315 research project titled "Tracing the conquerors. Roman Army and indigenous communities in the Karst and Notranjska regions, SW Slovenia").

## Bibliography

- Adam, A.-M. & M. Feugère, 1982: Un aspect de l'artisanat du bronze dans l'arc alpin oriental et en Dalmatie au I<sup>er</sup> s. av. J.-C. Les fibules du type dit "de Jezerine", *Aquileia Nostra* 53, 129-188.
- Bekljanov-Zidanšek, I., M. Draksler, D. Josipovič, R. Masaryk, M. Novšak, M. Perko, A. Plestenjak, P. Vojaković, T. Žerjal, D. Mitrova & A. Gaspari, 2022: *Emona, Roman urbanism in the north-eastern part of regio X, in Noricum and the Pannonian provinces. Towns and secondary settlements. New results and perspectives*, Pokrajinski muzej Celje, Trg Celjskih knezov 8, 3000 Celje, Slovenia, October 20-22, 2022 (conference talk).
- Bernardini, F., 2019: Fortificazioni militari repubblicane nell'area di Trieste (Italia nord-orientale). Materiali archeologici da Grociana piccola e San Rocco rinvenuti nel corso della prima campagna di ricognizioni, in: B. Vallori Márquez, C. Rueda Galán & J.P. Bellón Ruiz (eds), *Accampamenti, guarnigioni e assedi durante la Seconda Guerra Punica e la conquista romana (secoli III-I a.C.)*. *Prospettive archeologiche*, Roma.
- Bernardini, F., J. Horvat, G. Vinci, T. Berden, L. Lavrenčič, L. Liccioli & C. Lubritto, 2021: Grociana piccolo. A rare example of Republican military fortifications in Italy, *Journal of Roman Archaeology* 34/2, 695-712.
- Bernardini, F., J. Horvat & G. Vinci, 2023: San Rocco/Koromačnik military camp (2<sup>nd</sup>-1<sup>st</sup> centuries BC), in: J. Horvat, F. Bernardini & M. Belak (eds), *The Roman conquest beyond Aquileia (II-I century BC)*, Ljubljana (Opera Instituti Archaeologici Sloveniae 44), in print.
- Bishop, M.C. & J.C.N. Coulston, 2006: *Roman military equipment. From the Punic Wars to the fall of Rome*, Oxford.
- Connolly, P., 1997: Pilum, gladius and pugio in the Late Republic, in: M. Feugère (ed.), *L'équipement militaire et l'armement de la république (IV<sup>e</sup>-I<sup>er</sup> s. avant J.-C.)*. *Proceedings of the Tenth International Roman Military Equipment Conference, Montpellier 1996*, Oxford (Journal of Roman Military Equipment Studies 8), 41-57.
- Fernández Ibáñez, C., 2015: Las armas del enemigo. Militaria Romana de metal en la Guerra cantábrica de Augusto, in: J. Camino Mayor, E.J. Peralta Labrador & J.F. Torres- Martínez (eds), *Las guerras astur-cántabras*, Gijón, 323-343.
- Feugère, M., 1985: *Les fibules en Gaule méridionale de la conquête à la fin du V<sup>e</sup> s. ap. J.-C.*, Paris (Revue Archéologique de Narbonnaise Supplément 12).
- Gaspari, A., 2010: "Apud horridas gentis ...". *Beginnings of the Roman town of Colonia Iulia Emona*, Ljubljana.
- Gaspari, A., 2014: *Prehistoric and Roman Emona. A guide through the archaeological past of Ljubljana's predecessor*, Ljubljana.
- Gaspari, A., 2020: Ulaka, in: J. Hrovat, I. Lazar & A. Gaspari (eds), *Minor Roman settlements in Slovenia*, Ljubljana (Opera Instituti Archaeologici Sloveniae 17), 141-171.
- Gaspari, A., I. Bekljanov Zidanšek, J. Krajšek, R. Masaryk, A. Miškec & M. Novšak, 2014: New archaeological insights about Emona between the decline of the prehistoric community and the construction of the Roman town (second half of the 1<sup>st</sup> century BC and early 1<sup>st</sup> century AD), in: M. Ferle (ed.), *Emona, a city of the Empire*, Ljubljana, 135-165.
- Groh, S., 2018: *Im Spannungsfeld von Macht und Strategie. Die legio II Italica und ihre castra von Ločica (Slowenien), Lauriacum/Enns und Albing* (Österreich), Linz (Forschungen in Lauriacum 16).
- Guštin, M., 2015: Roman camps following the route to Segestica and the western Balkans, in: J. Istenič, B. Laharnar & J. Horvat (eds), *Evidence of the Roman army in Slovenia*, Ljubljana (Katalogi in monografije 41), 221-233.
- Horvat, J., 2015: The consolidation of Roman authority in the hinterland of the northern Adriatic, in: Y. Marion & F. Tassaux (eds), *AdriAtlas et l'histoire de l'espace adriatique du VI<sup>e</sup> s. a.C. au VIII<sup>e</sup> s. p.C. Actes du colloque international de Rome (4-6 novembre 2013)*, Bordeaux (Scripta antiqua 79), 273-291.
- Horvat, J., 2023: *Ptujska panorama. Legijski tabor in antično mesto*, Ptuj.
- Horvat, J. & A. Bavdek, 2009: *Ocra. The gateway between the Mediterranean and Central Europe*, Ljubljana (Opera Instituti Archaeologici Sloveniae 17).
- Istencič, J., 2005: Evidence for a very late Republican siege at Grad near Reka in Western Slovenia, *Carnuntum Jahrbuch* 2005, 77-87.
- Istencič, J., 2015: Traces of Octavian's military activities at Gradišče in Cerklje and Vrh gradu near Pečine, in: J. Istencič, B. Laharnar & J. Horvat (eds), *Evidence of the Roman Army in Slovenia*, Ljubljana (Katalogi in monografije 41), 43-74.
- Istencič, J., 2019a: *Roman military equipment from the river Ljubljanica: typology, chronology and technology*, Ljubljana (Katalogi in monografije 43).
- Istencič, J., 2019b: Caligati in the eastern hinterland of Aquileia up to the Early Augustan period, in: H. Dolenz & K. Strobel (eds), *Chronologie und vergleichende Chronologien zum Ausgang der Römischen Republik und zur Frühen Kaiserzeit*, Klagenfurt am Wörthersee (Kärntner Museumsschriften 87), 271-295.

- Istenič, J., 2023: Grad near Reka, Gradišče in Cerkno, and Vrh gradu near Pečine – pre-Roman places of worship?, in: J. Horvat, F. Bernardini & M. Belak (eds), *The Roman conquest beyond Aquileia (II-I century BC)*, Ljubljana (Opera Instituti Archaeologici Sloveniae 44), 111-125.
- Keppie, L., 1998: *The making of the Roman army. From Republic to Empire*, London.
- Kielb Zaaraoui, M., 2018: Les clous de chaussure, in: Y. Zaaraoui, C. Bottalico, L. Buffat, M. Gagnol, N. Giovannetti, M. Kielb Zaaraoui, M.-L. Le Brazidec, A. Renaud & A. Roumégous, *Occupation tardo-républicaine sur la colline du Lampourdier, Orange (Vaucluse). Rapport final d'opération. Fouille archéologique*, Orange (SAS Lafarge Holcim Granulat France, Service Régional de l'Archéologie Provence-Alpes-Côte d'Azur, Mosaïques Archéologie), 210-236.
- Kos, P. & A. Šemrov, 1990: *Münzen der römischen Republik*, Ljubljana (Situla 28).
- Laharnar, B., 2011: Roman lead slingshots (glandes plumbeae) in Slovenia, *Arheološki vestnik* 62, 339-374.
- Laharnar, B., 2013: The Roman stronghold at Nadleški hrib, Notranjska region, *Arheološki vestnik* 64, 123-147.
- Laharnar, B., 2015: The Roman army in the Notranjska region, in: J. Istenič, B. Laharnar & J. Horvat (eds), *Evidence of the Roman army in Slovenija*, Ljubljana (Katalogi in monografije 41), 9-41.
- Laharnar, B., 2016: Small finds from the Roman fort at Nadleški hrib, the Notranjska Region (SW Slovenia), in: J. Horvat, M. Guštin & I. Lazar (eds), *The Roman army between the Alps and the Adriatic*, Ljubljana (Opera Instituti Archaeologici Sloveniae 31), 85-97.
- Laharnar, B., 2022: *From Odra to Albion. Notranjska between prehistory and antiquity*, Ljubljana (Katalogi in monografije 45).
- Laharnar, B., 2023: The end of Grad near Šmihel pod Nanosom (Notranjska, Slovenia). The Roman army and the indigenous community, in: J. Horvat, F. Bernardini & M. Belak (eds), *The Roman conquest beyond Aquileia (II-I century BC)*, Ljubljana (Opera Instituti Archaeologici Sloveniae 44), in print.
- Laharnar, B. & E. Lozić, 2016: Roman battlefield archaeology. Case study Grad near Šmihel pod Nanosom and Nadleški hrib (SW Slovenia), *Schild von Steier* 27, 60-71.
- Laharnar, B., B. Štular & M. Mlinar, 2015, Gradič above Kobarid – a Late Republican fortified emporium?, in: J. Istenič, B. Laharnar & J. Horvat (eds), *Evidence of the Roman army in Slovenija*, Ljubljana (Katalogi in monografije 41), 243-256.
- Lazar, I., 2015: Roman tile workshop at Vransko. Archaeology, age of Celeia and Roman history, in: J. Istenič, B. Laharnar & J. Horvat (eds), *Evidence of the Roman army in Slovenija*, Ljubljana (Katalogi in monografije 41), 269-283.
- Mason, P., 2006: The Augustan fort at Obrežje, Slovenija, in: D. Davison, V. Gaffney & E. Marin (eds), *Dalmatia. Research in the Roman Province 1970-2001. Papers in honour of J.J. Wilkes*, Oxford (British Archaeological Reports International Series 1576), 67-71.
- Mason, P., 2008: The Roman fort at Obrežje and Augustan military activity in the Sava valley in Slovenia, in: J.-S. Kühlborn (ed.), *Rom auf dem Weg nach Germanien. Geostrategie, Vormarschstrassen und Logistik, Internationales Kolloquium in Delbrück-Anreppen vom 4. bis 6. November 2004*, Mainz (Bodenaltertümer Westfalens 45), 187-198.
- Peralta Labrador, E., R. Sáez & C. Fernández Ibáñez, 2009: Projectiles de catapulta romana procedentes de la fortificación de "La Espina del Gállego" (Cantabria). Estudio y tratamiento de conservación, *Sautuola* 15, 277-297.
- Poux, M., 2008: Typologie des militaria. État de la question, in: M. Poux (ed.), *Sur les traces de César. Militaria tardo-républicains en contexte gaulois. Actes de la table ronde de Bibracte, Centre archéologique européen, Glux-en-Glenne, 17 octobre 2002*, Glux-en-Glenne (Collection Bibracte 14), 315-437.
- Quesada Sanz, F., 1997: *El armamento ibérico. Estudio tipológico, geográfico, funcional, social y simbólico de las armas en la cultura ibérica (siglos VI-I a.C.)*, Montagnac (Monographies Instrumentum 3).
- Quesada Sanz, F. & J. Moralejo Ordax, 2020: Tras las huellas de Julio César. Los campos de batalla cesarianos de Ulia/Montemayor y el hallazgo de un carro de época ibérica, in: *Actualidad de la investigación arqueológica en España II (2019-2020). Conferencias impartidas en el Museo arqueológico nacional*, Madrid, 229-252.
- Quesada Sanz, F. & H. Uroz Rodríguez, 2020: El armamento de época iberorromana de Libisosa (Lezuza, Albacete). Un conjunto excepcional, *Gladius* 40, 19-72 (DOI: 10.3989/gladius.2020.02).
- Ribera i Lacomba, A., 1995: La primera evidencia arqueológica de la destrucción de Valencia por Pompeyo, *Journal of Roman Archaeology* 8, 19-42.
- Rueda Galán, C., J.P. Bellón Ruiz, A. Ruiz Rodríguez, F. Gómez Cabeza, M. Molinos Molinos & M.Á. Lechuga Chica, 2015: Un contexto excepcional. Las áreas campamentales en la batalla de Baecula, in: J.P. Bellón Ruiz, A. Riuz Rodríguez, M. Milinos Molinos, C. Rueda Galán & F. Gómez Cabeza (eds), *La segunda guerra púnica en la península ibérica. Baecula. Arqueología de una batalla*, Jaén, 289-310.
- Saria, B., 1935a: Terenski rad Arheološkog seminarar Univerze kralja Aleksandra I. u Ljubljani, *Jugoslovenski istoriski časopis* 1-2, 744-746.
- Saria, B., 1935b: Ulaka – Metulum?, *Glasnik Muzejskega društva za Slovenijo* 16/1-2, 59-60.

- Saria, B., 1939: Doneski k vojaški zgodovini naših krajev v rimski dobi, *Glasnik Muzejskega društva za Slovenijo* 20/1-4, 115-152.
- Saria, B., 1951: Poetovio, in: K. Ziegler (ed.), *Paulys Realencyclopädie der classischen Altertumswissenschaft* 21/1, Stuttgart, Waldsee, 1167-1184.
- Šašel Kos, M., 2005: *Appian and Illyricum*, Ljubljana (Situla 43).
- Tomaž, A., 2022: Čatež – Sredno polje, Ljubljana (Arheologija na avtocestah Slovenije 98).
- Ulbert, G., 1984: *Cáceres el Viejo. Ein spätrepublikanisches Legionslager in Spanisch-Extremadura*, Mainz am Rhein (Madrider Beiträge 11).
- Vedaldi Iasbez, V., 1994: *La Venetia orientale e l'Histria. Le fonti letterarie greche e latine fino alla caduta dell'Impero Romano d'Occidente*, Roma (Studi e ricerche sulla Gallia Cisalpina 5).
- Vicente, J.D., M. Pilar Punter & B. Ezquerra, 1997: La catapulta tardo-republicana y otro equipamiento militar de "La Caridad" (Caminreal, Teruel), in: M. Feugère (ed.), *L'équipement militaire et l'armement de la république (IV<sup>e</sup>-I<sup>er</sup> s. avant J.-C.). Proceedings of the Tenth International Roman Military Equipment Conference, Montpellier 1996*, Oxford (Journal of Roman Military Equipment Studies 8), 167-199.

# The Roman-Republican fortress at Cáceres el Viejo (Cáceres, Spain)

Old theories and new perspectives

Carlos S.P. Pereira

For a long time, the archaeological assemblage of the fortress at Cáceres el Viejo (Cáceres, Spain) remained hidden in the warehouses of the museums of Cáceres (Spain), Mainz and München (Germany). Only a few selected collections have attracted the interest of researchers and a small sample of the whole set has become known. Even with the monographic study of Günter Ulbert (1984) most of the archaeological collection of the Roman fortress has remained unpublished. The site is currently being studied again by a large team of researchers of different specialties, including the collection recovered during the archaeological intervention made in 2001 (Abásolo *et al.* 2004), with 1822 artefacts in total, nearly all of them unpublished. With this work, we intend to publish a monograph on the whole collection, so that we can better integrate this important site into the long and complex process of the Roman conquest of Hispania.

This new approach to the fortress was put together due to several reasons. For a long time, there has been a debate about the chronological and historical scope of this military site (Hurtado Pérez 1927; Corchón García 1954; Callejo Serrano 1962; Arias Bonet 1966; Beltrán Lloris 1973/1974; Morillo 1991, 155-158; 2003, 58-59). In fact, literary sources provide us abundant information on military activities in the region of Spanish Extremadura, a situation that has led some researchers to relate this archaeological site with the campaign of Q. Servilius Caepio (Fernández-Guerra y Orbe 1873, part I, 96; Salas Martín 1996, 78), while others consider to have been relevant in the post-Lusitanian War (Fabião 2014, 14-15; Heras Mora 2018, 702-703). Still, most seem to follow the opinion of Adolf Schulten, who considered it in the context of the Sertorian conflict (Morillo 2003: 58-59; Abásolo *et al.* 2008, 115; Heras Mora 2014, 164; Morillo & Sala Sellés 2019, 52-54; Pereira & Pereira 2020, 304).

In fact, one of the events most closely related to the fortress of Cáceres el Viejo was the one committed by Quintus Servilius Caepio in 139 BC, having established *Castra Servilia* to invade the Vettonian territory. The relationship between these two realities, the historical and the archaeological, is an old debate, but in its genesis was built on empirical data and without great archaeological facts. The history of the evolution of research on Cáceres el Viejo explains the dynamics of the interpretations given to it and clarifies some persistent positions (Corchón García 1954; Arias Bonet 1965, 247;

## Carlos S.P. Pereira

UNIARQ, Centre for  
Archaeology, School of  
Arts and Humanities,  
University of Lisbon,  
Faculdade de Letras,  
Universidade de  
Lisboa, Alameda  
da Universidade,  
1600-214 Lisboa,  
Portugal, carlos\_samuel\_  
pereira@hotmail.com

1966, 319; Salvatore 1997). The current study of the artefacts does not agree to an interpretation in that sense, excluding any relation with historical and military events before the early 1<sup>st</sup> century BC.

Until then, it is difficult to guarantee that the region was under the control of Rome, a situation which changed from the turn of the 2<sup>nd</sup> to the 1<sup>st</sup> century. Besides, literary sources also record the establishment of a fortress in this region by Licinius Crassus (Beltrán Lloris 1973/1974; 1976, 15-16) in the 90's BC. However, for the last decades of the 2<sup>nd</sup> century and the beginning of the 1<sup>st</sup> century BC, the information we have on military activities is scarce.

It is precisely in this military context that most researchers place the well-known fortress of Cáceres el Viejo, but despite this, we must consider a broader chronological time than considered by A. Schulten. We are therefore dealing with a moment of great military and cultural complexity. This conflict opposed Romans to Romans, initiating a dualistic process accomplished by two Roman political and military factions facing each other, and in each of them there is a process of acculturation of its own.

Cáceres el Viejo is a remarkable site for the study of the Roman military settlements of the first quarter of the 1<sup>st</sup> century BC, but it is equally relevant for the definition of the archaeological contexts for this phase of the Roman conquest process (Morillo & Sala Sellés 2019, 52-54). We now know that the overview of material culture that we knew was too simple and, in the light of recent advances, different ceramics allow more complete readings of the military diet, economy, supply networks, military productions and even relations with civilian settlements in the region.

### **Cáceres el Viejo and some of the new data**

This Roman fortress is well known by specialists from Schulten (1928; 1930; 1932) and Ulbert (1984; Salvatore 1997). Nevertheless, we recall that the defensive system remains visible today and is characterized by the existence of an orthogonal perimeter, rectangular in shape (24 ha), with right angles and a double ditch (fig. 1). The wall has a double rampart, joined by transversal stone ties, and was built with stones and filled with the soil coming from the opening of the two ditches.

The wall and the ditches are interrupted to allow access to the settlement. It had six gates, communicated by the main streets, each with different width sizes and with various defensive techniques. It seems likely that these differences resulted from the construction of the wall and gates by distinct groups of men. In fact, each legionary could perform engineering tasks (Fields 2008, 43). For this reason, each unit was in charge of building about 25 m of the ditch and the wall (Richardson 2004,

10-14; Jones 2017, 525-526). At Cáceres el Viejo it was possible to detect the connections of each of these sections (Salgado Carmona 2020), and it is possible that the gates were also built by different groups.

On the architecture and internal organisation of the fortress, Ulbert (1984) made a detailed analysis of the buildings, a work that remains a reference. Indeed, the recent excavations made at the site (Abásolo *et al.* 2004; Salgado Carmona 2020) have not extended this data, although it has allowed the identification of some building details, as was the case with the construction of the rampart by sections. The last archaeological intervention allows us to identify the internal *agger* and the *via sagularis* (Pereira & Morillo 2024).

Furthermore, this Roman fortress offers a restricted time of use, which facilitates the definition of type-sets for a specific time in the process of the Roman conquest of *Hispania*. Many of the artefacts were already known since the works of Schulten (1928; 1930; 1932), Paulsen (1928; 1930; 1932) and Ulbert (1984). Nevertheless, recent advances regarding Roman ceramics and the fact that we are now studying the whole collection allow us to sketch a more precise preliminary chrono-political and military framework (Pereira & Morillo 2024).

For instance, the amphorae show that the fortress did indeed receive wine and its by-products, oil, and fish products, but we did not know exactly in what percentages. The wine was the most consumed product, with several types of amphorae of different origin, while olive oil and fish sauces were balanced in lower percentages (fig. 2). The study of amphorae shows an almost complete absence of containers with Punic shapes, a situation which reveals an overwhelming preference for Italic products.

Although the amphorae of type Dressel 1, Ancient Tripolitanian (= Ancient African) and Lamboglia 2 represent most of the group, they do not reflect the real complexity of the economy of this fortress. To these, we could add others, such as the evolved Greco-Italian amphorae produced in *Ulterior*, the Dressel 4 from Cos, those from Brindisi, those of the Carmona type (T-8.2.1.1.) or the CC.NN. (T-9.1.1.1.). Although these types are a minority in the set, they are essential to adjust the chronology of occupation, since their production starts or ends during the first third of the 1<sup>st</sup> century BC.

We should also consider some presences and absences that allow us to define the limit *ante quem*. This is the case of a few fragments of variant C of the Hispanic Dressel 1 type, whose most ancient contexts point to its appearance around the first third of the 1<sup>st</sup> century BC (Arteaga Matute 1985, 218). In addition, if we also consider the absence of ovoid amphorae containers produced in the Guadalquivir valley, which begin to be manufactured from this time onwards, it is not possible to extend the chronology of the fortress beyond 70 BC.



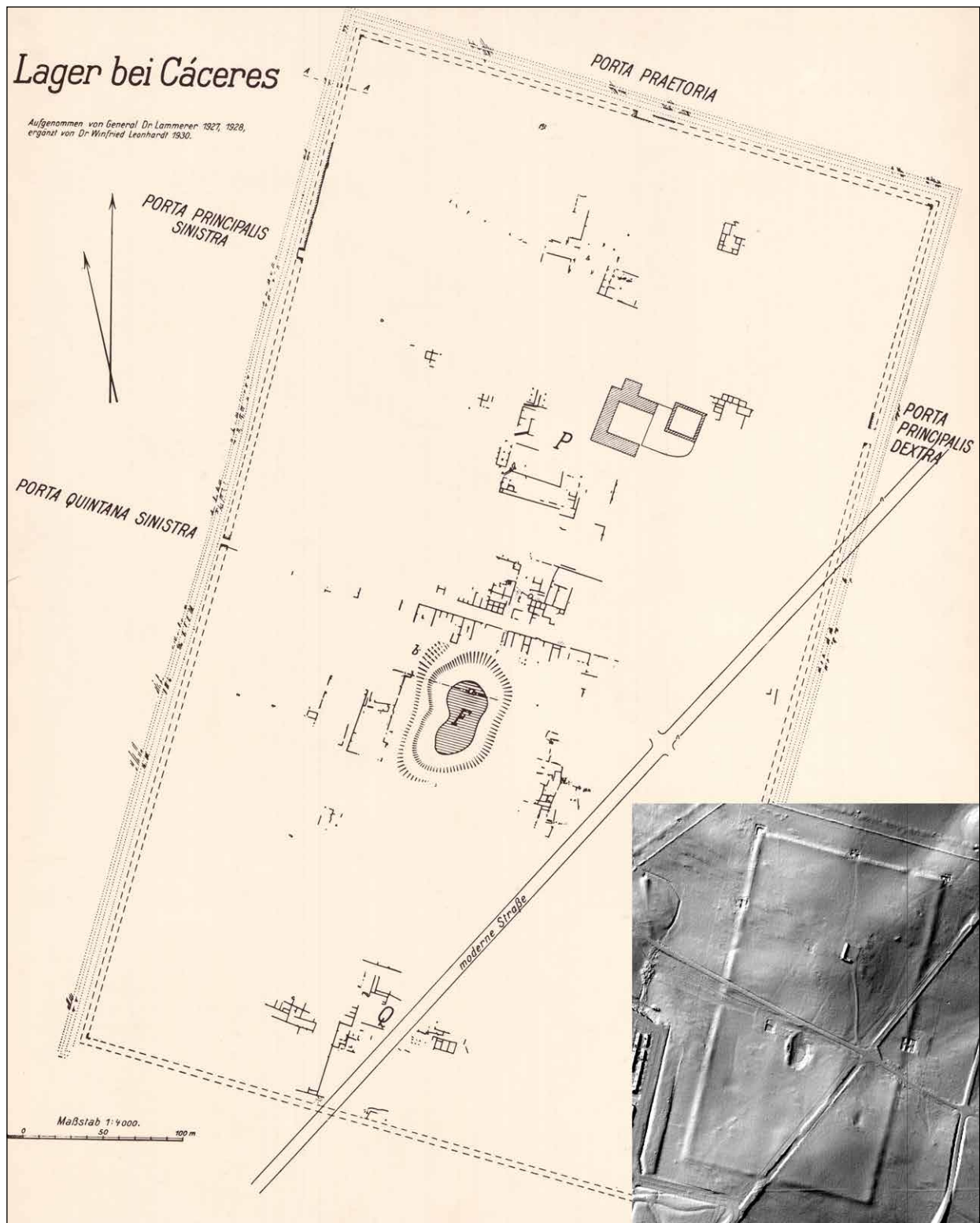


Figure 1. Plan of the Roman fortress of Cáceres el Viejo (drawing is part of the collection of Günter Ulbert, Deutsches Archäologisches Institut Madrid; below, LiDAR survey, authored by CSPP).



Figure 2. Percentage of imported products in amphorae (MNI basis) and some representative specimens. 1. Tyrrhenian Dressel 1A; 2. 1B; 3. 1C; 4. African Ancient Tripolitanian; 5. Brindisi type produced on the Adriatic coast; 6. Ulterior evolved Greco-Italic type; 7. Ulterior Dressel 1C; 8-9. T-8.2.1.1.; 10-11. T-9.1.1.1.

As with the amphorae, the Roman black glazed pottery, the common ware of the same origin and that from *Etruria* and the *Ulterior* province show a relationship with specific and synchronous areas, symptomatic of the probable southern routes used for the provisioning of the fortress. However, not all the products were imported, and a considerable percentage of pottery was manufactured locally. This phenomenon of imitations is transversal to most of the known categories and is something that stands out in this fortress in high percentages.

The local productions that imitate Roman black glazed pottery and common ware are the most noticeable (fig. 3), with around 45% the first and the latter with 77%, although in this case we should bear in mind that not all the vessels made locally imitate Italic shapes. Nonetheless, the reproductions of black glazed pottery faithfully imitate the profiles and dimensions of the Italic shapes, a situation

that suggests that there was a workshop in the fortress, or very close to it, whose Italic craftsmen were very familiar with the repertoires of the vessels that were produced on the Tyrrhenian coast.

In the case of common ware, the panorama of local/regional productions is what would be expected in a context of this nature. Vessels made locally correspond to the majority, while Italic productions are a minority. The lack of imported manufactured products in Cáceres el Viejo was balanced by those produced locally, which was also the case with the Roman black glazed ware, the lamps, and the thin-walled pottery. From the *Ulterior* province, we notice the presence of vessels produced on the coast, both in the Gaditanian and Malacitanian regions. Nevertheless we should also mention the residual percentage of ceramics produced in the Guadalquivir area, mainly mortars.

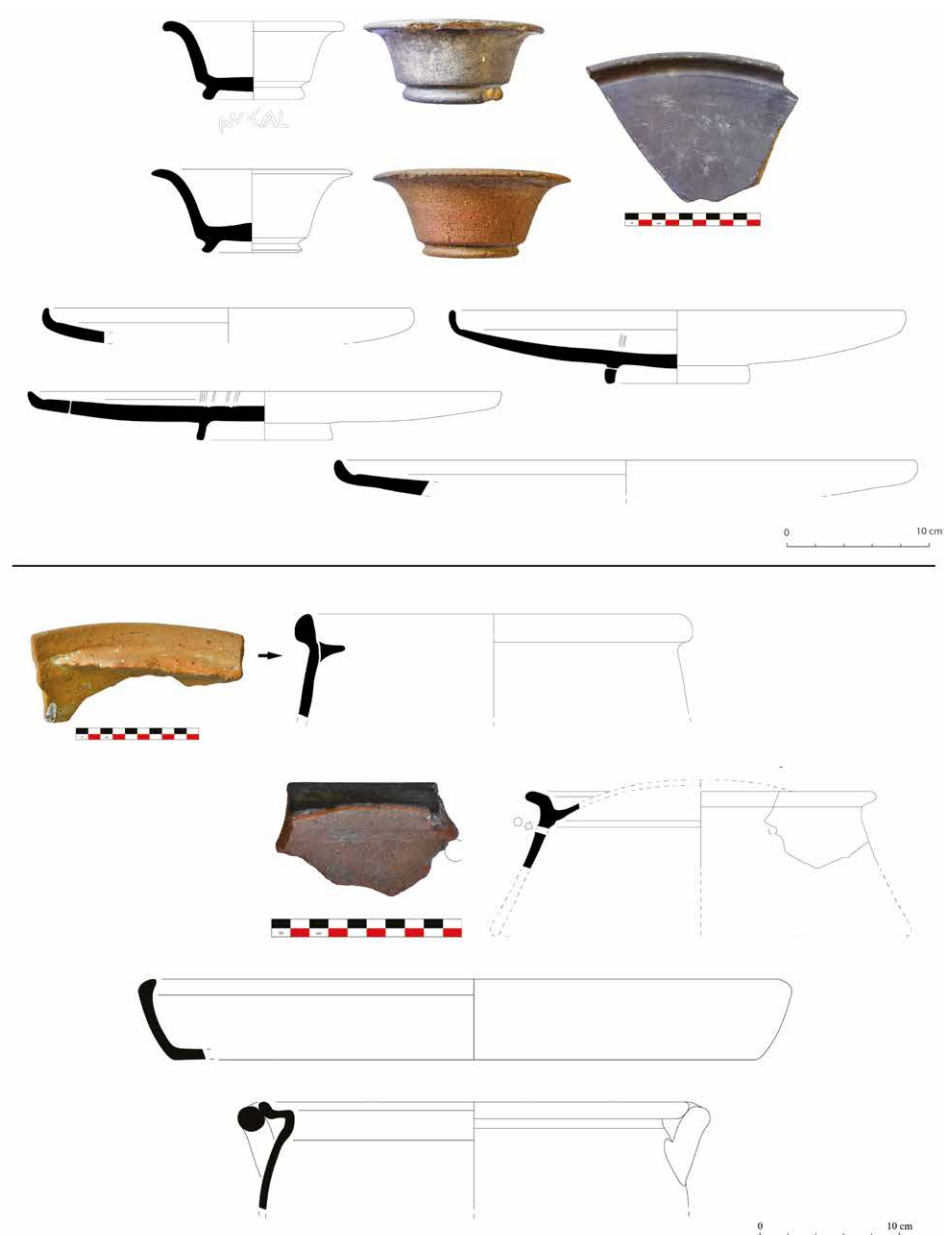


Figure 3. Some examples of the imitations of Roman black glazed pottery (above) and common ware (below).

Bearing in mind this phenomenon of imitations of black glazed pottery, this same pattern was recorded in the settlements of Villasviejas del Tamuja (Hernández *et al.* 1989; Hernández & Martín Bravo 2017; 2021; Morales Martín *et al.* 2021) and Cabeça de Vaíamonte (Fabião 1998; Pereira 2018), sites where these reproductions are well documented and integrate the same characteristics as those recovered at Cáceres el Viejo.

These artefacts are known in other settlements of the Iberian Peninsula, as is the case of *Valentia* (Marín Jordá *et al.* 2004), *Libisosa* (Uroz Rodríguez & Uroz Sáez 2014) or *Azaila* (Beltrán Lloris 2018). Moreover, the same situation is verified in the metallic tableware, which offers identical containers to those that were recovered in *Libisosa* (Uroz

Rodríguez 2015). Among these, we highlight the famous edge *amphora*, strainers, bitroncoconical jars (Piatra Neamt and Gallarate types), Idria cups, basins, and buckets. A wide range of tools can also be associated with this service, such as *simpula*, forks, knives, cleavers and stands or tripods. Several of these vessels were used in the preparation, serving and ingestion of liquids, which corroborates that the officials of this fortress maintained Italic dining practices. Still, other metal containers show that other practices were part of daily life, especially personal care, such as the basins.

Although we could expose other artefacts that will make up the future monograph, already submitted, it is crucial to talk about *militaria*. All kinds of passive and

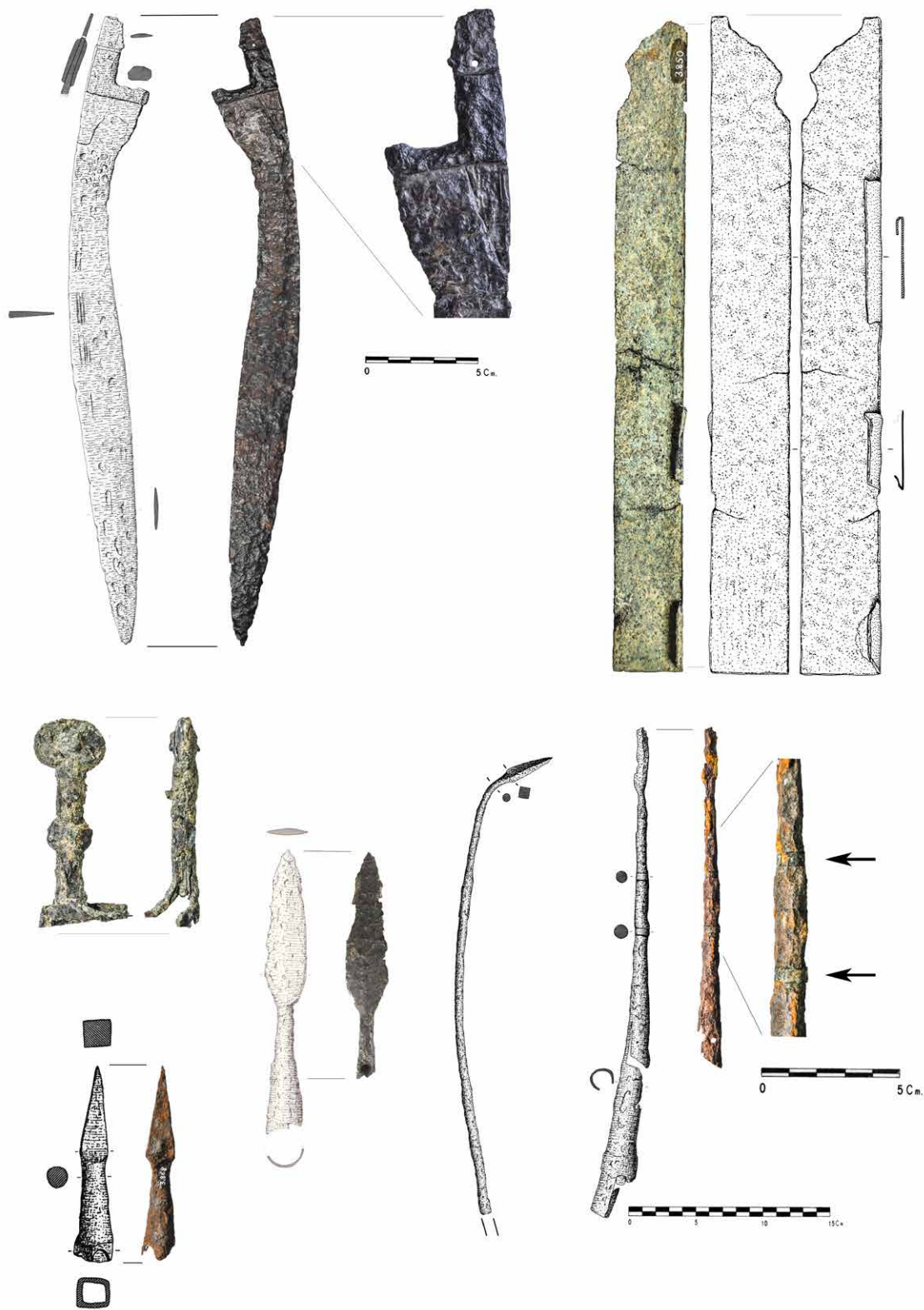


Figure 4. Some of the weaponry recovered in Cáceres el Viejo.

active equipment were documented, both infantry and cavalry, for combat or throwing, as the well-known Iberian *falcata*, which coexisted with other typically Italic weapons (fig. 4). Above all, the collection shows that in this fortress there was a dense infantry group composed mostly of Italic soldiers, but also Hispanic origin troops, together with a smaller number of cavalry. There are also artefacts to support the hypothesis of a unit deployed for the use of war machines, as demonstrated by the projectiles of darts or large-calibre stones. These weapons clearly show an army that had innovated and adapted to the reforms of the Roman army traditionally assigned to Gaius Mario or, more probably, after the Social War.

Concerning numismatic material, an in-depth review of the coins from the old and new excavations at Cáceres el Viejo has corroborated a chronology in the early decades of the 1<sup>st</sup> century BC for the abandonment of the site. In addition, the study of the unpublished documentation kept in the Museum of Cáceres has allowed us to identify other coins that complete the composition and monetary supply in circulation. Comparison with the numismatic record found in other Sertorian contexts of *Hispania* shows their similarity and links the coin finds to this warlike conflict.

The analysis of the weights, ingots, and scales recovered at this military settlement has proved to be also of great interest. From their study it has been possible to observe the use of *aequipondia* and *librae*, in addition to *pondera* of various characteristics responding to different metrological patterns, which are indicative of the coexistence between the Roman and Phoenician systems. The second one was very usual in the south of Iberian Peninsula till this moment. Some sets of weights are clearly for official use, while others are related to the artisanal areas of the fortress.

The study of clay building material is very interesting. In addition to antefixes, rhomboidal bricks used as paving tiles (*opus figlinum*) are detected, also a reflection of marble pavements. The scarcity of tiles leads us to suggest that the roofs were made of timber. Altars and *thymiasteria* made of local ceramics are also detected. Equally noteworthy is the study of the lithic artefacts recovered, which confirm the existence of a daily life that was not exclusively dedicated to war, but also to the maintenance of military equipment, weapons, and military diet. We highlight the existence of hand-operated rotary querns, sharpeners, and polishers for the maintenance of weaponry.

## In short

The debate about the chronological scope of this Roman military settlement and the possibility of existing two overlapping fortresses is closer to a resolution. Detailed studies make it clear that the chronology of the different categories of artefacts matches a specific moment in the 1<sup>st</sup> century BC. However, we should consider that the

site does not allow any chronostratigraphic interpretation, as only future excavations will make it possible. Regardless of these questions, the material pattern of Cáceres el Viejo offers similarities with other contemporary sites in *Hispania*. It is the case of the destruction contexts of *Valentia* (Alapont Martín *et al.* 2009), Azaila (Beltrán Lloris 2018), *Libisosa* (Uroz Rodríguez & Uroz Sáez 2014) or Tossal de la Cala (Bayo Fuentes *et al.* 2021).

We must also mention other important questions, namely the fact that the material culture clearly shows the coexistence of Hispanic and Italic artefacts. Although it is consensual that Schulten forced the archaeological data to historical conclusions (Beltrán Lloris 1973/1974; 1976; Morillo 1993), we consider that this researcher was quite accurate in many proposals, namely that this fortress was in service of the senatorial army. Although the presence of a Hispanic military unit is recognized there, the access to civil and military products of considered quality, and above all the local reproduction of most of the Italic repertoires to satisfy the requirement of the military stationed there is proof that the officialdom enjoyed the privileges of the main military supply networks during the first quarter of the 1<sup>st</sup> century BC.

It should also be considered the recent work carried out by one of us on a settlement located north of the river Tagus, called Cáceres Viejo de Santa Marina (Pereira & Dias 2020). The data obtained there allow us to propose a possible contemporary military function of both, but they exhibit an antagonistic topographical, architectural, and cultural reality. Although we cannot rule out that the settlement north of the Tagus may correspond to an outpost of the fortress of Cáceres el Viejo, it seems more probable that this was a border area. It is possible to trace a distinct material culture to the south (Berrocal-Rangel 1989; Hernández *et al.* 1989; Fabião 1998, 465-473; Hernández & Martín Bravo 2017; 2021; Pereira 2018, 62-63) and north of the Tagus (González Cordero & Quijada González 1991, 159; Martín Bravo 1999, 134-136 and 141; Río-Miranda & Iglesias Rodríguez 2002), and it is likely that Cáceres el Viejo functioned as a main base for senatorial military activities during that moment in time using as well the main civil settlements as support bases.

The use of civilian settlements had clear advantages for the armies, whether for movement, supply or recruitment. This system is not unprecedented in the Roman military world, although it is better documented for more recent stages (Erdkamp 1998; Roth 1999; Morillo 2006). This systematization of two-way relations with nearby civilian settlements guided the military strategy of advance and control of territory, especially in the case of fortresses that were established in areas already controlled and that integrated safe areas near 'frontier zones' or deployed in regions where the army enjoyed the support of allied cities.



Despite this very simple view, there is no doubt that these relations should be more complex than is proposed here or the archaeological evidence suggests. We cannot apply the same interpretation for all the cases, as has been shown in other studies: for instance Villasviejas del Tamuja, for which an imposition of the Roman presence is suggested as being supported by the orthogonal enclosure adjacent to the settlement, with buildings related to the presence of troops (Mayoral Herrera *et al.* 2021, 182-183), or that of Cabeça de Vaíamonte for which it has recently been suggested that the army presence must have been voluntary and peaceful (Pereira 2018, 350-354). Regardless of the process of assimilation or capitulation of the pre-existing civilian settlements to the Roman military cause, most authors agree on its relation to the events of the Sertorian War (Morillo & Sala Sellés 2017). We have no doubt about the identification of this archaeological site with *Castra Caecilia*, established between 79 to 77/72 BC, supported by archaeological data. Its architectural features show us a new pattern of *castrametatio*, a pattern of transition between Republican and Augustan fortresses (Pereira & Morillo 2024).

## Acknowledgements

This contribution is part of the results of the following research projects: 'Acampamentos militares romanos no Ocidente peninsular: estratégias de conquista e controlo do território', SFRH/BPD/108721/2015, and 'Landscape and militarized territory in Roman Hispania. Mobility and cultural transfer (2<sup>nd</sup> century BC-4<sup>th</sup> century AD)' (PID HAR2017-85929-P), granted by the Spanish Ministry of Economy, Industry and Competitiveness (MINECO) to the Spanish State Research Agency (AEI) and the European Regional Development Fund (ERDF), whose main researchers are Ángel Morillo and Cruces Blázquez Cerrato. This work was also financed by Portuguese funds through FCT – Fundação para a Ciência e a Tecnologia in the framework of the projects UIDB/00698/2020 and UIDP/00698/2020.

Besides the authors that were directly involved in this article, others cooperate in this same project with different studies, whose works will integrate the incoming monograph, namely: Ángel Morillo, Ana Margarida Arruda, Rui Morais, Andrés M<sup>a</sup> Adroher Auroux, Carmen Aguarod, Carmelo Fernández Ibáñez, Romana Erice, Cruces Blázquez, Teresa R. Pereira, Rosalía Durán Cabello, Íris C. Dias, Diego Barrios, Ana Catarina Sousa, Ana Mateos Orozco, Aránzazu López Fernández, Carlos Fabião, Elisa de Sousa, Emna Bouhawel, Estela Beatriz García Fernández, Francisco Gomes, Ignacio Simón, Jesús Salas Álvarez, José Miguel González Bornay, Luís Berrocal-Rangel, Maite Segura García, Pedro Albuquerque, Tânia Casimiro and Vincenzo Soria.

## Bibliography

- Abásolo Álvarez, J., M<sup>a</sup> González Fernández & B. Mora Serrano, 2008: Recientes investigaciones en el Campamento de Cáceres el Viejo, in: P. Sanabria Marcos (ed.), *Arqueología urbana en Cáceres. Investigaciones e intervenciones recientes en la ciudad de Cáceres y su entorno*, Cáceres (Memorias 7), 115-144.
- Alapont Martín, L.L., M. Calvo Gálvez & A. Ribera i Lacomba, 2009: *La destrucción de Valentia por Pompeyo (75 a.C.)*, Valencia (Quaderns de Difusió Arqueològica 6).
- Arias Bonet, G., 1965: En torno a *Norba Caesarina*. Reflexiones de un lector de D. Carlos Callejo Serrano, *El Miliario Extravagante* 10, 247-255.
- Arias Bonet, G., 1966: Cáceres el Viejo guarda aun su secreto I, *El Miliario Extravagante* 12, 319-329.
- Arteaga Matute, O., 1985: Excavaciones arqueológicas en el Cerro del Mar (Campaña del 1982), *Noticiario Arqueológico Hispánico* 23, 195-233.
- Bayo Fuentes, S., J. Moratalla Jávega, A. Morillo Cerdán & F. Sala Sellés, 2021: El fortín romano tardo-republicano del Tossal de la Cala (Benidorm, Alicante). Autopsia y reinterpretación de un yacimiento histórico, *Archivo Español de Arqueología* 94 (DOI: 10.3989/aespa.094.021.16).
- Beltrán Lloris, M., 1973/1974: Problemas de la arqueología cacereña. El campamento romano de Cáceres el Viejo (Cáceres). Estudio numismático, *Numisma* 23-24, 255-310.
- Beltrán Lloris, M., 1976: La cerámica del campamento de Cáceres el Viejo (Cáceres), in: *V Congreso de Estudios Extremeños. Ponencias VII y VIII, Arqueología y Arte Antiguo*, Cáceres, 1-22.
- Beltrán Lloris, M., 2018: Azaila. Cultura material romana republicana. El final del asentamiento, in: H. Uroz Rodríguez & A. Ribera i Lacomba (eds), *Cultura material romana en la Hispania republicana. Contextos privilegiados y estado de la cuestión*, Albacete, 401-416.
- Berrocal-Rangel, L., 1989: El asentamiento 'céltico' del Castrejón de Capote (Higuera la Real, Badajoz), *Cuadernos de Prehistoria y Arqueología de la Universidad Autónoma de Madrid* 6, 245-295.
- Callejo Serrano, C., 1962: *El origen y el nombre de Cáceres (De Norba a Qázrix y a Cáceres)*, Cáceres.
- Corchón García, J., 1954: *Veterrima inter Norbensis*, Madrid.
- Erdkamp, P., 1998: *Hunger and the sword. Warfare and food supply in Roman Republican wars*, Amsterdam.
- Fabião, C., 1998: *O Mundo indígena e a sua romanização na área céltica do território hoje português*, Lisboa (PhD thesis School of Arts and Humanities, University of Lisbon).
- Fabião, C., 2014: Por este rio acima. A bacia hidrográfica do Tejo na conquista e implantação romana no ocidente da Península Ibérica, in: C. Fabião & J.



- Pimenta (eds), *Conquista e Romanização do Vale do Tejo*, Vila Franca de Xira (Cira Arqueologia 3), 9-24.
- Fernández-Guerra y Orbe, A., 1873: *Discursos leídos ante la Academia Española. En la recepción pública de Don Luis Fernández-Guerra y Orbe*, Madrid.
- Fields, N., 2008: *The Roman army. The civil wars 88-31 BC*, Oxford (Battles Orders 34).
- González Cordero, A. & D. Quijada González, 1991: *Los orígenes del Campo Arañuelo y la Jara Cacerña. Su integración en la prehistoria regional*, Navalmoral de la Mata.
- Heras Mora, J., 2014: El campamento de Cáceres el Viejo y las guerras civiles en Hispania, in: F. Sala-Sélles & J. Moratalla Jávega (eds), *Las guerras civiles romanas en Hispania. Una revisión histórica desde la Contestania*, Alicante, 155-168.
- Heras Mora, F., 2018: *La implantación militar romana en el suroeste hispano (siglos II-I a.n.e.)*, Madrid (Anejos de Gladius 18).
- Hernández Hernández, F. & A.M<sup>a</sup> Martín Bravo, 2017: *Las necrópolis de El Romazal y el conjunto arqueológico de Villasviejas del Tamuja (Botija/Plasenzuela, Cáceres)*, Madrid.
- Hernández Hernández, F. & A.M<sup>a</sup> Martín Bravo, 2021: *Estratigrafía junto a la muralla del castro de Villasviejas del Tamuja (Botija, Cáceres). Construcciones y destrucciones a lo largo de los siglos IV-I a.C.*, Madrid (Arqueología y Patrimonio 16).
- Hernández Hernández, F. M<sup>o</sup>D. Rodríguez López & M<sup>a</sup>A. Sánchez Sánchez, 1989: *Excavaciones en el castro de Villasviejas del Tamuja (Botija, Cáceres)*, Mérida.
- Hurtado Pérez, P., 1927: *Castillos, torres y casas fuertes de la provincia de Cáceres*, Cáceres (2<sup>nd</sup> edition).
- Jones, R., 2017: What is a Roman Camp?, in: N. Hodgson, P. Bidwell & J. Schachtmann (eds), *Roman Frontier Studies 2009. Proceedings of the XXI International Congress of Roman Frontier Studies (Limes Congress) held at Newcastle upon Tyne in August 2009*, Oxford (Archaeopress Roman Archaeology 25), 251-530.
- Marín Jordá, C., A. Ribera i Lacomba & M<sup>a</sup>L. Serrano Marcos, 2004: Cerámica de importación itálica y vajilla ibérica en el contexto de Valentia en la época sertoriana. Los hallazgos de la plaza Cisneros, in: R. Olmos Romera & P. Rouillard (eds), *La vajilla ibérica en época helenística (siglos IV-III al cambio de Era)*, Madrid, 5-18.
- Martín Bravo, A.M<sup>a</sup>, 1999: *Los orígenes de Lusitania. El I milenio a.C. en la Alta Extremadura*, Madrid.
- Mayoral Herrera, V., P. Delgado Molina & C. Pro-Muñoz, 2021: En busca del ejército invisible. Rastreado la presencia militar tardorrepública en el castro de Villasviejas del Tamuja, in: C. Pereira, P. Albuquerque, A. Morillo Cerdán, C. Fabião & F. Chaves Tristán (eds), *De Ilipa a Munda. Guerra e conflito no Sul da Hispânia*, Lisboa (Estudos e Memórias 15), 169-190.
- Morales Martín, D., A. Pinilla Gisbert, F. Agua Martínez, M<sup>a</sup>A.Villegas Broncano & M. García Heras, 2021: Estudio arqueométrico de materiales cerámicos del poblado de 'Villasviejas' (Botija, Cáceres), in: F. Hernández Hernández & A.M<sup>a</sup> Martín Bravo (eds), *Estratigrafía junto a la muralla del castro de Villasviejas del Tamuja (Botija, Cáceres). Construcciones y destrucciones a lo largo de los siglos IV. I a.C.*, Madrid (Arqueología y Patrimonio 16), 291-310.
- Morillo, A., 1991: Fortificaciones campamentales de época romana en España, *Archivo Español de Arqueología* 64, 125-190.
- Morillo, A., 1993: Campamentos romanos en España a través de los textos clásicos, *Espacio, Tiempo y Forma, Serie II. Historia Antigua* 6, 379-398 (DOI:10.5944/etfii.6.1993.4219).
- Morillo, A., 2003: Los establecimientos militares temporales. Conquista y defensa del territorio en la Hispania republicana, in: A. Morillo, F. Cadiou & D. Hourcade (eds), *Defensa y territorio en Hispania de los Escipiones a Augusto. Actas coloquio*, León-Madrid, 41-80.
- Morillo, A., 2006: Abastecimiento y producción local en los campamentos romanos de la región septentrional de la Península Ibérica, in: A. Morillo (ed.), *Arqueología militar romana en Hispania*, Madrid (Anejos de Gladius 5), 33-74.
- Morillo, A. & F. Sala Sellés, 2019: The Sertorian Wars in the conquest of Hispania: from data to archaeological assesment, in: A.P. Fitzpatrick & C. Haselgrove (eds), *The archaeology of Caesar in Britain and Gaul. New archaeological perspectives*, Oxford-Philadelphia, 49-72.
- Paulsen, R., 1928: Die Fundgegenstände aus dem Lager Cáceres, *Jahrbuch des Deutschen Archaeologischen Instituts* 43, 14-29.
- Paulsen, R., 1930: Die Fundgegenstände aus dem Lager Cáceres, *Jahrbuch des Deutschen Archaeologischen Instituts* 45, 58-87.
- Paulsen, R., 1932: Die Fundgegenstände aus dem Lager Cáceres, *Jahrbuch des Deutschen Archaeologischen Instituts* 47, 348-388.
- Pereira, C. & Dias, I., 2020: Acciones y reacciones. Testimonios de los conflictos civiles romanos en Extremadura. El caso de Cáceres Viejo (Casas de Millán, Cáceres, España), *Archivo Español de Arqueología* 93, 103-126.
- Pereira, C. & A. Morillo, 2024: *El campamento legionario de Cáceres el Viejo (Cáceres, España), escenario de la Guerra de Sertorio*, Madrid (Anejos de Gladius, in press).
- Pereira, C. & T. Pereira, 2020: Um artefacto singular de Cáceres el Viejo (Cáceres, Espanha), *Sautuola* 23, 299-312.

- Pereira, T., 2018: *O papel do exército no processo de romanização. A Cabeça de Vaiamonte (Monforte) como caso de estudo*, Lisboa (PhD thesis School of Arts and Humanities. University of Lisbon).
- Richardson, A., 2004: *Theoretical aspects of Roman camp and fort design*, Oxford (British Archaeological Reports International Series 1321).
- Río-Miranda Álcón, J. & M<sup>a</sup> Iglesias Rodríguez, 2002: El castro vettón del Berrocalillo (Plasencia), *BIGC Valdeobispo* 15.
- Roth, J., 1999: *The logistics of the Roman army at war (264 B.C.-A.D. 235)*, Leiden/Boston/Köln (Columbia Studies in the classical Tradition 23).
- Salas Martín, J., 1996: Fuentes para el estudio de la Colonia Norba Caesarina y sus contributa Castra Servilia y Castra Caecilia, *Anas* 9, 59-78.
- Salgado Carmona, J.A., 2020: *Consolidación y adecuación de yacimiento arqueológico de Cáceres el Viejo (Cáceres). Informe preliminar*, Cáceres.
- Salvatore, J., 1997: A possible strategic function for the location of the Roman Republican fortress at Cáceres el Viejo in Extremadura, western Spain, in: W. Groenman-van Waateringe, B. van Beek, W. Willems & S. Wynia (eds), *Limes XVI. Roman Frontier Studies 1995. Proceedings of the XVI<sup>th</sup> International Congress of Roman Frontier Studies*, Oxford (Oxbow Monograph 91), 53-58.
- Schulten, A., 1928: Castra Caecilia, *Jahrbuch des Deutschen Archäologischen Instituts* 43, 1-14.
- Schulten, A., 1930: Castra Caecilia, *Jahrbuch des Deutschen Archäologischen Instituts* 45, 37-58.
- Schulten, A., 1932: Castra Caecilia, *Jahrbuch des Deutschen Archäologischen Instituts* 4, 334-348.
- Ulbert, G., 1984: *Cáceres el Viejo. Ein spätrepublikanisches Legionslager in Spanisch- Extremadura*, Mainz am Rhein (Madrider Beiträge 11).
- Uroz Rodríguez, H., 2015: La vajilla de bronce romana tardorepublicana de Libisosa, *Madrider Mitteilungen* 56, 168-210.
- Uroz Rodríguez, H. & J. Uroz Sáez, 2014: La Libisosa iberorromana. Un contexto cerrado de – y por – las guerras sertorianas, in: F. Sala-Sélles & J. Moratalla Jávega (eds), *Las guerras civiles romanas en Hispania. Una revisión histórica desde la Contestania*, Alicante, 199-215.

# The *castellum* of Puig Castellar de Biosca

A Roman Republican fortress in the 1<sup>st</sup> century of  
the conquest of *Hispania Citerior* (180-120 BC)

Esther Rodrigo Requena, Núria Romaní Sala,  
César Carreras Monfort, Joaquim Pera Isern  
and Laia Catarineu Iglesias

**Esther Rodrigo Requena /  
Núria Romaní Sala**

Serra Húnter Fellow,  
Universitat Autònoma de  
Barcelona, Departament de  
Ciències de l'Antiguitat i de  
l'Edat Mitjana, Facultat de  
Filosofia i Lletres, esther.  
rodrigo@uab.cat / nuria.  
romani@uab.cat

**César Carreras Monfort /  
Joaquim Pera Isern / Laia  
Catarineu Iglesias**

Universitat Autònoma de  
Barcelona, Departament  
de Ciències de l'Antiguitat i  
de l'Edat Mitjana, Facultat  
de Filosofia i Lletres,  
cesar.carreras@uab.cat  
/ Joaquim.Pera@uab.cat  
/ laiacatarineuiglesias@  
gmail.com

The Roman Republican *castellum* of Puig Castellar is located in the municipality of Biosca, county of Solsonès, province of Lleida, in the northeast of the Iberian Peninsula. It sits on a low hill situated at the confluence of three seasonal fluvial courses: the Riera of Biosca to the north; the river Llobregós, a tributary of the river Segre, the major affluent of the river Ebro, and the river Riera of Massoteres, to the south (fig. 1). The excavation research project carried out by the Classical Archaeology Research Team of the Autonomous University of Barcelona began in 2012 and has continued to the present date with different archaeological campaigns (Pera *et al.* 2019).

From the top of this hill, there is a wide area of visual control, mainly of the river Llobregós valley. This privileged location gives the settlement an exceptional strategic position to control the natural paths coming from the northern mountains in a broad area in the central Catalonia and the immediate territory up to the first foothills of the Pre-Pyrenees.

## The main building. The headquarter of the *castellum*

The excavation of the upper part of the hill of Puig Castellar, which forms a small plain, has made it possible to identify the remains of the central main building that had control over the settlement, and the defensive wall that enclose the site with two bulwarks and four towers documented. Besides, the barracks buildings for the soldiers lay on the south and west side of the wall (fig. 2).

The excavation of the main building has revealed a central large construction of considerable dimensions (around 900 m<sup>2</sup>) with an almost square floor plan of 30.2×29.7 m, so that we can define a modulation pattern that follows the Roman foot (c. 100 × 100 Roman feet, *pes monetalis*). This building is organized with fourteen rooms articulated around a large central courtyard and framed in two of its sides (west and north wings) by a corridor, possibly arcaded, that clearly shows Italian features in its architectural planning (fig. 3).

Despite the regularity of the building in its external modulation, it should be noted that each room has different dimensions, probably due to the different functions for which they were intended. Probably all the rooms would have direct access to the courtyard

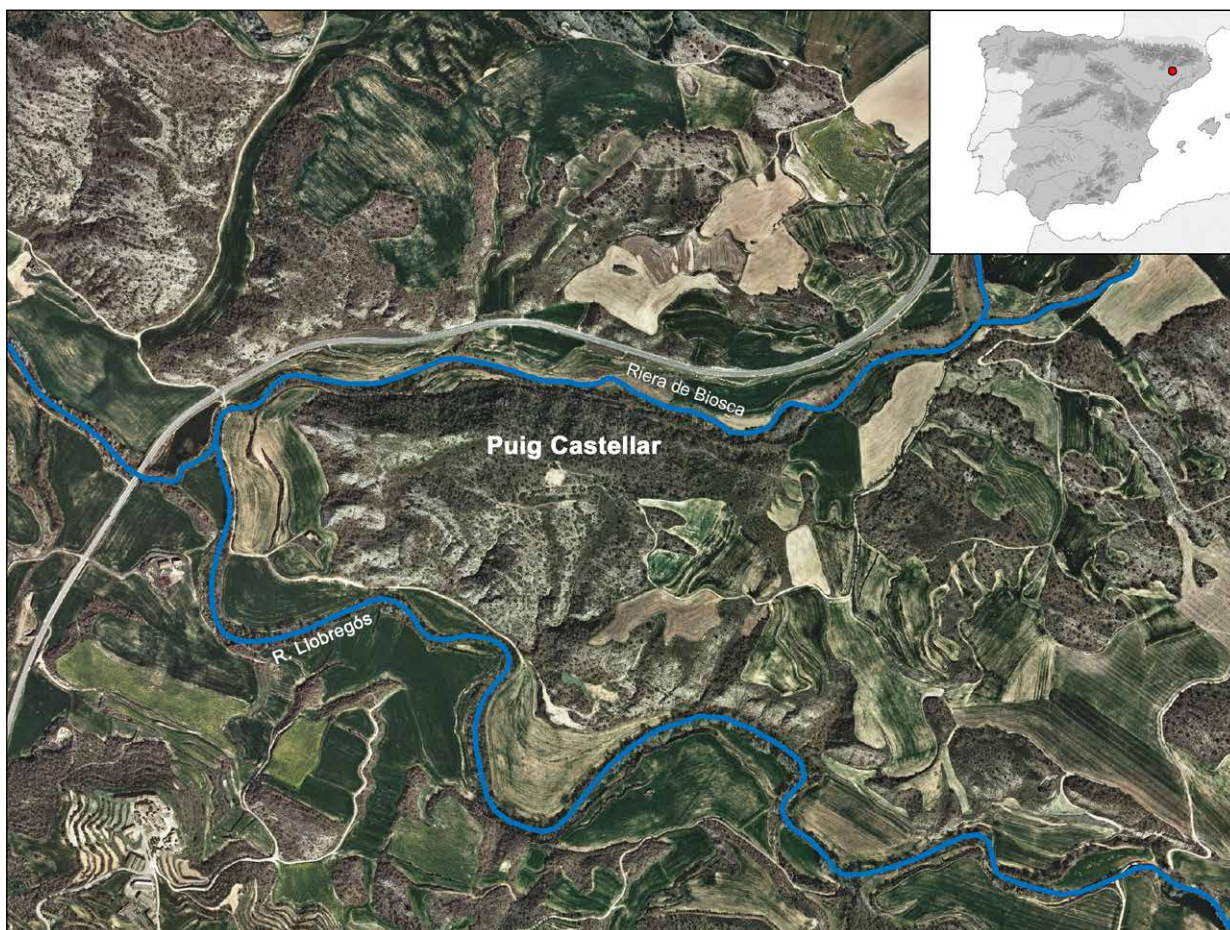


Figure 1. Orthophotograph of the hill of Les Guixeres where the *castellum* of Puig Castellar is located (Institut Cartogràfic i Geogràfic de Catalunya).

and porch with the sole exception of rooms 10 and 13. The rooms located in the south wing are on a lower terrace than the rest, which seems to be an architectural solution that allows a better adaptation to the original slope of the hill.

The large open-air courtyard of 97 m<sup>2</sup> is the central structural element around which the main building was organised. The ground of this space is made of pressed earth (beaten-earth floor), which it is quite eroded due to the location in the highest part of the hill. During the excavation of the courtyard, an anomaly was identified as a cistern. It is a large rectangular cistern measuring 13 m long with a width ranging between 2.50 and 2.80 m. This structure was dug directly into the natural rock which did not have any type of hydraulic coating for waterproofing since the geological chalks did that same function. Only on its eastern boundary it is closed by a solid wall built with large ashlar. Inside the cistern, two filling phases were identified: the upper one, corresponding to the moment of abandonment, was formed by clay from the walls and the adobe elevations of the immediate rooms, preserving even

some portions of the wall with the adobes in an articulated arrangement, all associated with a large amount of parietal wall building material (mouldings, painted stuccos, etc.), fragments of roof and pavements. The arrangement of the fragments of fallen adobe walls indicates clearly how they demolished the cistern in an intentional way, contributing to its filling.

As for the wall coatings, there is no doubt that, inside the noble rooms, the walls would be covered with stucco or painted plaster. We have recovered numerous samples of them in the layers of demolition that filled the cistern and in many of the superficial layers. The fragments recovered are mostly white and red. The archaeometric analysis of some painted plasters also indicate a very elaborate execution technique. Some recovered fragments show bevelled reliefs and mouldings on its surface, probably related to the Pompeian First Style decoration (Romaní *et al.* 2020).

The fabric of the pavements of the main building are in *coccio pesto* and *opus signinum*. Also, we have





Figure 2. Aerial view of the *castellum* from south (Puig Castellar team).

recovered a few fragments from the roofs: *tegulae* and *imbrices* (6 fragments) The archaeometric analysis of two of the recovered fragments of *tegulae* has allowed us to determine its italic origin from the Campania Region and Lazio Region (Rodà *et al.* 2015). We think that the scarce presence of these construction materials would be due to the disassembly of the roofs for their reuse.

According to the estimated chronology, we can present the settlement of Puig Castellar de Biosca as one of the first known sites in the use of Italian building and decorative techniques in *Hispania Citerior*. The architectural features of this building and its central position led us to propose that it could be the headquarter of the *castellum*, which in these early chronologies would combine the functions of accommodation for the commanding officer (*praetorium*) together with the administrative and representation functions (*principia*).

### The wall

The excavation works in the wall that surrounds the Puig Castellar hill (sector C) confirm that it is a rampart with four

squared towers documented until now and two bulwarks (fig. 4). The best-preserved section is documented by the south side. It is known to have an extension of more than 250 m. The topography of the hill also indicates the existence of a main access that would correspond to the current access road on the east side. At this point, the wall is partially missing but the existence of a possible tower that would flank the entrance seems to be documented. The stretch of wall that would close the *castellum* to the north, where the slopes are more pronounced, is more difficult to recognize since it has been almost entirely lost.

Furthermore, the structure of the wall has a base of blocks of stone that are arranged directly on the natural rock cut. The blocks are arranged forming irregular courses, of which two or three have been conserved. The base ranges between 1 and 1.20 m wide and the conserved part is 80 cm tall. The stone that was used as building material both in the wall and in the rest of the constructions of the site was expressly transported from a nearby quarry since the natural gypsum of the hill was not suitable for this defensive function.

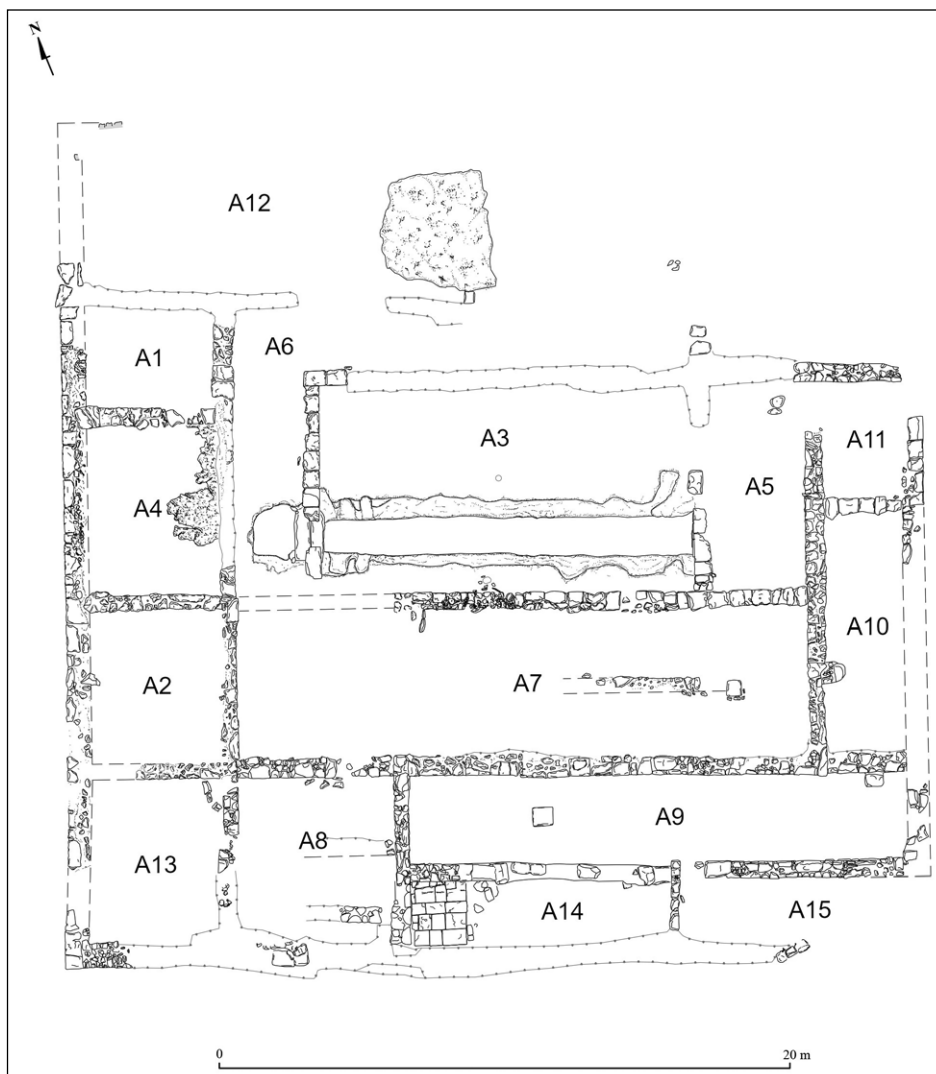


Figure 3. The archaeological plan of the main building (Puig Castellar team. Iñaki Matias, ICAC).

We have documented the existence of some rooms that are arranged in battery and attached directly to the inner face of the southern wall (fig.4). Even though currently it is not possible to determine the functions and uses of them because the archaeological work is yet in process, probably these rooms could be the barracks where the troops were quartered. They would be part of the troop's accommodation and workspaces.

The barracks are arranged in battery and attached directly to the inner face of the south and west side of the wall reinforcing the defensive structure of the wall, a technique already observed in other latest military sites such as Monteró in Lleida (Principal *et al.* 2015), Cabezueta de Barranda in Murcia (Brotons *et al.* 2008) or Tossal de la Cala in Alacant (Bayo Fuertes *et al.* 2021). The building technique used in all these rooms consists of a stone plinth that has a variable height according to needs; the walls that serve as reinforcement for the terraces have a higher height, while the other facings have a lower preserved height.

The set that makes up rooms C-5, C-6, C-7, C-8a and C8b, C-9, C-10 and C-11 are attached to the south face of the wall. Currently, they are the ones that are best preserved and those that have provided more data on their possible function and use. The dimensions range from 9.44 m<sup>2</sup> in the smallest room to 27.70 m<sup>2</sup> in the largest. Each room unit has a different size, surely depending on its function, the available space, and the number of occupants. Room C-8A would function as a corridor connecting the other rooms, while room C-9 could be a storage space. The rest of the rooms could have functioned as workspaces (8B) or rest spaces (C-7, C-10 and maybe C-5).

An interesting element is the discovery of a gaming board in one of the rooms (C-7) of the possible barracks (fig. 5). It seems that this room could have functioned as a common rest space, since, in addition to the game board, two hearths were documented. Board games seem not to have been used in the indigenous world in the northeast of the Iberian Peninsula or, at least, no finds have been



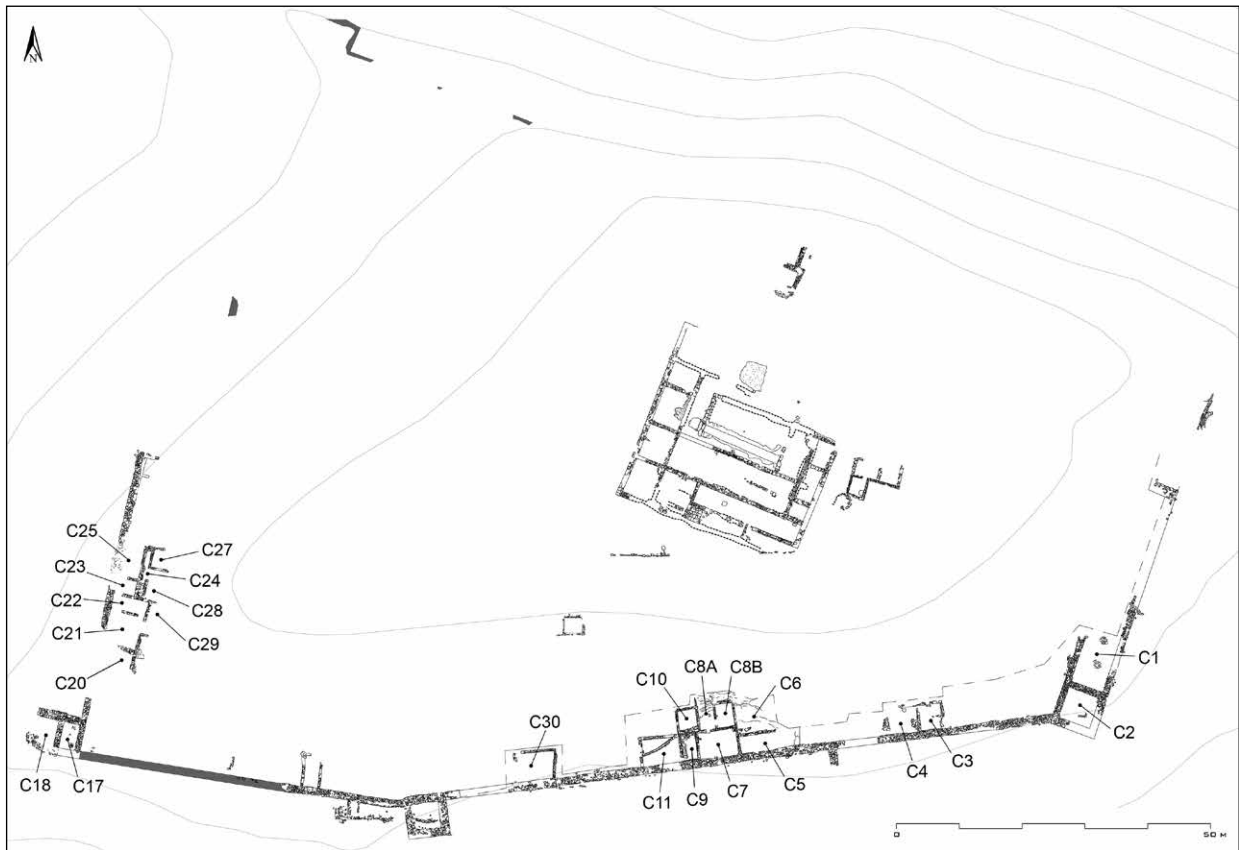


Figure 4. The wall with the barracks for the soldiers in the east and south (Puig Castellar team. Iñaki Matias, ICAC).

identified in a local context, although in the south of the Iberian Peninsula, on the coastal regions of Murcia and Alicante, sets of vitreous paste gaming tokens dating from the 4<sup>th</sup> and 2<sup>nd</sup> century BC have been documented in warrior tombs of the Iberian elites. In fact, it is only from the 2<sup>nd</sup> century BC, coinciding with the Roman occupation, that these types of games begin to spread in *Hispania*. Therefore, it may be assumed that the players of the game board at Puig Castellar were of foreign origin, perhaps from the Italian peninsula, where these types of recreational activities were more widespread. This boardgame is on a slab and comprises a roughly scratched square grid that would have possibly been used to play the game known as *ludus latrunculorum*, a very popular game in the military world and one which was widely known in the Italian world from the Late Republican period (Graells I Fabregat 2021; Rodrigo & Romani 2021).

Even so, it is very likely that the indigenous individuals constituted most of the troops stationed at Puig Castellar. The lack of coins and *caligae* nails common at other contemporary Roman military camps and the fact that more than 40 % of the ceramic assemblage comprised Iberian vessels (*i.e.*, amphorae, Iberian painted, grey, and coarse wares) seems to support this hypothesis. So far,

the site only documents a couple of graffiti, one in Latin and the other in Iberian writing.

Finally, the wall on the western side is partially destroyed and the outcropping of natural plaster can be seen. We have documented a possible bulwark in the southwest angle of the defensive wall. We find a series of rooms that are attached to the wall. So far, a total of 10 have been counted in this sector. Probably there was also an accommodation area for the troops like the barracks in the south wall.

### The pottery assemblage

The excavations have provided an important ceramic set that marks a chronological horizon typical of the second and third quarter of the 2<sup>nd</sup> century BC (Pera *et al.* 2021). These materials are very representative of the interaction between the Roman world and the indigenous world. In the studied stratigraphic contexts, amphorae and ceramics of Iberian tradition are widely represented reaching almost 50 % of the assemblage, coexisting with an extensive amphorae and ceramic repertoire of foreign origin, chiefly Italic.

Although the Iberian amphorae are predominant, we can observe the great amount of foreign amphorae



Figure 5. The gaming board with the grid highlighted in red (Núria Romani).

productions (43 individuals) with a clear predominance of Italian amphorae; also, into the fine ware imported production it can be observed the same predominance (221 individuals). It is very significant the great proportion of Campanian or black gloss pottery from the group A (126 individuals) with forms well-dated c. 180 BC. Besides, a great amount of those Italian imports is surprisingly documented in a settlement that was located more than 100 km far away from the coast. There is a clear predominance of the forms from the middle productions and a significative presence of some forms of the first horizon productions.

It should also be noted the limited presence of black gloss pottery from group B (8 individuals) with forms of the middle production from Cales, which can be attributed to the last third of the 2<sup>nd</sup> century BC. Finally, the group of fine wares would be supplemented by a representation of thin-walled vessels (36 individuals) of the Mayet II and III types. If we integrate painted pottery of Iberian type as fine dishes, this type is well represented (46 individuals), especially *kalathoi*. In reference to common pottery productions, there is a predominance of both Roman and Iberian oxidised productions, as well as some cooking pots of reduced cooking pottery, the latter being poorly represented.

The amphorae constitute a good example to know the supplies of the settlement, especially represented by the vinery containers. The imported amphorae forms documented are the usual ones of this period: the Greco Italic (classical and transitional) and the Dressel 1A, which mark a chronological range between 175 BC and 120 BC. The data that seems most relevant to this material is the great variety of ceramic fabrics that show the amphorae recovered, that are indicative of a wide diversity of

provenances although as we have already mentioned above, the Iberian amphorae are predominant. Until now, the excavations have provided very few examples of metallic material, partly due to the intense clandestine activity that the site has been suffered for decades. Among the materials of strictly military character, only one bronze arrowhead was found with a central nerve and an iron horn of a long weapon.

## Discussion

Considering the present evidence, Puig Castellar de Biosca can be considered as a singular settlement, probably a *castellum*, a military fortress with an important historical significance due the fact that it would be one of the first Roman military building in the Iberian Peninsula. The military character of this settlement seems that goes even beyond; despite we do not have some significant remains of *militaria*, its chronology, the location in height of the fortification, with an extensive visual domain of the territory, its considerable extension (1.6 ha), the singular typology of its buildings, the existence of a rampart, the early use in *Hispania* of a series of noble building materials such as *terrazzo* and *signinum* pavements, *tegulae* and *imbrices* of Italic origin, painted and moulded stuccos and, above all, a large amount of imported ceramic materials are sufficient elements to support this interpretation.

According to the location of the main building, it had a full control over the settlement. This building fits the constructive parameters of a headquarter (maybe a *principia*), a type of building that is documented in many military camps, although most of the examples known at present belong to the imperial period (Dobson 2008). Puig Castellar could be one of the first examples documented

for the Republican period. In the same way, one fundamental aspect to consider is what could have been the main function of this settlement in the historical and territorial framework of the northeast peninsular area.

It should be remembered that at the same time of the occupation of Puig Castellar de Biosca, Rome was involved in several wars in *Hispania*, such as the wars in *Lusitania* and *Celtiberia*, among which we want to highlight the long siege of *Numantia* (154-133 BC). In this context, it can be argued that Puig Castellar acted as a *castellum* from which the Roman army exercised the control of one of the routes that linked the coast (Empúries or central Catalan coast) with the province. Following this approach, the fortress of Puig Castellar could have held a control function for the immediate territory and, above all, give logistical support, if necessary, to the troops that were traveling along this route. Its position in height, its defensive systems, its considerable extension, and easy access from the valley fit perfectly to this purpose.

Another important aspect that we cannot ignore is the close relationship that we can establish between the end of the fortress and the foundation of the Roman town of *Iesso* (Guissona), located only 6 km away. It should be remembered that the foundational layers of the new town indicate a chronology of the end of the 2<sup>nd</sup> century BC. For us it is clear the relationship between the two centres, Puig Castellar and *Iesso*, a thesis that is supported by the chronology and the serial succession of the materials that we have been able to study in both enclaves. In this case we are facing a planned abandonment of the establishment, carried out in a well-ordered way; this would justify the absence of some constructive materials, since everything that could be reused does not appears in the recovered archaeological record.

Although these are the first conclusions, we think that the settlement of Puig Castellar, together with its strictly military role, could have also functioned as the official headquarters of a Roman centre of territorial administration. If we take account of this function, it would not be strange to find high officials of the Roman administration living and developing their activity in these military installations, maybe some delegates of the Roman power that we do not discard that they formed part of the same military establishment, it would be these representatives of the Roman power who left their mark on the settlement, through the sumptuous details shown by the architecture and some of the products consumed.

In conclusion the castellum of Puig Castellar de Biosca is a military settlement that can be dated between 180 BC and 120 BC. It identifies the initial moment of the Roman conquest of the Iberian Peninsula. There are very few examples of long-term camps from

this period in the *Hispania Citerior*, therefore the Puig Castellar castellum constitutes one of the first military complexes from the Republican era.

The Puig Castellar fortress provides new data for the knowledge of the first military settlements in the *Hispania Citerior* province that are added to the data already provided in recent decades within the line of research on the first strategies of conquest in Hispanic territory (Morillo 2016). Future excavation campaigns will allow us to complete the data presented in this paper for a better understanding of the site, and the role played by the Roman Army in areas already conquered that were far from the front lines.

## Acknowledgements

This research was funded by the Spanish Ministry of Science, Innovation and Universities (De la consolidación del poder militar romana a la fundación de ciudades (mediados del siglo II a.C.-principios del siglo I d.C) en la Cuenca del río Segre: Iesso y Iulia Libica DGYCIT PID2019-104120GB-I00-2023-2021), and the Department of Culture of the Catalan Autonomous Government (La conquesta romana a la Catalunya interior: l'exemple de Puig Castellar (Biosca), CLT009/18/00014).

## Bibliography

- Bayo Fuertes, S., J. Moratalla Jávega & A. Morillo Cerdán, 2021: El fortín romano tardo-republicano del Tossal de la Cala (Benidorm, Alicante). Autopsia y reinterpretación de un yacimiento histórico, *Archivo Español de Arqueología* 94, e16 (DOI:10.3989/aespa.094.021.16).
- Brotons, F. & A. Murcia, 2008: Los castella republicanos romanos de la cuenca alta de los ríos Argos y Quípar (Caravaca, Murcia). Aproximación arqueológica e histórica, in: M.P. García-Bellido, A. Mostalac & A. Jiménez (eds), *Del imperium de Pompeyo a la autoritas de Augusto*, Madrid (Anejos de Archivo Español de Arqueología 47), 49-66.
- Dobson, M., 2008: *The army of the Roman Republic. The second century BC. Polybius and the camps at Numantia*, Spain, Oxford.
- Graells i Fabregat, R., 2021: Los guerreros iberos y los juegos de estrategia, in: R. Graells i Fabregat & M. Pérez Blasco (eds), *El guerrero ibero y el juego. Estrategia, azar y estatus*, Elx, 57-63.
- Morillo, A., 2016: Campamentos y fortificaciones tardorrepublicanas en Hispania. Una nueva línea de investigación en arqueología militar romana, in: J. Pera & J. Vidal (eds), *Fortificaciones y control del territorio en la Hispania republicana*, Zaragoza, 1-51.
- Pera, J., E. Rodrigo, N. Romani & C. Carreras, 2019: Puig Castellar de Biosca (Lleida). Una fortificación romana del siglo II a. C. en el noreste de la Hispania Citerior, *Gladius* 39, 19-43 (DOI:10.3989/gladius.2019.02).

- Pera, J., N. Romaní, E. Rodrigo, C. Carreras & L. Catarineu, 2021: El contexto cerámico del castellum republicano de Puig Castellar de Biosca (180-120 a.C.), in: *V Congreso Internacional de la Sociedad de Estudios de Cerámica Antigua en Hispania-SECAH*, Alcalá de Henares/Madrid, 43-56.
- Principal, J., M.P. Camañes & C. Padrós, 2015: Un edifici singular al castellum tardorepublicà de Monteró I (Camarasa, la Noguera). I l'urbanisme complex d'un post avançat del nord-est de la Citerior, *Revista d'Arqueologia de Ponent* 25, 309-325.
- Rodà, I., A. Àlvarez, A. Gutiérrez García-Moreno & H. Royo, 2015: *Informe de l'anàlisi d'un conjunt de tègules trobades als jaciments de Can Tacó-Turó d'en Roïna (Montmeló-Montornès del Vallès). Ca l'Arnau (Cabrera de Mar) i Puig Castellar (Les Guixeres, Biosca)*, Tarragona (Unpublished. Institut Català d'Arqueologia Clàssica. Unitat d'Estudis Arqueomètrics).
- Rodrigo, E. & N. Romaní, 2021: Una tabula lusoria hallada en el castellum republicano de Puig Castellar de Biosca en Lleida, Catalunya (180-120 a.C.), *Archivo Español de Arqueología* 94 (DOI:10.3989/aespa.094.021.04).
- Romaní Sala, N., E. Rodrigo Requena, J. Pera Isern & A. Gutiérrez García-Moreno, 2020: El material constructiu de la fortificació militar de s. II aC de Puig Castellar de Biosca (Lleida). Paviments, revestiments parietals i cobertes, in: X. Aquilué, J. Beltrán de Heredia, À. Caixal, J. Fierro & H. Kirchner (eds), *Estudis sobre ceràmica i arqueologia de l'arquitectura. Homenatge al Dr. Alberto López Mullor*, Barcelona, 391-403.

# A maritime frontier in *Hispania Citerior* during the Sertorian Civil Wars

A geostrategic story

Feliciano Sala-Sellés, Sonia Bayo Fuentes and  
Jesús Moratalla Jávega

**Feliciano Sala-Sellés /  
Sonia Bayo Fuentes / Jesús  
Moratalla Jávega**

INAPH – Universidad de  
Alicante, Carretera de San  
Vicente del Raspeig, s/n.,  
03690 – San Vicente del  
Raspeig (Alicante), feliciano.  
sala@ua.es / sonia.bayo@  
ua.es / jesus.moratalla@  
ua.es, <http://orcid.org/0000-0003-1644-8611> / <http://orcid.org/0000-0001-8864-6524> / <http://orcid.org/0000-0003-0227-6150>

The archaeological sites studied are located on the north coast of the province of Alicante (Spain) as can be seen in figure 1. The province of Alicante covers, roughly speaking, the former Iberian territory whose inhabitants are referred to in the early Roman imperial written sources as *Contestani*. It is a very mountainous territory to the north, while to the south a coastline of open beaches facilitates the last stretch of the road leading to *Carthago Nova*. It had neither particularly good agricultural areas nor good pastures and there were hardly any important mineral resources. What it did offer was a strategic location between *Ebusus* and the important port of *Carthago Nova*. The north coast of Alicante is a must when the main Mediterranean shipping route shifts from Ibiza to Cape of La Nao and from there it continues southwards to *Carthago Nova*, the Strait of Gibraltar and Cádiz. The aforementioned map shows Roman cities (in red) although it is clearly an anachronism because these only received the legal status of *Colonia* or *Municipium* after Caesar and/or Augustus, 30 or 50 years after the end of the Sertorian Wars. However, this information is useful to show that the distance between them is more or less similar, therefore proving that they were staging posts in the maritime circulation from the Augustan period onwards.

These coastal sites share a series of common features (Sala-Sellés *et al.* 2013; 2014a-b). They are built on top of coastal promontories and occupy c. 0.5 ha in area and are well fortified. In all cases the defensive constructions show interesting adaptations to the topography with different solutions. No two fortifications are alike. From south to north and at a fairly regular distance we can find the Tossal de la Cala, Cap Negret, Penyal d'Ifac, Punta de la Torre and, going beyond the Cape of La Nao, we have Penya de l'Àguila and Passet de Segària, these last two only a few kilometres distance from the coast. Inland, the mountainous terrain makes moving and communication difficult, as it is a route that is impossible to travel on for carts and quite difficult when travelling on foot or with pack animals. Other common features are the presence of coves which are suitable for sheltering ships at the base of the promontories or the visual connection between them. The capacity of controlling the coast and the passage of ships that were sailing southwards by the Cape of La Nao can be seen in the images

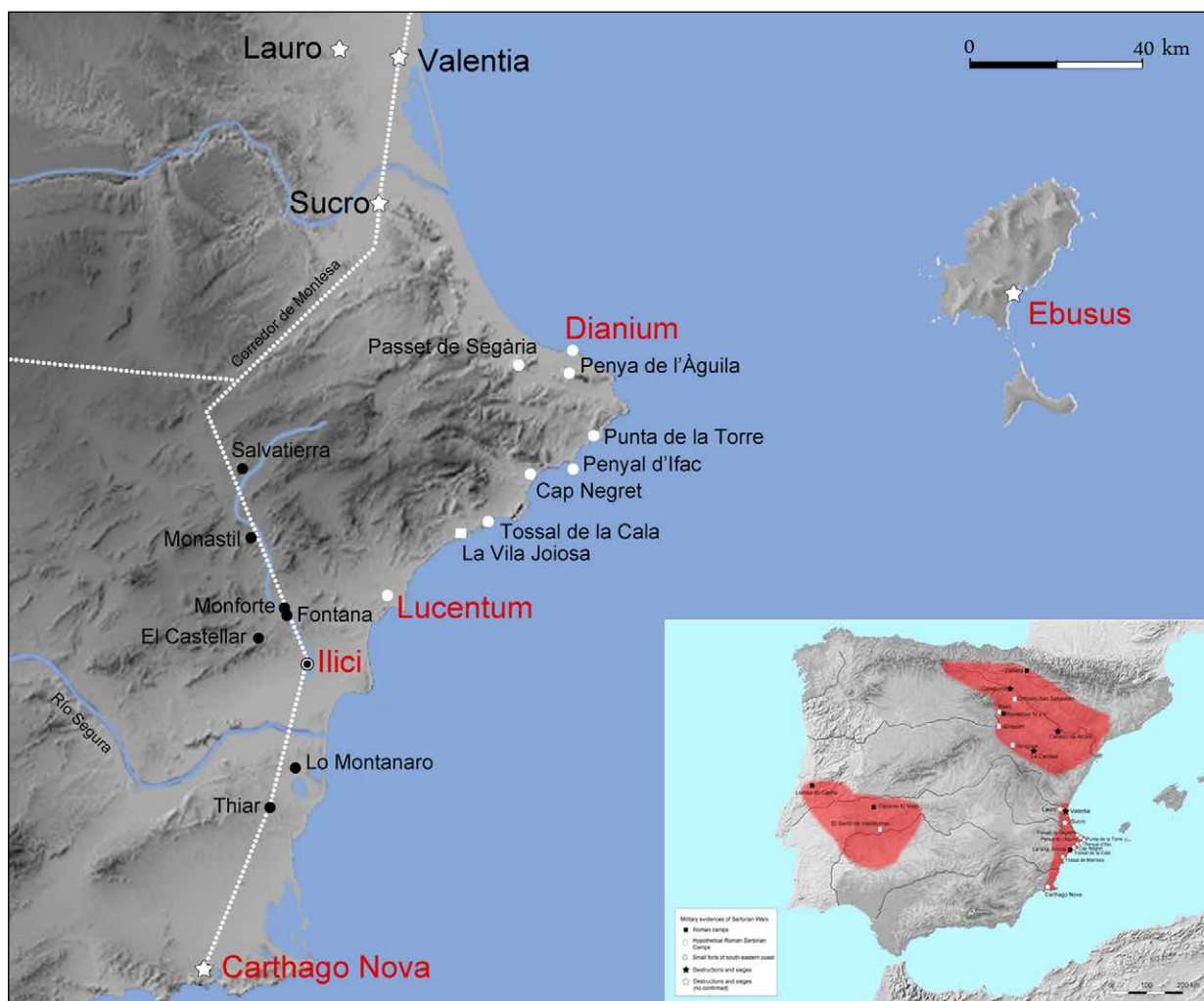


Figure 1. Historical map with the location of the sites (white points) and the battles mentioned (with a star) in the written sources. Location of the territory studied in Hispania.

in figure 2, taken from a top the excavation site of Punta de la Torre. Communication between sites through light or smoke signals would have been effective.

Some archaeological objects from these sites were known from previous excavations or from some clandestine work carried out between the 1940's and the 1970's. Traditional historiography considered these sites as Iberian coastal settlements dated between the 2<sup>nd</sup> and 1<sup>st</sup> centuries BC based on the presence of Roman coins, Italic amphorae and Campanian-ware, both A and B variants (Llobregat 1972). For researchers from the time, the presence of painted Iberian vases (Nordström 1969, 67) confirmed that these were small Iberian coastal settlements which received Italic products that they later redistributed among the Iberian population of the valleys inland. In short, they were a local population that was already immersed in the Romanisation process.

However, the emergency excavation carried out in 1987 at Cap Negret uncovered a large number of Italic and Punic wine and salted fish amphorae in a small area of  $6 \times 2$  m (Sala-Sellés 1990). The Number of identified specimens added up to twenty Dressel 1 amphorae and nine Greco-Italic amphorae from the Campanian area, twenty Adriatic Lamboglia 2 amphorae and twelve Punic amphorae from the Cádiz area. There were also Campanian A and B vases and thin-sided cups for drinking wine. However much they traded, this was an excessive number of items for a small Iberian settlement of 0.5 ha and the area of influence of its hypothetical commerce activity. Furthermore, the quantity and variety of Roman cooking vessels was also notable.

For this reason, when the restudy of the old archaeological interventions began in 2010, it was discovered that the metal and bone objects, to which little or no attention had been paid before, were Roman militaria weapons and objects (fig. 3). It could be admitted





Figure 2. Visual connection to the north and south from the Punta de la Torre fort.

that the weapons, such as the *pilum* or the *pugio* found in the excavation in the Tossal de la Cala in 1943 (Bayo Fuentes 2010, 127; 2018, 572-574), could have been a gift or a purchase from an Iberian, but with other objects such as the vessels for table service like Gallarate and Piatra Neamt jug handles no. 4 (Boube 1991; Mansel 2004, 27-28; Erice 2007, 200) and a *situla* foot no. 5 (Erice 2007, 203), personal objects such as a *fibulae* no. 6 (Bayo Fuentes 2018, 580), medical instruments as the *spathomele* no. 9 (Milne 1970, 58-60), *stili* no. 10, *bullae* no. 7, a key no. 11 and a plumb bob no. 14, it was logical to assume that they were objects of everyday life in a military environment (Bayo Fuentes 2018, 595-602). The carpentry tools from the Tossal de la Cala (nos 12-13) and the *tesserae lusoria* found in the Passet de Segària with the word GUMIA (glutton), no. 34, on the obverse and the numeral I on the reverse must be highlighted (Sala-Sellés 2016, 20; Bayo Fuentes 2018, 617-619; Baratta 2019, 117).

This was also the case of the objects recovered in a 1975 excavation at Penya de l'Àguila carried out by an English resident who applied the stratigraphic method to perfection. Among his findings there are weapon pieces as a *pilum* no. 15, spearheads no. 16 and 24, catapult projectiles no. 17 (Torres-Martínez *et al.* 2013, 66-69; Bayo Fuentes 2018, 586), sling lead ammunition and the Montefortino helmet cheek piece no. 26 (Feugère 1993, 83; 1994, 39; Connolly 1998, 100, fig. 1; Mazzoli 2016, 121), which stands out for its rarity. Other findings include soldiers' personal objects such as an iron ring no. 18, a fire starter no. 19, bronze belt ornaments no. 23, *caligae* nails

no. 20 and flat-headed nails no. 21. Finally, there are tableware objects as a colander no. 25 (Guillaumet 1977, 243-245; Mansel 2004, 25; Erice 2007, 199-200) and the foot of a basin no. 31, called *bacile* according to Bolla's typology (Bolla 1991, 117-119; Erice 2007, 200) which according to other opinions could be a personal ritual washbasin. From all this information, the theory that these small Iberian settlements may have been Roman garrisons installed on a temporary basis started to take shape, and therefore the Italic wine and the salted fish amphorae from Cadiz must have been for supplies for the soldiers.

However, as the study of the fortifications progressed (factories, construction resources and units of measurement), it became evident that they could also be Roman constructions. At this point, these sites were studied according to the traditional deeply rooted point of view that considered these sites as Iberian settlements and architecture, so the 'deconstruction' had to be done with sure steps until the clear conclusion was reached: they were late-republican Roman military garrisons – *castella* – and it can be asserted that their presence meant the beginning of the romanization of the Contestania Iberian population (Sala-Sellés 2020; 2021; Bayo Fuentes *et al.* 2021b). In short, the fortifications are simple and adapt to the topography of each site. This should not be seen as a weakness or improvisation but quite the contrary. For example, the defence system at Penya de l'Àguila shows an intelligent adaptation (Hemp 1929; Schubart 1963; Sala-Sellés *et al.* 2014a-b; Bayo Fuentes *et al.* 2021b): three simple walls between 2 and 3 m wide built as a barrier in the succes-

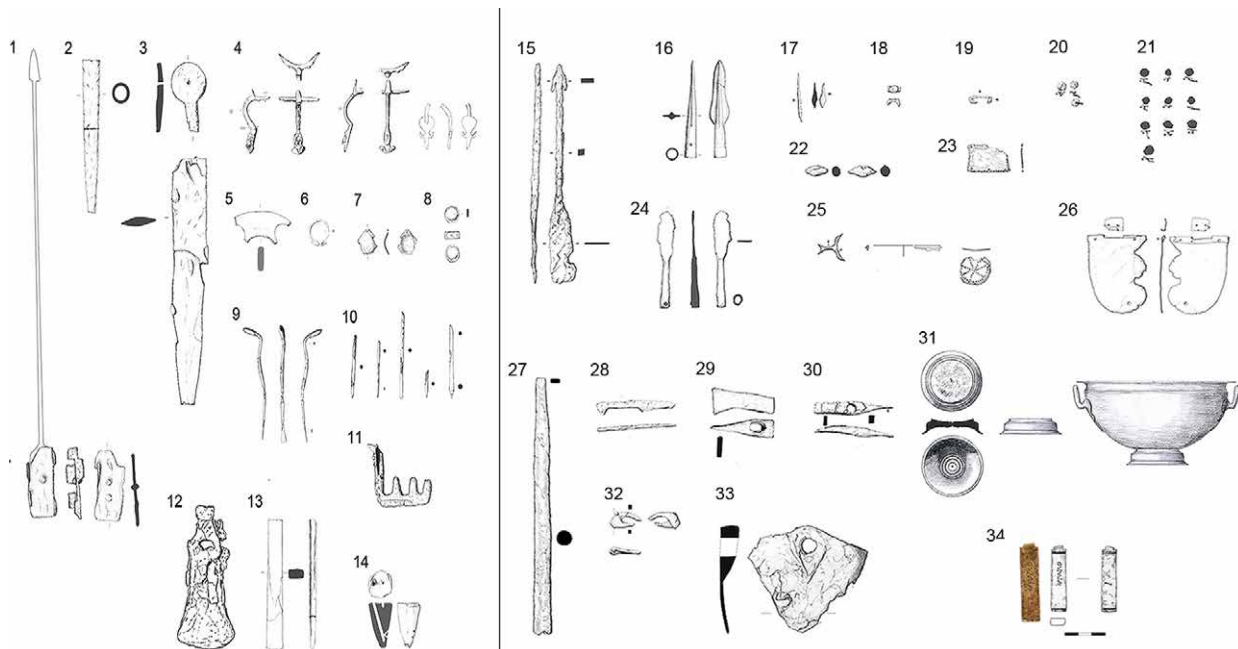


Figure 3. Weapons, militaria and objects of daily life found in Sertorian forts.

sive narrowings of the summit (which meant an economy of effort) to block the access to the settlement which was more than 1 km distance from wall III, which was c. 0.5 ha in extension. Furthermore, a bend of almost 10 m in wall II which was built using a rocky edge that protrudes from the surface with that same shape allows to gain a flank and defend a gate which is barely 90 cm wide, this is to say, it is a gate designed to exit but not to enter (fig. 4.1).

The fort at Passet de Segària was built on a sloping rocky hilltop. Terraces with cyclopean walls were built first to obtain a flat surface to enable construction. The fort was then built on these terraces, and of which a 58-metre stretch of a wall of pseudoisodomum construction, which has no Iberian tradition, is still visible (fig. 4.2-3). This wall would have enclosed the long side of a probably rectangular enclosure. This way of constructing the fortified space has models in the Italian peninsula during the Republican period, specifically in Norba (Quilici & Quilici 2001).

The base of a 1.5 m wide wall built at only 4-5 m above sea level was found during the excavations at Cap Negret (fig. 4.4). Less than 2 m from the outer face, the marl substrate of the base was cut into a slope parallel to the course of the wall. At that time the settlement was considered as a coastal Iberian settlement, and therefore the cut-out caught the researchers' attention, but its interpretation was not possible. Today there is no doubt that it is a V-shaped moat, necessary to reinforce the defence of a wall built at such a low height in respect to the sea level.

The fort of Tossal de la Cala provides the definitive confirmation of Roman architecture, thanks to the

fact that it was excavated in extension with modern methodology between 2013 and 2021 and it has given a museum-like status and it is open to the public, as can be seen in figure 5. With these works it has been possible to understand the constructions discovered in the excavations of 1943 and 1956 and reach the global interpretation published in 2021 (Bayo Fuentes *et al.* 2021a). In the zenithal photo (fig. 5), the different buildings can be differentiated by different colour gravel. The inhabitation area is on the north and southwest sides of the summit because there is an imposing 100 m high cliff on the south side as the contour lines show. A single street runs longitudinally through the entire enclosure. A series of buildings which were built side by side open onto this street, forming a large rectangular construction body which occupies the entire northern side. The south-western part is also built in the same way until it reaches the cliff. In short, it is a modular and repetitive architecture built using the *pes monetalis* (0,296 m). In the wall, a clay factory perfectly validated in complex defensive systems in Hellenistic architecture (Adam 1982, 19-20) that contributed to lighten the work and reduce the cost and time in its construction would have been used. It might seem that the construction scheme of Tossal de la Cala is far from the canonical models of Roman-Republican military settlements (Morillo Cerdan 2016, 16-29). However, walls which are c. 1 m wide can be found in the Hellenistic architecture of smaller forts, such as Kydna in Lycia, or Phylia in Vrachos (Adam 1982, 123-165; Hellmann 2010, 397-353) and the data that is being learned about the republican Roman Italy itself





Figure 4. Different walls of the fortifications. 1. Flanking bend of the Peña de l'Àguila; 2-3. Cyclopean and pseudoisodomic constructed walls from Passet de Segària; 4. Section of the wall at Cap Negret.

point to models that do not deviate much from what is presented in this work (Cera & Quilici 2001). To finish, the road opened in 1956 to build the tourist viewpoint on the summit, divided the site in two and does not allow the location of the gate or gates to the fortification to be known. Different hypotheses (a, b and c) are shown on the plan.

The defensive wall which is the rear wall of the buildings is a simple 1 m wide masonry wall, built on a natural rock escarpment 3-4 m high, which surrounded the perimeter of the summit at the 85-90 m level. The height of the wall, added to the height of the escarpment, provided a good vertical wall. This explains the lack of towers or other external defensive elements; the south side with the cliff was impregnable. To compensate for the structural weakness that could come from the steep slope, the perpendicular walls of the buildings were erected at the same time as the fortification wall was built. It can be said that they are stitched to it. As a result, it turns into a truly solid wall built using the casemate concept. The façade of the buildings would be the inner

face of the wall. A construction which is as simple as it is efficient (Bayo Fuentes *et al.* 2021a, 8-11, fig. 11).

The following conclusions can be drawn from the comparison of the archaeological data with the historical facts narrated in the written sources:

1. The small Iberian settlements dedicated to trade and fishing are really a network of forts dating from the first quarter of the 1<sup>st</sup> century BC, with an area of about 0.5 ha and the capacity to house between one or two *centuriae*, according to our calculations.
2. Why were they built? In the year 77 BC, Sertorius moved to the Ebro valley and the Levante coast trying to secure his power and control an escape port (Salinas de Frias 2014). *Dianium* would be chosen as this naval base with the help of the Cilician pirate fleet. Regarding the establishment of a naval base, he ordered the construction of forts in a well-studied fortification scheme of the coast around Cape of La Nao. They were built to guard and board the Senatorial ships that crossed from the island of

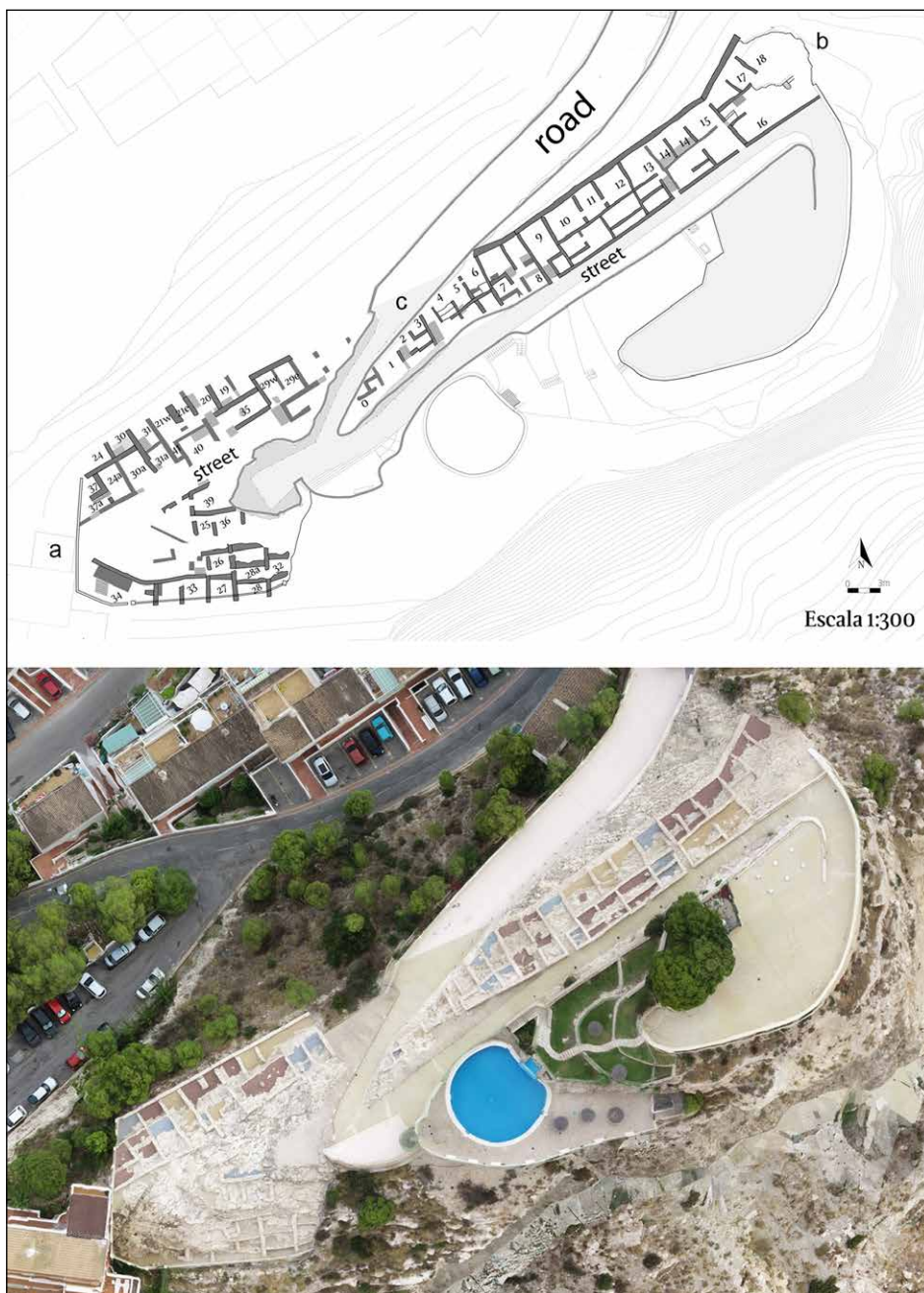


Figure 5. General plan and aerial view of the fort of Tossal de la Cala in Benidorm.

Ibiza to the port of *Carthago Nova*. When Pompey crossed the Pyrenees in 76 BC commanding his army to reinforce Metellus' legions and started advancing down the coast, the control of this sea route through these small garrisons supported by the Cilician ships was of vital importance for Sertorius' interests.

3. The battles that can be seen on the map (*Lauro*, *Valentia* in 76 BC and *Sucro* in 75 BC) marked a turning point in the development of the war in favour of the Senatorial army. After the battle of *Sucro*, Sertorius turned with his army towards the Ebro valley, where the accounts

focus the events of the war from 75 BC onwards. However, *Dianium* remained a Sertorian port until his death in 72 BC. Some fortresses may have been still active after his death, for as late as 70 BC Cicero (*Cicero In Verrem* 5.146, 151 and 154) accuses Verres of raiding the fishing boats in Sicily with the excuse that they were Sertorian soldiers fleeing from the port of *Dianium* (Abad Casal *et al.* 2019).

As it was argued in a recent publication (Morillo Cerdan & Sala-Sellés 2019), archaeology has shown what the



written sources denied with their silence (fig. 1). As the map shows, the peninsular coastal stretch around Cape of La Nao and between *Valentia* (Sertorian) and *Carthago Nova* (Senatorial) becomes a new area of conflict in the first Roman civil war to be added to the traditional ones: the Guadalquivir valley and Extremadura. Due to its strategic position opposite Ibiza, the area would be vital for the interests of either of the two armies if they needed to control maritime traffic. At this time in the 1<sup>st</sup> century BC, it was Sertorius who deployed his troops at the naval base of *Dianium* and in the coastal forts since the rear-guard was controlled by pacts with the local elites (Livius *Periochae* 95).

However, today it can be stated that Sertorius was not the first to build a fortified line for the surveillance of the sea on this coast. In the latest research project covering the 5<sup>th</sup> to 3<sup>rd</sup> centuries BC, works on the coastal sites have continued, concluding that on some promontories (Moraira, Cap Negret) or on others nearby (Tossal de la Cala) the Barcid army established control points as watchtowers or vantage points during the Second Punic War (Sala-Sellés *et al.* 2020). Since the end of the First Punic War, Rome had been disputing dominance over the sea with Carthage. Therefore, this time Hasdrubal Barca probably ordered the construction of a network of watchtowers on the northern coast of Alicante to protect the port and capital *Qart Hadasht* from possible incursions by the Roman fleet that landed in Ampurias in 218 BC, the same network that Sertorius rebuilt some 150 years later.

## Acknowledgements

This communication summarises the results of a research project conducted between 2010 and 2021, carried out in the framework of three R&D projects funded by the Spanish Ministries of Science and Innovation (HAR2009-11334), of Economy and competitiveness (HAR2012-32754) and of Economy, Industry and Competitiveness (HAR2016-76917-P), and funded by the Spanish State Research Agency (AEI) and the European Regional Development Fund (ERDF). For the publication of this work we have been supported by the project PROMETEO/2019/035, LIMOS, funded by Valencian Government.

## Bibliography

- Abad Casal, L., A. Álvarez-Ossorio Rivas, S. Bayo Fuentes, C. Doménech Belda, J. Moratalla Jávega, F. Prados Matinez, A.M. Ronda Femenia, F. Sala-Sellés & M. Tendero Porras, 2019: Nueva interpretación del Passet de Segària y la Penya de l'Àguila en el contexto de las guerras civiles romanas, in: *6<sup>e</sup> Congrès d'Estudis de la Marina Alta*, Dénia, 49-59.
- Adam, J.P., 1982: *L'architecture militaire grecque*, Paris.
- Baratta, G., 2019: *Benest, malest. Archeologia di un gioco tardo-republicano*, Barcelona (Colección Instrumenta 67).
- Bayo Fuentes, S., 2010: *El yacimiento Ibérico de "El Tossal de la Cala"*. Nuevo estudio de los materiales depositados en el Marq correspondientes a las excavaciones de José Belda y Miquel Tarradell, Alicante (Serie Trabajos de Arqueología del MARQ 1).
- Bayo Fuentes, S., 2018: *Contestania ibérica en los siglos II-I a.n.e. Poblamiento y romanización*, Alicante (PhD thesis Alicante University, <http://hdl.handle.net/10045/99256>).
- Bayo Fuentes, S., J. Moratalla Jávega, A. Morillo Cerdán & F. Sala-Sellés, 2021a: El fortín romano tardo-republicano del Tossal de la Cala (Benidorm, Alicante). Autopsia y reinterpretación de un yacimiento histórico, *Archivo Español de Arqueología* 94 (DOI: 10.3989/aespa.094.021.16).
- Bayo Fuentes, S., J. Moratalla Jávega & F. Sala-Sellés, 2021b: Arqueología de la conquista romana en la Contestania ibérica. Los fortines tardor republicanos de la costa y la vigilancia del camino hacia Carthago Nova, in: C. Pereira, P. Albuquerque, A. Morillo Cerdan, C. Fabião & F. Chaves (eds), *De Ilipa a Munda. Guerre e conflitto no sul de Hispânia*, Lisboa, 93-105.
- Bolla, M., 1991: Les bassins. I bacilli con attachi a foglia di vite, in: M. Feugère & C. Rolley (eds), *La vaisselle tardo-républicaine en bronze. Actes de la table ronde du CNRS*, Dijon (Publications du Centre des recherches sur techniques gréco-romaines 13), 113-120.
- Boube, C., 1991: Les cruches, in: M. Feugère & C. Rolley (eds), *La vaisselle tardo-républicaine en bronze. Actes de la table ronde du CNRS*, Dijon (Publications du Centre des recherches sur techniques gréco-romaines 13), 23-45.
- Cera, G. & S. Quilici (eds), 2001: *Fortificazioni antiche in Italia. Età repubblicana*, Roma.
- Connolly, P., 1998: *Greece and Rome at war*, London.
- Erice, M.R., 2007: La vajilla de bronce en Hispania, *Sautuola* 13, 197-216.
- Feugère, M., 1993: *Les armes des romains de la République à l'Antiquité tardive*, Paris.
- Feugère, M., 1994: *Casques antiques. Les visages de la guerre de Mycènes à la fin de l'Empire romain*, Paris.
- Guillaumet, J.P., 1977: Les passoires de la fin de La Tène en Gaule et dans le monde celtique, *Gallia* 35/2, 239-248.
- Hellmann, M.C., 2010: *L'architecture grecque 3. Habitat, urbanisme et fortifications*, Paris.
- Hemp, W.J., 1929: Three hill forts in Eastern Spain, *Antiquity* 3/10, 188-194.
- Llobregat, E.A., 1972: *Contestania ibérica*, Alicante.
- Mansel, K., 2004: Vajilla de bronce en la Hispania republicana, in: R. Olmos & P. Rouillard (eds), *La vajilla ibérica en época Helenística (siglos IV-III al cambio de era)*, Madrid (Collection de la Casa de Velázquez 89), 19-30.
- Mazzoli, M., 2016: Elmi Montefortino nel Mediterraneo Occidentale, in: R. Graells & D. Marzoli (eds), *Armas de la Hispania Prerromana*, Mainz, 109-148.

- Milne, J.S., 1970: *Surgical instruments in Greek and Roman times*, New York (1<sup>st</sup> edition London 1907).
- Morillo Cerdan, A., 2016: Campamentos y fortificaciones tardor republicanas en Hispania. Una nueva línea de investigación en arqueología military romana, in: J. Pera & J. Vidal (eds), *Fortificaciones y control del territorio en la Hispania republicana*, Zaragoza, 1-51.
- Morillo Cerdan, A. & F. Sala-Sellés, 2019: The Sertorian Wars in the conquest of Hispania. From data to archaeological assesment, in: A.F. Fitzpatrick & C. Haselgrove (eds), *Julius Caesar's battle for Gaul. New archaeological perspectives*, Oxford/Philadelphia, 49-72.
- Nordström, S., 1969: *La ceramique peinte iberique de la province d'Alicante*, Stockholm (Studies in Classical Archaeology 6).
- Quilici, L. & S. Quilici, 2001: Sulle mura di Norba, in: G. Cera & S. Quilici (eds), *Fortificazioni antiche in Italia. Età repubblicana*, Roma, 181-244.
- Sala-Sellés, F., 1990: El poblado ibérico de Cap Negret (Altea, Alicante), in: *Memòries Arqueològiques a la Comunitat Valenciana*, Valencia, 20-22.
- Sala-Sellés, F. (ed.), 2016: *Romanos contra romanos. Sertorio y las guerras civiles en el sudeste de Hispania*, Alicante (Catálogo de la exposición, Museo Arqueológico Provincial-MARQ).
- Sala-Sellés, F., 2020: Los fortines romanos tardo-republicanos de la costa norte de Alicante. Historia de una estrategia y de una investigación, in: *Actualidad de la investigación arqueológica en España I (2018-2019). Conferencias impartidas en el Museo Arqueológico Nacional*, Madrid, 83-100.
- Sala-Sellés, F., 2021: The roman-republican castella on the south-eastern coast of Hispania Citerior. The beginning of the romanization of the Iberian population, *Otium. Archeologia e Cultura del Mondo Antico* (DOI:10.5281/zenodo.5702502).
- Sala-Sellés, F., S. Bayo Fuentes & J. Moratalla Jávega, 2013: Dianium, Sertorio y los piratas cilicios. Conquista y romanización de la Contestania ibérica, in: A. Álvarez-Ossorio Rivas, E. Ferrer Albelda & E. García Vargas (eds), *Piratería y seguridad marítima en el Mediterráneo Antiguo*, Sevilla (Monografías SPAL 17), 187-210.
- Sala-Sellés, F., L. Abad Casal, S. Bayo Fuentes & C. Doménech Belda, 2014a: Las huellas de las Guerras Sertorianas en el Sureste de Hispania. Elementos para la revision histórica, in: F. Cadiou & M. Navarro Caballero (eds), *La guerre et ses traces. Conflits et sociétés en Hispanie à l'époque de la conquête romaine (IIIe-Iers.a. C.). Actes du colloque international tenu à Bordeaux, du 25 au 27 novembre 2010*, Bordeaux, 25-53.
- Sala-Sellés, F., J. Moratalla Jávega & L. Abad Casal, 2014b: Los fortines de la costa septentrional alicantina. Una red de vigilancia de la navegación, in: F. Sala-Sellés & J. Moratalla Jávega (eds), *Las guerras civiles romanas en Hispania. Una revision histórica desde la Contestania*, Alicante, 79-89.
- Sala-Sellés, F., F. Prados, J. Moratalla Jávega, V. Cañavate, J.L. Martínez, P. Perdiguero & P. Ramón, 2020: La vigilancia de la costa entre Ibiza y el litoral alicantino durante el periodo Bárquida, in: S. Celestino Pérez & E. Rodríguez González (eds), *Un viaje entre el Oriente y el Occidente del Mediterráneo, Actas del IX Congreso Internacional de Estudios Fenicios y Púnicos*, Mérida (Monografías y Trabajos de Arqueología 5), 567-576.
- Salinas de Frías, M., 2014: Reflexiones sobre la guerra de Sertorio en la Hispania Citerior y sus fuentes literarias, in: F. Sala-Sellés & J. Moratalla Jávega (eds), *Las guerras civiles romanas en Hispania. Una revision histórica desde la Contestania*, Alicante, 23-33.
- Schubart, H., 1963: Untersuchungen an den iberischen Befestigungen des Montgó bei Denia (Prov. Alicante), *Madriider Mitteilungen* 4, 51-85.
- Torres-Martínez, J.F., A. Martínez Velasco & C. Pérez Farraces, 2013: Los proyectiles de artillería romana en el oppidum de Monte Bernorio (Villarén, Palencia) y las campañas de Augusto en la primera fase de la Guerra cantábrica, *Gladius* 33, 57-80.



# New evidence of Roman military activities between the rivers Krka and Cetina (Dalmatia, Croatia)

Domagoj Tončinić, Joško Zaninović, Domagoj Bužanić and Mirjana Sanader

**Domagoj Tončinić /  
Domagoj Bužanić /  
Mirjana Sanader**

University of Zagreb Faculty  
of Humanities and Social  
Science, Department of  
Archaeology, I. Lučića 3,  
10000 Zagreb, Croatia,  
dtoncinic@ffzg.unizg.hr /  
dbuzanic@ffzg.unizg.hr /  
msanader@ffzg.unizg.hr

**Joško Zaninović**

Public Institute of Krka  
National Park, Department  
for Archeology, Cultural  
and Historical Heritage,  
Trg Ivan Pavla II, no. 5,  
22000 Šibenik, Croatia,  
josko.zaninovic1@npk.hr

This work aims to present the results of LiDAR scanning, geophysical surveys, and archaeological excavations of selected sites located between the rivers Krka (*Titius flumen*) and Cetina (*Hyppus flumen*). These new results, which indicate the earliest known activities of the Roman army in the area, were generated within the framework of a scientific research project dedicated to the discovery of archaeological traces of the so-called Delmataean Limes from the area between the rivers Krka and Cetina from 2018 to 2022. The professional public was presented with the details about the project and its research methods, as well as the preliminary interpretation of the LiDAR/ALS data at the conference ‘The Roman conquest beyond Aquileia (II – I century BC)’ held in Trieste from 10<sup>th</sup> to 11<sup>th</sup> November 2021 (Tončinić *et al.* 2023).

Within the framework of the Croatian Science Foundation project IP-2018-01-4934 ‘Understanding Roman Borders. The Case of the Eastern Adriatic’ (AdriaRom), the Department of Archaeology at the Faculty of Humanities and Social Sciences of the University of Zagreb conducted research on the archaeological remains of the Roman military in the hinterland of the Roman colonies *Iader* and *Salona*. The project aimed to search for and investigate the archaeological remains of Roman legionary and auxiliary camps, as well as archaeological remains of other Roman military infrastructure, to determine whether these objects functioned as a single defensive frontier. If the aforementioned remains did indeed function as a defensive border, it would mean that it was one of the earliest defensive systems of the Roman era. In scientific literature, this supposed defensive border has been referred to as the Delmataean Limes and has been the subject of ongoing scientific debate for a long time.

A methodological approach based on seven steps was chosen to carry out the above-mentioned research:

1. Study of ancient literary sources, Roman epigraphic monuments, and analysis of archaeological findings.
2. Analysis of aerial and satellite photographs, maps, and LiDAR scans to identify possible remains of Roman military architecture in specifically selected areas.

3. Systematic survey of sites in specifically selected areas.
4. Geophysical survey of specifically selected areas.
5. Archaeological excavations in specifically selected locations.
6. Analysis of the results of archaeological excavations.
7. Analysis and interpretation of all selected data.

## Study area

As mentioned above, the project's study area is the hinterland of the Roman colonies *Iader* (Zadar) and *Salona* (Salona), which extends between the rivers Krka and Cetina. It is an elongated and narrow area, around 71.5 km long, which is about 20 km away from the Adriatic Sea. To carry out the aforementioned research, more specific test areas were first selected for detailed analysis:

1. the surroundings of the Roman fortress *Burnum*.
2. the surroundings of the presumed forts of *Promona*, *Magnum* and *Andetrium*.
3. the surroundings of the Roman fortress *Tilurium*.

In the karst geomorphology of the wider surroundings of *Burnum* and *Tilurium*, three distinct landscape types can be distinguished. These are the islands whose direction follows the direction of the mainland, which is why they belong to the mainland island type, the elongated, narrow coastal belt, and the hilly inland areas bordered by the Velebit, Dinara and Kamešnica mountain ranges (Pejnović 2002, 301-335; Radić Rossi 2017, 549-576). The rivers that flow into the Adriatic Sea have made parts of the land around them, as well as their estuaries, very suitable for the development of agriculture and livestock breeding. Among those rivers in the area that interests us in this paper, the rivers Krka and Cetina stand out. These rivers made parts of their surroundings fertile. In the hinterland of *Iader* there are fertile plains of Ravni Kotari, east of *Burnum* there is Peterovo polje and in the hinterland of *Salona*, there is Sinjsko polje, to name only the largest fertile fields.

## Historical background

Two centuries passed from the time when the Romans first became interested in the area of the eastern Adriatic, which they then called *Illyricum*, to the time when they completely conquered it. Romans started their first war with the Illyrian state in 229 BC and these wars were, from then on, characterized by the tenacious resistance of the local population (about the conquest of *Illyricum*, the Illyrian and Histrian wars: Wilkes 1969, 13-77; Zaninović 1996; 2015; Matijašić 2009; Sanader 2009, 23-32; Džino & Dumić Kunić 2013).

Immediately before the First Illyrian War, the Illyrian state in the south of the Adriatic coast extended over the area from Lake Skadar, river Drim to the

Kotor Bay, and possibly even to the river Neretva. Roman conquests thus started with the conquest of the southern part of *Illyricum* and lasted with interruptions until 168 BC (Polybius *Historiai* 29.13; Titus Livius *Ab Urbe Condita* 40.18.4, 40.42.1-5, 41.1.3, 42.26.2-7, 29.11, 37.2, 45.8 and 48.8, 43.23.8, 44.30.2 and 14-15). In the meantime, the Romans were also fighting in its western part. In fact, in 221 BC they started a successful war against the Histrians. From *Histria*, in 129 BC the Romans advanced further eastward, to the river Krka, which at that time was the eastern border of the Liburnian territory (Plinius *Naturalis Historia* 3.129). However, it soon turned out that the eastern Adriatic was far from being conquered, primarily because new opponents to Roman conquest appeared. These were the *Delmatae*, who, among others, occupied the territory between the rivers Krka and Cetina. These confrontations continued in the following years. The *Delmatae* were finally defeated only after 9 AD when Romans crushed the Illyrian-Pannonian uprising.

The consolidation of the conquered area followed these extreme encounters with the peoples of *Illyricum* and especially with those who inhabited the area between the rivers Krka and Cetina, the *Delmatae*. Because of this, the Romans built military camps for legionaries and forts for auxiliary troops at strategically important positions in the hinterland of the important coastal cities, *Iader* (Zadar) and *Salona* (Solin). These are the fortress *Burnum*, above the river Krka, near today's village Ivoševci, and *Tilurium*, today the village Gardun, above the river Cetina. In addition to this, in the scientific literature concerning this problem, the idea of the existence of a very early Roman defensive line between the towns of *Iader* and *Salona* has appeared. According to Carl Patsch (1922, 57), who first wrote about it, the so-called Delmataean Limes was built to protect the conquered territory from the local population. For this reason, it is assumed, the Romans built two fortresses (*Burnum* and *Tilurium*) and several forts along the state road that connected *Aquileia* with *Salona* and *Dyrrachium*. This bold hypothesis was generally accepted, with some additions, by experts on the subject (Šašel 1974, 194-199; Wilkes 1977, 245-246; Zaninović 1996, 213-214; Šašel-Kos 1997, 284; Sanader 2002, 713-718; Periša 2008, 507-517; Tončinić 2013, 335-345).

After consolidating and securing the area, the Romans very quickly began to connect the newly conquered territory by planned road construction. This was most influenced by the area's geomorphology, which most probably allowed only slight alterations to already established prehistorical routes. In parts of the eastern Adriatic, foothills of the mountain massifs reach the sea. The state road *Aquileia-Dyrrhachium*, which was supposed to connect the west and east of

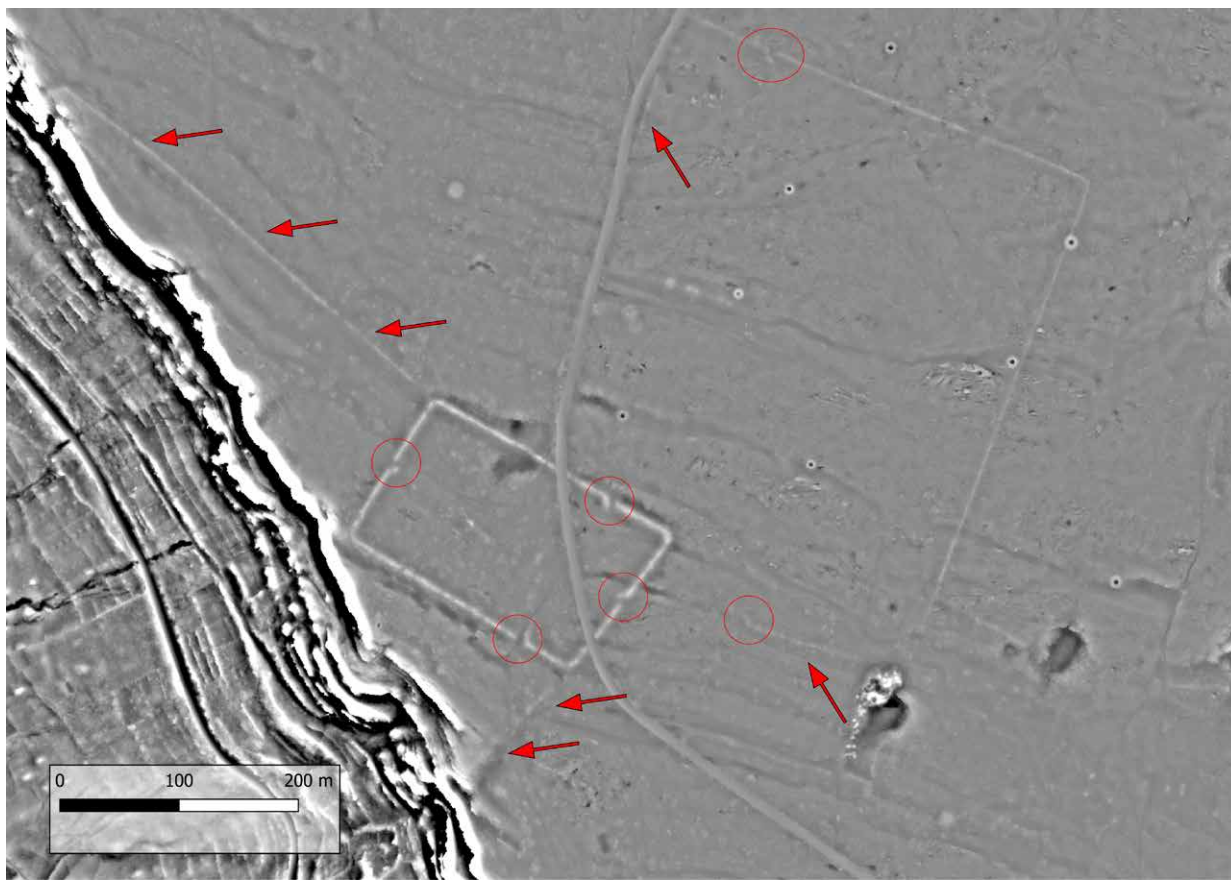


Figure 1. Area 7, Site 1, Structure 2, ALS interpretation (Miroslav Vuković).

the Empire and stretch along the eastern Adriatic coast, could not have, for this reason, been built along the coast itself, through what would seem as the optimal route. The road, therefore, ran in the hinterland, where the passage was much easier. This state road was then connected to settlements along the coast through mountain passes with the help of numerous secondary roads (Bojanovski 1974; Miletić 1993, 117-150; 2006, 125-136). As we already mentioned, when establishing these roads, the Romans used the existing routes of the local population, as these pre-Roman routes were usually the best solution. This is the case not only in the province of *Dalmatia* but also in other provinces of the Empire. It turned out that the existing network, used by the local population and based on the experience gained over many centuries, was usually the safest and fastest.

If there is a possibility that the process of forming a defensive line intended to protect the previously conquered territory in the eastern Adriatic is real, this would be one of the earliest defense systems in this part of the Roman world. However, while the existence of two fortresses is based on systematic archaeological excavations (Sanader 2003; Cambi *et al.* 2007; Šimić-

Kanaet 2010; Sanader & Tončinić 2010, 33-53; Sanader *et al.* 2014; 2017; 2021), auxiliary forts between them are known only from literary sources (Πρωμόνα: Appianus Alexandrinus *Illyrike* 25-28; Πριάμωνα: Strab. *Geographica* 755; *Promona*: *Tabula Peutingeriana* 6.1; *Ravennatis Anonymi Cosmographia* 211; *Magnum: Ravennatis Anonymi Cosmographia* 4.16; *Tabula Peutingeriana* 5; *Andetrium*: Plinius *Naturalis Historia* 2.142; Cassius Dio *Historia Romana* 56.12-14) and a respectable number of epigraphic monuments found in the presumed vicinity of these sites.

### Analysis of aerial and satellite photographs, maps, and LiDAR scans

Based on the study of ancient literary sources, Roman epigraphic monuments, and other archaeological finds, more detailed research was narrowed down to seven smaller areas within the greater study area. The next step was the analysis of aerial and satellite photographs and maps to identify possible remains of Roman military architecture in these smaller areas. These areas were also subjected to aerial laser imaging, *i.e.*, ALS (Airborne Laser Scanning) or LiDAR (Light Detection

and Ranging).<sup>1</sup> The landscape in these areas consists mainly of a classic karst geological base. However, there are significant differences in topography. One part of the area is characterized by flat, open karst areas without large fields that were never suitable for agricultural activities, while the other part consists of karst fields that are intensively cultivated, but also surrounded by karst hills. It is also worth highlighting that the areas surveyed differ significantly in terms of vegetation. The scanned area was covered with deciduous forests, coniferous forests, grasslands, and classic karst macchia.

The scanning has provided us with a large amount of data that still needs to be filtered, examined, and interpreted. The mass of data was so large that it will take years for researchers to properly examine it and interpret all of the features, which means that interpretation of the results is still ongoing and new potential sites can still be found using this data. In the months following the scanning, the preliminary analysis had already identified many new potential archaeological sites from prehistoric to modern times, allowing us to take further steps in our research.

### Field survey

The ALS was very successful and revealed many new possible archaeological sites, including possible Roman military camps. The structures which were preliminarily identified as possible Roman military camps have a rectangular plan with several breaks in the lines that could represent entrances to the camps themselves. Although the structures look very distinct in the hillshade view visualization of the LiDAR data, they are not visible in aerial photographs. For this reason, it was necessary to conduct additional surveys at these locations to confirm our preliminary assumptions. To this end, several smaller areas were selected among those previously scanned by ALS to be investigated in the field. Thus, several field surveys aimed to confirm the potential structures were conducted in 2020. Because these areas differ in terms of terrain, vegetation, and the amount

of past agriculture practiced there, two different survey methods were used.

The first method is a systematic field survey. This is an archaeological method that aims to document the wider spatial context of archaeological surface finds, i.e. the archaeological landscape. This technique is most commonly used in areas where the surface layer of soil is readily visible, usually on farmland and in areas with sparse vegetation. The second method is based on the study of dry stone walls. It is also an archaeological method aimed at documenting a larger spatial context, but this technique is usually applied in areas that have been cultivated only in some places, which greatly reduces the visibility of the surface layer. In such landscapes characterized by numerous dry stone walls and stone heaps, this alternative method of archaeological investigation can be used. Several of the features seen on ALS data were surveyed and, for the time being, cautiously interpreted as possible Roman military fortifications and/or possible Roman military structures.

Apart from investigating features seen in the ALS data, surveys were also recording small surface finds. Surveys using any of the above-mentioned methods usually result in the discovery of at least a small number of pottery fragments and other small finds that can confirm that the location is an archaeological site. However, a part of the scanned and then surveyed landscape appeared to have been used for agriculture only to a minimal extent. Both agricultural processes and clearing stone from the fields usually result in archaeological material reaching the surface if it is present in the soil. The absence of surface finds in several locations was attributed precisely to the lack of these practices there. Most other relevant data indicated the existence of Roman military architecture on some of these sites. To confirm this theory despite the lack of surface finds, it was necessary to conduct additional research at individual sites.

At this point, after analyzing ALS data and the results of the field survey, we noticed several prominent points along the river Krka that promised a clearer idea of what might lie below the surface. The area around the river had several locations with clear rectangular structures that appeared to have characteristic entry points (fig. 1) (Tončinić *et al.* 2023). Unfortunately, many of these sites did not yet provide any material which would help in confirming the hypothesis.

### Geophysical survey

Additional research was conducted using geophysical surveying in specific locations. Geophysical surveys were carried out in early 2021 by the companies GEARH d.o.o. from Maribor and Geoarcho d.o.o. from Zagreb. The selected areas are sites where possible remains of Roman

---

1 The ALS was conducted in May 2019 by the Slovenian company Flycom d.o.o. The total area covered is about 239 km<sup>2</sup>. Riegel's data recording system was used for the scan. During the flight, two cameras on a helicopter took photos, with which a set of orthophotographs corresponding to the areas covered by ALS was created. The basic data processing was also performed by Flycom d.o.o. The result of the scanning was a DEM (Digital Elevation Model) with a resolution of 20 points per m<sup>2</sup>. This base model was previously subjected to a filtering process, and all unwanted vegetation was removed. From the base model, additional data visualizations (hillshade, skyview factor, slope, etc.) were created in QGIS and RVT (computer visualization programs). The preliminary archaeological interpretation was done by Miroslav Vuković (Department of Archaeology at the Faculty of Humanities and Social Sciences, University of Zagreb).

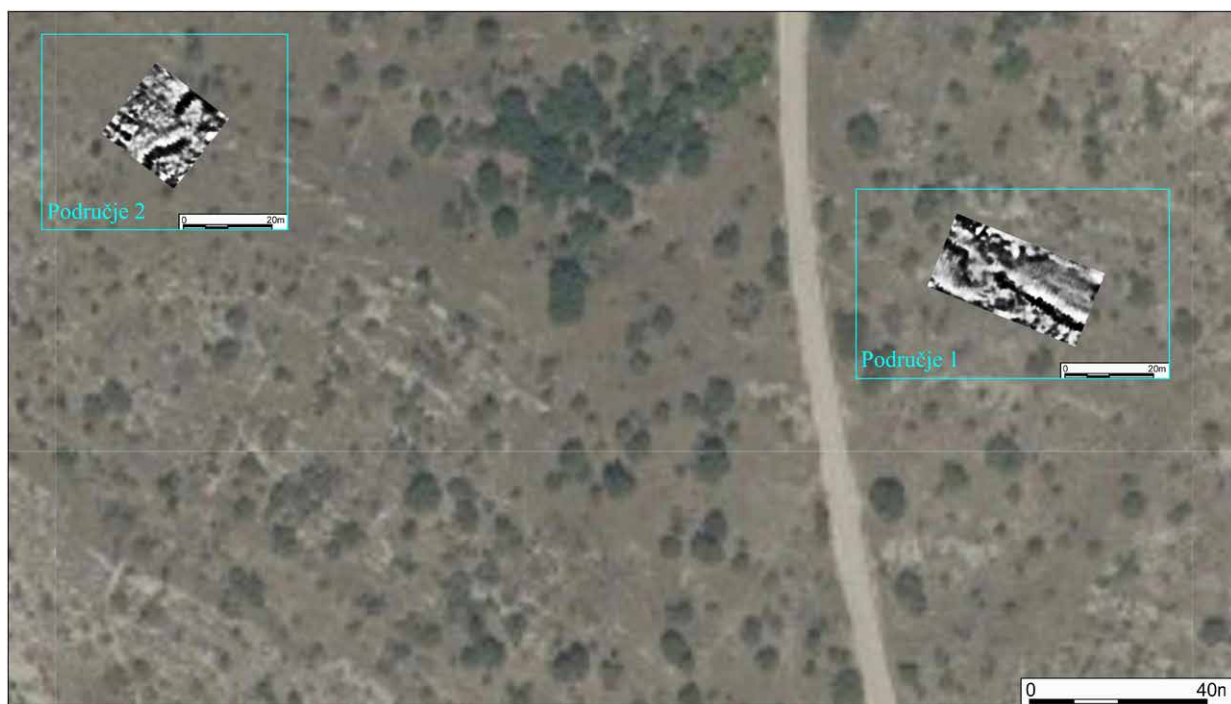


Figure 2. Area 7, Site 1, Structure 2, Detail 1 and 2. Results of geophysical surveys at Klanac. Micro-locations where geophysical surveys were conducted at the site Klanac. Both were along the route of a possible rampart of the camp.



Figure 3.  
Orthophotograph of  
trenches 1 and 2 and  
the surrounding terrain  
with clearly visible  
lines of stones on  
the rampart and the  
*clavica*-shaped gate  
(Miroslav Vuković).



military architecture were identified in earlier phases of research (fig. 2). Among them were possible Roman military camps. Geophysical surveys near the river Krka confirmed the existence of archaeological structures, which, based on analogies, were cautiously interpreted as Roman military camps. Along the river, there was a larger number of such structures. To test the theory further, archaeological excavations were prepared in two locations that seemed suitable according to the results of these surveys. Both of these locations were at the site Klanac, on the left side of the river Krka.

At Klanac, two areas were subjected to geophysical surveys. Both were along the route of a possible rampart of the camp. The magnetic contrast along the stretch of the ramparts as well as the structures at both entrances was clearly recognizable. Therefore, geophysical research also confirmed archaeological structures that were not visible in aerial photographs but were documented by ALS and confirmed by earlier field surveys. The reasons why Klanac was chosen for excavation are the very clearly expressed features of the *clavicula*-shaped gate, regular rectangular shape, and rounded corners. All these components were important in identifying this site as a Roman military camp. Also, before excavations started at Klanac, there was still no definite dating of the site. As mentioned above,

at similar sites along the river Krka, which applies also to Klanac, small finds and datable material were completely absent during field surveys.

## Excavations

Excavations showed the existence of a 5 m wide rampart without a front ditch (fig. 3). The documented rampart consists of three parallel lines of large stones built as drywalls. The stone was laid on a thin layer of red soil, or sometimes even directly on the karst rock. This karst rock, or more importantly, the lack of soil, is the most probable reason why the front ditch was not dug. The space between parallel lines of the drywall on the rampart was filled with small stones and earth. Between the inner and middle lines of the stone, the remains of pits and a small ditch were identified. These can be interpreted as palisade ditches and stake pits.

Excavations at the northern gate at Klanac proved central in answering key questions (fig. 3). The first main issue was related to the interpretation of the ALS data, which showed seemingly different styles of *clavicula*-shaped gates on several similar sites around the river (for *clavicula*-shaped gates Lenoir 1977). Some of them looked semi-circular, while others appeared to have a simple straight line that broke from the rampart at an



Figure 4. Entrance to the camp and the rampart.



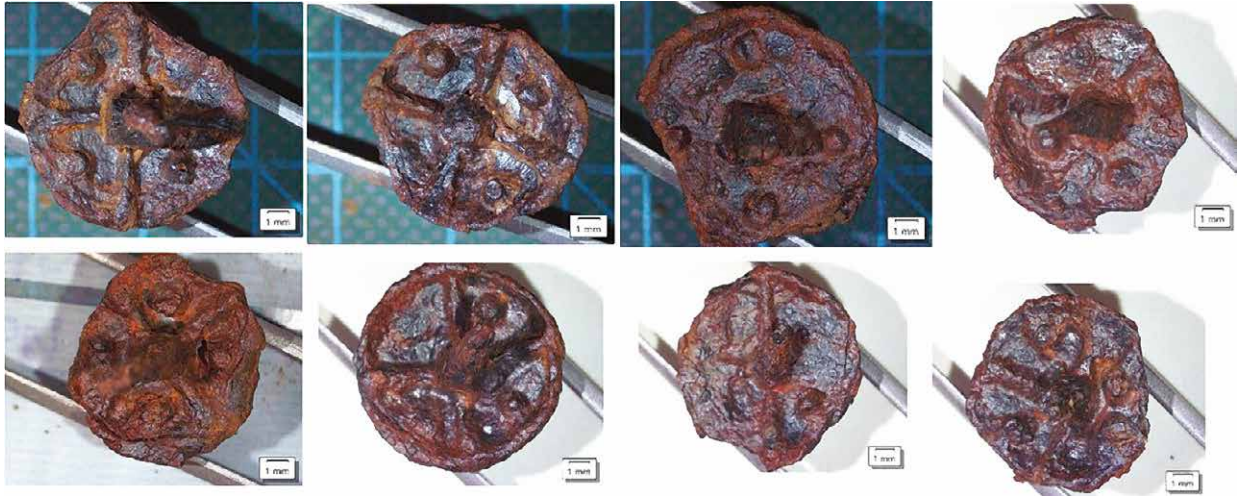


Figure 5. Examples of hobnails found at Klanac (F. Levarda).

angle. A digital terrain model derived from ALS data showed one of these latter gates in the northern part of the camp at Klanac and one of the semicircular ones in the western part of the same site. Finally, excavations at the northern gate documented a *clavicula*-shaped gate 5.5 m wide and 6.3 m long, facing inwards. Like the rampart, the gate is built of large stones stacked as drywall, but here with more carefully laid stones. In addition, the excavations showed that the finer details of features visible in ALS data, such as the curved inner line, can be lost and poorly reflected in the microtopography of the terrain as, in general, features identified in this way represent only the current ruinous state of a potential structure rather than its original appearance.

The second main issue was dating the site. This was made possible by small finds found in the same trench. The road that led through the entrance was filled with gravel from Krka (fig. 4), and several *caligae* hobnails were found directly on the surface of this gravel. Apart from two hobnails without a pattern and with a diameter of less than 1.5 cm, they are mostly nails of the Alesia D type with a diameter of 1.8 to 2.0 cm, and one example is of the Alesia B type with a diameter of 1.8 cm (fig. 5). A *fibula* of the Alesia type, group 4, variant 6a (according to H. Meller's typology) was also found in the same area (for hobnails: Brouquier-Reddé & Deyber 2001; for *fibulae*: Meller 2012). The samples needed for <sup>14</sup>C analysis were also taken at the ditch and pits on the rampart, but the analysis is still ongoing. Therefore, although the initial field survey of the terrain at this site did not identify any material that would indicate its dating or even the existence of the site, material from the excavations dates this site to the late Republican

era. This research has also confirmed the existence of defensive ramparts and gates of a Roman military camp, which can be interpreted as a Roman temporary camp. Comparing the various data sets obtained during our research of the area, it seems that Klanac is the best-preserved site of this type in the area.

## Conclusion

Investigations at the Klanac location were carried out as part of the project "Understanding Roman Borders. The Case of the Eastern Adriatic" (AdriaRom), which aimed to investigate archaeological remains of Roman military camps in the Dalmatian hinterland. The research was conducted to determine whether the position of camps indicated a plan to form a defensive military border in the area, which has been hypothesized in the scientific literature for a long time, and how it should be dated. The camp at Klanac is only one out of numerous possible Roman military camps which were documented by ALS and then verified by other methods. However, at the moment, Klanac is the only such site where archaeological excavations took place. Although these excavations are not concluded, small finds from the site (hobnails and *fibulae*) can provide a preliminary dating of the camp between the Octavian's Illyrian war (35-33 BC) and the Illyrian Uprising (AD 6-9).

## Acknowledgement

This work was funded by the Croatian Science Foundation through the research project "Understanding Roman Borders. The Case of the Eastern Adriatic" (IP-2018-01-4934).

## Bibliography

- Bojanovski, I., 1974: *Dolabelin sistem cesta u rimskoj provinciji Dalmaciji*, Sarajevo (Akademija nauka i umjetnosti Bosne i Hercegovine 47).
- Brouquier-Reddé, V. & A. Deyber, 2001: Fourniment, harnachement, quincaillerie, objets divers, in: M. Reddé & S. von Schnurbein (eds), *Alésia 2. Le matériel*, Paris (Mémoires de l'Académie des inscriptions et belles-lettres 22), 293-362.
- Cambi, N., M. Glavičić, D. Maršić, Ž. Miletić & J. Zaninović, 2007: *Rimska vojska u Burnumu / L'esercito romano a Burnum*, Drniš/Šibenik/Zadar.
- Džino, D. & A. Dumić Kunić, 2013: *Rimski ratovi u Iliriku*, Zagreb.
- Lenoir, M., 1977: Lager mit claviculae, *Mélanges de l'École française de Rome* 89/2, 697-722.
- Matijašić, R., 2009: *Povijest hrvatskih zemalja u antici do cara Dioklecijana*, Zagreb.
- Meller, H., 2012: *Die Fibeln aus dem Reitia-Heiligtum von Este II (Ausgrabungen 1880-1916). Studien zu den Spätlateneneformen / Le fibule del santuario di Reitia a Este (scavi 1880-1916). Studi sulle forme tardo-lateniane*, Mainz am Rhein.
- Miletić, Ž., 1993: Rimske ceste između Jadera. Burnuma i Salone, *Radovi Filozofskog fakulteta u Zadru* 32/19, Zadar, 117-150.
- Miletić, Ž., 2006: Roman roads along the Eastern coast. State of research, in: S. Čače, A. Kurilić & F. Tassaux (eds), *Les routes de l'Adriatique antique. Géographie et économie*, Bordeaux/Zadar, 125-136.
- Patsch, C., 1922: *Historische Wanderungen im Karst und an der Adria I. Die Herzegowina einst und jetzt*, Wien.
- Pejnović, D., 2002: Istra, Južno hrvatsko Primorje-Dalmacija, in: I. Borovac (ed.), *Veliki atlas Hrvatske*, Zagreb, 301-335.
- Periša, D., 2008: Je li delmatsko područje presjekao rimski limes?, *Archaeologia Adriatica* 2, 507-517.
- Radić Rossi, I., 2017: Proučavanje promjena morske razine na arheološkim nalazištima u priobalju / The study of sea-level changes at coastal archaeological sites, *Vjesnik za arheologiju i historiju dalmatinsku* 110/2, 549-576.
- Sanader, M., 2002: Tilurium, Burnum and Bigeste. A new contribution to the dating of the Delmataen limes, in: Ph. Freeman, J. Bennet, Z.T. Fiema & B. Hoffmann (eds), *Limes XVIII. Proceedings of the XVIII<sup>th</sup> International Congress of Roman Frontier Studies Held in Amman, Jordan, 02.-11. 09. 2000*, Oxford (British Archaeological Reports International Series 1084), 713-718.
- Sanader, M., 2003: *Tilurium I. Istraživanja / Forschungen 1997-2001*, Zagreb.
- Sanader, M., 2009: *Dalmatia. Eine römische Provinz an der Adria*, Mainz.
- Sanader, M., 2016: The veteran's colony Aequum, the legionary fortress Tilurium and the Sinj Field. Re-examining old problems, *Nova antička Duklja* 7, 39-54.
- Sanader, M. & D. Tončinić, 2010: Gardun, antički Tilurium / Gardun, the ancient Tilurium, in: I. Radman-Livaja (ed.): *Nalazi rimske vojne opreme u Hrvatskoj / The finds of the Roman military equipment in Croatia*, Zagreb, 33-53.
- Sanader M., D. Tončinić, Z. Buljević, S. Ivčević & T. Šeparović, 2014: *Tilurium 3. Istraživanja 2002.-2006. godine*, Zagreb (Dissertationes et Monographiae 6).
- Sanader, M., D. Tončinić, Z. Šimić-Kanaet, Z. Buljević, S. Ivčević, T. Šeparović & I. Miloglav, 2017: *Tilurium 4. Istraživanja 2007.-2010. godine*, Zagreb (Dissertationes et Monographiae 8).
- Šašel, J., 1974: Die Limes-Entwicklung in Illyricum, in: D. M. Pippidi (ed.), *Actes IX<sup>e</sup> Congrès International d'Etudes sur les Frontières Romaines, Mamaia, 6-13 septembre 1972*, Bucuresti/Köln, 194-199.
- Šimić-Kanaet, Z., 2010: *Tilurium 2. Keramika. Istraživanja 2001.-2006.*, Zagreb (Dissertationes et Monographiae 5).
- Tončinić, D., 2013: 22. međunarodni kongres o limesu (The XXII<sup>th</sup> International Limes – Roman Frontiers – Congress Ruse, Bugarska 6.-11. rujna 2012), *Obavijesti. Hrvatsko arheološko društvo XLV*, Zagreb, 91-98.
- Tončinić, D., I. Kaić, J. Zaninović, M. Vuković, D. Bužanić & M. Sanader, 2023: *Results of LiDAR scanning and archaeological survey of the selected areas between the rivers Krka and Cetina from 2019 to 2021*, Ljubljana, 147-159.
- Wilkes, J.J., 1969, *Dalmatia*, Cambridge.
- Wilkes, J.J., 1977: Augustan Limes in Illyricum?, in: D. Haupt & H. G.Horn (ed.), *Studien zu den Militärgrenzen Roms II. Vorträge des 10. Internationalen Limeskongresses in der Germania inferior*, Köln (Beihefte der Bonner Jahrbücher 38), 245-246.
- Zaninović, M., 1996: Rimska vojska u razvitku antike na našoj obali, in: M. Zaninović (ed.), *Od Helena do Hrvata*, Zagreb, 209-220.
- Zaninović, M., 2015: *Iliski ratovi*, Zagreb.

PART 3

**FORTRESSES  
AND MILITARY  
INSTALLATIONS**

STATE OF RESEARCH



# The Roman fortress of *Mogontiacum*/Mainz

Revised data of the defensive works and  
their chronology

Daniel Burger-Völlmecke

The Roman military site at Mainz is one of the most important and longest-occupied of the military stations on the Rhine. The strategic location on a plateau opposite the mouth of the Main was first used for the construction of a *castra hiberna* during the campaigns of Drusus. The plateau lies about 40 m above the Rhine and is divided by a deep valley, so that the camp area was protected on three sides by steep slopes (fig. 1).

## An unknown earlier fortress

The most important result of the research summarised here is proof of the existence of a previously unknown predecessor camp (timber-earth-camp 1) with a maximum size of 34 ha, differing from the known 36-37 ha camp. Although the defences for this camp could be identified for the first time on all four sides, the known sections cannot be connected to form a whole at present (fig. 2). As such, no exact calculation of the actual size of the camp is possible.

The findings show that the first defensive system was a classic earth and timber construction with parallel post ditches placed at 2.5-3.5 m intervals. A *fossa fastigata* up to 4 m deep and 7 m wide could be identified in front of the defences (ditch I). A head of the ditch has been identified on the north side of the camp. At this point, the *porta praetoria* of the early camp can be assumed. However, the gate itself diverges from the position of the *porta praetoria* of the later stone fortress by about 65 m and is located further south (fig. 2). In addition, remains of air-dried mudbricks found in the fill of the defensive ditch at the northwest side indicate a mudbrick construction of the parapet, which was the first to fall into the ditch during the demolition process of the timber-earth-wall (Trumm & Flück 2013, 113-117).

Immediately behind the defences, the *intervallum* seems to have included an c. 10 m wide zone with functional installations in the form of material and storage pits of up to 2.5 m depth as well as ovens and furnaces with various functions, which have been identified in all trenches to date. The fill levels produced material dating to the Augustan period, including the latest sigillata from Italian potteries. There are no sigillata vessels from southern Gaul. The same result can be seen with the material from the backfilling of the ditch. The fill of the V-shaped ditch shows an identical assemblage, including jugs of the Friedberg 25C type (Rasbach 2015, 246-247). As such, this could be an argument for an

**Daniel Burger-Völlmecke**  
Stiftung Stadtmuseum  
Wiesbaden – Foundation of  
City Museum Wiesbaden,  
Bierstadter Straße 1,  
65189 Wiesbaden, d.burger@  
stadtmuseum-wiesbaden.de

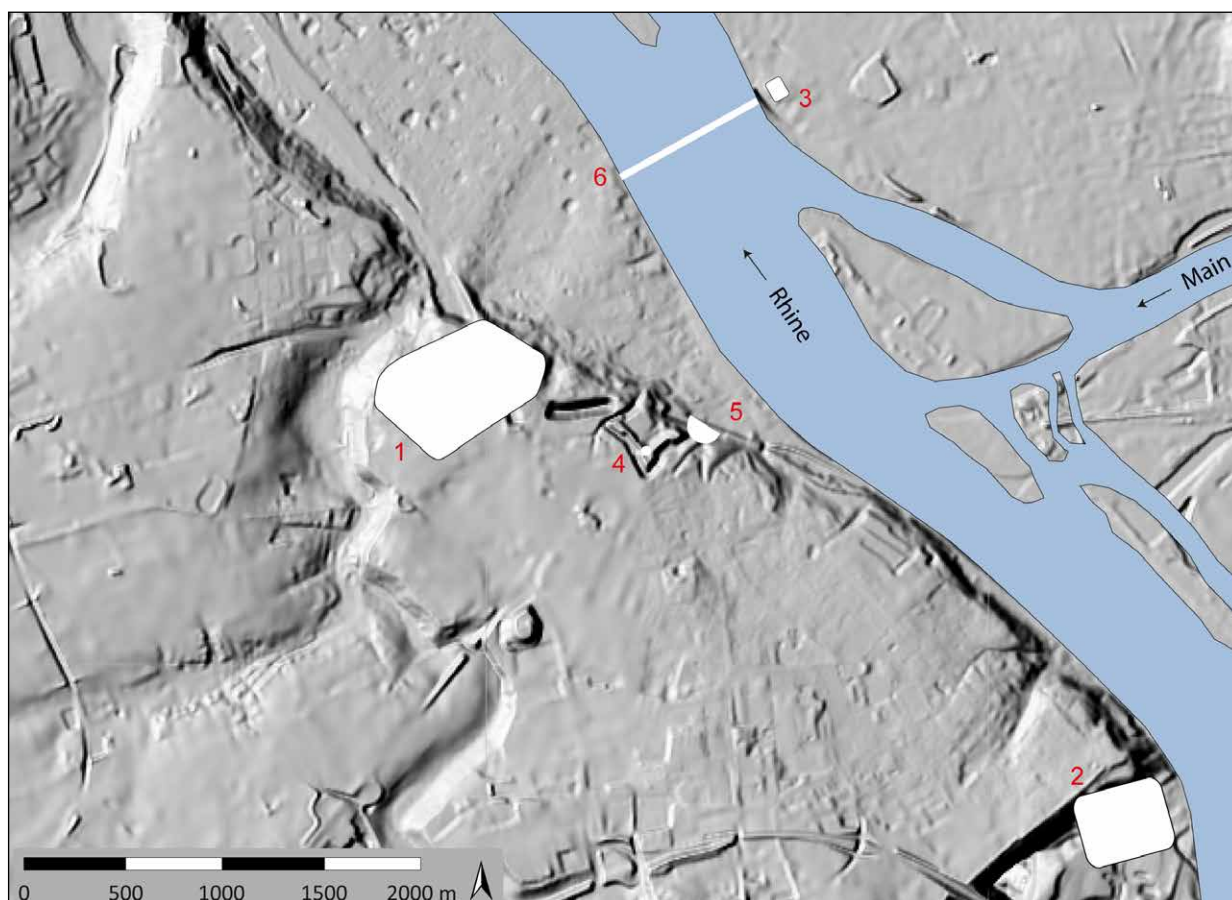


Figure 1. Ancient topography of the Main estuary in front of the background of a digital terrain model with reconstructed course of the Rhine in Roman time. 1. Fortress; 2. Fort of Mainz-Weisenau; 3. *Castellum Mattiacorum* (Mainz-Kastel); 4. 'Drususstein', believed to be a cenotaph for Drusus; 5. Roman Theatre; 6. Roman Rhine Bridge (based on Jung & Kappesser 2007, 40, fig. 1).

abandonment of this set of defences in the late Augustan / early Tiberian period.

These new results indicating the existence of a smaller predecessor fortification that was in use up to the late Augustan / Early Tiberian period inevitably cast doubt on the previous assumption that the two legions *XIV Gemina* and *XVI Gallica* were based at Mainz from the very outset of the military site around 13/12 BC (Ritterling 1924/1925, 1727-1736 and 1761-1764; Witteyer 2006, 324). Only with the enlargement of the camp in the late Augustan / early Tiberian period (see below) can we propose a first permanent stationing of two legions. This event is most plausible to assume under the restructuring of the Rhine border carried out by Emperor Tiberius in 17 AD, after he withdrew Germanicus from *Germania*. This is supported by the fact that it was only now that the Emperor Tiberius abandoned the offensive pursued under Augustus in favour of a defensive policy along the Rhine. The establishment of permanent bases along the Rhine with long-term garrisons underlines the break with the supposedly failed strategy of the predecessor Augustus. In this context, the Augustan

settlement of Lahnau-Waldgirmes on the right bank of the Rhine was also abandoned (Becker 2015, 70-72). This revised chronology of the early phases at Mainz corresponds with data from several other military stations that were founded in the Tiberian period (August, Zurzach, Konstanz, *Vindonissa*, *Argentorate*) and through which the Rhine was developed into a defensive military axis (Wiegels 2017, 53; 57).

### The large fortress of Mainz. Earth and timber construction phases 2-3

The expansion of the fortress was achieved by advancing the western and northern defences. For this purpose, the earth and timber fortification was laid down and the area was levelled with the earth material from the walls. Subsequently, a new fortification of the same construction was erected about 30 m further forwards (fig. 5). The south-eastern front and the praetorian front appear to have remained unchanged. There is no evidence for a defensive ditch belonging to the earth and timber phase 2 in any of the trenches. Possibly, it was removed by the later ditch sequences. It was nonetheless included in the ditch



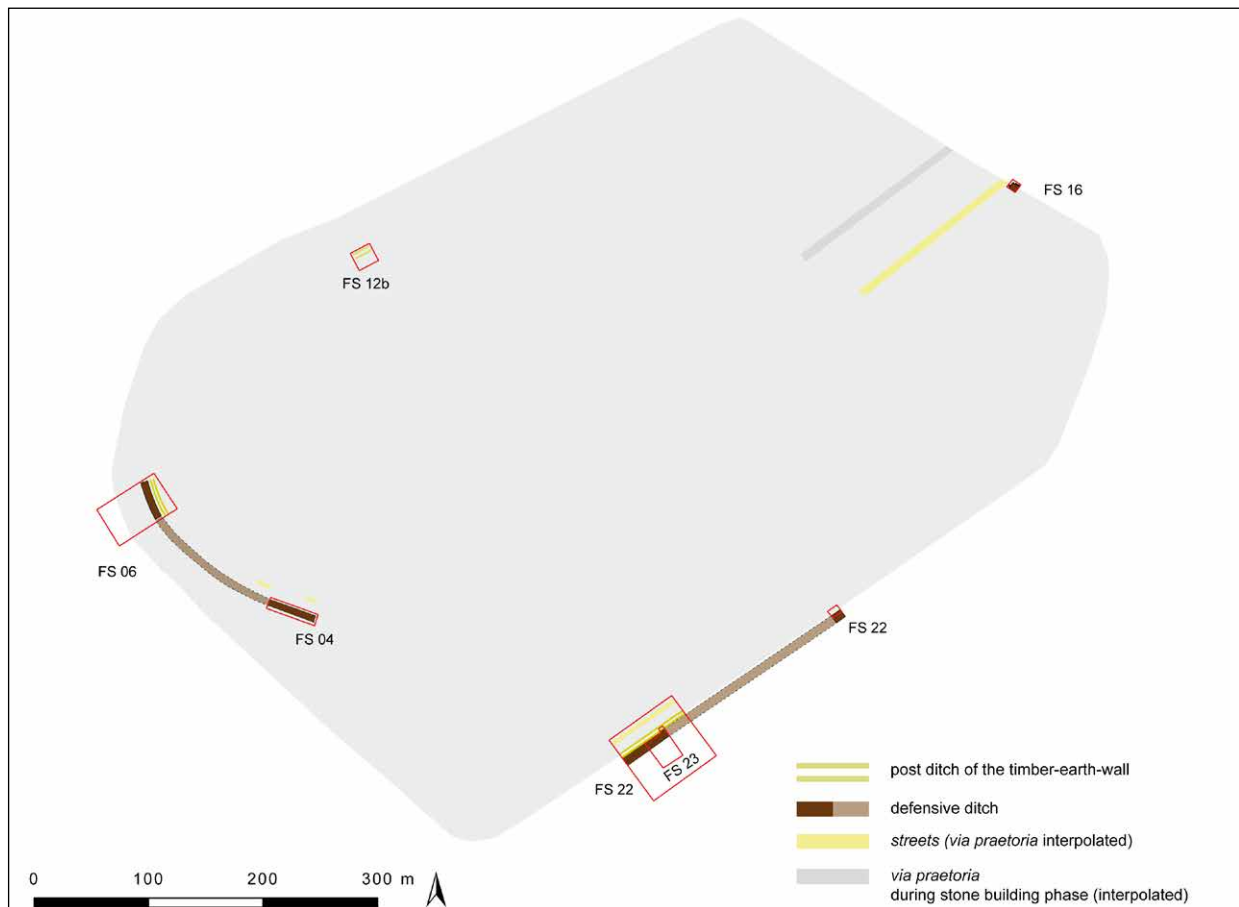


Figure 2. Overview of find sites (FS) with evidence of timber building phase 1 in front of the ground plan of the stone fortress. The courses of the main roads of the Augustan and the later stone fortress have been interpolated for better orientation.

typology (fig. 5, ditch II), as no defensive systems of fortress without a defensive ditch are known to the author.

In timber construction phase 3, a V-shaped ditch was constructed (ditch III) 25 m in front of the defence wall (fig. 3). It presumably served as an additional obstacle for any approach towards the presumed ditch II, which does not survive in the archaeological record. Ditch III cuts several pits, which had characterised the immediate apron of the fortress previously and which were filled in shortly before construction of the ditch. Coins from the upper backfill layers of these pits date to the reign of Claudius. They mark a *terminus post quem* of AD 41 for the construction of ditch III. These actions were accompanied by the construction of a perimeter road, also covering pits of the Claudian period. At the same time, the road towards the suburb of Mainz-Weisenau, where only isolated tombs and burials have been identified for previous periods, was extended into a representative roadside necropolis. This extensive infrastructural development of Mainz at that time was presumably caused by the development of the fortress, which had direct influence onto its surroundings

as the formative power-centre of the region. The legions *IV Macedonica* and *XXII Primigenia* are likely to have carried out this work, as they moved to the Mainz fortress from AD 43 onwards as part of the troop movements for the British campaign of Claudius (Ritterling 1924/1925, 1249-1250 and 1551-1552).

### Turning the earth and timber fortress into stone. Stone phase 1

The end of the earth and timber fortress is marked by the fill of the defensive ditch III, which closely links this event with the rebuilding of the defences in stone. The stone fortification wall has been identified in different stages of preservation on all four sides of the fortress (fig. 4). On all sides bar the northern front, the wall was almost totally removed, including its foundations, during construction of the second set of city walls of Mainz. Here it can only be identified as a negative robber-, or rather removal-trench, or in the lowest courses of foundations (fig. 3). Along the northern defences, a part of the stone fortification standing to a level of 1 m was documented. Here, the wall was

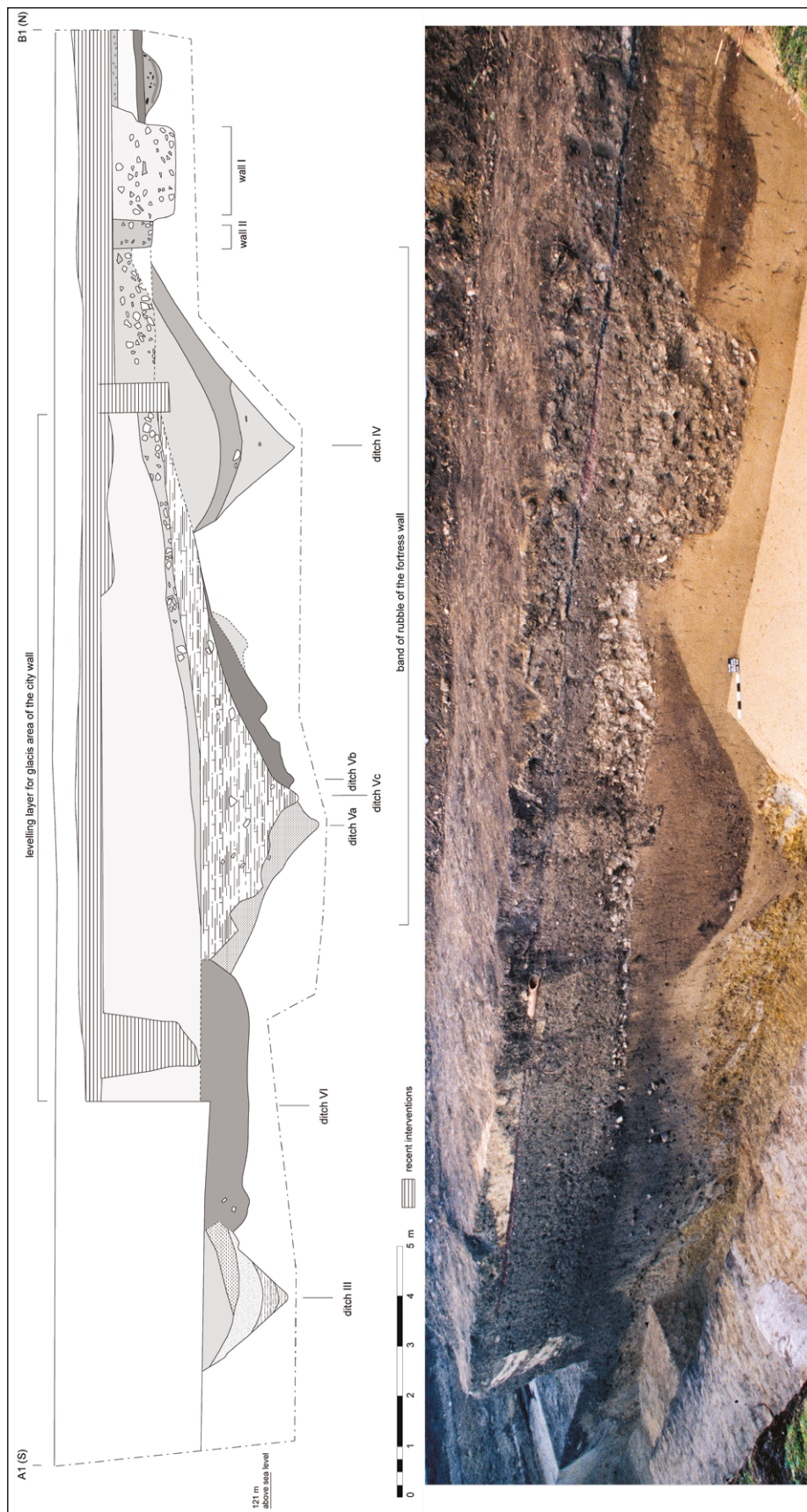


Figure 3. Section through the defences near the southern fortress corner. Ditch I was not provable at this site (GDKE, Landesarchäologie Mainz).

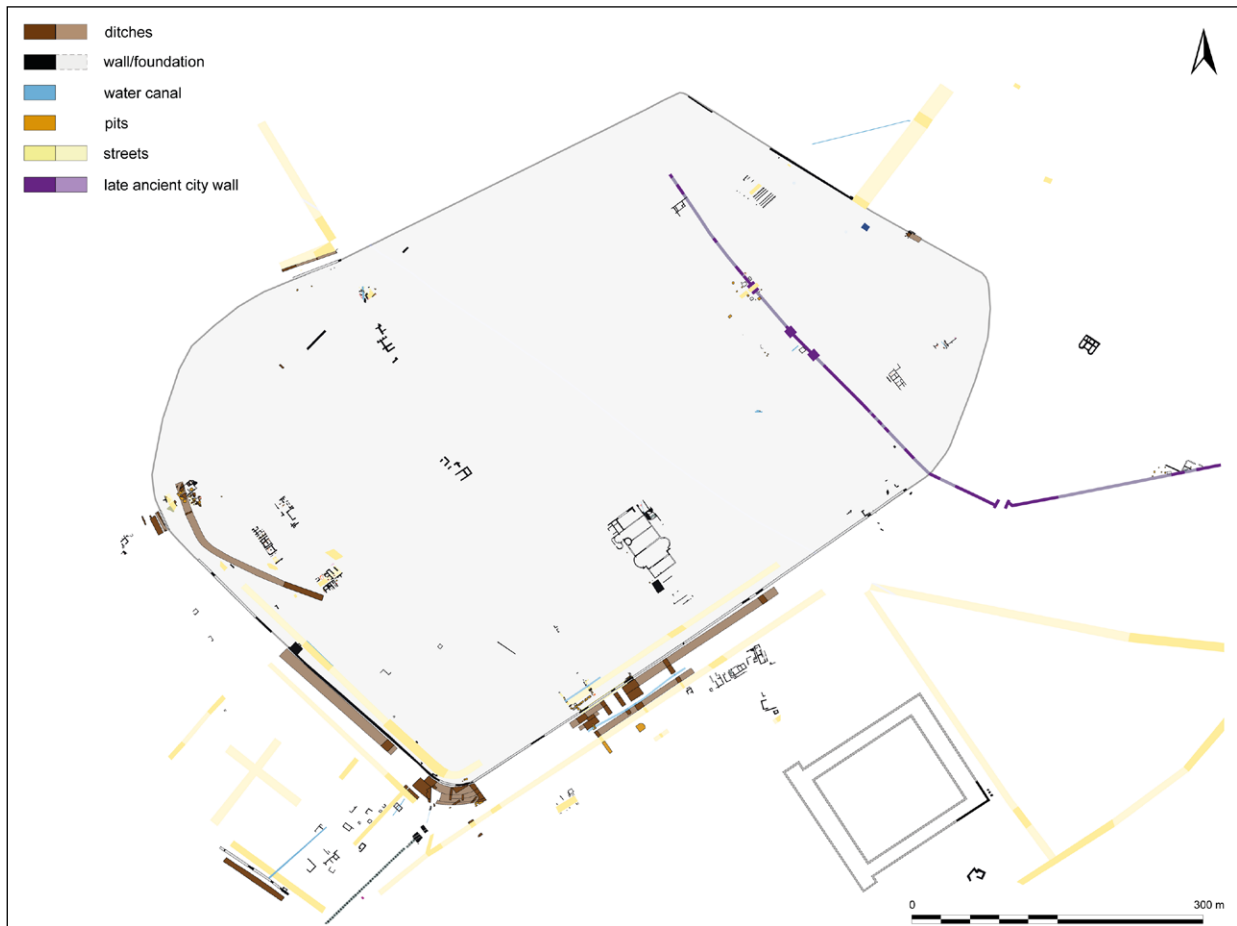


Figure 4. Current overall plan of the archaeological remains of the fortress of Mainz.

placed on the crest of the slope and overlies early imperial levelling and rubble layers. In contrast to the other sides of the fortress, no foundation trench could be identified in this area. The foundations of this wall measured 2.3 m across and contained little mortars. In terms of width, it was therefore significantly more substantial than the fortification wall on the other sides of the fortress. A 6.5 m wide defensive ditch, which could be traced to a depth of 2.7 m and has been termed ditch IV, was placed in front of the stone fortification (fig. 3 and 5). The northern defence wall did not have a fortification ditch at any time because of the edge of the slope.

For the dating of the stone construction, 21 masons marks by *Legio I Adiutrix* are known from crenelation stones of the stone wall. This legion was stationed in Mainz after the Batavian Revolt from AD 70 onwards, together with *Legio XIV Gemina Martia Victrix*. These masons mark, however, do not necessarily have a direct relationship to the construction process but merely show that the legion was involved in quarrying the stone used for the fortification walls (Büsing 1982, 96; Baatz 1986, 869). More recent

excavations have produced two coins from the fill of the last ditch of the timber fortress (ditch III) that date to AD 71/79. These show significant traces of wear and therefore suggest that the ditch was filled in only after the reign of Vespasian. If this is accepted, it would redate the stone phase of the fortification walls of the fortress at Mainz to the reign of Domitian and not under emperor Vespasian as previously assumed (Baatz 1962, 75). This would lead to new limitations in terms of interpretations: in view of Domitian's major campaign against the *Chatti* in AD 84/85 (Strobel 1987) it seems unlikely that a large-scale project such as the rebuilding of a fortress in stone was undertaken in the direct run-up or during such a major military undertaking. As such, construction of the stone fortifications would most likely have occurred only after completion of this campaign. This would furthermore provide a clear and prestigious final milestone to mark the end of military action, which Domitian is known to have staged in propaganda terms as a final act in the conflict in Germany that led to the resolution of problems and hostilities. The construction of stone walls for the Mainz fortress, which had played a major role

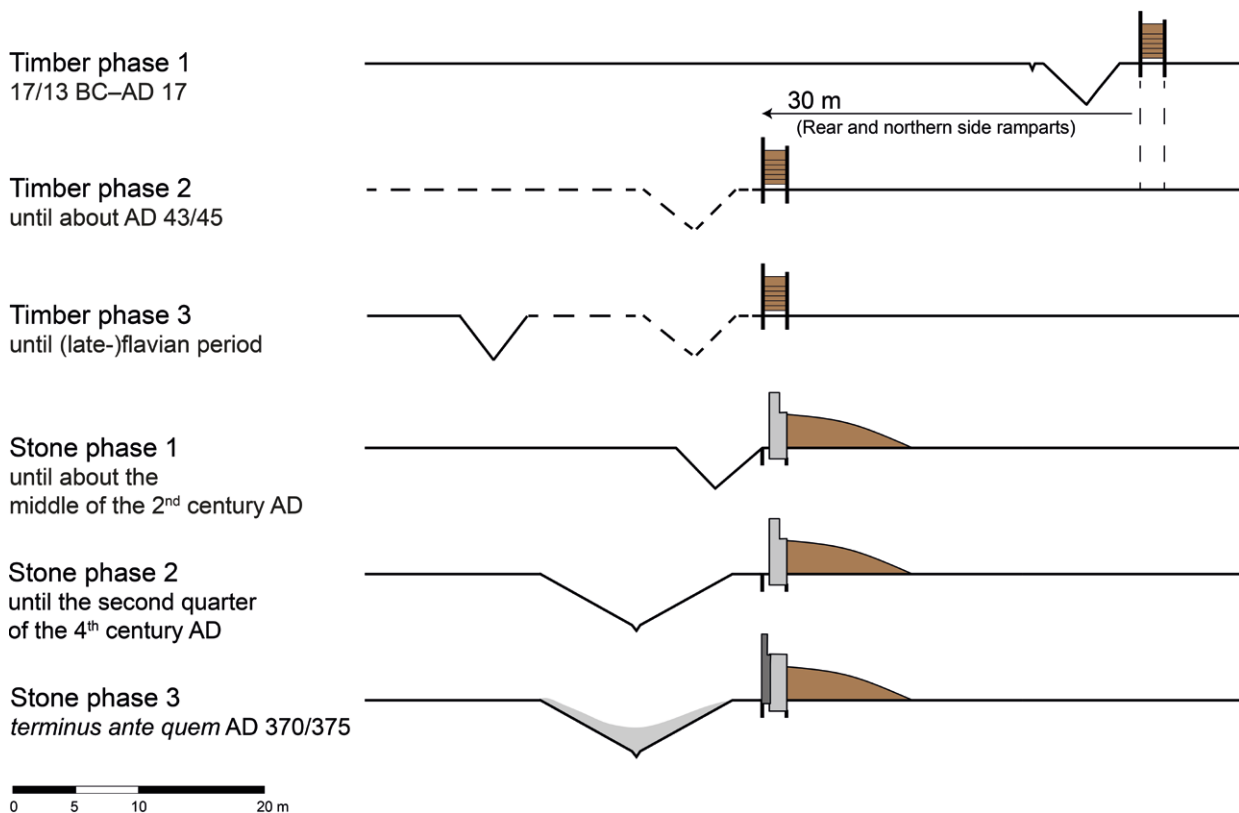


Figure 5. Summary of building phases based on archaeological data from the north-western corner of the fortress.

throughout the 1<sup>st</sup> century AD, would have had significant symbolic force within the wider context of Domitianic propaganda and would have marked the formal creation of a new province (Strobel 1987, 423-452).

As outline above, the mason marks on the covering slabs for the walls show that Legion I was involved in the production of these building materials. It does not necessitate that this unit was directly involved in the actual building process. This in turn means that the withdrawal of the legion from Mainz in AD 86 does not represent a *terminus ante quem* for construction of the stone wall, as it is entirely possible that *Legio XIV Gemina Martia Victrix*, which remained stationed at Mainz until AD 97 (Strobel 1988, 437-453), carried out or completed the building works.

As such, the above considerations allow the following conclusion: construction of the first set of stone defences of the Mainz fortress occurred while both legions, *I Adiutrix* (AD 70-86) and *XIV Gemina Martia Victrix* (AD 70-97) were stationed there. Whether it occurred during the reign of Vespasian, as suggested by D. Baatz on the basis of the data available at that time, or only under Domitian, as suggested by the two worn Vespasian coins from the ditch III, cannot be said with certainty. Both interpretations rest on series of indications that

need to be tried and tested in future. Should this confirm construction under Domitian, this is more likely to have occurred after the campaigns against the *Chatti*, rather than earlier.

### Stone phases 2-3

The subsequent stone phase 2 of the Mainz fortress is defined solely on the basis of evidence for the creation of a new defensive ditch which, in itself, was modified repeatedly (ditch Va-c, fig. 3 and 5). In D. Baatz' (1962, 24) sequence, this ditch identified as late Tiberian due to an absence of finds. Material from more recent excavations, however, including sigillata plates of Dragendorff 31 and 32 types and a tile stamped by *Legio XXII Primigenia Pia Fidelis* (of the Stockstadt group variant), date the ditch to the middle of the 2<sup>nd</sup> century or the latter half of that century at the very latest. This new evidence completely changes our understanding of the subsequent ditch sequences. They are evidently not, as has been assumed to date, new phases of ditches in their own right that accompany rebuilding processes of the fortification walls, but should rather be understood as repeated changes to the sloping sides of the ditch, or even cleaning or repair works – as is commonly found at other forts and fortresses that were occupied for extended periods of time (Jones 1975,

108). The latest ditch Vc suggests that the defensive ditches were up to 14 m wide and up to 4 m deep (fig. 3). There is nothing to indicate that the creation of ditch Va-c was accompanied by any major building processes or modifications to the stone defensive wall of the fortress. Ditch Vc appears to have remained in use until the second quarter of the 4<sup>th</sup> century AD. Afterwards, a 0.5 m wide wall was placed directly in front of the earlier stone fortification wall (fig. 3 and 5). This new feature has been identified along all sides of the fortress but the praetorial front. Similar ways of strengthening existing fortification walls have been identified at several other military installations along the Rhine. H.-U. Nuber has previously pointed out this phenomenon and identified it as a modification typical for the Constantinian period (Nuber 2011, 79-101). U-shaped ditch VI can possibly be assigned to this phase (fig. 3). However, it was only found at the southern corner of the fortress. In other places, ditch Vc was filled in like a dell and possibly had the function of a U-shaped ditch (fig. 5).

Overall, interpretation of the late Roman fortifications of Mainz is highly complex and somewhat problematic, particularly so as they seem to present apparent contradictions when compared to the known structures and find assemblages from the interior of the fortress. In the *praetentura* the city wall, which must have been built by AD 375 at the latest, covers several cellars that are filled with redeposited burnt material including coins from AD 353. A. Heising has argued that these should be seen as the remains of a major fire related to the Germanic incursions of AD 355 (Heising 2008, 36-41, 43-49, 182-183 and 194, note 818).

For the *retentura* of the stone fortress, on the other hand, the situation appears entirely different. Today, only one pit from the excavations of D. Baatz has produced numismatic evidence dating to the 4<sup>th</sup> century. The coins in question produce a *terminus post quem* of AD 317-325 for the fill of the pit (Baatz 1962, 29-30). None of the excavations in the area of the fortifications, nor those in the interior of the fortress, have provided any finds dating to the 4<sup>th</sup> century. In the rear part of the fortress, the modern fortifications are deeply set into late Roman layers. Often this means that levels of the 3<sup>rd</sup> and 4<sup>th</sup> century have been disturbed or are no longer preserved. Nonetheless any late Roman occupation should be identifiable through pits or cellars or at least a spectrum of late Roman finds (friendly note U. Müller<sup>3</sup>). Not one of these is the case, however, begging the question whether the Mainz fortress was even fully garrisoned and the entire area in use during the 4<sup>th</sup> century. The latest epigraphic reference to *Legio XXI* from Mainz dates to AD 342 (Ritterling 1924/1925, 1805; Baatz 1962, 78; Heising 2008, 196), after which it was engaged in the civil wars between Constantius II. and Magnentius in 351-355, most probably not surviving the Battle of Mursa in AD 351.

There are some indicators, however, that not all of the legion was involved in these conflicts and some parts of it remained in its main base at Mainz (Heising 2008, 197-198). Such a scenario tallies well with the internal structures discussed above.

The outlined situation stands in stark contrast to the modification and strengthening of the fortifications that can be observed along the entire known course of the wall. The current state of knowledge in no way indicates a reduction in size of the Mainz fortress. This leads to the hypothesis, that the fortress may have been used only in its *praetentura* part for much of the 4<sup>th</sup> century, while the *retentura* remained part of the fortified area, but largely unused. The evident strengthening of the fortifications itself may be an indication that a full occupation of the fortress was intended, but ultimately not realised. In this context it is important to note the following: as a result of the state of preservation of levels, the 4<sup>th</sup> century work on the fortification walls has been identified only in the foundation levels of the walls. As such, it is not clear whether the project was actually completed. In view of the apparent only partial occupation and use of the Mainz fortress in late Antiquity, an initiated but never completed project to strengthen the fortifications walls seems a plausible scenario.

## The end of the Mainz fortress

The date for abandonment of the fortress at Mainz is defined to an extent by the second city wall. It cuts across the *praetentura*, following the strategically important 120 m contour line, from AD 369/370-375 onwards at the latest. As such, it provides a *terminus ante quem* for the end of at least the part of the fortress outside of it. *Spolia* built into the foundations of the city wall include reused parts and stones from levelled buildings of the fortress (Heising 2008, 202-203), an observation that is supported further by the archaeological features related to the fortifications. Apart from the northern wall of the fortress, the course of the stone fortification is generally only visible in negative as a stone-robbing trench, sometimes including isolated levels of the foundation (fig. 3). In all sections, the levelled fortress walls have left a band of rubble that runs across the backfilled defensive ditch Vc (fig. 3). This level is formed from the smaller pieces of the core of the wall, it appears that all stones and ashlar that were still of use were gathered and taken elsewhere – and presumably reused for construction of the city wall. All finds from this level are Roman, and it is covered by a substantial levelling layer that is up to 2 m deep in places, which also included only Roman finds. As such, it is clear that the levelling of the fortification walls must have occurred in the Roman period. The sheer scale of this building project is best indicated by a massive pit identified near the



south-eastern fortifications. In section, it becomes clear that it has cut across the entirety of defensive ditch Vc – which was 14 m wide and 4 m deep, as stated above. Such extensive levelling works were required in order to prepare the terrain outside of the city wall for use as a glacis and to ensure that no structural or similar remains survived which could have been used as cover by an enemy.

As part of the reorganisation of the Rhine Frontier under Valentinian I, the *milites armigeri* were transferred to Mainz around AD 368 (Scharf 2005, 257). It seems likely that the abandonment of the fortress, the dissolution of all remaining parts of *Legio XXII Primigenia*, and the reduction of the city walls were all caused by a decree or central decision related to the restructuring of the Rhine frontier by Valentinian I (Heising 2008, 201). It has been argued repeatedly that the new late Roman *limitanei* unit would have been based in a specially prepared 1-2 ha sized area on the slope, just below the praetorial front of the former fortress. This area produced tiles stamped by *limitanei* units that postdate AD 369 (Batz 1962, 79, note 170; Witteyer 1998, 1052). A. Heising (2008, 203 fig. 41) has rightly pointed out that the unit could have had its base anywhere in the area of the former fortress between the new city wall and the former praetorial front – an area of c. 6 ha. Following this model, the earlier wall along the praetorial front could have remained in use, which would have created a military zone that was clearly divided from the civilian city. In view of the economic advantages in terms of time and building material and activity saved, this seems an attractive model. However, it would require a re-evaluation of the reconstruction by H. Büsing (1982, 72-73, no. C49-52, 54-55, 46-49, fig. 36), who proposed that some of *spolia* built into the new city walls originated from the former *porta praetoria* of the fortress. Unfortunately, the area between the former praetorial front of the fortress and the late Roman city wall has been disturbed and destroyed by post-antique use to an extent that no major new discoveries that could shed light on this issue can be expected in future.

## Summary

New research on the defensive works of the fortress of Mainz revealed a previously unknown and smaller predecessor camp of timber-earth technique, which was probably erected around 17 BC. Until 17 AD the corresponding garrison is still unknown. With the enlargement of the camp area in 17 AD the stationing of the legions *XIV Gemina* and *XVI Gallica* is probable. Altogether, there are three construction phases defined for the timber-earth fortress. The extension of the fortification wall in stone at a later date is probably supported by new finds. In the historical context, the extension could have taken place after the *Chatti* campaigns in AD 84/85. There is also proof for three construction phases during the

stone fortification. In the second quarter of the 4<sup>th</sup> century, a 0.5 m wide wall was placed directly in front of the earlier stone fortification wall. At the time of the construction of the second city wall of Mainz, the fortress was abandoned and levelled *terminus ante quem* in 370/375 AD.

## Acknowledgement

The article presents a summary of my PhD thesis, which was submitted in July 2017 under the supervision of Prof. A. Heising at the Department for Provincial Roman Archaeology of the Albert-Ludwigs-University of Freiburg (Burger-Völlmecke 2020). The find material and the excavation documentation were kindly made available to me by the GDKE Rhineland-Palatinate, State Archaeology Mainz (M. Witteyer and J. Dolata). Special thanks to Christoph Rummel for his help with the English translation.

## Bibliography

- Batz, D., 1962: *Mogontiacum. Neue Untersuchungen am römischen Legionslager in Mainz*, Berlin (Limesforschungen 4).
- Batz, D., 1986: Review of H. Büsing, *Römische Militärarchitektur in Mainz*, *Bonner Jahrbücher* 186, 869.
- Becker, A., 2015: *Die archäologische Ausgrabung*, in: A. Becker & G. Rasbach (eds), *Waldgirmes. Die Ausgrabungen in der spätaugusteischen Siedlung von Lahnau-Waldgirmes (1993-2009). 1 Befunde und Funde*, Darmstadt (Römisch-Germanische-Forschungen 71) 29-107.
- Burger-Völlmecke, D., 2020: *Mogontiacum II. Topographie und Umwehrung des römischen Legionslagers von Mainz*, Berlin (Limesforschungen 31).
- Büsing, H., 1982: *Römische Militärarchitektur in Mainz*, Mainz (Römisch-Germanische-Forschungen 40).
- Heising, A., 2014: Die militärischen Werkstätten (*fabricae*) des Legionslagers von Mogontiacum/Mainz, in: F. Kemmers & B. Rabe (eds), *Lege artis. Festschrift für Hans-Markus von Kaenel*, Bonn (Frankfurter Archäologische Schriften 25), 21-38.
- Jones, M.J., 1975: *Roman fort defences to AD 117*, Oxford (British Archaeological Reports British Series 21).
- Jung, P. & I. Kappesser, 2007: Die Bearbeitung raumbezogener Informationen mit den tabulae MoGontiacenseS (MoGIS) und das römische Mainz in der Spätantike, *Mainzer Zeitschrift* 102, 33-51.
- Nuber, H.U., 2011: Archäologische Zeugnisse des Wandels in der militärischen Architektur und Konzeption in den Nordwest-Provinzen (3.-4. Jahrhundert), in: M. Konrad & C. Witschel (eds), *Römische Legionslager in den Rhein- und Donauprovinzen. Nuclei spätantik-frühmittelalterlichen Lebens?*, München (Bayerische



- Akademie der Wissenschaften, Philosophisch-Historische Klasse, Abhandlung Neue Folge 138), 79-101.
- Rasbach, G., 2015: Belgische Ware und andere Gebrauchskeramik, in: A. Becker & G. Rasbach (eds), *Waldgirmes. Die Ausgrabungen in der spätaugusteischen Siedlung von Lahnau-Waldgirmes (1993-2009). 1 Befunde und Funde*, Darmstadt (Römisch-Germanische-Forschungen 71), 235-252.
- Ritterling, E., 1924/1925: Legio, in: A.F. von Pauly & G. Wissowa (Hrsg.), *Pauly's Realencyclopädie der classischen Altertumswissenschaft*, Stuttgart.
- Scharf, R., 2005: *Der Dux Mogontiacensis und die Notitia Dignitatum. Eine Studie zur spätantiken Grenzverteidigung*, Berlin/New York.
- Strobel, K., 1987: Der Chattenkrieg Domitians. Historische und politische Aspekte, *Germania* 65/2, 423-452.
- Strobel, K., 1988: Bemerkungen zum Wechsel zwischen den Legionen XIV Gemina und XXII Primigenia in Mainz und zur Struktur des untergermanischen Heeres in trajanischer Zeit, *Germania* 66, 437-453.
- Trumm, J. & M. Flück, 2013: *Am Südtor von Vindonissa. Die Steinbauten der Grabung Windisch-Spillmannwiese 2003-2006 (V.003.1) im Süden des Legionslagers*, Brugg (Veröffentlichungen der Gesellschaft Pro Vindonissa 22).
- Wiegels, R., 2017: Die Besitznahme der Oberrheinlande durch Rom. Aspekte einer Bevölkerungs- und Militärgeschichte, *Frankfurter elektronische Rundschau zur Altertumskunde* 34, 37-72.
- Witteyer, M., 1998: Mogontiacum. Militärbasis und Verwaltungszentrum, in: F. Dumont (ed.), *Mainz. Die Geschichte der Stadt*, Mainz, 1021-1058.
- Witteyer, M., 2006: Mayence-Mogontiacum, in: M. Reddé, R. Brulet & R. Fellmann (eds), *Les fortifications militaires. L'architecture de la Gaule romaine*, Bordeaux, (Documents d'archéologie française 100) 324-329.



# Tel Shalem

## A Roman military camp in the Jordan valley

Eckhard Deschler-Erb and Sebastian A. Knura

Tel Shalem (Arab. Tell er Radgha) is located in the middle Jordan Valley about 11 km south of present-day Beth She'an (Nysa-Scythopolis) on a slight hill (-204.50m HNN) and about 2 km west of the deeply cut river Jordan (fig. 1). In antiquity, a crossing over the Jordan and the various north-south and west-east trunk roads could be monitored or controlled from this cleverly chosen site (Agricola *et al.* 2021, 29; Arubas *et al.* 2019, 201-202). Tel Shalem shows occupation from the Bronze Age to Ottoman times. Nowadays the site is located in the open field. Tel Shalem was already known as a site in Late Antiquity; archaeological exploration began in the 1940's. Until 2008, several inscriptions have been found (Ameling *et al.* 2023, 1985-2000; Ecker *et al.* 2019), the remains of large bronzes (including a statue of Hadrian, Foerster 1985, 139), and a bath house could be documented within the military camp (Agricola *et al.* 2021, 29; Arubas *et al.* 2019, 202-203).

In 2008, 2013 and 2017, the Archaeological Institute of the University of Cologne conducted geophysical surveys of the site under the direction of Michael Heinzelmann (Buess & Heinzelmann 2012) and a total of four excavation campaigns took place in 2017, 2019, 2020 and 2022, which were funded by the Gerda Henkel Foundation from 2019 onward. The campaigns in Tel Shalem were led in cooperation by Benny Arubas (holder of the excavation licence) from the Hebrew University in Jerusalem, Dudi Mevorah from the Israel Museum in Jerusalem, Eckhard Deschler-Erb from the University of Cologne (responsible for the Cologne part on site from 2020), Michael Heinzelmann from the University of Cologne (responsible for the Cologne part until 2019) and Andrew Overman from Macalaster College (campaigns 2017 and 2019). Sabine Deschler-Erb from the Integrative Prehistory and Archeological Science (IPAS), University of Basel and Avner Ecker from Bar-Ilan University, Department of Land of Israel Studies and Archaeology, were also involved in the on-site excavations.

### The military camp

Section **B2** (fig. 2) was created in order to understand the fortification(s) of the military camp. Until the start of the excavations in 2022, it was assumed on the basis of the geophysical survey that there were at least two camps with different extents on top of each other (first camp Buess & Heinzelmann 2012, 177-178, fig. 3-4). This assumption could be discarded on the basis of the 2022 results in section **B2** and a new analysis of the geophysics. First of all, four burials of children and youths from the Mamluk period (13<sup>th</sup>-16<sup>th</sup> century AD) were recovered directly below the present level, all of them facing Mecca and testifying to their Islamic faith. These burials are located directly in the Roman strata, which can be interpreted from south to north (inside to outside of the military camp)

**Eckhard Deschler-Erb /  
Sebastian A. Knura**

Archaeology of the Roman  
Provinces, University of  
Cologne, edeschle@uni-koeln.  
de / sknura1@uni-koeln.de

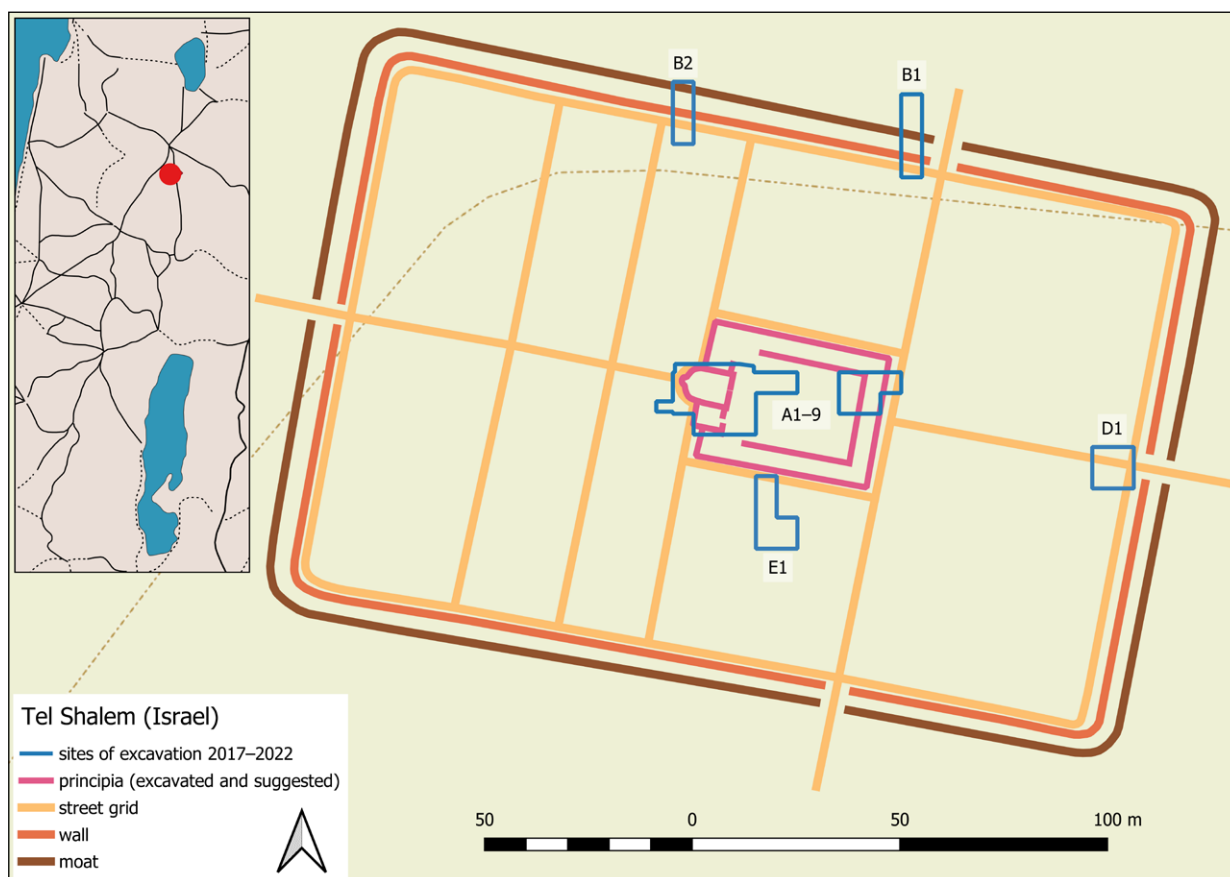


Figure 1. Tel Shalem, northern Israel. The Roman camp with all the campaigns carried out so far (Archaeological Institute, University of Cologne, Sebastian A. Knura).

as the remains of a rampart road, a stone rampart with a tower foundation and a bottom ditch. The existence of two different military camps could not be proven. The outline of Tel Shalem newly appears in a single-phase playing-card format (210 × 140 m) with a base area of c. 2.9 ha (fig. 1). This basic shape is typical for military camps of the Roman army in the Principate. In terms of size, we have a typical camp for auxiliary units, which is at most somewhat small in area for cavalry units (Reddé 2015a, 131-135, table 1).

For a periodisation of the complex, its interior buildings must be examined more closely, and this is best done in the centrally located principia of Tel Shalem (sector A with areas A1-A9). The principia measures c. 49 × 36 m; its western areas with the central flag sanctuary and adjoining rooms have been the best researched to date (fig. 3). The flag sanctuary (*aedes*) measures 10.0 × 5.6 m in its last phase of expansion and was closed with a semi-circular apse. An additional niche opened to the inner courtyard. The interior design of the room shows a splendour that has not been known until now for the middle Roman imperial period (examples Reddé 2015b, 469 and 471, fig. 100). The central element covering the floor is a polychrome

mosaic (c. 40 m<sup>2</sup>) with geometric ornamentation. At the top and bottom are inscriptions inserted in the mosaic (the upper one in a separate *tabula ansata*) naming *Ala VII Phrygum*, its field sign (*Capricornus*), and Quintus Pomponius Sanctianus, one of its commanders, who claims responsibility for the magnificent furnishings of the flag sanctuary (Ameling *et al.* 2023, 1990-1993, nos 7812-7813; Ecker *et al.* 2019, 217-219). Another inscription from the inner courtyard of the *principia* can be used to date the last stage of expansion of the flag sanctuary. This inscription, which was located at the foot of a statue pedestal, was dedicated to Emperor Caracalla (Marcus Aurelius Severus Antoninus, 211-217 AD). It names, among others, a hitherto unknown governor of the province of *Syria* (Attidius Praetextatus) as well as Quintus Pomponius Sanctianus, the commander of *Ala VII Phrygum* as the executing authority for the inscription and probably also of an associated statue. On the basis of various criteria, the inscription (and thus also the youngest phase of the flag sanctuary) can be dated between AD 197/209 (Ameling *et al.* 2023, 1994-1996, no. 7814; Ecker *et al.* 2019, 215-217). This latest demonstrable phase lies directly on top of a slightly earlier

elaboration of the flag sanctuary. The room had the same layout: a semi-circular apse and a built-in niche. There was a floor with 'pseudo-paving' instead of the mosaic; glazed windows may also have been built into the walls of the flag sanctuary in this earlier phase. The latter are a major unusual feature for Principate Palestine (Jackson-Tal *et al.* in preparation). Among the two younger phases, an earlier period of the flag sanctuary with a rectangular end of the apse could be documented in a few sections. However, this oldest phase is only known in rudimentary form and only on the basis of a few sondages. After the fort was abandoned, the flag sanctuary was covered with many layers of roof tiles (*tegulae* and *imbrices*). No traces of violent destruction have been found (so far?).

The room directly adjoining the *aedes* to the south was investigated in 2020 and 2022 (section **A8**). It is a rectangular room (6.10 × 4.75 m) with an open front facing the inner courtyard of the *principia* and partly stone benches along the long sides (fig. 3). As in the central flag sanctuary, several phases can be documented in the room of section **A8**, which can be more or less synchronized with the phases in the main room. After the fort was abandoned, this room was also covered with many layers of tiles extending from the *aedes* to approximately the middle of the room.

South of the *principia*, the excavation campaigns of 2020 and 2022 were able to document the remains of a building (section **E1**) that is most likely to be part of the *praetorium* (fig. 4) of Tel Shalem (Johnson 1983, 152-160). What is known so far is mainly one room (7.10 x min. 4.95 m) with a multi-layered floor, plastered mud-brick walls and a large cistern underneath (pear-shaped, depth c. 4.30 m). This cistern was probably filled mainly with rainwater, which was supplied by pipes from the roadside ditches. One of these pipes has been preserved. It leads from the northern entrance of the large room already listed above under a threshold directly into the cistern. At the southern end of section **E1**, a building could be excavated, which may no longer be directly related to the Principate fort (fig. 4). The corner of this building, with a built-in doorstep, is located above the Principate horizon and seems to have been built in a slightly different masonry technique than the main room listed above. Numerous human skeletons have been found at the foot of the aforementioned doorway, the anthropological processing is still pending. It is possible that we are looking at a Late Antique/Byzantine structure here, which may have a cultic (Christian?) interpretation.

To the south of section **E1**, the remains of a bathing complex were first excavated in 1978 and later in 2017 (fig. 1). A larger room with *suspensurae*, remains of a mosaic floor with geometric decoration and stone benches placed on top of it became apparent (Arubas *et al.* 2019, 2022). The complete excavation of this bath complex is

Tel Shalem (Israel)  
Excavation of 2022  
Area B2  
Author: S. A. Knura

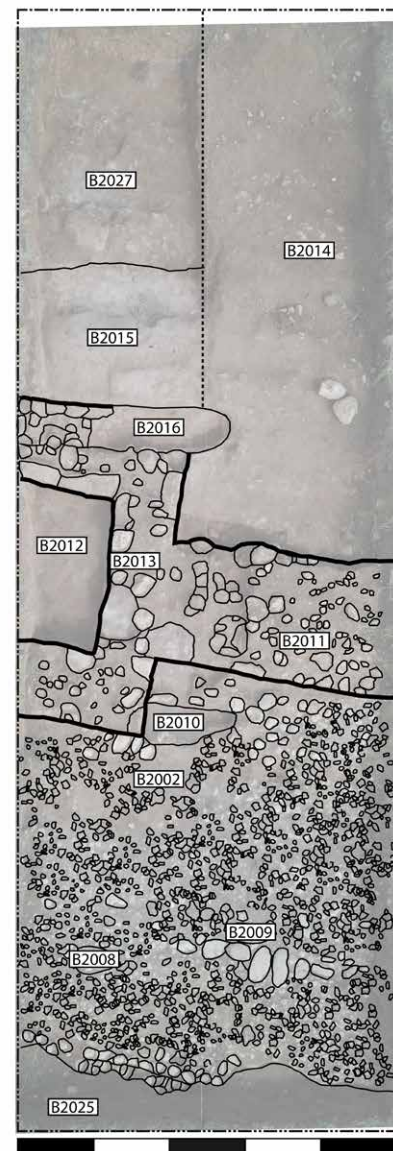


Figure 2. Tel Shalem, wall-section **B2** with Roman wall structures (B2011-2013), a rampart road (B2002), a bottom ditch (B2015, 2027) and Mameluk burials (B2008-2010, 2016) contained therein (Archaeological Institute, University of Cologne, Sebastian A. Knura).

planned as part of further excavation campaigns at Tel Shalem.

To conclude the presentation of the features, a look should be taken at section **D1**, to the far east, in the *praetentura* of the military camp (fig. 5). In this area of Tel Shalem, the preserved cultural layers are not very high. The bedrock here already rises to a depth of less than 1 m below the modern surface. Nevertheless, it was possible to document clear features from the camp period. On both sides of the *via principalis*(?) two basins were found, which most likely served as water troughs for the animals of the



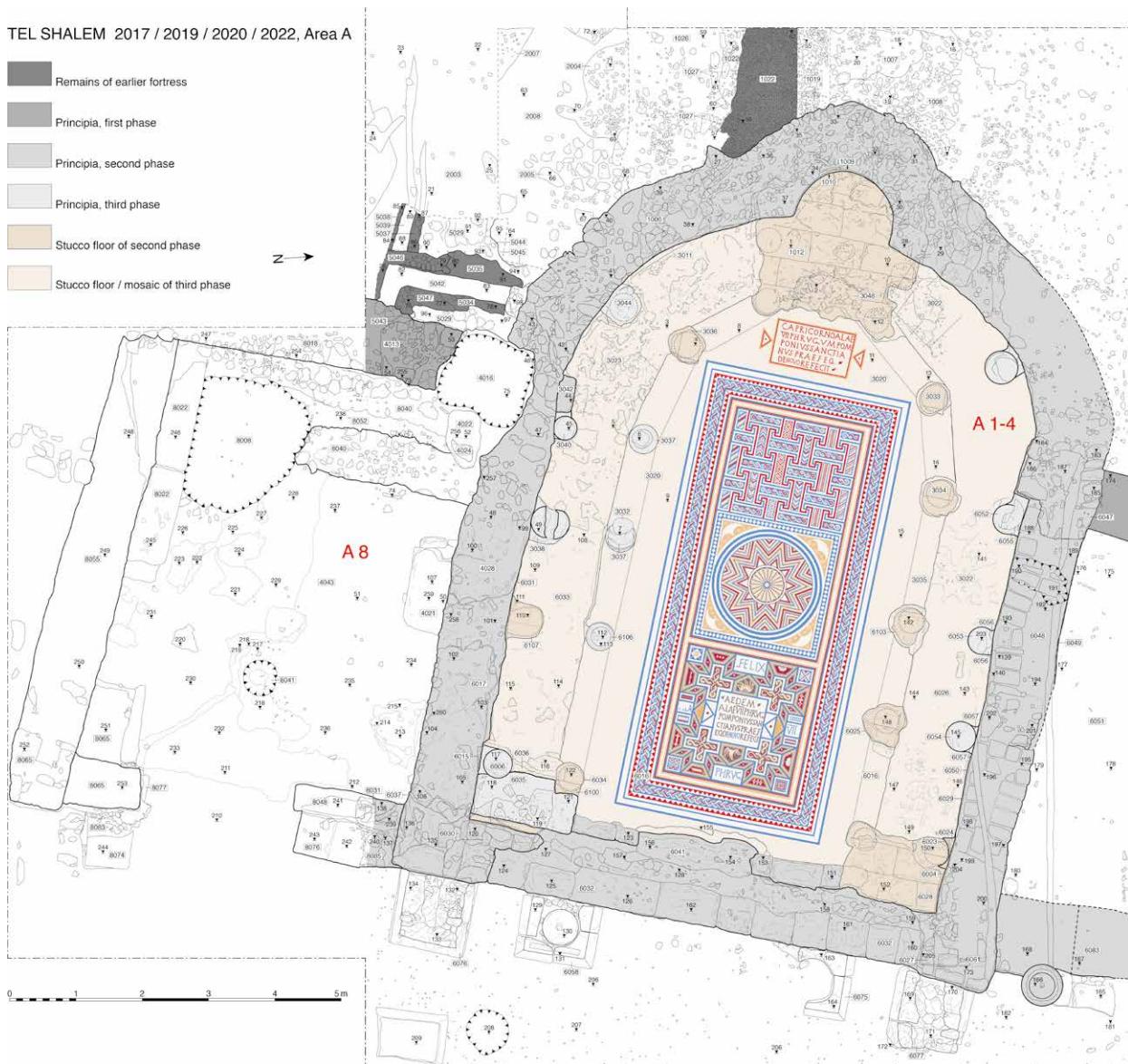


Figure 3. Tel Shalem, *sacellum* A1-4 with mosaic floor and neighbouring room A8 to the south (Archaeological Institute, University of Cologne, Amira Smadi).

auxiliary camp and were probably placed along military barracks (or stables?) (Agricola *et al.* 2021, 30).

### Find materials

The rich find material from Tel Shalem covers a spectrum from the Bronze Age to the Ottoman period. For the period of the Roman military presence, inscriptions and large bronzes are particularly noteworthy and have been documented on an astonishing scale. The first to be mentioned is the building inscription of a vexillation of *Legio VI Ferrata*, which was found about 100 m northwest of Tel Shalem (Arubas *et al.* 2019, 202; Ameling *et al.* 2023, 1989-1990, no. 7811). The legion mentioned was stationed

at *Legio* (el-Lajjun)/*Carpacotna* near the old biblical town of Megiddo, from Hadrianic times onwards (Tepper *et al.* 2016, 91-93). It is assumed that the vexillation mentioned in the inscription built the military camp at Tel Shalem in Hadrianic times (Arubas *et al.* 2019, 203; Ameling *et al.* 2023, 1990). The remains of an honorary inscription for Emperor Hadrian (Publius Aelius Hadrianus, 117-138 AD), found in fragments (covers of Byzantine tombs at Hilbuni) about 2 km from the military camp, point to the same period and represent the largest Latin inscription currently known in *Judaea / Palaestina*. It is likely to have been placed on an arch of honour erected either to welcome Hadrian on his visit to the province (130 AD) or to mark Rome's triumph



over the Jews in the Bar-Kochba Revolt (136 AD). Current research tends to assume a triumphal arch (Ameling *et al.* 2023, 1985-1988, no. 7810; Arubas *et al.* 2019, 203). In addition, at least 50 stamped specimens were found in the brick layers in the area of the *principia*, naming the *ala* prefect Antius Antoninus as well as the *Ala VII Phrygum* (Ameling *et al.* 2023, 1997-2000, nos 7815-7817; Ecker *et al.* 2019, 219-222). Thus, in addition to Quintus Pomponius Sanctianus, another commander of the *ala* is attested.

The other inscriptions in the military camp at Tel Shalem have already been dealt with above.

Bronze effigies of the imperial family are repeatedly attested in Roman forts. They seem to have been a common part of the army's deference to the respective imperial high command (Kemkes 2014, 109). This also applies to Tel Shalem, where excavations in the late 1970's and early 1980's collected the head and large parts of the body of an armoured statue of the emperor Hadrian, as well as at least the head of another presumed emperor of youthful age (Foerster 1985, 139; Arubas *et al.* 2019, 202; Cimadomo *et al.* 2019, 193-194). These finds from older and rather poorly documented excavations can be joined by two more bronzes from 2022. Firstly, a figuratively decorated breastplate fragment was found in a Mameluke-period layer on the eastern edge of the *principia* (section A9), which can best be paralleled with the armoured statue of emperor Hadrian mentioned above. Secondly, in the area of the longitudinal benches in room A8, a strongly larger-than-life bare foot was found, which must have been deposited there already in Roman times, as it was covered by the brick layer mentioned above. The attribution of this foot must remain open at present. In any case, it is too large for the other statue parts listed.

## Conclusions

In summary, the following statements can be made about the Roman military camp at Tel Shalem. The site was founded in Hadrianic times, most likely already at the time of Hadrian's imperial visit to the region around AD 130, but at the latest with Rome's victory in the Bar Kochba revolt. Pioneer units of *Legio VI Ferrata* may have been in action as construction crews, who would have left the completed camp to *Ala VII Phrygum* for use after the completion of this work. Tel Shalem's main task was to control a crossing over the river Jordan and to patrol the traffic on the long-distance routes between the Mediterranean and the Jordanian mountains as well as along the Jordan Valley. The extension of the *principia* with a rectangular end to the flag sanctuary probably belongs to this foundation phase. Towards the end of the 2<sup>nd</sup> century, the *principia* was probably modernized. The flag sanctuary was supplemented with a semi-



Figure 4. Tel Shalem, section E1 *Praetorium*(?). From top to bottom (west-east) a canal opening, a room with plastered walls and a closing stone for a cistern, and at the lower end, structures from Late Antiquity (?), without scale (Archaeological Institute, University of Cologne, Sebastian A. Knura).

circular apse and a new interior design (including glass windows). During this phase, the second prefect of *Ala VII Phrygum* known to us, Antius Antoninus, may have been in command at Tel Shalem. At least the stamped tiles of the roof for this period usually bear his name. Possibly for the visit of the Severan imperial family on their way through the eastern provinces, the *principia* and therein, especially the flag sanctuary were elaborately remodelled at the beginning of the 3<sup>rd</sup> century. This included, among other things, the central mosaic floor, rows of columns and bronze statues of the imperial family together with the corresponding inscriptions. Quintus Pomponius Sanctianus, the prefect in command at the time, was responsible for this.

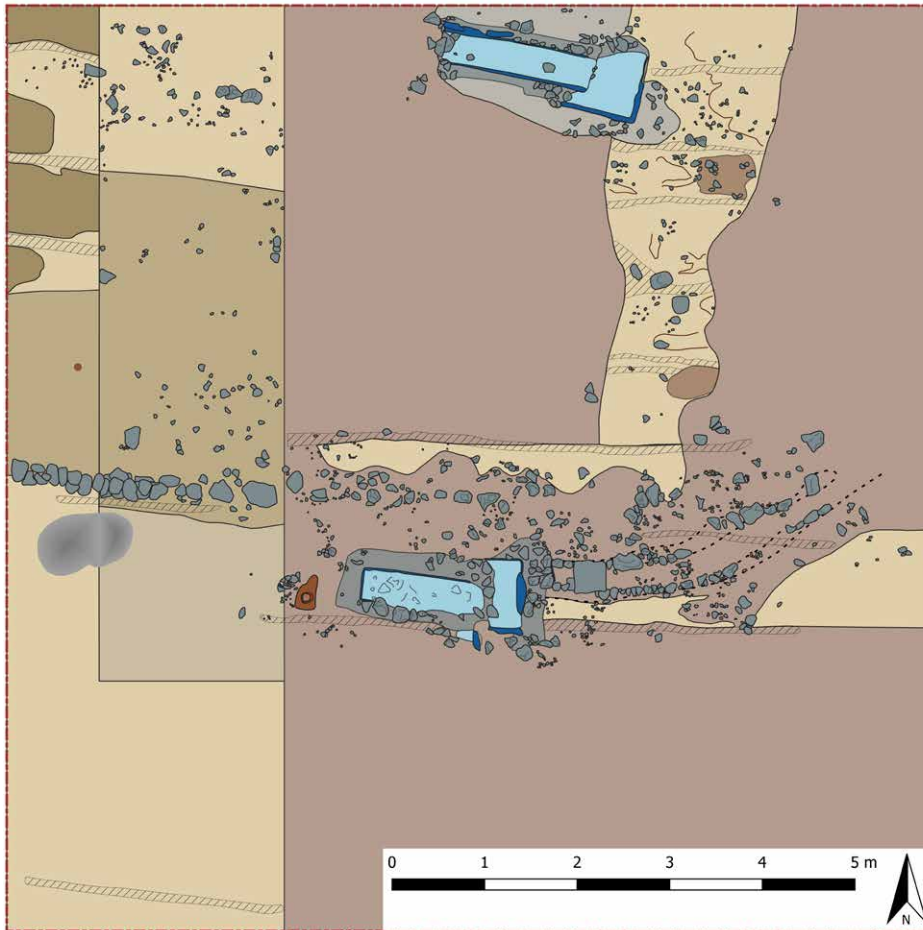


Figure 5. Tel Shalem, section **d1**, military barracks (?) with water troughs north and south of the *via principalis* (?) (Archaeological Institute, University of Cologne, Stephanie Lomp).

Tel Shalem does not seem to have been used for military purposes for much longer after these events. A younger, probably Late Antique or Byzantine building on the eastern edge of section **E1** probably has nothing to do with the Middle Imperial camp at Tel Shalem, which seems to be abandoned in the mid to late 3<sup>rd</sup> century.

## Bibliography

- Agricola, C., S. Braun, E. Deschler-Erb & S. Deschler-Erb, 2021: Römisches Militär in Tel Shalem – Israel, *Der Limes. Nachrichtenblatt der Deutschen Limeskommission* 15/1, 28-35.
- Ameling, W., H. Cotton, W. Eck, A. Ecker, B. Isaac, A. Kushnir-Stein, J. Price, P. Weiß & A. Yardeni, 2023: *Corpus Inscriptionum Iudaeae/Palaestinae* 5/2, *Galilaea and Northern Regions: 6925-7818*, Berlin/Boston.
- Arubas, B., M. Heinzelmann, D. Mevorah & A. Overman, 2019: Capricorno Alae VII Phrygum (i). Interim report on the fort near Tel Shalem, *Journal of Roman Archaeology* 32, 201-213.
- Buess, M. & M. Heinzelmann, 2012: Ein hadrianisches Militärlager bei Tel Shalem (Israel). Ergebnisse einer geophysikalischen Prospektionskampagne, *KuBA* 2, 175-179.
- Cimadomo, P., L. Di Franco & S. La Paglia, 2019: Hadrian in Ioudaea. The celebration of the Emperor throughout the Tel Shalem Bronze Statue, *Bulletin Antieke Beschaving* 94, 193-210.
- Ecker, A., B. Arubas, M. Heinzelmann & D. Mevorah, 2019: (ii) interim report on the inscriptions from the aedes of the fort near Tel Shalem, *Journal of Roman Archaeology* 32, 214-222.
- Foerster, G., 1985: A cuirassed statue of Hadrian, *Atiqot. English Series* 17, 139-157.
- Jackson-Tal, R., N. Katsnelson & A. Bartfeld, in preparation: *Glass window use in a Roman military sacred context. The evidence from a fort near Tel Shalem, Israel, Jerusalem.*
- Johnson, A., 1983: *Römische Kastelle*, Mainz (Kulturgeschichte der Antiken Welt 37).
- Kemkes, M., 2014: Zu Ehren des Kaiserhauses. Bronze Bildnisse in militärischen Kontexten, in: G. Uelsberg, J. Heiligmann & M. Brouwer (eds), *Gebrochener Glanz. Römische Großbronzen am UNESCO-Welterbe Limes*, Bonn/Stuttgart/Nijmegen, 108-119.

- Reddé, M., 2015a: Camp, in: Y. le Bohec (ed.), *The encyclopedia of the Roman Army* 1, Chichester, 126-139.
- Reddé, M., 2015b: Headquarters, in: Y. le Bohec (ed.), *The encyclopedia of the Roman Army* 2, Chichester, 468-475.
- Tepper, Y, J. David & M.J. Adams, 2016: The Roman VI<sup>th</sup> Legion Ferrata at Legio (el-Lajjun), Israel. Preliminary report of the 2013 excavation, *Strata. Bulletin of the Anglo-Israel Archaeological Society* 34, 91-123.



# Why did the Roman army leave Nijmegen?

Paul F.J. Franzen

Around AD 100 the Roman Empire was preparing for some major changes. In 98 a new emperor, Trajan, had succeeded to the throne, after the two-year transitional reign of Nerva, and all this without another dreaded civil war. A great war in *Dacia* was being prepared, and thus a major build-up was underway. This included the reshuffling of many army units, and the choices made now were to have a lasting influence on the prospects of many places along the Rhine and Danube. Those locations where a legion would remain or was newly stationed, would often have above-average chances of becoming major settlements which would last into the Middle Ages and beyond. Indeed, nearly one in four would, at some point in the future, become a European capital.

In the aftermath of the Batavian Revolt there were no less than four legions stationed in *Germania inferior*. One of these legions, the Tenth, was stationed at Nijmegen-Hunerberg (fig. 1), in the heart of the Batavian *civitas*. The Batavian Revolt of AD 69-70 had united parts of Gaul and Germany against the Romans, and it took an army with no less than eight legions at its core to subdue it. To have a legion in the Batavian heartland was both sensible as a precaution in case of any lingering ill-feelings, it controlled the left flank facing *Germania* (like under Augustus), and it secured the logistical connection with *Britannia*.

With major strategic choices to make, the question is why did the Romans withdraw their troops from Nijmegen? Were the above-mentioned factors no longer valid, or were there more, local, factors that played a role? Focusing on the situation at Nijmegen, we present two major factors that may have influenced, or even decided, the outcome of any deliberations on keeping a legion stationed here. One factor is the availability of enough drinking water, the other is the shifting of the river Waal, away from the legionary base. Taken together, this probably constituted enough reasons despite the above-mentioned strategic ones, to withdraw the Tenth Legion.

## Water related features

Drinking water, both of good quality and in sufficient quantities, are essential to any human. A Roman legion, consisting of some 5,000 men and a large number of animals (horses and mules) and an unknown number of directly associated personnel in the form of wives, children, slaves and other attending staff, would need an enormous amount of water, every day. The bare minimum would be something between 26,000 and 41,000 litres a day, depending on several assumptions regarding the number of people and animals involved, and what constitutes the bare minimum. Would we add the water needed for baths (a cultural and health necessity), washing, growing crops, raising cattle and other

Paul F.J. Franzen  
info@franzenarcheologie.nl



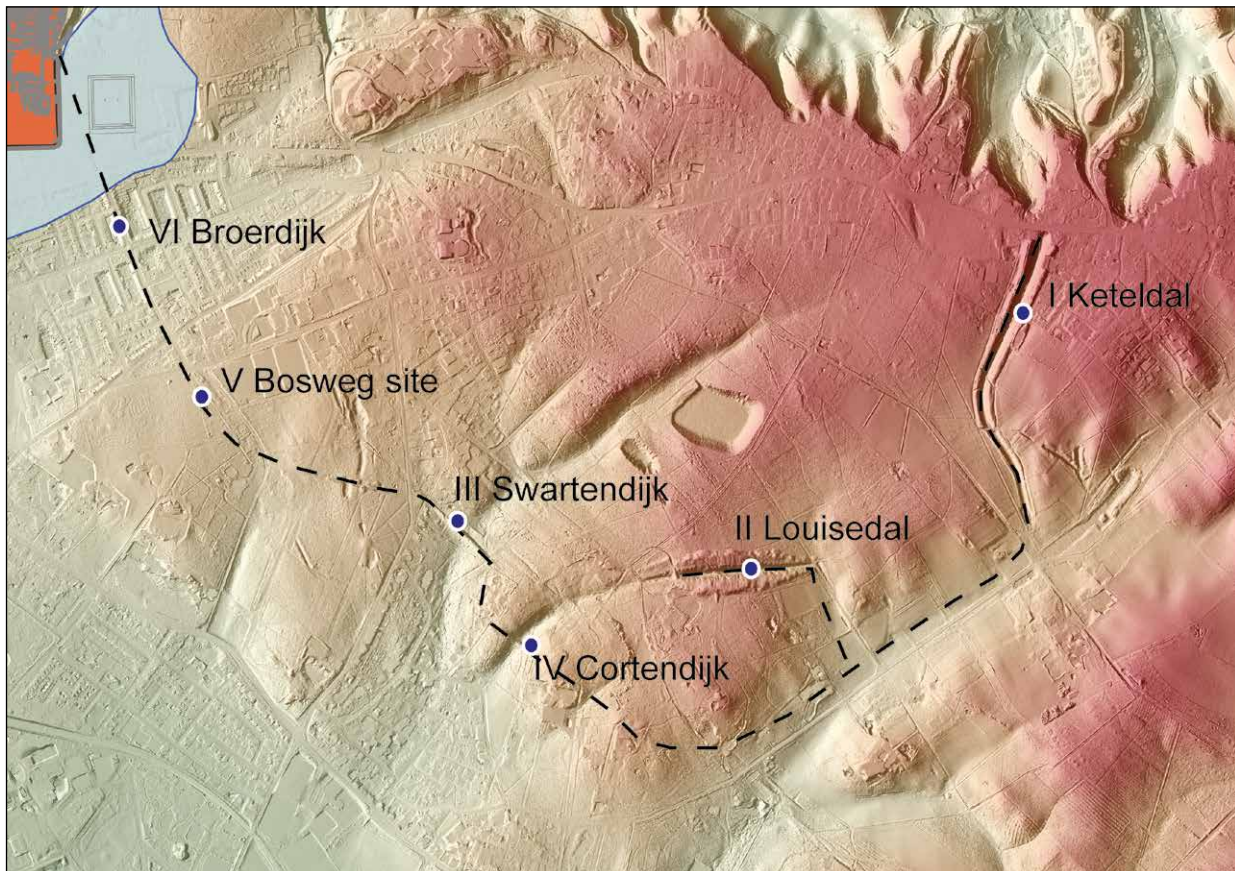


Figure 1. Map of Nijmegen in AD 100. Fortress (phase 5), military town (certain and probably) and parts of the aqueduct: I. Keteldal; II. Louisedal; III. Swartendijk; IV. Cortendijk; V. Bosweg site; VI. Broerdijk.

animals or needed in several crafts, this amount would be much, much more.

It is therefore quite remarkable to see that the Flavian fortress on the Hunerberg, in its stone-built phase (fig. 1, phase 5) and comprising 16.5 ha, had only one well (Brunsting 1959; Schut 2005, 65; Kessener & Janssens 2017, 45). The earlier timber-built phase was c. 18 ha, and has, unless we assume the well from phase 5 already present in phase 4, none. The excavated area of both phases is large enough to have a comprehensive understanding of its layout (Kloosterman 2019). The hitherto assumed size of phase 4 was c. 15 ha (Haalebos 1995, 6; Kloosterman 2019, 20), but based on original drawings from the Archaeological State Service (ROB) and contrary to a misinterpretation of a defensive ditch seen in 2008 (Polak & Van Diepen 2011, 35) it now stands at some 18 ha, yet this increase in size has not yielded one (additional) well.<sup>1</sup>

The Nijmegen aqueduct was therefore most likely the main source of water for the fortress. In the military town

or *canabae legionis*, the situation seems to be different. There we do see some wells, mostly on the western side of the fortress (fig. 2). In 2006 this number was put at 6 wells (Franzen 2009, 1278); after evaluation of old excavations this now stands at 8, plus the one in the fortress. That still is not much, given that nearly every single farmstead in the wider area has at least one well, and considering that we are talking about an urban environment with many more inhabitants, which after some 30 to 35 years may have encompassed over 100 ha with at least 5,000 inhabitants (Haalebos 1995, 8). Other *canabae* grew to equally impressive sizes, like e.g. *Carnuntum* 120 ha (Gugl *et al.* 2015, 19). Given the presence of multiple sorts of conduits (lead, wood, ceramics) in both fortress and *canabae*, as well as dividers and settling-tanks, the *canabae legionis* must have been connected to the aqueduct as well. There is even the impression that at least part of the wells in the *canabae legionis* date to the later stages of its occupation (Franzen 2009, 1278). One of the dividers/settling-tanks seems to have had an extra conduit, that was added after the initial building phase. All of this could point to a situation where the initial need for water was met by the

1 Drawings 980 and 981 of trench 333 in 1961, project Sterreschans, now present at the Provincial Archaeological Depot, Nijmegen.



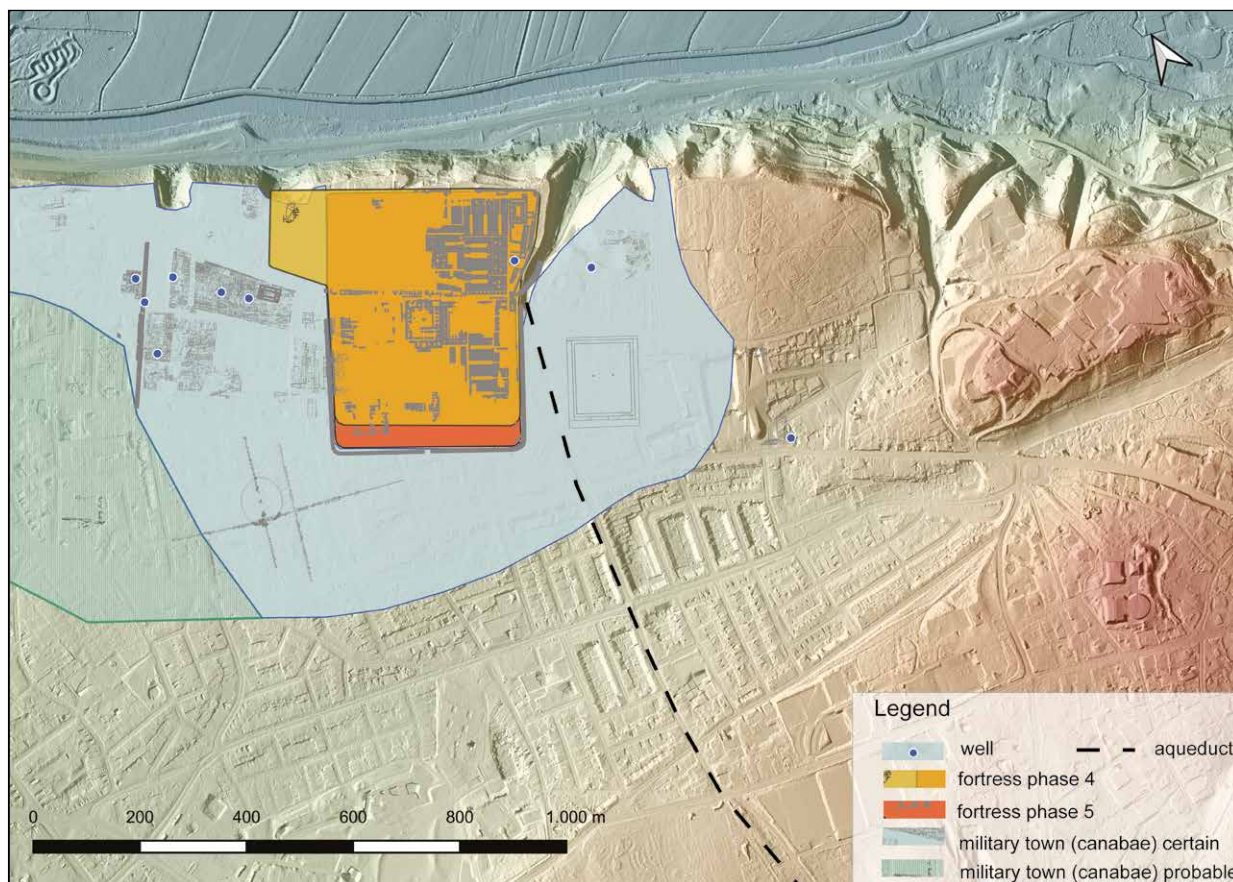


Figure 2. Map of the Hunerberg with attested wells and the aqueduct. Depicted are phase 4 and 5 of the fortress, and the area of the *canabae legionis*.

aqueduct, and that later, as demand grew, extra conduits and wells were constructed.

A look at several pre-Flavian military sites on and near the Hunerberg reveals the same pattern. The site of the Kops Plateau (with its three phases between 12 BC and AD 69), excavated for c. 75 %, <sup>2</sup> has yielded not a single well, but does have conduits and several cisterns, where water was led to or from using lead pipes. The 42 ha large Augustan base (19/16-10 BC), home to several legions and auxiliary troops, has also not a single well attested. This is in stark contrast with near contemporary Oberaden where there are multiple wells, often per barrack (Kühlborn 1992, Beilage 2). More to the west, the *Oppidum Batavorum*, contemporary with the Kops Plateau settlement, seems to have had no wells as well (Heirbaut 2010, 12), contrary to earlier beliefs (Bloemers 1983, 33). At least one wooden channel delivering water from the direction

of the Hunerberg has been identified (Harmsen & Van Enckevort 2017, 39-42).

### The landscape and the sources for the aqueduct

The presence of springs and water-bearing layers or aquifers is highly dependent on the landscape (Driessen 2007, 38; Kessener & Janssens 2017, 19-21). The Nijmegen area is characterised by the presence of a moraine and, in increasing thickness to the west and south, a sandr. Whereas in the former aquifers and springs are not uncommon, in the latter they are. The moraine is still relatively near to the surface at the Kops Plateau but to the west the sandr increasingly determines the soil profile. This in turn influences to a high degree the prospect of finding water on the Hunerberg. It also automatically shifts the attention to the east in search of water sources suitable to construct an aqueduct.

A Roman aqueduct depends solely on gravity (fig. 1). That means that only sources of water that are located above from the intended customers can be used. If you use springs in the mountains and the consumers live in a

<sup>2</sup> The GIS-data for this project can be found (and downloaded) here: <https://archaeology.datastations.nl/dataset.xhtml?persistentId=doi:10.17026/dans-znx-zrhj>; the drawings are kept at the Provincial Archaeological Depot, Nijmegen.

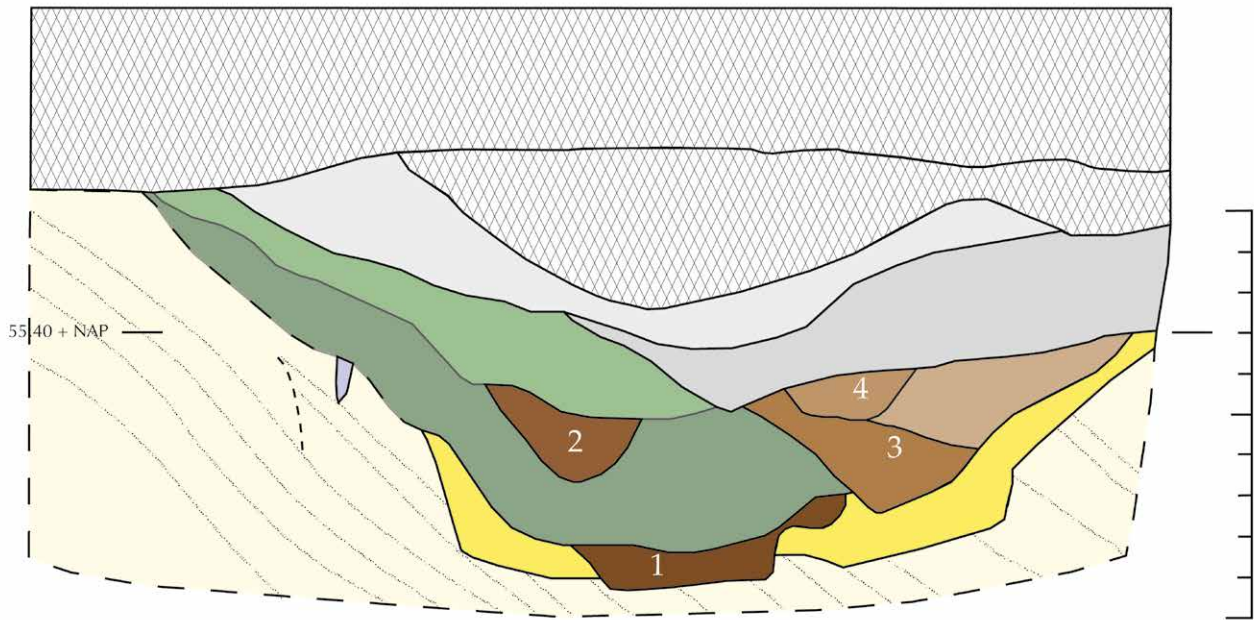


Figure 3. Section over the aqueduct, showing the different phases (after Kloosterman 2022, based on the original drawing).

valley: no problem. The Hunerberg in Nijmegen is part of a moraine, between 45 and 53 m above sea-level. Just to the north the current polder lies at 10 m, and the modern city centre to the west lies between 20 and 30 m above sea-level. This means only springs to the east, that are located high enough above the Hunerberg, are suitable. According to Kessener & Janssens (2017, 70-74) most of the available sources were connected to the Roman aqueduct, and a few possible candidates were located thus that it would have been (too) difficult to connect them as well. Thus, it seems that the Roman military presence at Nijmegen was at or near maximum capacity as far as the amount of water is concerned that could be transferred to the Hunerberg via the aqueduct.

### Bosweg site

In 2020 a rescue excavation revealed the remnants of a wooden channel as part of the aqueduct (Kloosterman 2022). No datable finds were recovered, and other means of dating failed as well. Yet the analysis of the pollen yielded what we can consider an indirect dating: the pollen spectre from the 1<sup>st</sup> phase resembled that of the earliest phase at the Kops Plateau (10 BC – AD 10), c. 1 km to the north. This excavation yielded not only an indirect date for the first aqueduct, it also showed several younger ditches, i.e. possibly channels (fig. 3). The sequence could thus be: the first major channel belongs to the founding phase; it is the biggest of all phases. When that fell into disuse a smaller channel was constructed, to be replaced at a later date by a much larger version. The youngest, still a bit doubtful,

phase is represented by a small channel constructed in the filled-up phase 3.

Seemingly in contrast with this are the results from a project in 1994 where a partial section was recorded, across the dam that was the foundation of the aqueduct along the Broerdijk (Van Enckevort & Thijssen 1996, 152). Yet it is important to realise that the finds, broadly dating between AD 50 and 150, were recovered from layers on the outer flank, and not from the core or even below the sole of the dam. Therefore, they can also date a maintenance or a rebuilding phase. The latter would be perfectly in line with the interpretation derived from the Bosweg project.

As to the dating of the aqueduct, or aqueducts, the Bosweg excavation fits neatly in the chronological narrative of the military installations on the Hunerberg and surrounding area. The first and largest aqueduct therefore could date to the Augustan period, coinciding with the multi-legionary and auxiliary base on the Hunerberg. It can also be the one that was in use during the (first phases) of the settlement on the Kops Plateau, and the Batavian *vicus* or *Oppidum Batavorum*. Apparently, the aqueduct wasn't maintained well enough or for unknown reasons fell into a state of disrepair, and a new channel was needed (Bosweg phase 2). This was good enough to supply the needs of the small settlement on the Kops Plateau and the *Oppidum Batavorum*, prior to AD 69. With the new fortress of the Tenth Legion on the Hunerberg, and with a fast-growing military town around it, a new major channel was constructed (Bosweg phase 3). Somewhere after the departure of the legion and the abandoning of



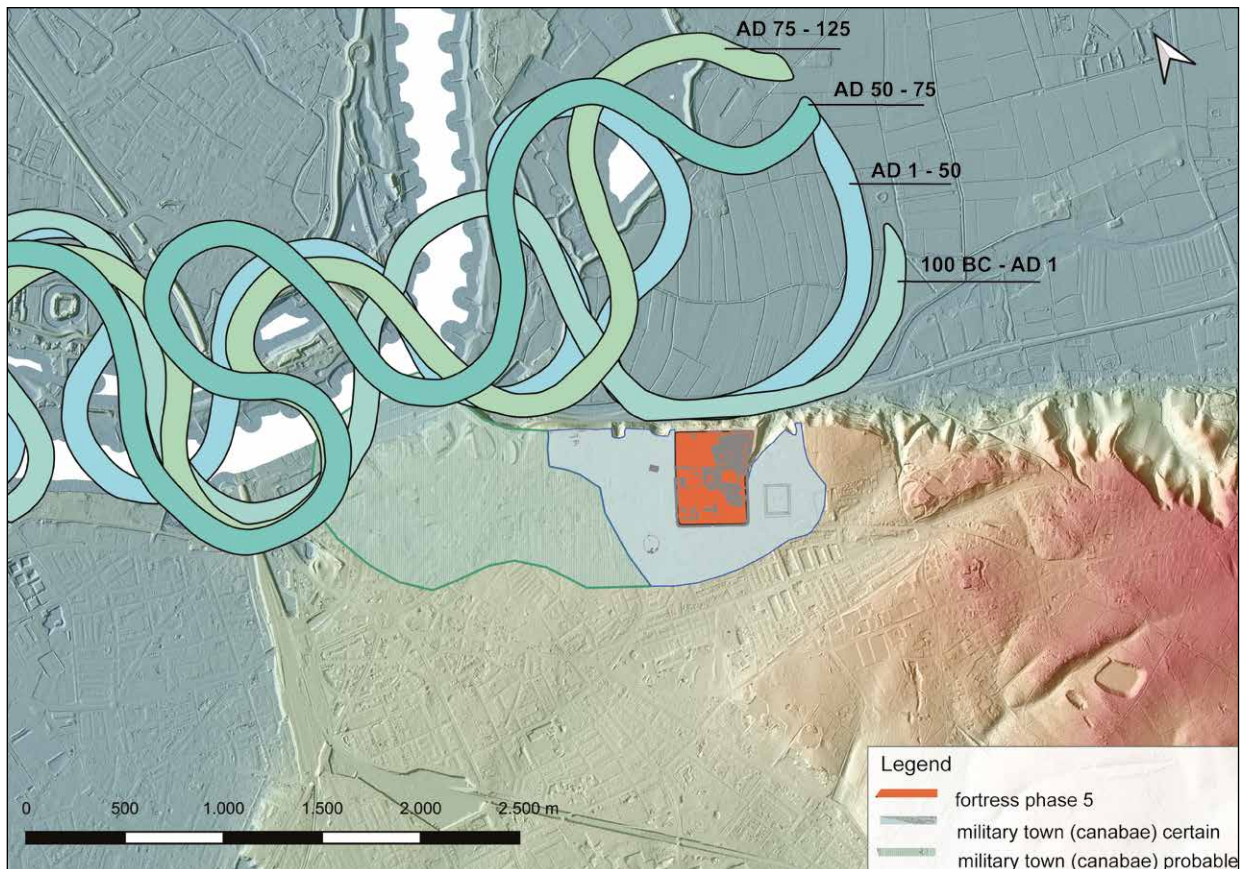


Figure 4. The river Waal between 100 BC and AD 125. with the Flavian fortress and military town on the Hunerberg. 1. Fortress phase 5; 2. *Canabae legionis* (certain); 3. *Canabae legionis* (probably) (after Willemse 2019).

the *canabae legionis*, this too stopped working and a new, small channel was constructed (Bosweg phase 4). This could have happened at any point in time after c. AD 120, but possibly it happened at the end of the 2<sup>nd</sup> century AD, or shortly afterwards. The on and off presence of legionary units in the fortress would have guaranteed some form of maintenance, at least until the middle of the 2<sup>nd</sup> century AD (Haalebos 2000, 477).

### Possible scenario

The aqueduct was the main source for the Flavian fortress and military town on the Hunerberg, as well as for the pre-Flavian settlement on the Kops Plateau, possibly for *Oppidum Batavorum* and fairly certainly also for the Augustan base on the Hunerberg. Therefore, it dates to that earliest, Augustan, phase. The different phases shown in the section from the Bosweg mirror the development of the Roman (semi-)military presence on the Hunerberg and surrounding areas. After a while the demand for water outgrew the capacity of the aqueduct, and maybe extra sources were at first connected to the main channel, but by the end of the 1<sup>st</sup> century AD it had

reached its (near) maximum capacity. This was a hard to solve problem.

### A not so stable and calm river

Another problem which culminated around AD 100 is that the Waal, as the main branch of the Rhine, was altering its course, and moving away from the Hunerberg. The presence of rivers as necessary for the army logistics is widely accepted. Every amphora of oil or wine, every crate with *terra sigillata*, every block of tufa used in Nijmegen came via the river, and with it of course much more. A large project to protect the Dutch against flooding caused by the main rivers ('Ruimte voor de rivier', i.e. 'Space for the river') meant that north of the modern city centre a new, additional, channel was created for the Waal. To this end, large-scale archaeological research had to be conducted. One of the most exciting reports resulting from this was that into the history of the river, and its implications for human settlement (Willemse 2019). The traditional version, in writing as well as maps of Roman Nijmegen, depicts the Roman Waal more or less in the same location as the present river. Local archaeologists

confirmed this to hold true as late as 2009 (Van den Broeke *et al.* 2009).

Willemse, on the basis of extensive coring, multiple trial trenches and excavations, <sup>14</sup>C and OSL dating, and combining other available data, came up with a radically new and exciting picture (fig. 4). This included a much more active river, that changed its course repeatedly in Roman times, sometimes over considerable distances in a short time span. A privately funded trial trench in 2015 was dug in order to verify this author's theory that in Augustan times the Waal was to be located at the foot of the Hunerberg, at the level of the base on the moraine. The results were alas inconclusive (Daniel 2016), but with this new report it seems we were not that far off.

Between 100 BC and AD 790 no less than eight major new courses were identified, four of them relevant for this argument. The river that the first Romans encountered had moved well over 1 km to the west by the (end of) period 4: AD 75-125. With it the necessary harbour facilities had to move as well, away from the protective zone of the fortress. But a fortress so much removed from its vital logistics was not something the Romans liked. Normally, as we see everywhere on the Rhine and Danube, the forts and fortresses were as close as possible to the river, and thus their harbours were very close at hand. We think this was intentional. The fact that the Batavians were able to starve the occupants of *Vetera* 1 into surrender must have been an enormous shock, which emphasises the importance of sufficient supplies, and a guarded supply chain, including the last part between river and fortress. In the heartland of the Batavian *civitas*, only one generation after the revolt, that lesson would not have been forgotten.

Now, the Roman army was perfectly capable of harnessing rivers, and creating waterways of their own, as a recent dissertation once again confirmed (Verhagen 2022). Yet this would come at an enormous cost, and given the size of the river, and the force it could exercise, this would be a major task, involving many men and lots of resources. If the strict condition was that the base should be located near to the river, then either the river needed to return to the Hunerberg, or a safe channel connecting them would be needed, or the fortress should move and follow the river. That last option would mean losing many of the advantages the Hunerberg did offer. It seems every solution was possible, but costly and less than ideal. Also, there was no guarantee that a new connection or moving the fortress would solve the problem permanently. There is even a chance that the Romans did try one of the first two options, and failed, and we simply just don't know it, yet.

## Conclusion

To sum up: the Romans faced two local problems around AD 100 which could, and probably did, influence the more strategic arguments whether or not to keep a

legion in Nijmegen. The first problem was a guaranteed and sufficient supply of good drinking water to the Hunerberg. It appears that the fortress and the ever-expanding military town outgrew the limits of the water supply. Secondly, the main logistical artery was moving away from the fortress which left the Romans with less-than-ideal solutions. Solvable, but maybe not at this time, as the new war in Dacia was coming ever closer. In the end the Romans made the choice to leave and, although (sub-) units did occupy the fortress after the Tenth Legion left, it never really functioned as it did before. And although left without a permanent legionary garrison, Nijmegen did flourish for a while, but not as it could have, like *Aquincum*, *Carnuntum*, *Vindobona*, *Singidunum* and other comparable sites.

## Bibliography

- Bloemers, J.H.F., 1983: Nijmegen, gem. Nijmegen. Ograving Romeinse militaire en civiele bewoning. *Jaarverslag Rijksdienst voor het Oudheidkundig Bodemonderzoek* 1981, 31-33.
- Brunsting, H., 1959: Legerplaats van het 10<sup>e</sup> legioen, *Bulletin van de Koninklijke Nederlandse Oudheidkundige Bond*, zesde serie 12, \*174.
- Daniël, A.A.W.J., 2016: *Op zoek naar de Romeinse haven bij Ubbergen*, Nijmegen Archeologische Berichten Ubbergen Rapport 5).
- Driessen, M.J., 2007: *Bouwen om te blijven. De topografie, bewoningscontinuïteit en monumentaliteit van Romeins Nijmegen*, Amersfoort (Rapport Archeologische Monumentenzorg 151).
- Franzen, P.F.J., 2009: The Nijmegen canabae legionis (71-102/105 AD). Military and civilian life on the frontier, in: A. Morillo, N. Hanel & E. Martín (eds), *Limes XX. Estudios sobre la frontera romana / XXth International Congress of Roman Frontier Studies, Leon, (España), Septiembre 2006*, Madrid (Anejos de Gladius 13), 1271-1283.
- Gugl, Ch., S. Radbauer & M. Kronberger, 2015: *Die Canabae von Carnuntum II. Archäologische und GIS-analytische Auswertung der Oberflächensurveys 2009-2010*, Wien.
- Haalebos, J.K., 1995: *Castra und Canabae. Ausgrabungen auf dem Hunerberg in Nijmegen, 1987-1994*, Nijmegen (Libelli Noviomagensis 3).
- Haalebos, J.K., 2000: Römische Truppen in Nijmegen, in Y. Le Bohec & C. Wolff (eds), *Les légions de Rome sous le Haut Empire. Actes du Congrès de Lyon (17-19 septembre 1998)*, Lyon-Paris (Collection du Centre d'études et de recherches sur l'Occident 27), 466-489.
- Harmssen, C. & H. van Enckevort (eds), 2017: *Op de grens van Oppidum Batavorum. Archeologisch onderzoek aan het Nijmeegse Hertogplein*, Nijmegen (Archeologische Berichten Nijmegen Rapport 70).

- Heirbaut, E.N.A., 2010: *Privé-toiletten uit Oppidum Batavorum. Opgravingen op de St. Josephhof in Nijmegen 2*, Nijmegen (Archeologische Berichten Nijmegen Rapport 17).
- Kessener, P. & M.P.J. Janssens, 2017: *Onderzoek ten behoeve van de UNESCO nominatie Romeins aquaduct, Gemeente Berg en Dal en gemeente Nijmegen. Een archeologisch wetenschappelijke bureaustudie*, Weesp (RAAP Rapport 3319).
- Kloosterman, R.P., 2019: *De kwaliteit van het bodemarchief binnen het areaal van de Romeinse legioensvesting op de Hunerberg te Nijmegen. Bureauonderzoek*, Nijmegen (Archeologische Berichten Nijmegen Briefrapport 247).
- Kloosterman, R.P., 2022, *Archeologisch onderzoek naar het Romeinse aquaduct aan de Bosweg te Nijmegen*, Nijmegen (Archeologische Berichten Nijmegen Rapport 105).
- Kühlborn, J.-S., 1992: *Das Römerlager in Oberaden III. Die Ausgrabungen im nordwestelichen Lagerbereich und weitere Baustellenuntersuchungen der Jahre 1962-1988*, Münster (Bodenaltertümer Westfalens 27).
- Polak, M. & L. van Diepen, 2011: *Archeologisch onderzoek in de Sterreschansweg te Nijmegen*, Nijmegen (Archeologische Berichten Nijmegen Rapport 21).
- Schut, P.A.C., 2005: *De aardwerken van Groesbeek. Een aquaduct voor de Romeinse legioensvesting van Nijmegen?*, Amersfoort (Rapport Archeologische Monumentenzorg 119).
- Verhagen, J.G.M., 2022: *Tussen de Dam van Drusus en de Zuilen van Hercules. Romeinse waterwerken in de Rijn-Maasdelta*, Amsterdam (PhD thesis Vrije Universiteit).
- Van den Broeke, P., H. van Enckevort & J.R.A.M. Thijssen 2009: 'De oeverbewoners noemen hem Vahalis'. De Waal bij Nijmegen in de Romeinse tijd, *Jaarboek Numaga* 66, 15-31.
- Van Enckevort, H. & J.R.A.M. Thijssen, 1996: *Graven met beleid. Gemeentelijk archeologisch onderzoek in Nijmegen 1989-1995*, Abcoude.
- Willemse, N.W., 2019: *De vroege Waal bij Nijmegen. Stratigrafie, sedimentologie en genese van laat-holocene rivierafzettingen tussen Nijmegen en Lent (Ruimte voor de Waal)*, Weesp (RAAP Rapport 3208).





# The three fortresses of *Legio II Italica* in the province of *Noricum*: Ločica (Slovenia), *Lauriacum* and Albing (Austria)

Stefan Groh

With the fortresses of *Legio II Italica* in Ločica, *Lauriacum* (Enns) and Albing (fig. 1) we have a rare stroke of luck in archaeology, namely that the strategy of the generals and emperors, the political and military constraints and ultimately the individual and situational decisions led to the construction of three legionary *castra* in stone architecture in a relatively short period of about 40 years (170/171-211/217 AD). The ground plan of the fortresses allows us to understand the reasons for the construction of each one. The strategic concepts were then reflected in the sequence of erection of the interior buildings as well as the varying architectural design of the *castra*. The two stone-built fortresses of Ločica and Albing were never even rudimentarily completed. The one in *Lauriacum* (Enns) was originally projected as a provisional camp for the advance into *Germania libera*. It was the only one of *Legio II Italica* to be completely built and remained in existence until the 5<sup>th</sup> century AD (fig. 1).

The history of *Legio II Italica* had its beginning in *Aquileia*, the logistical base of the emperors Marcus Aurelius and Lucius Verus for operations in the Danube region. The Italic legions II and III were raised here from 165 AD (Groh 2018, 90-94). In Ločica, the *praetentura Italiae et Alpium* was established around 170/171 AD, in response to the invasion of the Germanic tribes, which reached as far as *Opitergium* (Oderzo) in Northern Italy. In contrast to the common hypothesis that this *praetentura* was based on a spatial defence concept for the protection of Italy, it is now assumed that there was a fortress to control the Amber Road in the function of a post. Shortly after the start of construction works, the strategy changed due to the warlike events with the Germanic tribes. The troops were moved to the Danube limes, where a new temporary camp was erected by *Legio II* in *Lauriacum*. Previously, in the course of the transfer of the legion to the Danube Limes, a temporary camp of *Legio II Italica* had been installed at the Amber Road near Strebersdorf (Austria, Sedlmayer 2020, 61-65, fig. 26-29).

The advance of both Italic legions (II and III) towards the north is likely to have been accompanied by the transfer of the war staff to *Carnuntum* or *Vindobona*, from where the offensives against the Germanic tribes were directed between 170-173 and 178-180 AD.

## Stefan Groh

Austrian Archaeological  
Institute, Austrian  
Academy of Sciences,  
Dominikanerbastei 16,  
1010 Vienna, Austria, stefan.  
groh@oeaw.ac.at

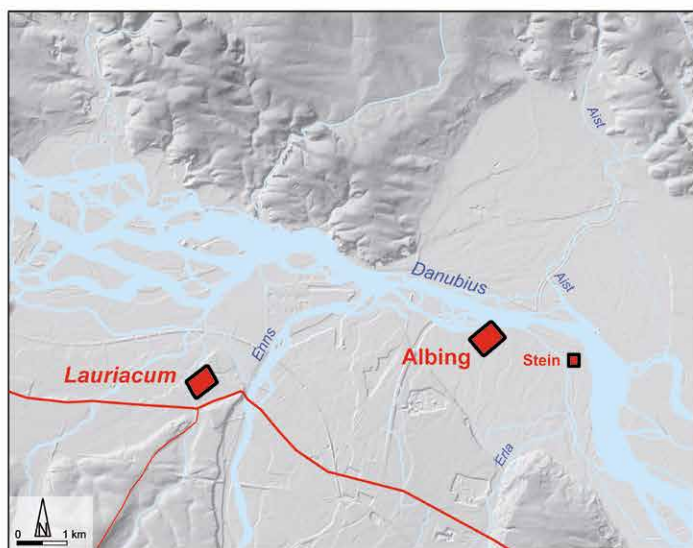


Figure 1. Topography of Noricum and of the adjacent Roman provinces and German territories. Network of paths and river systems as well as woodlands. The position of the fortresses in Ločica, Lauriacum and Albing.

	Ločica	Lauriacum	Albing
dimensions (m)	538 × 431.6	534 × 396	567.7 × 435.8
area (ha)	23.29	20.53	24.54
length-to-width ratio	1:1.25	1:1.35	1:1.3
ratio of the <i>praetentura</i> to the <i>retentura</i>	1:1.3	1:1.2	1:1.1
circumference (m)	1936	1814	1998
built up camp space (%)	20	79	7

Table 1. Basic data of the ground plans of the fortresses of Ločica, *Lauriacum* and *Albing*.

The outline of the *castra legionis* of *Lauriacum* (fig. 1) corresponded to a parallelogram whose orientation, as is usual for field or temporary camps, was dictated by topography. After the end of *expeditio II Germanica* (178-180 AD), both the camp site and the ground plan were retained (Freitag 2018, 173-184). In the fortress, an early Severan period expansion programme is evident, but under Caracalla's reign (211-217 AD), a transfer of the *castra* to a new, topographically more suitable site was intended. In Albing (fig. 1) construction works began of a larger and in terms of military architecture, more innovative fortress. Towers projecting over the outer walls, massive fortifications, an extra-wide *porta praetoria* with three passages and the *principia* with a *quadriporticus* framing the *groma* were the essential structures of the intended monumentalisation. Spoliated building material from the *Lauriacum* site was used laying the foundations of the fortress. The elaborately designed construction measures of the fortress of Albing were never completed. The large-scale construction probably ceased with the assassination of emperor Caracalla, i.e. around 217 AD at the latest (Groh 2018, 35-36 and 100-102). Accordingly, *Legio II Italica* remained at its camp site in *Lauriacum* until the 5<sup>th</sup> century AD, and the fortress kept its original expeditionary character due to the retained basic outline of a parallelogram.

### The topography and morphology of the three fortresses

The three camp sites diverge greatly in terms of their topography and morphology. In the following, the site factors and the layout of the fortresses will be discussed (table 1).

#### Ločica

The fortress of Ločica ob Savinji (fig. 2) was situated in a plain, 14 km west of *Celeia* (Celje) near the confluence of the rivers Bólska (Wolska) and Savinja (Sann). The strategic position of the *castra* made it possible to control the important river crossing over which the Amber Road. Whenever one wanted to reach the upper Adriatic by the shortest route from the area of the eastern foothills of the Alps or the central Danube region, one had to cross

this narrow point, which is already indicated by the latin name of the pass, *Atrans*. The topography itself explains what was meant by the term *praetentura Italiae et Alpium*, a strategically ideally located control post that monitored, administered and, if necessary, blocked access to *Regio X* and Italy in general.

The fortifications consisted of the four gates and 30 internal towers. In each of the four rounded corners of the fortress, a tower was added to the inner side. A total of 14 towers were built in the *praetentura* and 16 in the *retentura*. In front of the wall no trenches were dug. The *praetentura* remained free of buildings in the c. 80 m wide first *scamnum*, except for a latrine attached to the *porta praetoria*. In this area the centurion barracks are missing. The distance between the *valetudinarium* and the internal towers of the praetorial front measured 102 m. The barracks of the Second Cohort were 98 m long, from which it can be concluded that in the first *scamnum* either only shorter centuria barracks or none at all were planned. The *via sagularis* was at least 11 m wide, and the maximum length of the barracks planned here could have been 80 m.

In the second *scamnum* of 102 m width were situated a *horreum*, the *valetudinarium* and the unfinished *thermae*. Excavations have shown that only the *valetudinarium* was in use. The area southwest of the baths and the *scamnum tribunorum* remained unbuilt. To the east and west of the *principia*, in the 130 m long third *scamnum*, in the *latera praetorii*, the six barracks of the First and Second Cohorts were situated. The space between the *principia* and the barracks of the Second Cohort, located at a distance of 60 m, also remained unbuilt.

The proportion of the subsections of the fortress are deduced from the building structures, with three *scamna* of 80, 102 and 130 m in length. A *scamnum tribunorum* is perhaps indicated by the projection of the *valetudinarium* in relation to the *horreum* by 34 m, but the *basilica* of the *thermae* was situated to the rear again by 8 m, so that a width of only 26 m can be assumed for tribune houses (if they were ever planned at all). This width is also found in *Lauriacum*, where between the baths and the *via principalis* the tribune houses were up to 25 m wide, which, in addition to the positioning of the *valetudinarium* and the

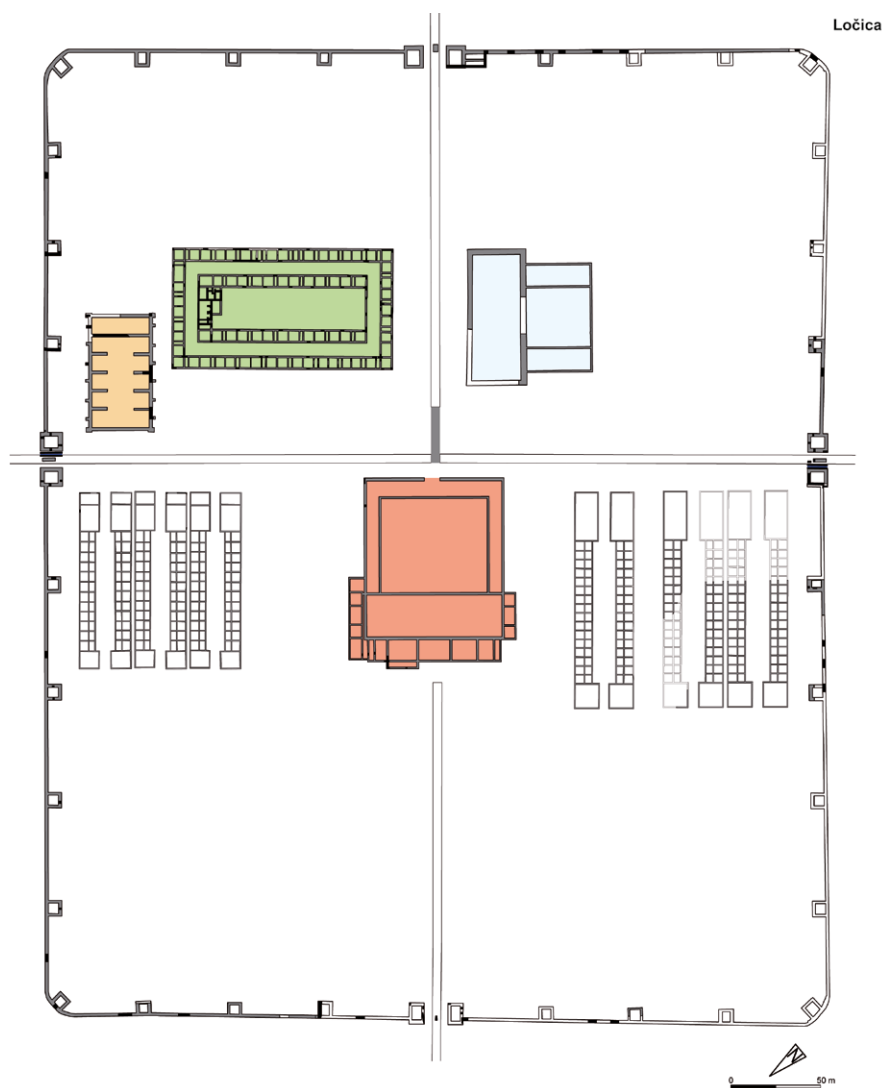


Figure 2. General plan of the fortress of Ločica, 170/171 AD.

baths, could indicate a construction plan of both fortresses that was congruent in some aspects. The distance between *valetudinarium* and *principia* measured 60 m in Ločica and 65 m in *Lauriacum*, that between *basilica thermarum* and *principia* 38 m in Ločica and 51 m in *Lauriacum*. In Ločica, the absence of further barracks, workshop buildings and *fabricae* is primarily noticeable, structures that are very significant for the *Lauriacum* site. There, in turn, there is no *horreum* directly comparable to Ločica.

### ***Lauriacum***

The camp of *Lauriacum* (fig. 3) was not located on a low terrace on a river in a wide plain, as in Ločica, but in a clearly elevated position at 258 m above sea level in the shadow of two hills, the Stadtberg and Eichberg, which limited the field of vision to the south-east and south-west. The primary conception of *Lauriacum* reflects the planning of a temporary camp in a crisis situation or of an advanced headquarters, apparent in the outline

of the fortress in the form of a parallelogram and the topographical position. Comparable to this is the location of the fortress of *Mogontiacum* (Mainz), which was also adapted to the topography (Burger-Völlmecke 2020, 18-31, fig. 2).

The orientation of the *castra* of *Lauriacum* followed exactly the terrace edges to the northwest and northeast, but the positioning on the plateau was determined not only by these natural barriers, but especially by other factors, namely the flow of a watercourse (Bleicherbach), which was integrated into the ditch system. The camp was secured to the north by a double ditch system. A berm of 2.4-2.6 m was followed by a narrow 6.5 m wide and about 3 m deep first V-shaped ditch, then another berm of 2.5 m and on the outer boundary a 11 m wide and up to 5.8 m deep second V-shaped ditch. The ditch system thus extended over a total width of about 23.5 m. The praetorial front and the south-eastern side were also protected by two ditches. On the south-western front, a 3.4 m deep



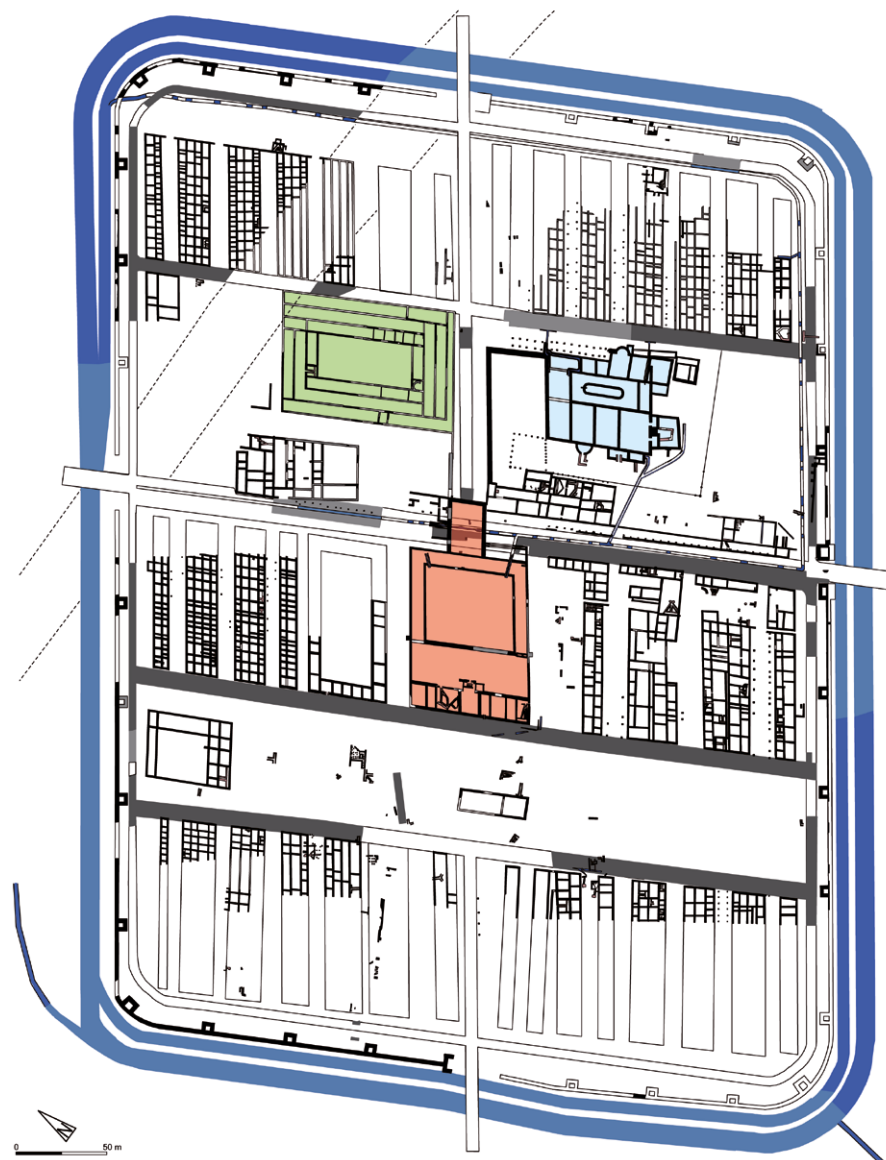


Figure 3. General plan of the fortress of *Lauriacum*, 171 to 5<sup>th</sup> century AD.

and up to 12 m wide V-shaped ditch was uncovered at a distance of up to 27 m from the curtain wall, in which sediment deposits of the watercourse (Bleicherbach) could be found: the ditches were thus irrigated. The fortifications of the *castra* at *Lauriacum* comprised four gates and 30 internal towers, four of which were placed in the rounded corners of the fortress. 19 towers and the *porta principalis dextra* as well as the west tower of the *porta decumana* (probably also the east tower of the *porta praetoria*) have been documented by excavations, and three towers by geophysical measurements (Groh 2018, 154-155, fig. 22-23).

The interior construction extended over five *scamna* of 90, 112, 90, 60 and 100 m in length. The 90 m long first *scamnum* was occupied by 24 m wide barracks, 10 of which were double barracks. The 67.5 m long barracks

situated in the left *praetentura* did not show any prominent centurion's quarters. The total length of the double barracks in the right *praetentura* was 87 m, the centurion's quarters may have measured 13.5 × 12.0 m. The barracks of the First Cohort also clearly showed prominent centurion's quarters. Only in the barracks in the north-western corner of the fortress there are no centurion's quarters evident, which may indicate special accommodation, such as that of *immunes*.

In the second *scamnum* of 112 m length there were situated the *valetudinarium* on the left and, north of the *via principalis* a building complex measuring 70 × 35 m, which, according to the geophysical datas, projected into the *via principalis* and is interpreted as a block of magazines/workshop buildings or tribune houses. The eastern part of this *scamnum* was occupied by the thermal

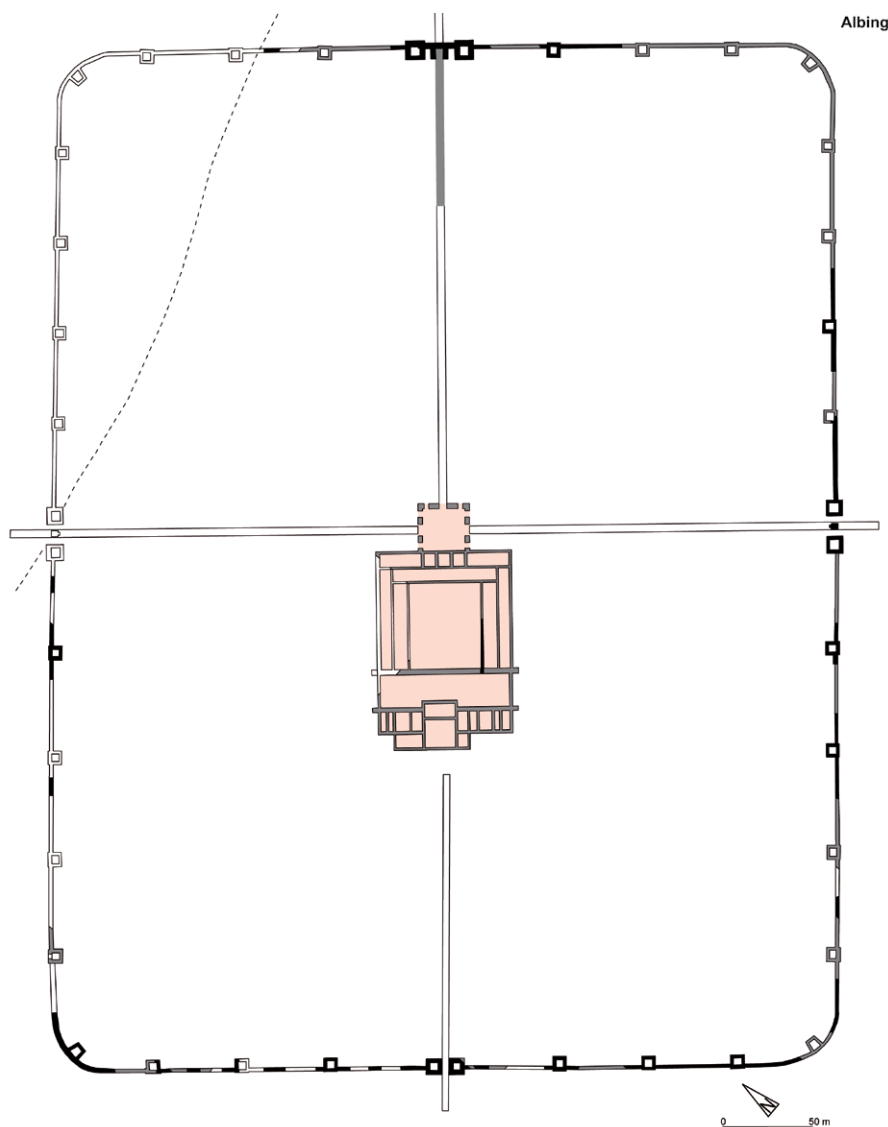


Figure 4. General plan of the fortress of Albing, 211-217 AD.

complex. The *via principalis* was lined on its north side by a portico built in a later expansion phase (period 2, after AD 202), which is very well documented in the eastern part, but is now also indicated for the western part and the *via decumana* on the basis of the geophysical datas. Three tribune houses of 400 m<sup>2</sup> floor space are only recognisable between the thermal complex and the *via principalis*.

In the 90 m long third *scamnum* were situated the barracks of the Second Cohort, of at least 72.5 m length (probably 87 m in addition), whose ground plan and dimensions corresponded to those of the barracks in the first *scamnum*. There was no regular subdivision of the *arma* with corridors. Adjacent to it was a building measuring about 87 × 44 m, which can be seen either as a magazine building or *praetorium*. The *principia* were erected in the middle of the third *scamnum*, followed by the 94 m long barracks of the First Cohort.

Only a few excavations were carried out in the fourth *scamnum* of 60 m in length. According to the ground plan and to the more recent excavation data, the buildings of the fourth *scamnum* are considered to be *fabricae*. One of them is thought to be a shield factory of the 4<sup>th</sup> century AD, as documented for *Lauriacum* in the *Notitia Dignitatum*. More than two-thirds of the 100 m long fifth *scamnum* has not been investigated. The excavated structures mostly indicate barracks.

### Albing

The fortress of Albing (fig. 4) was built on a low terrace (244 m above sea level), bordered on the west by the river Enns, on the north by the Danube. Its orientation followed almost exactly that of the *castra* of *Lauriacum*. The exact alignment with a view to the confluence of the river Aist with the Danube is comprehensible. The fact that this estuary of the Aist was of great military importance is



indicated by the temporary camps Obersebern 1-3 installed in this area already during the early imperial period (Groh & Sedlmayer 2018). Along the river Aist, a communication axis and trade route led from the Bohemian areas to the Danube.

The fortifications consisted of four gates, a curtain wall (no ditches) and 32 towers, some of which projected in front of the fortification wall, four of which were erected in the rounded corners of the fortress. There were 16 towers each in the *praetentura* and in the *retentura*. Of the fortification, the *porta praetoria*, the *porta principalis dextra* and the *porta decumana* as well as 13 towers are known from excavations and, in addition, 11 towers from geophysical prospection.

The *praetentura* was left free of buildings, in the *retentura* was situated the *principia*, the only internal structure of the fortress whose foundations had been laid before the premature termination of the construction works. The overall ground plan of the *principia* has been investigated by geophysical prospection and aerial photo analysis and in detail by excavations. In the *praetentura*, the *via principalis* has been proven by prospections and over a length of 80 m by excavations.

### The sequence of the building activities

On the basis of the three fortresses, the sequence of the respective construction measures can be concluded. While Shirley (2001, 142-155) assumes a period of 2-3 years until the completion of wooden/earthen camps, the findings from Ločica and Albing show how, in times of crisis, the rapid implementation of a military building project may have progressed in only a few months. Work began on the fortifications, the curtain walls including towers and the gateways. Ditches were not dug either in Ločica or Albing; their construction was probably planned only after the completion of the building measures of the entire fortifications and/or the interior buildings. Together with the gates and the wall, sewers leading through the gates were constructed in Ločica, as well as individual gravelled sections of the *via praetoria* in Ločica and Albing. The first buildings to be constructed in Ločica and Albing were the *principia*, those in Albing including a monumental framework of the *groma*. Further construction works can be seen in Ločica, where the *valetudinarium* was built first, followed by a *horreum* and the barracks for the First and Second Cohorts. The last building to be started, before the unfinished fortress was abandoned, were the baths, of which the foundations of the transverse hall and the tripartite parcelling of the bathing wing of the row type are evident. Exactly the same type of baths was built and completed shortly afterwards in a comparable size at *Lauriacum* (Groh 2018, 94-103), from which it can be concluded in all probability that the same construction plan was used.

## Architectural trends and special features

It is precisely in the snapshots of the state of construction of the two fortresses of Ločica and Albing that the special function of each one and the associated intention of the commanders and ultimately of the emperor can be read.

### Gates and towers

A development in the fortification architecture is clearly discernible (Groh 2018, 32). The towers were still attached to the inside of the fortification walls around 170/171 AD in Ločica and *Lauriacum*, but already projected from the wall in Severan times (fig. 2-5). The corner towers were rectangular in Ločica, slightly trapezoidal in *Lauriacum* and strongly trapezoidal in Albing. There were striking differences in the average size (base area) of the towers, which amounted to an enormous area of 81.9 m<sup>2</sup> maximum for the 30 towers in Ločica, only 43.5 m<sup>2</sup> for the 30 towers in *Lauriacum* and 56.3 m<sup>2</sup> for the 32 towers in Albing. The size of the towers thus varied, with the same wall thicknesses of the defences, by an average of 2.1 m in all three fortresses. Ločica, with its mighty towers of the gates and defences, must therefore have left an extremely defensive impression.

The *portae praetoriae* of Ločica and Albing were also of enormous size (425 and 355.6 m<sup>2</sup> respectively), whereby the one in Albing had three passages and was 37.6 m wide (fig. 5). Only the *porta principalis dextra* is known from *Lauriacum*, which, with an area of 297.9 m<sup>2</sup> and a width of 30.4 m, was similar in size to those of Ločica and Albing. A specific feature of Albing is the extremely small *porta decumana* measuring only 21.8 m in width and 191.8 m<sup>2</sup> in area (Ločica: 29.9 m width and 350 m<sup>2</sup> area). The clear widths of the gateways (gate passages) varied greatly. In Ločica they measured 12.8 m and 13.2 m in the two main gates and 9.4 m and 9.8 m in the *porta principalis*. In *Lauriacum* only the 12.8 m width of the *porta principalis dextra* is known, a dimension that corresponds to that of the *porta praetoria* of Ločica. Albing deviates completely from these values. Here the gateway of the *porta praetoria* measured 17.6 m in width, the known *porta principalis* 10.8 m and only 3.6 m (!) the *porta decumana*. This underlines the orientation of the *castra* of Albing towards the riverside of the Danube and the estuary of the Aist or towards the territory of *Germania libera*. In Albing the most representative *porta praetoria*, whose conception was reminiscent of that of *Castra Albana in Regio I (Latium, Italy)*, opened in this direction (Groh 2018, 36-38). This situation is probably comparable to the 'Limestor' of Dalkingen in *Raetia*, which was also monumentalised under Caracalla's reign (Plank 2014, phase 6). The towers of the gates had a rectangular ground plan in Ločica, but an approximately square one in *Lauriacum* and Albing (fig. 5).

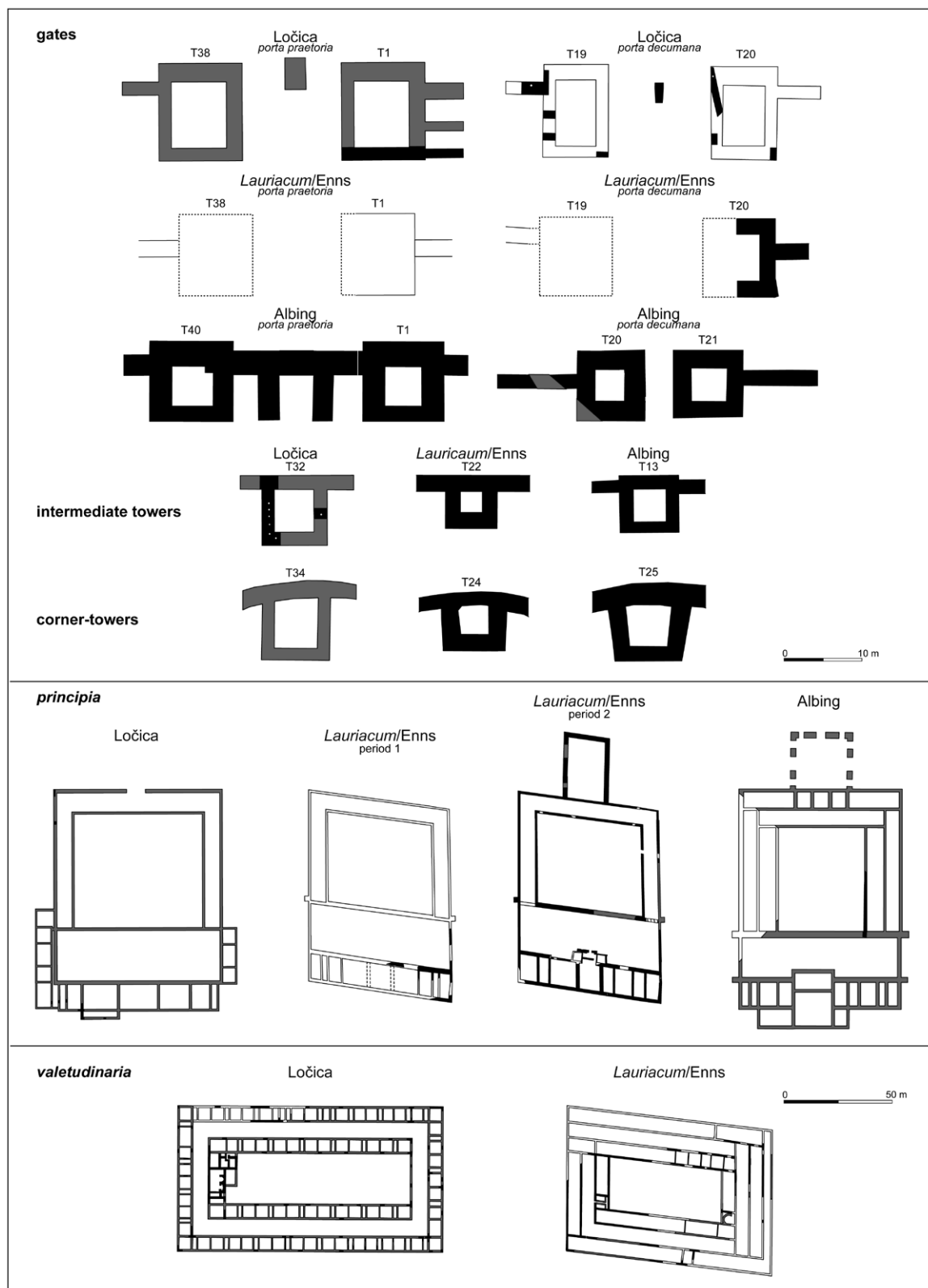


Figure 5. Overview of important building types (gates, towers, *principia* and *valetudinaria*) in the fortresses of Ločica (unfinished), *Lauriacum* (phase 1 and 2) and Albing (unfinished).

## Principia

The decisions as to which buildings were erected in which size in the *castra* were based on purely functional requirements. The *principia* were designed to be oversized in the fortresses of Ločica (9435 m<sup>2</sup>) and Albing (7978 m<sup>2</sup>), in Ločica because they functioned as the official residence of the *praefectus* of the *praetentura Italiae et Alpium*, in Albing as an expression of the emperor's will to represent (fig. 5). In *Lauriacum*, on the other hand, the *principia* were of modest shape (5847 m<sup>2</sup>), and their architectural models are to be sought in the *principia* of the temporary wooden/earthen camps. In the late Antonine period the *principia* of the *castra* of Ločica and *Lauriacum* (phase 1) had not been adorned by any architecturally outstanding framework of the *groma*. But during the Severan period a monumentalised *groma* of 630 m<sup>2</sup> had been realised in the course of a second construction phase in *Lauriacum* and was already planned in Albing at the start of the construction works on an area of 733 m<sup>2</sup> (Groh 2018, 47-64).

## Valetudinarium, horreum, baths

The oversized *valetudinarium* in Ločica (8235 m<sup>2</sup>) resulted from the quarantine function of the fortress at the time of the Antonine plague. In permanently occupied *Lauriacum*, a 30 % smaller version (6365 m<sup>2</sup>) with the same floor plan (fig. 5) has been realised (Groh 2018, 81-83). The *horreum* of Ločica, which measured almost 2500 m<sup>2</sup> in area, has no counterpart in *Lauriacum* or Albing. No *horreum* has yet been excavated in *Lauriacum*, and construction works had not yet been started in Albing. The immense size of the *horreum* of Ločica allows conclusions to be drawn about a food supply program (Groh 2018, 77). The baths of the block-type, which remained under construction in Ločica and which were completed in *Lauriacum* are both comparable in their ground plan and in their size: 2529 and 2482 m<sup>2</sup> respectively (Groh 2018, 83-84).

## Barracks

In Ločica, only the construction work of the barracks of the First and Second Cohorts had been begun, but was never completed. Their ground plan, size and function are different from those at *Lauriacum*. The six barracks of the First Cohort at Ločica are the largest known barracks in a fortress, measuring 120 m in length and 1363 m<sup>2</sup> in floor area (Davison 1989, 268-275; Groh 2018, 64-77). They were structured by prominent centurion's quarters (317 m<sup>2</sup>) and end buildings (163.8 m<sup>2</sup>) as well as 16 *contubernia* of 36.1 m<sup>2</sup> area each. Their morphology, compared with the *castra praetoria* in Rome, suggests the planned quartering of mounted *equites singulares* or *immunes*. This could indicate that Ločica was also designed for the emperor's stay or as a strategic headquarters in the Marcomannic Wars.

In *Lauriacum* the size of the barracks of the First Cohort was reduced by about 15 % to 95 m in length and 1139 m<sup>2</sup> in size. They had smaller centurion's quarters (300 m<sup>2</sup>) and no end buildings. The 14 *contubernia* were also reduced in size to 32.1 m<sup>2</sup>. These differences indicate that a First Cohort, completely different from the formation in Ločica, was then stationed in *Lauriacum*.

The six barracks of the Second Cohort at Ločica were designed with a length of 98 m and a floor area of 993 m<sup>2</sup>. They had centurion's quarters of 212 m<sup>2</sup> and end buildings of 92.7 m<sup>2</sup>. The 12 *contubernia* were similar in size to those of the First Cohort, with an area of 37 m<sup>2</sup>. In *Lauriacum*, the barracks of the Second Cohort, none of which has been completely excavated, were probably about 90 m long. The 14 *contubernia* were 29.4 m in size. In Ločica, no foundations of the other crew quarters have been documented; before their construction, the legion had already been withdrawn to the Danube.

## The function of the three fortresses

Table 2 summarises the dating approaches, the most important architectural features as well as the functions of the three *castra*. The rapid succession of buildings in Ločica and *Lauriacum*, which were almost certainly erected within only a few years in the 170's AD by the same construction units, and the striking differences in their morphology and in the dimensions of the buildings can only be explained by a completely divergent function.

The fortress of Ločica was monumentalised by oversized towers and gateways, with which one defied the Germanic tribes and in which one stationed the crisis staff of the *praetentura Italiae et Alpium* together with the imperial guard on the Amber Road. The *castra* of *Lauriacum* were in their initial phase planned as a temporary camp, oriented towards the topography. The ground plan was determined by the embedding between the surrounding hills and the watercourses. Functional, small-scale buildings characterised the interior. No representative architectural accents can be detected in the first phase. From the Severan period onwards, after the construction in Albing had ceased, an attempt was made to adapt and to adorn the central administrative building by erecting a monumental architectural framework of the *groma* in front of the *principia*. These construction activities were carried out in the knowledge that *Legio II Italica* would remain permanently stationed at this site.

In planning the fortress at Albing, emperor Caracalla may have had in mind a replacement for the one at *Lauriacum*, which was not very representative in its conception and morphology. The re-foundation of the fortress of *Legio II Italica* in Albing was to be a symbol of Rome's strength against the Germanic tribes. These audacious plans ended a fortress that was begun to be built in a swamp and whose few buildings never got beyond

	Ločica	Lauriacum	Albing
dating	170/171 AD	171/180 to 5 <sup>th</sup> century AD	211-217 AD
architectural specifics	only <i>valetudinarium</i> completed; oversized <i>valetudinarium</i> ; large <i>horreum</i> ; oversized barracks; large <i>principia</i> ; construction of towers started latest; oversized towers	outline of the camp in form of a parallelogram; alignment of the interior buildings based on the outline in form of a parallelogram; two ditches (irrigated); modest <i>principia</i> ; absence of tribune houses; absence of centurion's quarters; small towers	no building completed; fortification with projecting towers; large designed <i>principia</i> ; monumentalised <i>groma</i> ; <i>porta praetoria</i> with three passages; small <i>porta decumana</i> ; medium sized towers
function	administration / office of the <i>legatus</i> ; protection / elite force; food supply / distribution; sick care/quarantine; hygiene	one of the command centres of the <i>expeditio Germanica</i> ; replacement for the military base of St. Pantaleon-Stein; permanent fortress; stationing of construction vexillations; production site ( <i>fabricae</i> )	representation; territorial reform; provincial administrative reform; troop expansion; monumentalisation
completed buildings	<i>valetudinarium</i>	all	none
under construction / unfinished	perimeter with towers and gates; <i>via praetoria</i> ; <i>principia</i> ; sewers; latrine; <i>horreum</i> ; barracks of the First and Second Cohorts; <i>thermae</i>	none	perimeter with towers and gates; <i>via praetoria</i> ; <i>principia</i> with monumentalised <i>groma</i>

Table 2. Overview of the dating, function and architectural specifics of the fortresses of *Legio II Italica* in *Noricum*

the first foundations. The failing of this building project in Albing can be seen as the last attempt to implement structural administrative reforms in this region. These reforms would have involved moving the legion to its new location east of the river Enns, where an auxiliary fort had already existed at St. Pantaleon-Stein before the Marcomannic Wars (160-180 AD, Ployer 2018, 46-47). After the premature abandonment of the construction work in Albing, *Legio II Italica* remained permanently in the fortification of *Lauriacum* with retained provisional basic features until late antiquity.

## Bibliography

- Burger-Völlmecke, D., 2020: *Mogontiacum II. Topographie und Umwehrung des römischen Legionslagers in Mainz*, Berlin (Limesforschungen 31).
- Davison, D.P., 1989: *The barracks of the Roman army from the 1<sup>st</sup> to 3<sup>rd</sup> centuries A.D. A comparative study of the barracks from fortresses, forts, and fortlets with an analysis of building types and construction, stabling, and garrisons*, Oxford (British Archaeological Reports International Series 472).
- Freitag, K., 2018: *Canabae et municipium. Die römischen Siedlungsräume um das Legionslager von Lauriacum/Enns*, Linz (Forschungen in Lauriacum 18).

- Groh, S., 2018: *Im Spannungsfeld von Macht und Strategie. Die legio II Italica und ihre castra von Ločica (Slowenien), Lauriacum/Enns and Albing (Österreich)*, Linz (Forschungen in Lauriacum 16).
- Groh, S. & H. Sedlmayer, 2018: Frühprinzipszeitliche Militärlager von Lauriacum/Enns und Obersebern im Kontext der raetisch-norischen Kontrolle der Donaupassage, *Bayerische Vorgeschichtsblätter* 83, 43-74.
- Plank, D., 2014: *Das Limestor bei Dalkingen, Gemeinde Rainau, Ostalbkreis*, Darmstadt (Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg 129).
- Ployer, R., 2018: *Der norische Limes in Österreich*, Wien (Österreichische Denkmaltopographie 1).
- Sedlmayer, H., 2018: *Extra muros. Lebenswelt der consistentes ad legionem von Lauriacum*, Linz (Forschungen in Lauriacum 17).
- Sedlmayer, H., 2020: *AD Metalla! Zum Militärplatz Strebersdorf in den pannonischen Eisenrevieren an der Bernsteinstraße*, Drémil Lafage (Monographies Instrumentum 68).
- Shirley, E., 2001: *Building a Roman legionary fortress*, Stroud.

# Pictured fortifications in Roman art as the source for their reconstruction

Dmitry A. Karelin and Aleksandra E. Medennikova

This article is a continuation of our previous study (Medennikova & Karelin 2021), which concerns mainly the classification of the images according to the genres of art, their typology and characteristic features. This paper is dedicated to the study of these pieces of art as the source for Roman military architecture reconstruction. The idea for this study was inspired by Sebastian Sommer's question about our reconstruction of the gates of the Roman fortress Babylon at the 23<sup>rd</sup> Limes Congress in Ingolstadt in 2015. He wondered why we had drawn the towers with flat roofs. Unfortunately, we cannot get information about such details from badly damaged archaeological monuments, but careful analysis of depicted fortifications in Roman art could reveal how they could look and their peculiar features.

The main aims of the study are: a) to classify the images according to the types of architectural representations and their meanings; b) to define characteristic features of images depicting fortresses; c) to find out if they can show any peculiarities of Roman military architecture yet unknown to archaeology and compare them with archaeological data. The work has not yet been completed, also because we were not able to locate all the pieces of Roman art where fortifications are depicted, especially coins.

## Classification of the objects according to the genres of art

We studied 80 pieces of art dated to the 1<sup>st</sup> century BC till the 6<sup>th</sup> century AD (table 1).<sup>1</sup> They belong to different types of visual art: coins, mosaics and frescoes, codices, sculpture, sarcophagi and applied arts (Medennikova & Karelin 2021, 157-164).

## Classification of the objects according to the types of architectural representations and their meanings

The first group contains representation of architectural landscape (for a detailed description of these groups Medennikova & Karelin 2021, 161-163 and 165-167). This

### Dmitry Karelin

Moscow Institute of  
Architecture (State Academy)  
(MARCHI), Rozhdestvenka  
Str., 11/4-1-4, 107031 Moscow,  
Russian Federation,  
dmitry.a.karelin@gmail.com

### Alexandra Medennikova

Pontificio Istituto di  
Archeologia Cristiana, Via  
Napoleone III, 1, 00185 Roma,  
Italia, alexandra.  
medennikova@gmail.com

1 From now on we refer to any piece of art according to the numbers from table 1. The last five columns contain the information about the architectural details, elements and features referring to tables 2-6. There are 72 numbers in the table. Some coins were united in larger groups according to their date and similar depictions. And *vice versa* we could divide simultaneous coins because of differences in architectural details (for example no. 1.7-9).

no.	name	collection	date	bibliography	huge masonry	Depiction of gate	correspondence with tables				
							2	3	4	5	6
1. Coins											
1.1	denarius (city walls)	-	57 BC	La Rocca 2000, fig. 13	+	+	1	1	2	-	1
1.2	denarius ( <i>Emerita Augusta</i> )	ANS 1969.222.1271	16 BC-AD 14	Elkins 2015, 59-60, fig. 48	-	+	1	2	2	-	2
1.3	bronze medal (city gate of Merida)	BM	100 BC-100 AD	Donaldson 1966, 320-322, no. 86	+	+	1	2	2	-	2
1.4	aureus (Praetorian camp)	ANS 1967.153.113	AD 41-54	Elkins 2015, 71, fig. 71	+	+	-	-	1	-	2
1.5	gold medal (Praetorian camp)	BM	AD 41-54	Donaldson 1966, 328-331, no. 88	+	+	-	-	1	-	2
1.6	drachm (gate with Isis figure)	ANS 1944.100.55424	AD 98-117	Elkins 2015, 134, fig. 186	-	+	-	1	-	-	1, 5
1.7	bronze coin (gate of Bizya)	Yale 2009.110.19	AD 117-138	Elkins 2015, 160, fig. 213	+	+	1	2	-	1, 2 (6)	1, 4, 5
1.8	bronze medals (gate of Bizya)	CM	AD 117-138	Donaldson 1966, 314-317, no. 83	+	+	-	2	2-	1, 2 (4)	1, 4, 5
1.9	bronze medals (gate of Bizya)	CM	117-138 AD	Donaldson 1966, 314-317, no. 84	+	+	-	2	-	1, 2 (4)	1, 4
1.10	brass medal (gate of Anchialus)	BM	AD 161-180	Donaldson 1966, 310-311, no. 81	+	+	3	2	-	-	1
		Yale 2004.6.919	AD 193-211	Elkins 2015, 160, fig. 215							
1.11	brass medal (gate)	BM	AD 161-180	Donaldson 1966, 318-319, no. 85	+	+	1	2	2	-	1
		Yale 2004.6.928	AD 211-217	Elkins 2015, 160, fig. 214							
1.12	brass medal (gate of Nicopolis, Moesia inferior)	CM	AD 238	Donaldson 1966, 312-313, No. 82	+	+	3, 5	2	1	-	1
1.13	bronze coin (city walls)	Yale TR2007.13938.805	AD 238-244	Elkins 2015, 161, fig. 216	+	+	4	2	-	-	1
1.14	bronze coin (walls of Bizya)	-	AD 244-249	La Rocca 2000, fig. 16	+	+	1	2	-	1, 2 (6)	1, 4, 5
		ANS 1944.100.15580	AD 244-249	Elkins 2015, 161, fig. 218							
1.15	bronze coin (city walls)	ANS 1951.64.11	AD 260-261	Elkins 2015, 161 and 163, fig. 217	+	+	1	2	-	-	1, 5
		BM	AD 260-261	Donaldson 1966, 323-327, no. 87							
1.16	argenteus (city walls Nicomedia)	ANS 1944.100.5496	AD 284-305	Elkins 2015, 124, fig. 170	+	+	5	1	-	-	1
1.17	argenteus (city walls)	Yale 2008.217.20	AD 286-337	Elkins 2015, 124, fig. 169	+	+	1	1, 2	-	-	1
1.18	aureus (city walls)	Numismatica Ars Classica NAC AG 49 (21 October 2008), lot 438.	AD 286-337	Elkins 2015, 124, fig. 171	+	+	5	1	1	-	1
1.19	nimmus (city walls)	Yale 2007.182.459	AD 306-337	Elkins 2015, 127, fig. 179	+	+	-	1	-	-	1
		Yale 2001.87.8260	AD 306-361	Elkins 2015, 127, fig. 178							
		Yale 2001.87.19520	c. AD 388	Elkins 2015, 129, fig. 184							
		Yale 2001.87.19211	AD 379-392	Elkins 2015, 129, fig. 183							
		Yale 2001.87.19213	AD 425-455	Elkins 2015, 129, fig. 185							

Table 1. Classification of the objects according to the genres of art (continued on the next pages).



no.	name	collection	date	bibliography	huge masonry	Depiction of gate	correspondence with tables				
							2	3	4	5	6
2. Mosaics											
2.1	labyrinth mosaic from the <i>domus</i> of republican times in San Giovanni in Laterano Square	Centrali Montemartini Museum, Rome, Italy	100-1 BC	Salvetti 2016, 587-609	+	-	1, 2	1	2	-	-
2.2	labyrinth mosaic from via Cadolini, Cremona	Museo Archeologico di San Lorenzo, Cremona, Italy	25 BC-AD 25	Reed Doob 1990, 42, fig. 3; Arslan Pitcher 2013, 13-20	-	+	1, 2	-	1	-	1
2.3	labyrinth mosaic from the House of Iulia Felix, <i>Pompeii</i>	National Archaeological Museum of Naples, Naples, Italy	100 BC -AD 100	De Vos 1993, pl. XXII	+	+	1, 2	2	2	-	1
2.4	labyrinth mosaic in a Roman villa in Orbe	Villa at Orbe-Boscéaz, Switzerland, <i>in situ</i>	c. AD 170	Von Gonzenbach 1961, 182-184	+	+	4	2	2	-	1
2.5	labyrinth mosaic with Minotaur in the center	<i>Frigidarium</i> of baths at <i>Hippo Regio</i> , Algeria	AD 150-200	Molholt 2011, 294, fig. 10	+	-	-	-	-	-	-
2.6	labyrinth mosaic	Cormerod, Switzerland	AD 200-225	Von Gonzenbach 1961, 96-99	-	+	-	-	2	-	1
2.7	labyrinth mosaic with Theseus slaying the Minotaur from <i>Thuburbo Majus</i>	Bardo National Museum, Le Bardo, Tunis	late 3 <sup>rd</sup> century AD	Molholt 2011, 291, fig. 5	+	+	-	-	-	1, 2, (6)	1, 4
2.8	mosaic with a representation of the Mediterranean from Haïdra	Haïdra, Tunis, <i>in situ</i>	late 3 <sup>rd</sup> -early 4 <sup>th</sup> century AD	Bejaoui 1997, 825-858	-	+	2	2	-	1	1
2.9	mosaic with rural scenes	Bardo National Museum, Le Bardo, Tunis	300-400 AD	Dorigo 1971, fig. 146	+	+	3	2	-	1	1
2.10	Samson carrying the gate of <i>Gaza</i>	Hugog synagogue, Galilee, Israel, <i>in situ</i>	400-500 AD	Magness <i>et al.</i> 2019, 28-29	+	+	1	2	2	-	1
2.11	representation of the city of <i>Alexandria</i>	Church of Saint John the Baptist, Jerash, Jordan	AD 531	Saradi 2010, 80, fig. 6	+	+	1	2	-	-	1
2.12	the Memphis and Alexandria Mosaic	Yale	500-600 AD	Elkins 2013, 293, fig. 3	+	+	1	2	-	-	1
2.13	representation of the city of <i>Theodorias</i>	Basilica of Qasr el-Lebia, Libya	500-600 AD	Saradi 2010, 82, fig. 9	+	+	1	2	1	1	1
2.14	mosaic with a depiction of city of <i>Alexandria</i>	-	400-500 AD	Saradi 2010, 79, fig. 4	+	+	1, 4	2	2	-	1
2.15	labyrinth mosaic from the villa in Auriol	Auriol, Bouches-dû-Rhone, France	-	Smith 1956, fig. 58	+	+	1, 5	2	2	1	1
2.16	labyrinth mosaic	-	-	Molholt 2011, 290, fig. 3	+	+	-	1	-	-	1
3. Frescoes											
3.1	fresco from the house of Sacerdos Amandus	<i>Pompeii</i> , Italy, <i>in situ</i>	AD 69-79	Baldassarre & Pugliese Carratelli 1990, 586-597	+	+	1	2	2	-	1
3.2	the 'Colle Oppio' fresco	baths of Trajan, Rome, Italy, <i>in situ</i>	AD 64-109	Volpe 2010, tav. 3.1; La Rocca 2000, figs 1-5	+	+	1, 5	1, 2	-	1	1, 5
3.3	city landscape from the Hypogeum of Aurelii	Rome, Italy, <i>in situ</i>	AD 230-240	Braconi 2011, 135-165	-	+	-	-	-	-	1
3.4	fragment of fresco depicting wall with hairy heads above	<i>Dura Europos</i> , Syria, <i>in situ</i>	-	Moormann 2011, 181-182, fig. 104	+	+	-	-	-	-	1

no.	name	collection	date	bibliography	huge masonry	Depiction of gate	correspondence with tables					
							2	3	4	5	6	
<b>4. Codices</b>												
4.1	<i>Notitia Dignitatum</i>	Bodleian Library, Oxford, Great Britain, MS. Canon. Misc. 378; Bavarian State Library, Munich, Germany, BSB Clm 10291	Medieval copies of a probably 300-400 AD original	<i>Notitia Dignitatum</i> in Bavarian State Library; <i>Notitia Dignitatum</i> in Bodleian Library	+	+	1, 2, 3, 4	-	1	-	1	
4.2	<i>Vergilius Vaticanus</i>	Vatican Apostolic Library, Vatican, Vat. lat.3225	300-500 AD	De Nohac 1917; Wright 1993; <i>Vergilius Vaticanus</i> in Biblioteca Apostolica Vaticana	+	+	1	2	-	-	1	
4.3	Genesis of Vienna	Vienna, Nationalbibliothek, Austria, cod. theol. grec. 31	500-600 AD	Weitzmann 1979, 458-459, n. 410	+	+	1	2	1	-	1	
4.4	<i>Tabula Peutingeriana</i>	Vienna, Nationalbibliothek, Austria, Codex Vindobonensis 324	Medieval copy of a probably 300-400 AD original	Bosio 1983; Johnson 1983, fig. 16A	+	+	1, 3, 4	2	1	-	1	
4.5	<i>Corpus Agrimensorum Romanorum</i>	Herzog August Bibliothek in Wolfenbüttel, Germany	400-600 AD	Weitzmann 1979, no. 188, 212-213; Johnson 1983, fig. 16B; Smith 1956, figs. 55-64.	+	+	1, 3, 4, 5	2	1, 2	-	1	
<b>5. Sculptures</b>												
5.1	Trajan's Column	Trajan's Forum, Rome, Italy, <i>in situ</i>	AD 107-113		+	+	1, 2, 3	1, 2	1, 3	1, 2 (3)	1, 4	
5.2	Column of Marcus Aurelius	Piazza Colonna, Rome, Italy, <i>in situ</i>	AD 176-193	Petersen <i>et al.</i> 1896	+	+	1, 2	1, 2	1, 3	2 (3, 5)	1, 4	
5.3	Triumphal arch of Galerius	Thessaloniki, Greece, <i>in situ</i>	AD 298-305	Laubscher 1975, plate 46, 47.2 and 50.5	+	+	1	2	1	-	1	
5.4	<i>Tabula Iliaca</i>	Capitolini Museums, Rome, Italy	100 BC – AD 100	Mancuso 1911	-	+	1	2	1	-	1	
5.5	<i>Tabula Iliaca</i>	National Museum in Warsaw, Warsaw, Poland	100 BC-AD 100	-	-	+	2	2	1	-	1	
5.6	cast of a now-lost marble relief depicting the <i>castellum aquae</i> , Vesuvian gate, and city walls	Museo della Civita Romana, Rome, Italy	-	Huet 2007, fig. 2	+	+	-	-	1	-	1	
<b>6. Sarcophagi</b>												
6.1	'City-gate' sarcophagus	Church of Sant'Ambrogio, Milan, Italy, <i>in situ</i>	AD 380-390	Sansoni 1969, 3-12, fig. 1-4	+	+	1	2	3	2 (5)	1, 4	
6.2	'City-gate' sarcophagus	Louvre Museum, Paris, France and Capitolini Museums, Rome, Italy	AD 390-400	Sansoni 1969, 12-19, fig. 5-8	+	+	1	2	3	2 (3, 5)	1, 4	
6.3	'City-gate' sarcophagus	Diocesano Museum, Ancona, Italy	AD 390-400	Sansoni 1969, 19-29, fig. 9-10	+	+	1	2	3	2 (5)	1, 4	
6.4	'City-gate' sarcophagus	Cathedral of S. Catervio, Tolentino, Italy	late 4 <sup>th</sup> century AD	Sansoni 1969, 29-39, fig. 13-16	+	+	1	2	3	2 (3)	1, 4	
6.5	'City-gate' sarcophagus	Cathedral of Mantua, Italy, <i>in situ</i>	beginning of the 5 <sup>th</sup> century AD.	Sansoni 1969, 51-61, fig. 24-26	-	+	-	-	1	2 (5)	1, 4	
6.6	sarcophagus with a miracle at Bethesda	Vatican Museums, Vatican	c. AD 366-384	Utro 2019, 52, no. I	+	+	-	-	3	-	1	
6.7	sarcophagus with a miracle at Bethesda	Cathedral of Tarragona, Tarragona, Spain	c. AD 366-399	Utro 2019, 53, no. II	-	+	-	-	3	--	1	

no.	name	collection	date	bibliography	huge masonry	Depiction of gate	correspondence with tables					
							2	3	4	5	6	
6.8	sarcophagus with a miracle at Bethesda	Ischia, Italy	c. AD 366-399	Utro 2019, 53, no. III	+	+	-	-	3	-	1	
6.9	sarcophagus with a miracle at Bethesda	Praetextatus Catacombs in Rome, Rome, Italy	c. AD 366-399	Utro 2019, 54, no. IV	-	+	-	-	-	-	1	
6.10	sarcophagus with a miracle at Bethesda	Arles Archaeological Museum, Arles, France	late 4 <sup>th</sup> century AD	Utro 2019, 55, no. V	-	+	-	-	-	-	1	
6.11	marble sarcophagus with the representation of masonry on the short sides	Roman National Museum, Thermae of Diocletian, Rome, Italy	300-400 AD	-	+	-	-	-	-	-	-	
7. Applied arts												
7.1	incense burner in a form of a Roman fort	Egyptian museum in Turin, Turin, Italy, inv. no. 1667	30 BC-AD 395	Fassone 2015, 206, fig. 269	-	+	5	2	-	-	1	
7.2	fastening buckle, belt application and belt tag from <i>Abritus</i>	Regional Historical Museum Razgrad, Razgrad, Bulgaria	c. AD 250	Radoslavova 2014, 152-161, plate 4a and 7a	-	+	4	2	1	1	2, 3, 4, 5	
7.3	pin in form of city gate	possibly private collection	c. AD 300	Ćurčić 2010, 11, fig. 4	+	+	2	-	-	1	2, 4, 5	
7.4	gate's model from <i>Intercisa</i>	Hungarian National Museum, Budapest, Hungary	100-300 AD	Flügel & Obmann 2013, fig. 24	-	+	-	2	-	1	3, 4, 5	
7.5	bronze brazier from Pompeii	National Archaeological Museum of Naples, Naples, Italy	-	-	-	-	1	-	2, 3	1	-	
7.6	bronze brazier in shape of Roman fort	Museum of Roman Civilization, Rome, Italy	-	Bidwell <i>et al.</i> 1989, 159, fig. 7.1.2	-	-	1	1	1	-	-	
7.7	Roman watch tower	Historisches Museum in Regensburg, Germany	-	-	-	-	4	-	-	-	-	
7.8	gate's model from Tokod	-	-	Flügel & Obmann 2013, fig. 25	-	+	-	1	-	1	4, 5	
7.9	fibula in form of a tower	-	-	Flügel & Obmann 2013, fig. 21	-	-	1	-	-	1	-	
7.10	fibula in form of a tower	-	-	Flügel & Obmann 2013, fig. 22	-	-	1	-	1	1, 2 (6)	-	
7.11	fibula in form of a tower	Hungarian National Museum, Budapest, Hungary, inv. no. 171.1874.40	-	Flügel & Obmann 2013, fig. 23	-	-	3	-	-	1, 2 (6)	-	

type of image occurs frequently in frescoes, sculptural reliefs and codices. All of them have a common high viewpoint which offers a bird's eye view of a city and makes it possible to examine all details. A well-known example of this group is 'Colle Oppio Fresco' from the Baths of Trajan (fig. 4, table 1.3.2). Another group demonstrates an 'idea of a town'. Here the viewer can see the whole city encircled by the wall. It is one of the key elements of the image and it aims to emphasize the concept of safety and seclusion. Such iconography appears in codices, coinage and late Roman mosaics. There is a group where the images of fortifications are reduced to only one element, a city gate. This group includes coins, sculptural reliefs, paintings and applied arts. Prime examples are a fastening buckle from

*Abritus* (Razgrad) (fig. 1, table 1.7.2) and a model of a gate from *Intercisa* (Dunaujváros) (fig. 2, table 1.7.4). The meaning can vary in different cases, but this detail always emphasizes the border and its crossing (Medennikova & Karelin 2021, 165-167).

The second and third groups are strictly connected with the very important question for our study. What idea did the Romans want to express by depicting city walls in general? The concept of the border in Roman culture is closely connected with the notion of the *pomerium*. It was a sacral outline of Rome and a *colonia*. We know about it from many written sources, for example, Varro, Plutarch, Livy, *etc.*, who described this ritual in detail. The Romans paid special attention to the foundation of gates as places where the sacred border could be crossed. The plough



Figure 2. Model of Roman gate of *Intercisa* (Dunaujváros), terracotta (Hungarian National Museum, Budapest), 2<sup>nd</sup>-3<sup>rd</sup> century AD (Tamás Kisbali).

Figure 1. Fastening buckle and belt application from *Abritus* (Razgrad). *Opus interrasile*. Copper, silver and gold foil (Regional Historical Museum Razgrad). Middle of the 3<sup>rd</sup> century (courtesy of Galena Radoslavova, Radoslavova 2014, plate 7a).

was lifted above the ground in the future gate's place. We could, thus, suppose that the depiction of walls and gates is the only way to show the *pomerium* and the point where it breaks using art.

The fourth group includes floor mosaics showing a labyrinth surrounded by walls. They present a special type of fortifications. They are quite simplified and often have gates that lead to the entrance of a labyrinth. Probably these images are the depictions of *lusus Troiae* (Troy games), a doubtful city foundation ritual (Medennikova & Karelin 2021, 167). This assumption is supported by a few authors (Rykwert 1988; Kern 2000; Salvetti 2016, 595-597). This ritual is only known from written sources, never from images. Vergilius (*Aeneis* V.590-603) mentioned Ascanius, both as a founder of *Alba Longa* and as a person who initiated the tradition of *lusus Troiae*. This idea does not have any other evidence and seems rather controversial.

The early Christian sarcophagi (fig. 3) form the fifth group. Here the gates were not depicted in a detailed and realistic manner as a part of a Late Antique city fortification. They rather had a symbolic meaning of another border which was very common in funerary art and probably was connected with representations of heavenly cities (Bisconti 2007). This group contains two types of monuments: the so-called 'City-Gate' sarcophagi (fig. 3, table 1.6.1-5) and sarcophagi that represent a miracle at Bethesda (table 1.6.6-10).



Figure 3. Sarcophagus with *traditio legis* scene. Marble (Musée de Louvre, inv. no. 2980). The end of the 4<sup>th</sup> century AD (Aleksandra Medennikova).

### Depiction of the masonry

The architectural and constructional features shown in the studied images could be very informative. First of all, the examination of various masonry types that the Romans used in military architecture could clarify whether its representations reflected reality. There were many various masonry types, from mud and burnt bricks to the *opus mixtum* technique, which the Romans used to construct fortresses and city fortifications in the late period. Sometimes the stonework could be very pretentious, for example, at Magdeleine Tower at Le Mans (Johnson 1983, fig. 14-15, plate 1-2). However, in the studied pieces of art only huge stone blocks are depicted. This peculiarity unites 50 objects dating from the 1<sup>st</sup> century BC to the 6<sup>th</sup> century AD (69.4 % of all studied images), but we know a few fortresses actually constructed with such technique. For example, the so-called Servian walls in Rome and Udhruh fortress in Jordan could be mentioned (Andreussi 1996, 319-324; Gregory 1995-1997, vol. 2,

383-389 and vol. 3, fig. F30.1-5). Trajan's column provides the best opportunity to examine this feature. The Roman camps and the cities of their allies are monumental constructions with stone walls, although they actually were temporary, as a rule. Inside one city one can see a theatre built of stone, which is hardly possible for a provincial settlement in the time of Trajan's conquest. The settlements of Roman enemies, on the contrary, look very primitive, they are almost groups of wooden and mud-brick cabins.

We should also point out that researchers have quite different opinions on this manner of depiction. Richmond (1982, 3-6, 21-24 and 53-54) argued that in this way the Romans portrayed city and military camp walls built of turf blocks, whereas Coulston (1988, 22, 24-25, 136-139 and 145) and Thill (2010, 28-34; 2018, 268) consider such style as a result of imperial propaganda. In this article we are not going to join the discussion, so further information could be found in their publications.





Figure 4. The 'Colle Oppio Fresco' (Baths of Trajan on Esquiline Hill, Rome). AD 64-109 (after Volpe 2010, plate 3.1, photo L. Rizzi).

However, according to the widespread use of huge masonry in pictured fortifications we suppose that this manner of depicting stonework was a mean of propaganda. In the depictions of Roman fortifications from the 1<sup>st</sup> century BC and up to the Late Antiquity masonry is portrayed in this style. It can, therefore, be regarded as an artistic tradition formed under the influence of propaganda.

### Other architectural peculiarities

The examined images depict certain architectural details up to the level of foundation. It is particularly important due to the poor state of preservation of most of the Roman fortresses. Even a single piece of art could provide important details. On 'Colle Oppio Fresco' from the Baths of Trajan (fig. 4, table 1.3.2) one can see the gates with towers' tops. They are conic or *cupola* roofs with long eaves. Moreover,

the fresco contains the depiction of towers with flat roofs with some kind of cornice and a gallery above the portals. So many details inspired us to sort and carefully analyze all of them. There were a few points that we focused on during the analysis: kinds of roofs or tops of towers, forms of towers in the plan, details of merlons. Special attention was paid to the order and gates' ornamentation. We have examined each aspect and calculated the percentage of these features or details present on all studied objects.

### Tower's peculiarities

Half of the studied depictions show towers with flat roofs (table 2). We have also found pitched, four-sloped, conic and *cupola* tops in a few examples. Four-sloped, conic and *cupola* tops appeared only from the beginning of the 2<sup>nd</sup> century AD. Special attention was paid to coins from Bizya (table 1.1.7-8) possibly showing



no.	roofs' types	amount	percentage (from the total amount of objects)	date
1	flat	36	50.0	1-600 AD
2	pitched	9	12.5	100 BC – 400 AD
3	four-slope	8	11.1	100-600 AD
4	conic	8	11.1	100-600 AD
5	cupola	7	9.7	late 1 <sup>st</sup> century – 600 AD

Table 2. Types of towers' roofs.

no.	towers' types	amount	percentage (from the total amount of objects)	date
1	non-projecting	13	18.1	100-500 AD
2	projecting	40	55.6	100-600 AD

Table 3. Projecting and non-projecting towers.

no.	merlons' depictions	amount	percentage (from the total amount of objects)	date
1	schematic	20	27.8	1-600 AD
2	simplified (T-shaped)	15	20.8	1-600 AD
3	merlon cup	10	13.9	100-400 AD

Table 4. Peculiarity of merlons' depictions.

no.	order and decorative details	amount	percentage (from the total amount of objects)	date
1	corniches	19	26.4	100-600 AD
2	columns, pilasters and capitals	14	19.4	100-600 AD
3	doric order	4	5.6	100-400 AD
4	ionic order	2	2.8	100-200 AD
5	corinthian order	5	6.9	100-600 AD
6	unidentified order	5	6.9	100-400 AD

Table 5. Order and decorative details.

no.	gate's peculiarity	amount	percentage (from the amount of gate's depictions)	date
1	single portal	55	87.3	100 BC-600 AD
2	double portal	6	9.5	1-400 AD
3	triple portal	2	3.2	100-300 AD
4	gate decoration	16	25.4	100-600 AD
5	arched gallery above the portal	10	15.9	1-400 AD

Table 6. Peculiarities of gate's architecture and ornamentation.



Figure 5. Fragment of the relief from the Column of Marcus Aurelius, AD 176-193 (after Petersen *et al.* 1896, plate 123).

tower tops with arched galleries and late Roman coins with some rotunda-like structure crowning the tower (table 1.1.16 and 18). Furthermore, reliefs from Trajan's column and a clay model from Regensburg provide rare depictions of the wooden frame on top of the tower (table 1.5.1 and 7.7).

The next point is towers which could be projecting or non-projecting from the walls' circuit (table 3). Most of the images demonstrate the former, and starting from the 3<sup>rd</sup> century AD non-projecting towers were depicted even less often. There are a few coins dating from the 3<sup>rd</sup> to the 5<sup>th</sup> centuries AD with very schematic

depictions of the city walls (table 1.1.16-19). This fact exactly corresponds with archeological evidence where projecting towers appeared later than non-projecting ones and became widespread in late Roman times (Lander 1984, 119-121; Gregory 1995-1997, vol. 1, 160).

### Merlons

A quarter of the studied images show merlons in a very schematic and simplified way (table 4). But there are fewer pieces of art with a T-shaped pattern, which could have been schematically depicted as upper cups of a merlon. Furthermore, several monuments show this

constructional detail more realistically, and one of them, a column of Marcus Aurelius, depicts pitched merlons' cups (fig. 5, table 1.5.2). Some examples with such detail were found during the investigations of Roman forts at Wiesbaden, Heddernhelm, Stickstadt and Lützel-Wiesbelsbach (Bidwell *et al.* 1989, 204, fig. 7.17.1).

## Order

Twenty-five pieces of art dating from the 2<sup>nd</sup> to the 6<sup>th</sup> centuries AD (34.7 % of the total amount of objects) contain depictions with order elements or other decorative elements (table 5). Most of them are cornices, mainly shown in a simplified and schematic way. Columns, pilasters, capitals, *etc.* occur on the fifth of the objects studied. The majority of them are of Corinthian, Doric and undefined order.

## Gates' peculiarities

A gate of a fortress or a city appears on 63 pieces of art (87.5 % of the total amount). A single portal seems to be their most common feature. Gates with double or triple portals appear only on a few objects. The depiction of order ornamentation of the gate's portal appears on the quarter of objects with the gate's images (table 6). A very peculiar and most specific detail is the *quadriga*, which appears only on a few coins from *Bizya* (table 1.1.7-9 and 14). Several objects show an arched gallery above the portal.

## Summary

All mentioned peculiarities considered by us add more details to the general idea of Roman military architecture. These features could be used for the reconstruction purposes of some fortresses and forts, with some caution. We distinguished five main types of depictions:

1. Architectural landscape.
2. Axonometric depiction of the city.
3. Orthogonal view of the gate.
4. Floor mosaics with depictions of wall circuit usually with a labyrinth inside it.
5. Sarcophagi depicting city walls.

In the overwhelming majority of the images, the stonework is shown in a similar manner: as masonry of huge rectangular blocks. The Romans did not depict a variety of masonry types which they practiced in construction. These 80 objects show many architectural peculiarities of Roman military architecture hardly known by archaeological data. In our analysis, we found out that the forms of tower roofs were much more varied than flat and pitched ones. Furthermore, it became clear that the variability became more common in Late Antiquity.

Quite a lot of objects show order, architectural decorations and gates' ornamentation, while preserved archaeological monuments with such details are much rarer. We also could reveal some peculiar details, such as *quadriga* and arched gallery above the portal. Possibly they could have been more widespread in Roman times. The presented results and calculations are preliminary, as we plan to continue our research to find more pieces of art with images of fortified structures.

## Acknowledgements

We are very grateful to the director of the Regional Historical Museum Razgrad Galena Radoslavova for the photos of the fastening buckle from *Abritus* and her permission to publish them. We also would like to thank Olga Volgina for her invaluable help with the English translation and Irina Kulikova for her useful advice.

## Abbreviations

ANS: *American Numismatic Society, New York, USA*  
 BM: *British Museum, London, Great Britain*  
 CM: *Cabinet des Médailles, Paris, France*  
 Yale: *Yale University Art Gallery, USA*

## Bibliography

- Andreussi, M., 1996: Murus Servii Tullii; mura repubblicane, in: E.M. Steinby (ed.), *Lexicon Topographicum Urbis Romae* 3, Roma, 319-324.
- Arslan Pitcher, L., 2013: I mosaici della domus di via Cadolini rivisitati, in: C. Angelelli (ed.), *Atti del XVIII Colloquio dell'Associazione italiana per lo studio e la conservazione del mosaico, Cremona, 14-17 marzo 2012*, Tivoli (Roma), 13-20.
- Baldassarre, I. & G. Pugliese Carratelli, 1990 (eds): *Pompei. Pitture e mosaici* 1/1, Roma.
- Bejaoui, F., 1997: Îles et villes de la Méditerranée sur une mosaïque d'Ammaedara (Haïdra en Tunisie), *Comptes rendus des séances de l'Académie des Inscriptions et Belles-Lettres* 141/3, 825-858.
- Bidwell, P., R. Miket & B. Ford, 1989: The reconstruction of a gate at a Roman fort of South Shields, in: P. Bidwell, R. Miket & B. Ford (eds), *Portae cum turribus. Studies of Roman fort gates*, Oxford (British Archaeological Reports British Series 206), 155-225.
- Bisconti, F., 2007: I sarcofagi "a porte di città". Prototipi antichi ed esiti paleocristiani, in: A.C. Quintavalle (ed.), *Medioevo, la chiesa e il palazzo. Atti del convegno internazionale di studi, Parma, 20-24 settembre 2005*, Milano, 456-467.
- Bosio, L., 1983: *La Tabula Peutingeriana. Una descrizione pittorica del mondo antico*, Rimini.
- Braconi, M., 2011: Il cavaliere, il retore, la villa. Le architetture ultraterrene degli Aureli tra simbolo, rito e autorappresentazione, in: F. Bisconti (ed.),

- L'ipogeo degli Aureli in viale Manzoni. Restauri, tutela, valorizzazione e aggiornamenti interpretative*, Todi, 135-165.
- Coulston, J.C., 1988: *Trajan's column. The sculpting and relief content of a Roman propaganda monument*, Newcastle upon Tyne (PhD thesis Newcastle University).
- Ćurčić, S., 2010: Architecture as icon, in: S. Ćurčić & E. Hadjitryphonos (eds), *Architecture as icon. Perception and representation of architecture in Byzantine art*, New Heaven/London, 3-37.
- De Nolhac, P., 1917: *Le Virgile de Vatican et ses peintures*, Paris.
- De Vos, M., 1993: Camillo Paderni. La tradizione antiquaria romana e i collezionisti inglesi, in: L. Franchi dell'Orto (ed.), *Ercolano 1738-1988. 250 anni di ricerca archeologica. Atti del convegno internazionale, Ravello-Ercolano-Napoli-Pompei, 30 ottobre-5 novembre 1988*, Roma (Soprintendenza archeologica di Pompei 6), 99-116.
- Donaldson, T.L., 1966: *Ancient architecture on Greek and Roman coins and medals*, Chicago.
- Dorigo, W., 1971: *Late Roman painting. A study of pictorial records, 30 BC-AD 500*, London.
- Elkins, N.T., 2013: A note on late Roman art. The provincial origins of camp gate and baldachin iconography on the late Roman coinage, *American Journal of Numismatics* 25, 283-302.
- Elkins, N.T., 2015: *Monuments in miniature. Architecture on Roman coinage*, New York (Numismatic Studies 29).
- Fassone, A., 2015: L'Epoca Romana e Tardo-Antica, in: *Guida Museo Egizio di Torino*, Modena, 202-211.
- Flügel, C. & J. Obmann, 2013: Visualisierung römischer Kastelltores. Das Beispiel der porta principalis dextra des Alenkastells Celeusum/Pförring, in: C. Flügel & J. Obmann (eds), *Römische Wehrbauten. Befund und Rekonstruktion*, München (Schriftenreihe des Bayerischen Landesamtes für Denkmalpflege 7), 13-27.
- Gregory, S., 1995-1997: *Roman military architecture on the eastern frontier*, Amsterdam.
- Huet, V., 2007: Le laraire de L. Caecilius Jucundus. Un relief hors norme?, in: M.-O. Charles-Laforge (ed.), *Contributi di archeologia vesuviana 3. La norme à Pompéi (1<sup>er</sup> s. avant-1<sup>er</sup> s. apr. J.-C.)*, Colloque du Centre Jacob-Spon, Romanitas, Université de Lyon 2, 17 novembre 2004, Rome (Monografie della Soprintendenza archeologica di Pompei 21), 143-150.
- Johnson, S., 1983: *Late Roman fortifications*, London.
- Kern, H., 2000: *Through the labyrinth. Designs and meanings over 5,000 years*, Munich/New York.
- La Rocca, E., 2000: L'affresco con veduta di città dal Colle Oppio, in: E. Fentress (ed.), *Romanization and the city. Creation, dynamics and failures. Proceedings of a conference held at the American Academy in Rome to celebrate the 50<sup>th</sup> anniversary of the excavations at Cosa, 14-16 May, 1998*, Ann Arbor (Journal of Roman Archaeology Supplementary Series 38), 57-71.
- Lander, J., 1984: *Roman stone fortifications. Variations and change from the first century A.D. to the Fourth*, Oxford (British Archaeological Reports International Series 206).
- Laubscher, H.P., 1975: *Der Reliefschmuck des Galeriusbogens in Thessaloniki*, Berlin.
- Magness, J., S. Kisilevitz, M. Grey, D. Mizzi, K. Britt & R. Boustian, 2019: Inside the Huqoq Synagogue, *Biblical Archaeology Review* 45/3, 24-38.
- Mancuso, U., 1911: *La "Tabula iliaca" del Museo Capitolino. Memoria del dott. Umberto Mancuso*, Roma (Atti della R. Accademia dei Lincei. Memorie della Classe di scienze morali, storiche e filologiche 14/8, 5<sup>th</sup> Series).
- Medennikova, A.E. & D.A. Karelin, 2021: On the implication of pictured fortification in Roman art, in: A.V. Zakharova, S.V. Maltseva & E.I. Staniukovich-Denisova (eds), *Actual problems of theory and history of art*, Saint-Petersburg, 157-171.
- Molholt, R., 2011: Roman labyrinth mosaics and the experience of motion, *The Art Bulletin* 93/3, 287-303.
- Moormann, E.M., 2011: *Divine interiors. Mural paintings in Greek and Roman sanctuaries*, Amsterdam.
- Notitia Dignitatum in Bavarian State Library (<https://daten.digitale-sammlungen.de/0000/bsb00005863/images/>, 28-11-2022).
- Notitia Dignitatum in Bodlean Library (<https://digital.bodleian.ox.ac.uk/objects/3eb32a9c-616b-4ce6-ae15-411881ee1625/>, 28-11-2022).
- Petersen, E., A. von Domaszewski & G. Calderini (eds), 1896: *Die Marcus-Säule auf Piazza Colonna in Rom, 128 Tafeln*, München.
- Radoslavova, G., 2014: A unique belt decoration excavated from grave belonging to beneficiarius consularis in the village of Lipnik, region of Razgrad, in: G. Dzanev (ed.), *Reports on Rome-Razgrad*, Razgrad, 152-161.
- Reed Doob, P., 1990: *The idea of the labyrinth from classical antiquity through the middle ages*, Ithaca.
- Richmond, I.A., 1982: *Trajan's army on Trajan's Column*, London.
- Rykwert, J., 1988: *The idea of a town. The anthropology of urban form in Rome, Italy and the ancient world*, Cambridge MA.
- Salveti, C., 2016: La rappresentazione del labirinto e della cinta muraria in un mosaico romano da San Giovanni in Laterano, *Rendiconti della Pontificia Accademia Romana di Archeologia* 88, 587-609.
- Sanson, R., 1969: *I sarcofagi paleocristiani a porte di città*, Bologna.

- Saradi, H.G., 2010: Space in Byzantine thought, in: S. Ćurčić & E. Hadjistryphonos (eds), *Architecture as icon. Perception and representation of architecture in Byzantine art*, New Heaven/London, 73-111.
- Smith, E.B., 1956: *Architectural symbolism of imperial Rome and the Middle Ages*, Princeton.
- Thill, E., 2010: Civilization under construction. Depictions of architecture on the Column of Trajan, *American Journal of Archaeology* 114, 27-43.
- Thill, E., 2018: Don't confuse us with the facts. Visualizing the frontier in the capital city, in: S. Sommer & S. Matešić (eds), *Limes XXIII. Proceedings of the 23<sup>rd</sup> International Congress of Roman Frontier Studies Ingolstadt 2015 / Akten des 23. Internationalen Limeskongresses in Ingolstadt 2015*, Mainz (Beiträge zum Welterbe Limes Sonderband 4), 265-272.
- Utro, U., 2019: *Tempo divino. I sarcofagi di Bethesda e l'avvento del Salvatore nel Mediterraneo antico*, Città del Vaticano.
- Vergilius Vaticanus*, in: Biblioteca Apostolica Vaticana ([https://digi.vatlib.it/view/MSS\\_Vat.lat.3225/0001](https://digi.vatlib.it/view/MSS_Vat.lat.3225/0001), 28-11-2022).
- Volpe, R. (ed.), 2010: Scavi nelle Terme di Traiano sul Colle Oppio. Atti della giornata di studi (Roma, Istituto Archeologico Germanico, 20 ottobre 2005), *Bulletino della Commissione Archeologica Comunale di Roma* 111, 227-389.
- Von Gonzenbach, V., 1961: *Die römischen Mosaiken der Schweiz*, Basel (Monographien zur Ur- und Frühgeschichtliche der Schweiz 13).
- Weitzmann, K. (ed.), 1979: *Age of spirituality. Late antique and early Christian art, third to seventh century. Catalogue of the exhibition at the Metropolitan Museum of Art*, New York.
- Wright, D.H., 1993: *The Vatican Vergil. A masterpiece of late antique art*, Berkeley.





# ***Arae Flaviae* / Rottweil**

A Flavian fortress on the Upper Neckar

Klaus Kortüm

As the location of a fortress among the *castra* on the Germanic frontier, Roman Rottweil has received comparatively little attention as yet from the interregional research. This can almost certainly be attributed to the fact that it has only recently been recognized that the large Rottweiler fort does not represent a limited episode, but played a central role in the Flavian occupation of the southern *agri decumates*.

## **Historical background**

The Roman forts and military bases, the majority of which were established on the left bank of the Upper Rhine between Speyer and Lake Constance and initiated under Tiberius, were given up at the beginning of the early Flavian occupation of the *agri decumates* at the latest (fig. 1) (Franke 2003, 147-156; Reddé 2009; Trumm & Flück 2013, 227-245; Kemkes 2016, 233-253; Wiegels 2017; Flück *et al.* 2022, 16-27). The abandonment is often presumed to have already taken place even around 45 AD under Claudius and in the context of a major strategic re-grouping of the army for conquering of *Britannia*, which also led to the withdrawal of *Legio II Augusta* from *Argentorate* (Strasbourg, F). Indeed, on the southern part of the Upper Rhine below the Rhine-Knee the existence of a sizable auxiliary (?) fort up until shortly after the disorders relating to the year of the four Emperors 68/69 AD is attested up to now only for *Argentovaria* (Oedenburg, F). For Strasbourg the existence of an auxiliary fort has been assumed in absence of a legion between c. 43 und 90 AD (Kuhnle 2018). Above the Rhine-Knee supposedly only the fortress *Vindonissa* (Windisch, CH) remained continually occupied. *Legio XXI rapax*, stationed there between 45 und 69 AD had covered the complete southern frontier. This resulted in a strikingly small number of troops in the south of the province Upper Germania during the Late Claudian-Neronian period. That changed fundamentally with the re-organisation of the province under Vespasian, the deployment of *Legio XI Claudia* in *Vindonissa* from 71/72 AD and Rom's significant expansion beyond the Rhine.

The beginnings of Rottweil are closely linked to the activities of the Governor Pinarius Clemens (*legatus Augusti exercitus Germanici superioris*) east of the Rhine from ?72/74 until 76/77? AD). This is for us most apparent through the construction of a connecting road from the Upper Rhine across the Black Forest to the Danube, which was with certainty, part of a new, much more extensive strategic concept for the Roman frontier policy (CIL XVII.2654; Nuber 2010/2015). Rottweil lay on the intersection of this new traffic route with a road coming from the region of *Vindonissa* to the south. The latter used the natural geographical situation presented by the

## **Klaus Kortüm**

Landesamt für  
Denkmalpflege im  
Regierungspräsidium  
Stuttgart (Baden-  
Württemberg), Berliner  
Straße 12, D-73728 Esslingen  
am Neckar, klaus.kortuem@  
rps.bwl.de

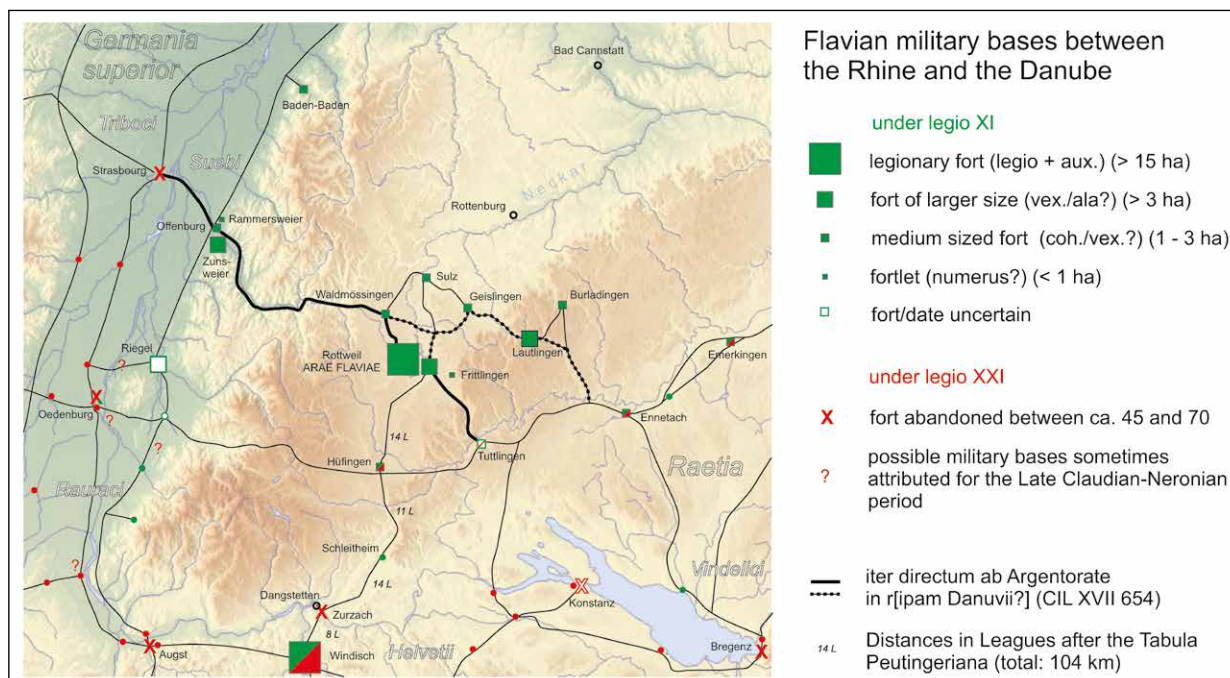


Figure 1. Forts, settlements and roads of southern Upper Germania in the Flavian period (relief map <https://maps-for-free.com>, © LAD/Kortüm).

corridor running north-south between the Black Forest on the west and the Swabian Alb on the east. Already used in prehistoric times, the importance of this route had been recognized by the Roman military since the time of Augustus at the latest, as not only the location of the fortress at Dangstetten (D) at the southern end of the corridor has shown.

Along the new connecting roads various garrison-forts were established. Predominantly the Upper Neckar region around Rottweil received a ring of auxiliary forts and thereby a new concentration of military units (fig. 1). At the same time the land behind the Rhine became a 'demilitarized' interior region, when one disregards *Vindonissa*. It is however significant that the auxiliary troops, which had earlier accompanied each legion in *Vindonissa*, are no longer traceable there during the presence of the 11<sup>th</sup> Legion. Their successors are found in the fortress at Rottweil instead (see below, Trumm & Flück 2013, 232 and 238-240).

The area of the Rhine Valley lying to the right of the river had already been partly settled with groups of Gallo-Roman and Germanic populations in the pre-Flavian Period. That garrison-forts or military posts had also existed there at the same time, as has been generally accepted earlier, is now being questioned. Any indication of a pre-Flavian settlement on the other side of the Black Forest has not yet been found (Wiegels 2017, 48-55). On most of the new locations the military was initially

completely dependent on their communications with the older regions for their daily supplies.

The fortress built at Rottweil as part of the Flavian measures served as the headquarters for Rome's activities in the southern *agri decumates*. One could speak of an army corps commanded from Rottweil that succeeded the pre-Flavian 'Windisch army corps' in and around *Vindonissa*. Nonetheless *Vindonissa* remained the base-camp (*hiberna*) of the legion and it was presumably never foreseen to replace it with Rottweil. Thus, from the start, the fort at Rottweil was obviously thought of as a type of outpost of *Vindonissa*. Presumably the large distance between the Upper Rhine and the Upper Neckar led to the view that the centre of the new military concentration necessitated a permanent presence of Roman legionaries, including high-ranking officers from the classes of *equites* and *senatores*. Due to its geographical position, Rottweil could have been considered also as compensation for *Argentorate*, which at that time was not garrisoned with a legion. But the field of operations of the Legions at *Vindonissa* reached much more in the easterly direction into *Raetia* (Kemkes 2016, 162-169).

### Rottweil as military establishment of the Flavian-Trajanic period

The Roman settlement areas extended on both sides of the Neckar in the proximity of a natural river crossing (fig. 2). Here a total of five forts together with their outer settlements became established in the Flavian-Trajanic period. The



Figure 2. The topography of Rottweil in the Flavian period (heights: <https://www.lgl-bw.de>, © LAD/Kortüm).

*Municipium Area Flaviae* developed from them later (Kortüm & Lauber 2009; Lauber 2013; Kortüm 2021). The fortress (fort I = Kastell I/K I, the fortresses were numerically recorded in the order of their discovery) was built on the flat plateau to the west of the Neckar. However the main settlement area of Rottweil lay to the east of the river on a ridge between Neckar und its tributary, the Prim. An auxiliary fort stood here, supposedly for an *ala quingenaria* (fort III = Kastell III/K III. Kortüm & Lauber 2009, 264-265; Scholz 2009, 56-57; Kortüm 2021, 232-233 and 237). South of it, an extensive ancillary village stretched along the trunk-

road running from south to north. By comparison there are only surprisingly small *canabae* to be found outside the fortress. The axes of the legionary and auxiliary forts have the same orientation and obviously take reference to one another. The structures must have, at least at some time, contemporarily existed. The auxiliary fort as well as the civilian buildings in its proximity overlay older structures (forts IV and V = Kastell IV/K IV and Kastell V/K V. To the location of the forts II, IV and V Kortüm 2021, 231, fig. 1). These are evidence for the initial phase of settlement for Rottweil, which however only lasted for a few years. After

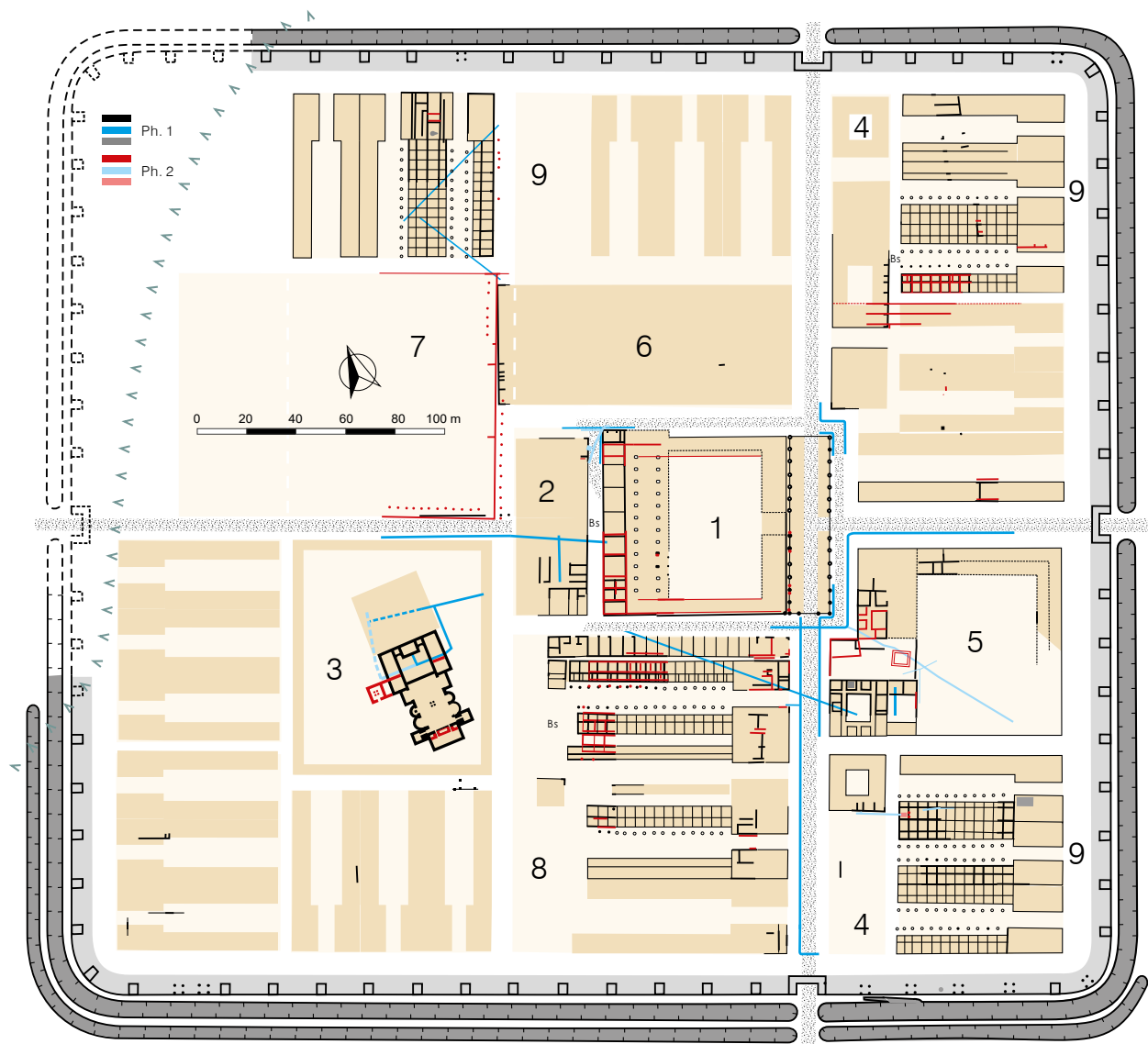


Figure 3. The fortress in Rottweil, fort I (© LAD/Kortüm).

giving up the fortress, an auxiliary fort, fort II (Kastell II/K II) was built in its centre, continuing to use the *via principalis* und *via praetoria* as well as the legionary baths. The ground plan of the fort indicates the simultaneous presence of two *cohortes equitatae* (Kortüm 2021, 234-244). This was the only military structure in Rottweil that was built in stone. Its abandonment in the Trajanic period meant at the same time the end of Rottweil as a military base. The fortress is therefore only a part of the extremely dynamic development within the complete locality.

### The fortress

The plateau on the western side of the Neckar, on which the fort of c. 16 ha was built, provided more than

enough space. Nevertheless the fort was pushed right up to the steep slopes abutting the river. A position that already offered natural protection was obviously highly commendable. However this presented a problem on the north-western corner. A gully cut into the terrain here, which, at least from today's vantage point, prevented the layout of a regular, rectangular plan (fig. 2). Hence a part of the perimeter defences must have been retracted somewhat, which would have reduced the enclosed area available for building. However, some researchers have also asserted that this prominent landmark can only have formed after the Early Middle Ages and in connection with the building of the medieval defences of *Rotuvilla* (Rottweil). The current level of research does not allow a



decisive answer to this question (Franke 2003, 87; Kortüm & Lauber 2009, 234). In any case, the extreme position of the fortress on the very edge resulted, to some extent, in the *porta principalis dextra* being the only easily approachable gate and is therefore to be regarded factually as the main entrance of the fort with orientation to the east.

Basically the 'large fort' has already been known since the beginning of the 20<sup>th</sup> century. Nonetheless it took several decades before the true dimensions of the structure were fully recognized through further excavations, whereby it was also apparent that, due to the expansiveness und layout, a complete legion could be effectually stationed here. In this context the work from Regina Franke (2003) still remains fundamental. Meanwhile the area examined archaeologically has almost been tripled by several rescue excavations. Only short preliminary reports have appeared to these excavations, which concentrate primarily on the building features. Examinations of the additional finds do not exist. This limited level of research should always be considered during the following argumentation.

In spite of the numerous smaller and larger excavations there are still white blotches left in the plan of the fort. In sizable sections significant remains of buildings are missing, which makes an overall judgement difficult. Primarily, when confronted by the question as to which large or special buildings were formerly there or even not there (*horrea, fabricae, valetudinarium, etc.*), several imponderables remain. The structures that have been verified, with the exception of the baths, are buildings made purely of wattle and daub. The main roads in the fort however were carefully dressed with stone surfaces from the beginning. At the moment it is possible to refer to the following components within the fort (fig. 3, Kortüm 2021, 234).

The *principia* (fig. 3.1) occupies a central area from c. 7000 m<sup>2</sup>. As yet it is mainly the rear tract of rooms that is known. The corner-rooms appear to have been used as offices (*tabularium?*, Kortüm & Wulfmeier 2019). The front end, in the form of a great hall covering the *via principalis* along the complete width of the building, is unusual. It is initially reminiscent of the 'exercise halls' that are as yet only known from the auxiliary forts. In Rottweil though, a branch of the *via principalis* also goes around the hall, which rather gives it the appearance of an integral part of the *principia*.

Separated by an alleyway, there follows a structure behind the *principia*, which is subdivided into small rooms (fig. 3.2). Spoken of earlier as a possible *fabrica*, it is indeed more likely to be the *praetorium* (Allison 2013, 152-178). Opposite the *principia* to the east in a row along the *via principalis*, as is commonly the case, are the so-called tribunes' houses (fig. 3.4). As yet four to five peristyle buildings of various sizes for the knightly and senatorial officers have been authenticated. In the angle between

*via principalis* und *via praetoria* (fig. 3.5) the residential houses are integrated into a complex with gardens and a large enclosed courtyard.

As is similarly the rule for fortresses, the baths lie within the perimeter defences (fig. 3.3). Their position in the *retentura* with the entrance towards the *via decumana* is rather striking and especially its divergence from the orientation of the fort. The latter can certainly be explained by the adherence to the recommended north-south orientation of bath-buildings from Vitruvius. From the bath complex, only the parts built of stone have been dug. A wooden hall to the front would have to be added. The surrounding courtyard ought to have established the integration in the orthogonal survey-plan from the rest of the fort. Why such an exceptionally large building-complex like figure 3.7 is found in the rear part of the fort, is not fully clear.

The soldier's barracks form an outer ring of buildings along the inside of the perimeter defences (fig. 3.9). They are the usual cohort blocks, each with six centurial barracks. These have twelve *contubernia*. Up to now however, only three of these blocks have been attested. The available remaining space allows room for four more. When the northwest corner could be entirely utilized, then it would be six. That would give a total strength from seven to maximally nine regular cohorts.

Since only recently the position of the First Cohort of the legion has been verified (fig. 3.8, preliminary report Kortüm *et al.* in press). South of the *principia* barracks buildings could be excavated that proved longer than the other living quarters. Also, the total area occupied by them is almost twice as large as that of a normal cohort block. At first glance this fits the common assumption that the First Cohort of a legion had double strength compared to the Cohorts Two to Twelve (Baatz 2000). The enlarged First Cohort ought to have been divided in five instead of six double *centuriae*. However, the number of the attested *contubernia* in Rottweil is clearly too small for this. Also the space is just enough for a maximum of six (instead of the usually assumed 10) centurial barracks of an enlarged First Cohort. Precise assertions are difficult because the built-up area presents several irregularities and does not show only the usual ground plan for barracks. Apart from hall-like building structures there are also smaller singular buildings of inexplicable function. That is a warning against all too schematic completion of the fragmentary features discovered. The side streets along the *principia* would have been lined with *tabernae* with open fronts.

An additional peculiarity is the segregated corridors in the ante-chambers (*arma*) of the northern barracks. This tripartite division of each *contubernia* has up to now been primarily held as a phenomenon of the Severian and post-Severian Period. However earlier isolated cases are already known (Trumm & Flück 2013, 253 with

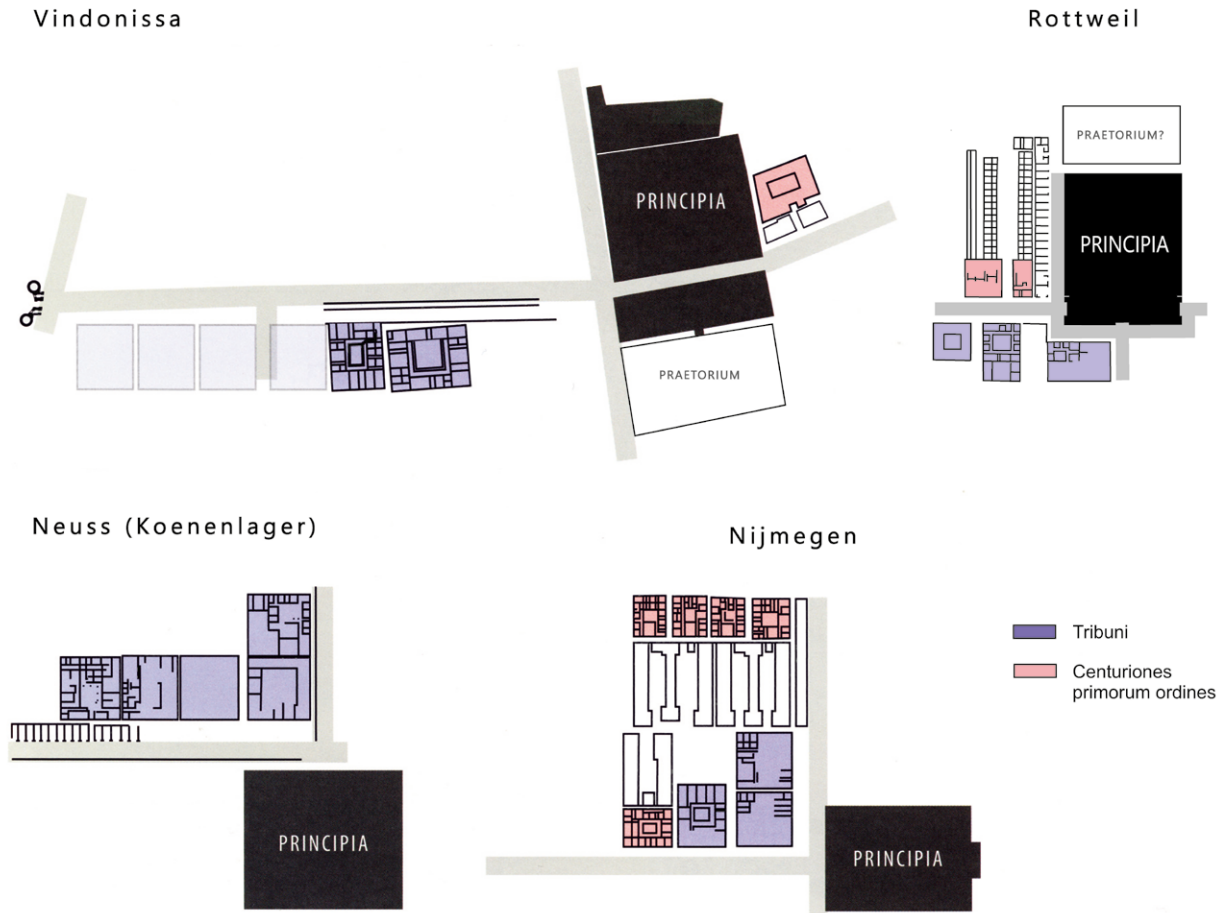


Figure 4. The central area of the fortress at Rottweil in comparison with *Vindonissa* and other legionary fortresses on the Rhine (after Flück *et al.* 2022, 260, fig. 370, modified, © LAD/Kortüm).

note 1253). In Rottweil for example there are signs of this in some *contubernia* of the north-eastern cohort blocks (Franke 2003, 64). Therefore the tripartite division was at least not principally limited to the First Cohort.

The defensive perimeter of the fort consists of an earth wall, in which dense rows of wooden towers are integrated. As yet the gateways have not been excavated. The ditch was presumably only doubled on those stretches where the fort did not reach the edges of the slope. The inner buildings of the fort show at least two building phases. Franke (2003) differentiates between three phases; however, the separation of her phase 1 is problematic (Kortüm & Lauber 2009, 261, note 15). Our Phase 1 corresponds to the phases 1 and 2 from Franke, phase 2 is her phase 3. For many of the buildings these phases are separated by a distinct layer of burnt debris. It constitutes the levelling of the half-timbered walls, the remains of which are found in the post-trenches or foundation-trenches of the second phase. It is not associated with a noticeable accumulation of finds, so that an outbreak of damaging fire is out of the

question. When the layer of burnt debris is missing, as for example in the complete southern front part of the fort, it can be occasionally difficult to decide if there is evidence of modification or rather that a building has possibly been in continual use without any changes at all. In addition, not all modifications must have been carried out at the same time. Also the complicated building phases of the baths should rather be considered as independent phenomena (White 1999).

It is striking that some buildings such as the *principia* for example or some of the men's barracks, after demolition, were re-erected on the same place with nearly identical ground plans, although as a rule with foundations of lesser depth. Because the new building measures, due to the relatively short time of the overall occupation of the fortress, are hardly attributable to dereliction, the cause has to be seen in an interruption of the occupation in some form or other. In other places there were clear changes, as for example a built-over tribune house in the *praetentura sinistra*. Also the fact that the front hall of the



	area K I & K II		area K III - IV	
	number	%	number	%
Augustus-Claudius	18	17,5	75	31,1
Nero, 68/69 AD	3	2,9	10	4,1
Vespasian	22	21,4	37	15,4
Titus/Domitian	37	35,9	62	25,7
Nerva	4	3,9	14	5,8
Trajan	19	18,4	43	17,8
total	103	100,0	241	100,0

Table 1. The coins from Augustus to Trajan found in the fort areas west and east of the Neckar (up to 2020).

*principia* was missing in the second phase, could indicate a change of requirements. If the supposed *praetorium* was actually used as such right to the end is still unclear by the present level of research (Franke 2003, 58; Kortüm & Wulfmeier 2019).

When comparing the excavated ground plans of the buildings with those of the 11<sup>th</sup> Legion in *Vindonissa*, it is apparent that those in Rottweil are always constructed smaller and with less effort (fig. 4). That the buildings in *Vindonissa* rest on stone-footings is a supplementary fact. The exact same observation can be made by the central buildings (*principia*, *praetorium*, *domus tribunorum*, *thermae*) as well as the barracks. This tendency also holds true in the comparison with other fortresses of the 1<sup>st</sup> century, even when there is definitely a larger range in the execution (Trumm & Flück 2013, 254-255, fig. 219; Flück *et al.* 2022, 260, fig. 370).

For the question as to what soldiers were stationed in the barracks, the observation is not unimportant that the housing of the auxiliary fort II (K II) that followed are noticeably shorter as all those as yet known from the fortress. On the other hand the barracks from fort III (K III) on the other side of the Neckar are a little longer than the normal ones in the fortress from Rottweil, but all the same they do not quite reach the length of the barracks from *Vindonissa*.

## The dating

Regina Franke fixes the time for the occupation of the fortress in Rottweil at c. 75-85 AD. She relies thereby on the analysis of the *terra sigillata* (Franke 2003, 138-146; Kortüm & Lauber 2009, 268-272). Important is her assertion that the earliest layer of finds from Rottweil, as found in the forts III, IV and V, is missing from the inventory from left of the Neckar, i.e. in the area of the fortress (including fort II). This result must be tested using the significant amount of material that has been found in the meantime. An examination regarding this material remains a desideratum. At the moment only the coins are available. A

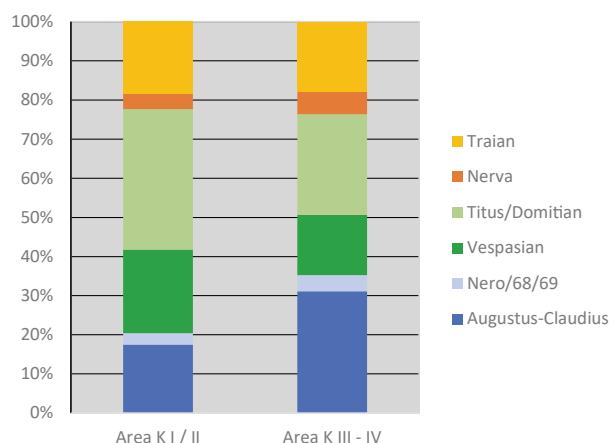


Figure 5. The number of coins of the 1<sup>st</sup> century for Rottweil in the central military areas east of (K III, K IV, KV) and west of (K I, K II) the Neckar (© LAD/Kortüm).

simplified overview shows that the amount of pre-Flavian coins from the right side of the Neckar is significantly higher than those coming from the opposite side (table 1; fig. 5.5, Nuber 1988; Franke 2003; Lauber 2013; M. Klein, Landesmuseum Württemberg, Stuttgart (unpublished).

That confirms that the fortress was not founded at the beginning of the military presence, but indicates a later expansion. This may also be an explanation for why extensive civilian infra-structure cannot be found around the fort. Obviously, one could not, under the given circumstances (only outpost, not military base), make use of military establishments already present on the other side of the Neckar. Therefore the date for the begin of the fortress remains dependent on an exact date for the beginning of Rottweil, or more precisely, for when the accumulation of finds to the right of the Neckar actually sets in. Here the most likely dates that come into consideration are between 70 and 75 AD. For the fortress that could mean a beginning between 75 and 80 AD. The opening of the second phase has yet to be dated.

Concerning the end of the fortress, the current state of knowledge is as follows: By recent excavations in the vicinity of the tribunes' buildings in the *praetentura dextra* layers of levelling were encountered, which occurred in connection with the construction of fort II. From these come stamped tiles, which could have been produced in 89 AD at the earliest (see below). Apart from this, the scattered contents from a purse were uncovered, which gave a *terminus post quem* from 97 AD (Kortüm & Lauber 2009, 272). Accordingly, the fort II could only have been built under Trajan either when governor of Upper Germany and co-regent to Nerva or at the beginning of his sole regency. If the fortress and the auxiliary fort immediately succeed one another, which some of the archaeological observations imply, then the fortress had

unit/area	thermae		town	total	
	K I & K II	K I & II	K III-V		
<i>legio XXI Rapax</i>	–	–	1	1	43-69/70 and 83-89/90 in GS
<i>legio XI Claudia pf</i>	60	27	31	118	70-101 in GS
<i>coh I Biturigum (eq) (cR)</i>	15	17	13	45	no later than 74 in GS
<i>coh II Aquitanorum eq cR</i>	1	2	–	3	82 and 90 in GS (not cR!), no later than 116 in RAE (with cR)
<i>coh III Dalmatarum (eq) pf</i>	8	4	–	12	80 in GI, 89/90 from GI to GS (?), from the end of 90's in GS
<i>coh I Flavia (Hispanorum eq) pf Domitiana</i>	16	1	1	18	78 in GI, 89/90 from GI to GS (?), Feb. 98 in GI again
<i>coh II Hispanorum (eq pf)</i>	2	–	1	3	march 101 at latest in GI, no later than 116 in GS
total	102	51	47	200	

Table 2. The spread of stamped tiles from Rottweil. GS = *Germania superior*, GI = *Germania inferior*, RAE = *Raetia*.

existed at least until this point in time. That would mean that it had been used in one way or other for nearly the whole time, in which the 11<sup>th</sup> Legion was stationed in *Vindonissa*. The closing coin from the area of fort II was minted in 101/102 AD. Consequently, the last military establishment can only have stood for a very few years. That is, however, another problem.

### The garrison of the fortress

The question concerning the garrison of the fort can almost only be supported by stamped tiles. This is known to be problematic due to the tiles primarily showing deliveries of material, which can also come from outside the garrison area. That the greater part of the stamped tiles is derived from the area of the fortress is due to their association with the baths. Many of the tiles were directly unearthed during its excavation. By most of the others the circumstances of the recovery indicate that they come from the rubble deposits, which originate from the diverse works of modification and renewal on the baths.

Most abundant are the tiles of *Legio XI Claudia pf* (table 2, published and unpublished stamps up to 2020; Kortüm 2021, 236-237). Because over 95 % of the stamps they carry are not known from *Vindonissa*, and also because they differ in chemical composition to the products from the south, they must have been locally produced. The precise whereabouts of their production is not yet known. Moreover as the typical pottery of the 11<sup>th</sup> Legion is also found in Fort I in Rottweil, it is fully justified to regard the 11<sup>th</sup> Legion, or rather a part of it, as the garrison of the fort (Franke 2003, 136 and 157; Kortüm 2021, 236). Nonetheless, legionaries were apparently not the only occupants of the fort. This of course also applies for other fortresses, not least for the base at *Vindonissa*. In this respect the appearance of stamps from several auxiliary units is not surprising. The stamps give the names of five military units in total. The garrisons of the forts in the vicinity of Rottweil are as yet

unknown. It would be theoretically possible that also one or another unit from a post outside the settlement is hidden within the auxiliaries proved to be in Rottweil.

According to the history of the unit, *Cohors I Biturigum* could have been a part of the garrison since the beginning, the more so as it had apparently produced tiles for the initial materials in the baths. Rottweil was perhaps even the first permanent base of these troops newly recruited by Vespasian. For *Cohors II Aquitanorum* is, in principle, an Early Flavian deployment in Rottweil also conceivable, although the suffix to the name *c(ivium) R(omanorum)*, which the Rottweil tiles show, must have only first been received during the Dacian wars of Domitian or Trajan. The *cohortes III Dalmatarum* und *I Flavia*, being a contingent of the army of Lower Germania, took part in the suppression of the attempted rebellion of the governor from Upper Germania, Antonius Saturninus, at the beginning of 89 AD. Afterwards, Domitian sent them together (?) to Upper Germania, apparently to guarantee the loyalty of the army of Upper Germania for the future. Rottweil would be an appropriate base for that. Indeed *Cohors I Flavia* explicitly emphasized their allegiance to Domitian on a portion of their stamps. The production of tiles signed with the suffix *p(ia) f(idelis) D(omitiana)* can therefore be unusually precisely dated between 89 und 96 AD. Soon after, the unit is again traceable in Lower Germania. The presence of *Cohors II Hispanorum*, according to the records of the military diplomas, can only fall in the period after the spring of 101 AD. Therein may be seen the garrison of fort II, perhaps together with the Aquitanians. If the stamps are not deceptive, a picture emerges for the occupation period of the fortress that indeed shows that one to two auxiliary units were continually stationed there. All units by the way are partially mounted cohorts. Where precisely they were billeted in the fort is not yet determinable. By complete *equitata*-units, ten barrack-blocks (six *centuriae* und four *turmae*) must be assumed. There is room enough

for them. There would then remain for the legionaries, according to current levels of research, room perhaps for half a legion, *i.e.* six cohorts including sections of the *cohors prima*. Perhaps it is no coincidence that fort II (K II) had provided yet again enough room for two auxiliary units. How long soldiers were stationed in fort III is under debate (Kortüm & Lauber 2009, 272). If the definition of fort III on the opposite side of the Neckar as a co-existing fort for an *ala* is correct, then there would have been no less than a complete army corps in Rottweil during the Flavian period.

## Acknowledgement

I would like to thank my colleague Gary White, Erfstadt, for the translation.

## Abbreviation

CIL: *Corpus Inscriptionum Latinarum*

## Bibliography

- Allison, P.M., 2013: *People and spaces in Roman military bases*, Cambridge.
- Baatz, D., 2000: Vegetius' legion and the archaeological facts, in: R. Brewer (ed.), *Roman fortresses and their legions. Papers in honour of George C. Boon, FSA, FRHistS*, London/Cardiff (Occasional Papers of the Society of Antiquaries of London 20), 149-158.
- Flück, M., S. Streit, C. Meyer-Freuler & T. Lippe, with contributions of S. Deschler-Erb, S. Fünfschilling, S. Häberle, S. Kramis, M. Nick, M. Peter, P. Rentzel, A. Schlumbaum & P. Vandorpe, 2022: *Zu Gast bei Offizieren in Vindonissa*, Brugg (Veröffentlichungen der Gesellschaft Pro Vindonissa 26).
- Franke, R., 2003: *Arae Flaviae V. Die Kastelle I und II von Arae Flaviae/Rottweil und die römische Okkupation des oberen Neckargebietes*, Stuttgart (Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg 93).
- Kemkes, M., 2016: *Das römische Donaukastell Rißtissen*, Stuttgart (Materialhefte zur Archäologie in Baden-Württemberg 101).
- Kortüm, K., 2021: *Municipium Arae Flaviae / Rottweil. Ein Update*, *Berichte der Bayerischen Bodendenkmalpflege* 62, 229-244.
- Kortüm, K. & J. Lauber, 2009: Die Rottweiler Kastelle, in: J. Biel, J. Heiligmann & D. Krausse (eds), *Landesarchäologie. Festschrift für Dieter Planck zum 65. Geburtstag*, Stuttgart (Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg 100), 259-289.
- Kortüm, K. & J. Chr. Wulfmeier, 2019: Neue Grabungen im Rottweiler Legionslager, *Archäologische Ausgrabungen in Baden-Württemberg* 2019, 163-167.
- Kortüm K. *et al.* (in press): Der Lagerplatz der 1. Kohorte im Rottweiler Legionslager, *Archäologische Ausgrabungen in Baden-Württemberg* 2022, 167-180.
- Kuhnle, G., 2018: Die revidierten Eckdaten der römischen Militärpräsenz in Argentorate/Straßburg, in: C.S. Sommer & S. Matešić (eds), *Limes XXIII. Proceedings of the 23<sup>rd</sup> International Congress of Roman Frontier Studies Ingolstadt 2015 / Akten des 23. Internationalen Limeskongresses in Ingolstadt 2015*, Mainz (Beiträge zum Welterbe Limes Sonderband 4), 833-841.
- Lauber, J., 2013: *Arae Flaviae VI. Der Gebäudekomplex M von Rottweil*, Stuttgart (Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg 114).
- Nuber, E., 1988: Die antiken Münzen aus Rottweil, in: M. Klee, M. Kokabi & E. Nuber, *Arae Flaviae IV*, Stuttgart (Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg 28), 237-365.
- Nuber, H.U., 2010/2015: Die Baar im römischen Verkehrsnetz Südwestdeutschlands, in: G. Seitz (ed.), *Hans Ulrich Nuber. Ausgewählte Schriften*, Rahden, 213-219.
- Reddé, M., 2009: Oedenburg et l'occupation militaire romaine sur le Rhin supérieur, in: M. Reddé (ed.), *Oedenburg I. Les camps militaires julio-claudiens*, Mainz (Monographien Römisch-Germanisches Zentralmuseum 79/1), 403-428.
- Scholz, M., 2009: *Das Reiterkastell Aquileia/Heidenheim*, Stuttgart (Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg 110).
- Trumm, J. & M. Flück, 2013: *Am Südtor von Vindonissa*, Brugg (Veröffentlichungen der Gesellschaft Pro Vindonissa 22).
- White, G., 1999: Das römische Badegebäude auf dem Nikolausfeld in Rottweil am Neckar, *Fundberichte aus Baden-Württemberg* 23, 193-242.
- Wiegels, R., 2017: Die Besitznahme der Oberrheinlande durch Rom, *Frankfurter elektronische Rundschau zur Altertumskunde* 34, 37-72 (<http://www.fera-journal.eu>).



# Amphora studies in Xanten

From the local Roman legionary occupation to the imperial supply system

Matheus Morais Cruz

The present work seeks to present a brief bibliographical survey and possibilities of study on the Roman commercial amphorae from the *Cugerni* settlement (*Oppidum Cugernorum* or *Civitas Cugernorum*), later elevated to the *Colonia Ulpia Traiana*, and from the *Vetera I* fortress, both archaeological sites located in the modern Xanten (Germany).

Understood as part of the *instrumentum domesticum* and as the main ceramic container for the transport of essential Mediterranean commodities for the maintenance of the Roman way of life in the provinces of the Empire, Roman amphorae constitute essential supports for understanding the economy, trade, and consumption of this period and provide insights on important aspects of history absent or little explored in textual sources, as well as information about the less favored classes of ancient societies.

Besides providing a wide possibility of conjectures about preferences and practices of production, consumption, and disposal and about the regional and local trade of commodities, the amphorae are also characterized as fundamental elements for our understanding of the insertion of these Roman occupations within the imperial supply networks and commercial circulation. The emphasis of the work, therefore, is the economic and commercial contacts established between the two contexts studied and their participation in the dynamics of interprovincial circulation of commodities in the Empire.

## Archaeology and amphora studies in Xanten

The interest in studying the Roman military occupations of Xanten dates as far back as the 16<sup>th</sup> century, when Stephan Winandus Pighius (1520-1604) undertook the first missions to identify *Vetera Castra*. Pighius relied, above all, on comparing the geographical description of textual sources, such as Tacitus' *Historiae*, and the topographic characteristics of the region (Hiller 1989, 178; Müller *et al.* 2008, 2; Obladen-Kauder 2014, 45-46).

It was, however, only during a period of extraordinary economic and cultural flourishing and the establishment of numerous historical associations and societies for heritage management in the western Prussian provinces of Rhineland and Westphalia (Schreiter 2020, 200), research in Xanten, led by Joseph Steiner, received further impetus with the creation of the *Niederrheinische Altertumsverein* in 1877 (Müller *et al.* 2008, 9; Schreiter 2020, 203). The society's statute explicitly stipulated both the archaeological investigations of the ancient ruins of *Colonia Ulpia Traiana* and more extensive and regular excavations of the fortresses of the Fürstenberg (Rosen 1989, 275; Schreiter & Jaschke 2014, 179).

**Matheus Morais Cruz**

Museum of Archaeology and  
Ethnology (University of São  
Paulo), matheusmrcruz@  
gmail.com

The richness of the archaeological findings of the *Vetera I* camp put Xanten in a prominent position. Between the late 19<sup>th</sup> and early 20<sup>th</sup> centuries, the fortified Roman camps installed along the Lower Rhine were not, at first, part of the agenda of archaeological investigations of the period, except for the Neuss and *Vetera I* camps, which were systematically investigated (Kemkes 2020, 302). With the exception of the periods of the two World Wars, during which archaeological activities were completely interrupted, archaeological research in Xanten evolved exponentially throughout the 20<sup>th</sup> century. Reflecting this are the establishment of the *AltertumsMuseums in Xanten* in 1908 in the space of the *Klever Tor* (Schmenk 2008; Schreiter & Jaschke 2014); the founding, in 1974, of the *Regionalmuseums Xanten*, intended to store the archaeological finds previously held by the *Niederrheinische Altertumsverein*; the establishment, in 1977, of the *Archäologische Park Xanten* (APX); and the opening of the *RömerMuseum* in 2008 under the direction of Hans-Joachim Schalles. These events are well-known in the German archaeological literature and have been extensively discussed by Hanel (1995; 2014), Rosen (1998), Müller, Schalles and Zieling (2008), Schmenk (2008) and Obladen-Kauder (2014).

Regarding the amphora studies, research in Xanten had a later development than the studies on these sites' urban and architectural evolution. Despite the great interest in studying the settlements, fortresses, and colonies that were part of the so-called *limes germanicus*, the ancient objects of everyday life, such as those of the *instrumentum domesticum* were not highlighted by archaeologists. Throughout the first half of the 20<sup>th</sup> century, many of Xanten's amphorae findings were treated fragmentarily and superficially.

It was only from the second half of the 20<sup>th</sup> century, with the publications by Heukemes (1958) and Ettlinger (1977), the translation of Remesal Rodríguez's paper to German (1977), and the first initiatives for the creation of an amphorae corpus sponsored by the *Römisch-Germanische Limes Kommission* and, later, the *Bodendenkmalamt Baden-Württemberg*, that archaeologists interested in the study of the *limes germanicus* began to develop modern research on this type of pottery (Remesal Rodríguez 2018b, 11-12).

These pioneer works culminated in the significant development of amphora studies along the Rhine from the 1980's. We can cite the publications by Schallmayer (1982; 1983), Schüpbach (1983), Martin-Kilcher (1983; 1987), Hanel (1994; 1998), Baudoux (1996) and Ehmig (1998), among others.

The first project to study the amphora material of the *Colonia Ulpia Traiana* was founded in the late 1970's by Remesal Rodríguez, with the support of Schönberger, and was entitled *Amphoren aus Xanten*. According to Remesal Rodríguez (2006, 42), until the 1980's, only seven stamps of more than 300 stamps and *tituli picti* previously recorded

and stored in the magazines of the *Archäologische Park Xanten* had been analyzed and published.

From a global approach to the epigraphic sources of these amphorae, in particular, stamps and *tituli picti*, the project sought to understand Xanten's economic relations with other Roman provinces and the general economic and administrative organization of the Empire. In addition, from the analysis of this material, the project contributed to new evaluations on the dating of the stratigraphic levels of each excavated site (Remesal Rodríguez 2006, 44).

However, it was not until the early years of the 21<sup>st</sup> century that a major project created from a partnership between the *Centro para el Estudio de la Interdependencia Provincial en la Antigüedad Clásica* of the *Universitat de Barcelona* (CEIPAC-UB), directed by J. Remesal Rodríguez, and the *LVR-Landschaftsverband Rheinland* was finally created for the study of all the amphora material available in the *Archäologische Park Xanten*. CEIPAC's project analyzed about 18.000 amphorae fragments recovered over 337 excavations carried out in the former colony area until the 1970's (Remesal Rodríguez 2018b). In its first stage, in 2001, only the epigraphic sources of these amphorae identified until that moment were studied. Then, in 2002, the second stage began, in which the researchers were dedicated to studying the amphorae found in a single area of the former colony (*Insula 39*) and then expanding it to the areas of the *Ostmauer*, *Hafengrabung*, and *Insula 15*. Finally, in the third stage, the work consisted of studying all the amphora material of the colony (Carreras Montfort & De Soto 2018, 21).

The analytical process was also divided into two steps: the classification of these findings in typologies by analyzing the shape (when possible) and fabric; and their quantification with the application of techniques of manual junction of sherds from the same vessel and the calculation of the Estimated Vessels Equivalent (EVE) which provided sufficient information for intra-site studies and comparisons with collections from other regions of the Roman Empire (Carreras Montfort 2006, 25-28; Carreras Montfort & De Soto 2018, 23-30).

The material recovered from these areas proved to be an important sampling for understanding the consumption and disposal of amphorae in the colony in the Roman period, not only for the quality of the recovered sherds but also for providing an excellent chronological horizon, dating from the beginning of Augustan-Tiberian period until the second half of the 2<sup>nd</sup> century AD (Carreras Montfort 2006, 25).

Between January 13 and 15, 2004, the colloquium 'Römische Amphoren der Rheinprovinzen unter besonderer Berücksichtigung des Xantener Materials' was held at the *Regionalmuseum Xanten*. During this colloquium, the first results of the CEIPAC's project were presented and subsequently confronted with existing



data from other sites in *Germania*. The lectures were published in 2006, in volume 14 of the *Xantener Berichte* (Zieling *et al.* 2006). Among these contributions, we can mention the controversy generated on the one hand by the publications by J. Remesal Rodríguez, P. Berni Millet, and C. Carreras Montfort, and on the other, by W. Eck and P. Eich, concerning the role of *praefectus annonae* in the administration of the *annona militaris* and the organization of the Roman economy.

In 2018, the project also resulted in the publication of the book *Colonia Ulpia Traiana (Xanten) y el Mediterráneo. El comercio de alimentos* edited by Remesal Rodríguez (2018a). The volume seeks to present the results obtained during the development of the previously mentioned research stages, in addition to presenting the state of research of each amphora typology and the interpretation of their presence on the site regarding the contacts established between Xanten and other regions of the ancient Mediterranean.

In the *Vetera I* camp, the amphorae and other artefacts of everyday life began to draw the attention of scholars only in the late 20<sup>th</sup> century. A large number of findings was recorded in the preliminary excavation reports published between 1905 and 1933 in the old volumes of *Bonner Jahrbücher*, a series of publications organized by the *Bonner Provinzialmuseum*. These amphorae and amphora sherds (275 estimated amphorae). This number does not correspond to the number of fragments found, but to the estimated number of individual amphorae were initially stored at the *LVR-Landesmuseum Bonn* but were transferred in 2021 to the *Archäologische Park Xanten*, which now concentrates the findings of the colony and the camp. Hanel (1995) did the latest extensive work on this material, in the 1980's, during the development of his Ph.D. dissertation *Vetera I. Die Funde aus den Zweilegionenlagern auf dem Fürstenberg bei Xanten*, which aimed to analyze and systematize the findings of the excavations carried out between these years.

### **The amphorae of Xanten. Transport, circulation, consumption, and disposal**

The commercial amphora (*amphora*, in Latin; ἀμφορεύς, in Greek) was a type of ceramic or terracotta vessel, characterized by its two handles joining the shoulder of the body and a long neck and its generally ovoid or cylindrical formats. The amphorae were designed to obtain greater logistics efficiency and individual handling, also offering structural resistance and space optimization in the ships that transported them (Koehler 1986, 49; Peacock & Williams 1986, 52-53).

This ceramic vessel functioned as a very important container for trade in antiquity, having been used for long-distance transport, mainly by maritime routes, and storage of essentially liquid or pasty commodities, such as wine,

olives, olive oil, fish sauce (such as *garum*, *liquamen*, *muria*, *cordula*, *laccatum*, *lumphā* or *(h)allex*), *defrutum* (a kind of grape syrup made from the reduction of must), and honey, although they also carried dry products such as cereals, grains and dried fruits (Funari 1985a, 161-162; 1985b, 16; Peacock & Williams 1986, 2; Höpken 2018, 373-375).

In Roman antiquity, especially in the Republican and Imperial periods, due to the large availability of raw material, the manufacture of amphorae was performed on a large scale, often produced in series (Remesal Rodríguez 1982), driven especially by the need for food and resources to Rome and the troops of the Roman army stationed in distant regions, what made these containers one of the main circulating items in the Mediterranean during this period. To optimize their transport most of the specialized workshops and kilns were located in regions with easy access to fluvial or sea routes (Peacock 1977; Bernardes & Viegas 2016). Their low cost also explains the ease with which they were reused for other purposes, as fixed containers (Schallmayer 1982, 123; Martin-Kilcher 1983, 339), in civil construction (Remesal Rodríguez 1983, 129), and in landfills (Carreras Montfort & De Soto 2018, 37).

The amphorae of Xanten, coming from the *Cugernii* settlement *Colonia Ulpia Traiana* and the *Vetera I* fortress, can be considered, along with those of the *Colonia Claudia Ara Agrippinensium* (Köln) and *Novaesium* camp (Neuss), the most extensive and significant sources for the study of the Roman supply mechanisms in *Germania inferior*, in addition to providing a wide possibility of conjectures for research on regional and local trade when compared to the assemblages of other camps and colonies from the Northern Rhineland.

As discussed before, a major project for the study of Xanten's amphorae was created in the early 2000's. In addition to the typological classification, CEIPAC's researchers also carried out a quantitative work: through the quantification of handles (3.333 units) and spikes (906 units) of various typologies by the Minimum Number of Individuals (MNI) method, it was possible to identify a minimum number of 1.699 amphorae ( $1.667 + 32$  of unpaired typologies) for handles and 906 amphorae for spikes (Carreras Montfort & De Soto 2018, 29-30). Of this total number of vessels, almost half corresponds to Dressel 20 amphorae, while the rest is mainly equivalent to Gauloise 4 and related typologies, Germanic flat-bottomed amphorae, Dressel 7-11 and similar, and Haltern 70.

Besides the identification of potential individuals from the analysis of fragment assemblages, the process of quantifying the material also led to the weight of the fragments, the most relevant factor for CEIPAC research due to its representativeness and invariability (Peacock & Williams 1986, 19; Carreras Montfort 2006, 26; Carreras Montfort & De Soto 2018, 26) as a way to calculate its correlation with the dimensions of the excavated area

(Carreras Montfort 2000, 54-58). The total weights of the fragments were then divided by the value of the area of the excavated sites corresponding to each finding, resulting in density values. The distribution analyses helped to understand whether the different densities of amphorae were affected by the topography of the city, the reuse of the containers, or the disposal patterns of the material.

It is important to note that the classification and quantification carried out by the CEIPAC refers to the totality of amphorae identified in the *Colonia Ulpia Traiana*, transported, consumed, and discarded over at least three centuries, from the period of the occupation of the *Cugerni* settlement to the abandonment of the city in the 3<sup>rd</sup> century AD. Thus, from a careful reading of publications concerning the dating of the sites and their correlation with the well-known range of production of each typology, our research, still under development, will focus on identifying the amphorae belonging to the period until the settlement's partial devastation during the Revolt of the *Batavi* and before its elevation to Roman colony, so that we can provide a more precise comparison between them and the amphorae of *Vetera I*.

With this in mind, some sites with well-defined homogeneous chronologies and representative amphorae assemblages will be selected to evaluate possible changes and continuities in the patterns of importation, consumption, and disposal of these amphorae from the viewpoint of chronological evolution. As well as the *Cugerni* settlement and due to the archaeological-historically secured horizon of destruction as a result of the Revolt of the *Batavi*, the *Vetera I* fortress is of particular importance for the evaluation of the early imperial trading activities in the Lower Rhine area.

The amphorae of *Vetera I* were systematized by Hanel (1995) from the analysis of the annual reports (*Bonner Jahrbücher*) published between 1904 and 1933. In comparison with *Colonia Ulpia Traiana* and despite its relatively long period of occupation (c. 82 years) and the large contingent of legionary soldiers it housed, the camp records a low number of amphorae finds (275 pieces). It can be explained by several reasons; perhaps one of the most important and significant is the fact that over time, *Vetera I* was the target of destructive activities (such as the relocation of building material and agricultural activities), which deeply impacted the remnants of the camp. It is also possible to mention the fact that the excavations were mostly concentrated within the camp boundaries, and it is possible that most of the amphorae were discarded in a specific location outside the living area, as happened in the *Cugerni* settlement. Despite this and the different methods of classification and quantification applied to this material, it is still possible to draw some conclusions about the relative representativeness of each commodity within the sample

and its consumption in the camp, in order to propose a comparison between the two contexts.

Although the CEIPAC project raised important information about the patterns of consumption and disposal of amphorae in the area of the ancient settlement, as well as, analyzed possible commercial and logistical relations between it and other provinces of the Empire, we believe that a comparative study, considering also other camps from the Lower Rhine, even if applied on a small sample, could reveal important information about possible patterns in *Vetera I*. Due to their durability – as a result of their physical characteristics and mechanical properties – and their large scale of production, amphorae are one of the most common and voluminous archaeological records in sites throughout the Mediterranean, especially from the Roman period, besides being considered director fossils for the study and quantification of the mechanisms of trade, distribution, and consumption of food supplies; and, on many occasions, the only type of remaining archaeological record capable of certifying interactions involving valuable, perishable commodities (Peacock & Williams 1986, 2). The mapping of product flows – which has pointed to a combined use of maritime, river, and terrestrial routes by interregional trade (Carreras Montfort & Morais 2010; 2012) – has revealed important information not only for our understanding of trade in this period but also of the Roman presence in the provinces of the Empire. Thus, the amphorae should not be understood simply as effective artifacts for providing an 'index' of the transport of commodities in antiquity, but as direct testimonies of the movement of certain products of vital importance to the economy and the maintenance of a Roman way of life.

### Alternative scientific communication

Besides the contribution to the debate around the Roman economy and administrative structure of amphorae supply, another innovation of the research project will be the development of a digital game, which will aim to communicate the results of the work, both to the academic and general public. This proposal aims to spread historical and archaeological knowledge about the two archaeological contexts of Xanten and its involvement in the amphorae supply networks. Besides the three-dimensional representations of the materiality that characterized both contexts, in particular the Roman amphorae, the game will allow reflection in a ludic way on themes and concepts presented by the research. Although still under development, this project presents a great educational potential for meeting the goal of providing complex approaches to the past and the present, through its interpretative frameworks correlated to a contextualized use of technology, adapting and creating it as a strategy for the enhancement of knowledge (Ribeiro & Trindade 2017, 136).

## Concluding remarks

Our goal with this research is to identify possible patterns of transport, circulation, consumption, and disposal of amphorae, as well as to discuss the logistical mechanisms of the Roman supply networks that enabled the circulation of these containers in both archaeological contexts of Xanten during the early imperial period. Furthermore, we aim to identify and evaluate the economic and commercial relations between the settlement, the camp, and other provinces of the Empire. Our final intention is to contribute to the discussion around the possibility of an early and well-organized imperial administrative structure for supplying the Roman army. Furthermore, with the project of alternative scientific communication, we intend to communicate the results of the research to a broad public through a didactic and ludic tool.

We understand that the regional and historically contextualized study of the two contexts combined with a global perspective of trade, economy, and politics can help us reflect on how the historically determined conditions that characterized the transformations that took place in the Roman Empire delineated over almost a century the internal development of both places and the economic and commercial strategies for the maintenance of the frontier. Although our investigation is only a contribution to the discussion of the exposed themes, we intend, from the analysis of the data obtained through the quantification methods employed and from the information obtained by reading the epigraphic supports (amphorae stamps and *tituli picti*) identified in Xanten, to explore in our research new possibilities for understanding the commercial circulation and military supply systems, responsible for providing the necessary consumer goods for the maintenance of the Roman settlements in the region.

## Bibliography

- Baudoux, J., 1996: *Les amphores du nord-est de la Gaule (territoire français). Contribution à l'histoire de l'économie provinciale sous l'Empire romain*, Paris (Documents de Archéologie Française 52).
- Bernardes, J.P. & C. Viegas, 2016: Roman amphora production in the Algarve (Southern Portugal), in: I.V. Pinto, R. Roberto de Almeida & A. Martin (eds), *Lusitanian amphorae. Production and distribution*, Lisbon (Roman and Late Antique Mediterranean Pottery 10), 81-92.
- Carreras Montfort, C., 2000: *Economía de la Britannia romana. La importación de alimentos*, Barcelona (Colección Instrumenta 8).
- Carreras Montfort, C., 2006: A quantitative approach to the amphorae from Xanten. A more comprehensive view of long-distance trade, *Xantener Berichte* 14, 25-39.
- Carreras Montfort, C. & P. De Soto, 2018: Metodología. Estudio cuantificado de las ánforas, in: J. Remesal Rodríguez (ed.), *Colonia Ulpia Traiana (Xanten) y el Mediterráneo. El comercio de alimentos*, Barcelona (Colección Instrumenta 63 / Corpus international des timbres amphoriques 26), 21-58.
- Carreras Montfort, C. & R. Morais (eds), 2010: *The western Roman façade. A study of the economy and trade in the Mar Exterior from the Republic to the Principate*, Oxford.
- Carreras Montfort, C. & R. Morais, 2012: The Atlantic roman trade during the Principate. New evidence from the western façade, *Oxford Journal of Archaeology* 31/4, 419-441.
- Ehmig, U., 1998: Pinselaufschrift und Stempel auf einer südspanischen Ölamphore aus Mogontiacum, *Pyrence* 29, 237-248.
- Ettlinger, E., 1977: Aspects of amphora typology seen from the north, in: *Méthodes classiques et méthodes formelles dans l'étude typologique des amphores. Actes du colloque de Rome, 27-29 mai 1974*, Rome (Collection de l'École Française de Rome 32), 9-16.
- Funari, P.P.A., 1985a: A Anforologia. Uma nova disciplina arqueológica, *Revista de História* 118, 161-170.
- Funari, P.P.A., 1985b: *As transformações morfológicas das ânforas olearias Béticas de tipo Dressel 20*, São Paulo (master thesis University of São Paulo).
- Hanel, N., 1994: Amphorenstempel aus Gross-Gerau, *Münstersche Beiträge zur antiken Handelsgeschichte* 13/2, 122-143.
- Hanel, N., 1995, with a contribution of T. Rehren: *Vetera I. Die Funde aus den römischen Lagern auf dem Fürstenberg bei Xanten*, Köln/Bonn (Rheinische Ausgrabungen 35).
- Hanel, N., 1998: Die Amphoren aus den Ausgrabungen von 1927/28 in Flottenlager Köln-Marienburg (Alteburg), *Kölner Jahrbuch* 31, 417-425.
- Hanel, N., 2014: Auf der Suche nach Vetera castra. Die römischen Militärlager auf dem Fürstenberg als Forschungsgegenstand während des zweiten Deutschen Kaiserreichs, in: K. Jashke, D. Schmitz, M. Sieler & R. Trost (eds), *An den Grenzen des Reiches. Grabungen im Xantener Legionslager am Vorabend des Ersten Weltkrieges*, Xanten/Mainz (Kataloge des LVR-Römermuseums im Archäologischen Park Xanten 6), 54-63.
- Heukemes, B., 1958: Datación de algunas marcas de ánforas españolas (noticiario), *Archivo Español de Arqueología* 31, 197-198.
- Hiller, H., 1989: Archäologische Studien von St. V. Pighius in Xanten, in: H. Wrede & R. Harprath (Hrsg.), *Antikenzeichnung und Antikenstudium in Renaissance und Frühbarock. Akten des Internationalen Symposiums 8.-10. September 1986 in Coburg*, Mainz, 167-183.

- Höpken, C., 2018: Mediterrane Köstlichkeiten für Xanten. Zu den Amphorenfunden am Niederrhein, *Xantener Berichte* 32, 373-388.
- Kemkes, M., 2020: The limes, in: S. James & S. Krmnicek (eds), *The Oxford handbook of the archaeology of Roman Germany*, Oxford, 298-349.
- Koehler, C.G., 1986: Handling of Greek transport amphoras, in: J.Y. Empereur & Y. Garlan (eds), *Recherches sur les amphores Grecques*, Athens, 247-257.
- Martin-Kilcher, S., 1983: Les amphores romaines á huile de Bétique (Dressel 20 et 23) d'Augst (Colonia Augusta Rauricorum) et Kaiseraugst (Castrum Raurense). Un rapport préliminaire, in: J.M. Blázquez Martínez & J. Remesal Rodríguez (eds), *Producción y comercio del aceite en la antigüedad. Segundo congreso internacional (Sevilla, 24-28 febrero 1982)*, Madrid, 337-347.
- Martin-Kilcher, S., 1987: *Die römischen Amphoren aus Augst und Kaiseraugst. Ein Beitrag zur römischen Handels und Kulturgeschichte 1. Die Südspanischen Ölamphoren (Gruppe 1)*, Augst (Forschungen in Augst 7/3).
- Müller, M., H.-J. Schalles & N. Zieling, 2008: Forschungsgeschichte, in: M. Müller, H.-J. Schalles & N. Zieling (Hrsg.), *Colonia Ulpia Traiana. Xanten und sein Umland in römischer Zeit*, Mainz (Xantener Berichte Sonderband. Geschichte der Stadt Xanten 1), 1-20.
- Obladen-Kauder, J., 2014: Wo lag Vetera I? Die Suche nach dem römischen Militärlager im Raum Xanten seit der frühen Neuzeit bis Anfang des 20. Jahrhunderts, in: K. Jashke, D. Schmitz, M. Sieler & R. Trost (eds), *An den Grenzen des Reiches. Grabungen im Xantener Legionslager am Vorabend des Ersten Weltkrieges*, Xanten/Mainz (Kataloge des LVR-Römermuseums im Archäologischen Park Xanten 6), 40-53.
- Peacock, D.P.S., 1977: Recent discoveries of Roman amphora kilns in Italy, *The Antiquaries Journal* 57/2, 262-269.
- Peacock, D.P.S. & D.F. Williams, 1986: *Amphorae and the Roman economy. An introductory guide*, London.
- Remesal Rodríguez, J., 1977/1978: La economía oleícola Bética. Nuevas formas de análisis, *Archivo Español de Arqueología* 50/51 (135/136), 87-141.
- Remesal Rodríguez, J., 1982: Die Ölwirtschaft in der Provinz Baetica. Neue Formen der Analyse, *Saalburg Jahrbuch* 38, 30-71.
- Remesal Rodríguez, J., 1983: Transformaciones en la exportación del aceite bético a mediados del s. III d. C., in: J.M. Blázquez Martínez & J. Remesal Rodríguez (eds), *Producción y comercio del aceite en la antigüedad. Segundo congreso internacional (Sevilla, 24-28 febrero 1982)*, Madrid, 115-132.
- Remesal Rodríguez, J., 2006: Römische Amphoren aus Xanten. Epigraphische Aspekte, *Xantener Berichte* 14, 42-48.
- Remesal Rodríguez, J. (ed.), 2018a: *Colonia Ulpia Traiana (Xanten) y el Mediterráneo. El comercio de alimentos*, Barcelona (Colección Instrumenta 63 / Corpus international des timbres amphoriques 26).
- Remesal Rodríguez, J., 2018b: Introducción, in: Remesal Rodríguez 2018a, 11-20.
- Ribeiro, A.I. & S.D. Trindade, 2017: O ensino da História e tecnologias. Conexões, possibilidades e desafios no espaço das Humanidades Digitais, in: C. Porto & J.A. Moreira (eds), *Educação no ciberespaço. Novas configurações, convergências e conexões*, Aracajú/Santo Tirso, 145-159.
- Rosen, J., 1989: Zur Geschichte des Niederrheinischen Altertumsvereins Xanten, in: G. Precht & H.-J. Schalles (Hrsg.), *Spurenlese. Beiträge zur Geschichte des Xantener Raums*, Köln, 275-286.
- Schallmayer, E., 1982: Wegmarken des antiken Welthandels. Römische Amphoren aus Baden-Württemberg, *Denkmalpflege in Baden-Württemberg. Nachrichtenblatt des Landesdenkmalamtes* 11/3, 116-123.
- Schallmayer, E., 1983: Römische Okkupationslinien in Obergermanien und Rätien. Zur chronologischen Typologie der Amphoren, in: J.M. Blázquez Martínez & J. Remesal Rodríguez (eds), *Producción y comercio del aceite en la antigüedad. Segundo congreso internacional (Sevilla, 24-28 febrero 1982)*, Madrid, 281-336.
- Schmenk, H., 2008: *Xanten im 19. Jahrhundert. Eine rheinische Kleinstadt zwischen Tradition und Moderne*, Köln/Weimar/Wien.
- Schreiter, C., 2020: Erwerbungen und Sammlungen des Niederrheinischen Altertumsvereins Xanten. Von der Gründung bis zum Erlass des Preußischen Ausgrabungsgesetzes (1870-1914), *Xantener Berichte* 33, 199-276.
- Schreiter, C. & K. Jaschke, 2014: Das LVR-RömerMuseum im Archäologischen Park Xanten. Geschichte und Konzept, *Rheinische Vierteljahresblätter* 78, 178-191.
- Schüpbach, S., 1983: Avenches. Contribution à la connaissance de la chronologie des estampilles sur les amphores à huile de la Bétique, in: J.M. Blázquez Martínez & J. Remesal Rodríguez (eds), *Producción y comercio del aceite en la antigüedad. Segundo congreso internacional (Sevilla, 24-28 febrero 1982)*, Madrid, 349-361.
- Zieling, N., S. Martin-Kilchert, P. Berni Millet, C. Carreras Montfort, J. Remesal Rodríguez, W. Eck, P. Eich & U. Ehmig, 2006: Kolloquium Römische Amphoren der Rheinprovinzen, *Xantener Berichte* 14, 1-84.

# Roman practice camps near *Legio*

Trobajo del Camino, San Andrés de Rabanedo and  
Oteruelo de la Valduncina, León, Spain

Ángel Morillo, Brais X. Currás, Almudena Orejas  
and Agostino Nobilini

## Ángel Morillo

Dpt. Prehistoria, Historia  
Antigua y Arqueología,  
Facultad de Geografía  
e Historia, Universidad  
Complutense, Madrid,  
amorillo@ghis.  
ucm.es, [http://orcid.  
org/0000-0003-2139-0346](http://orcid.org/0000-0003-2139-0346)

## Brais X. Currás / Almudena Orejas

EST-AP. Dpt. Arqueología y  
Procesos sociales, Instituto  
de Historia, CSIC, brais.  
curras@cchs.csic.es /  
almudena.orejas@cchs.csic.  
es, [http://orcid.org/0000-  
0002-8975-070X](http://orcid.org/0000-0002-8975-070X) / [http://orcid.  
org/0000-0003-4675-2489](http://orcid.org/0000-0003-4675-2489)

## Agostino Nobilini

Universidad Complutense,  
Madrid, agostinonobilini@  
yahoo.it; [http://orcid.  
org/0000-0001-8631-6089](http://orcid.org/0000-0001-8631-6089)

Since the beginning of the 20<sup>th</sup> century, remote sensing has been an essential tool for pinpointing and identifying structures linked to the armies of Rome and to the control of its borders and provincial territories. Suffice it to recall how the pioneering works of Poidebard (1934) and Baradez (1949) enabled the documentation of many structures of this type on the eastern fringes of the Empire and along the *fossatum Africae*. In the northwest of the Iberian Peninsula, Loewinsohn (1965) identified in this way the military forts of Castrocalbón in the 1960's, while Sánchez-Palencia (1986) located the fort of Valdemeda in the 1980's. The quantitative and qualitative improvements in the currently available means have led to a notable increase in the detection of military structures or, at least, indications of their existence, especially as regards enclosures of a temporary or ephemeral nature, such as marching or campaign camps, of which there are hardly any material or structural remains easily identifiable in situ (Morillo *et al.* 2020). Over the past years, a particularly large number of finds has been made in northern Spain (Didierjean *et al.* 2014, Costa *et al.* 2016; Orejas *et al.* 2019) and it has been thanks to the sequential analysis of aerial photos and LiDAR images that it has been possible to document the series of camps that are briefly described below. In this paper, some of the data obtained from the interventions performed in 2022 supplement the preliminary results of the work carried out to date (Morillo *et al.* 2021).

The research described here forms part of an overall study of the surroundings of *Legio* (León), in which archaeological surveys are currently being carried out with remote sensing methods. The aim of these interventions is to gain a better understanding of the characteristics and scope of the military presence in the area, plus its relationship with the settlement patterns and road network (Morillo 2012; Morillo & Durán 2017; Morillo *et al.* 2018). It has been possible to identify 18 of these military practice camps (Morillo *et al.* 2021), which are located 4 km from the ancient urban centre of *Legio*, next to the road leading to *Asturica Augusta* (fig. 1).

## Methodology

The identification and preliminary morphological study were performed by means of a sequential analysis of aerial photos and LiDAR images. The comparison between

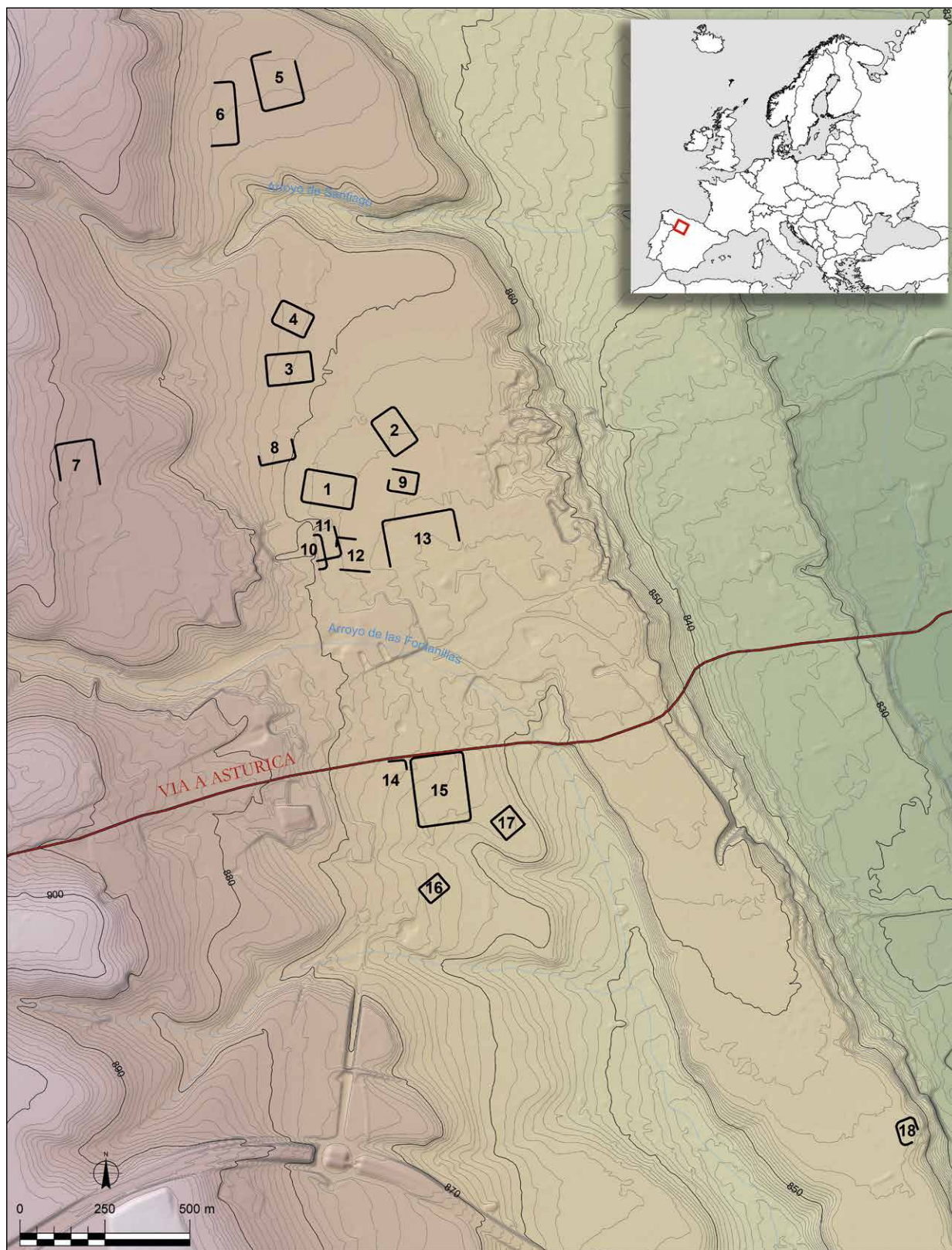


Figure 1. General map showing the location of the series of 18 military practice camps identified in San Andrés de Rabanedo and León.





Figure 2. Ongoing data collection process of the geophysical prospections.

photos taken on different dates (from the USAF flights in 1946 and 1956 to the most recent series of PNOA, Plan Nacional de Ortofotografía Aérea, and LiDAR images), at different scales and with different resolutions and treatments, provided supplementary information. As crop and soil marks were not detectable to the same extent in these graphic materials (fig. 3), only their joint analysis allowed for both completing the register of the layout of the military forts and evaluating their evolution over the past few decades.

Additionally, archaeological field surveys were conducted. Even though this peri-urban area, where buildings alternate with farmland, had undergone far-reaching transformations, those graphic materials helped to verify the conservation of topographic features and the differential growth of vegetation, indicating segments of ditches and ramparts. They were then supplemented by selective surveys with the aim of documenting the stratigraphic section of the structures (fig. 4).

On the other hand, geophysical prospections are currently being conducted in collaboration with the Polytechnic University of Cartagena and the Research Support Centre (Centro de Asistencia a la Investigación, CAI) of the Complutense University of Madrid (fig. 2). Several profiles have been obtained with electrical

resistivity tomography (ERT) in the enclosures R-1, R-5 and R-18, which have been combined with an analysis using ground penetrating radar (GPR), equipped with a 600 MHz antenna. After processing, these data can be compared with the results of the archaeological surveys performed to date, with the intention of assessing the precision of the geophysical prospections in the documentation of the camp structures.

### **The documented military forts. Morphology, orientation, dimensions and location characteristics**

In all cases, the military forts, which have rectangular ground plans and rounded corners, were built on the naturally level ground of the intermediate terrace on the right bank of the river Bernesga. Their surface areas range from 0.5 to 3 ha, although the most noteworthy aspect is the uniformity of the modules 3:2 and 4:3, with only two exceptions (table 1). The enclosures have a sole *fossa*, except in the case of R-18, which has two. As will be seen below, the perimeters of some of the camps are intact, while in others only partially so owing to the subsequent changes in the lie of the land or to the fact that work on them was never concluded. If, as everything suggests, they are evidence of training in castrametation, it

enclosure	surface	documented perimeter	major axis	minor axis	W side	N side	E side	S side	slope	module
	(ha)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(%)	
R-1	1.45	479.0	150.0	96.5	97.2	150.0	95.7	151.9	1.2	1.55 (3:2)
R-2	1.06	404.0	125.0	85.0	125.0	84.7	125.0	86.0	2.4	1.47 (3:2)
R-3	1.19	435.7	133.0	90.0	91.0	132.5	88.5	134.5	1.8	1.48 (3:2)
R-4	0.79	346.8	107.7	74.7	74.8	107.3	74.3	108.2	1.9	1.44 (3:2)
R-5	*2.06	460.6	166.6	125.0	166.6	*122.6	166.0	126.3	1.4	1.33 (4:3)
R-6	-	312.0	-	-	-	-	184.8	-	-	-
R-7	-	344.6	-	113.2	-	113.5	-	-	-	-
R-8	-	185.4	-	-	-	-	-	105.5	-	-
R-9	*0.53	246.8	84.0	63.5	63.5	*84.0	63.3	83.8	1.3	1.32 (4:3)
R-10	-	136.5	-	-	-	-	102.0	-	-	-
R-11	-	157.8	-	-	-	-	-	-	-	-
R-12	-	164.3	-	92.7	-	-	-	-	-	-
R-13	-	435.1	214.0	-	-	*214.0	-	-	-	-
R-14	-	72.0	-	-	-	-	-	-	-	-
R-15	3.17	701.0	204.5	155.5	204.0	156.0	204.2	155.3	-	1.31 (4:3)
R-16	0.40	249.0	73.7	55.3	73.5	55.2	74.0	55.5	3.1	1.33 (4:3)
R-17	0.51	282.2	72.0	71.0	72.7	70.5	71.3	71.3	1.9	1.01 (1:1)
R-18	*0.50	180.0	83.5	72.5	80.0	69.0	*82.0	*75.0	-	1.15

Table 1. Dimensions of the military camps and modules. The lateral measurements take the intersection of the projection of each one of the sides as a reference. The average slope of the camp surface has been calculated by means of a digital elevation model (DEM) based on the LiDAR data of the PNOA. The surfaces correspond to the maximum length of the enclosure, from the outermost edge of the moat (\* = estimated by interpolation).

is conceivable that in some cases only a few sections were completed, with the accent being placed on aspects such as the design of their corners, their modular structure and their orientation.

The main characteristics and the conservation status of each military enclosure are now reviewed, based on the data shown in tables 1 and 2. R-1 (fig. 3), as with R-4, conserves its full perimeter, which can be made out in practically all the available aerial photos and LiDAR images. R-2 has been partially altered by modern paths and constructions, but a review of the data of several flights allows for determining its structure. Albeit not very clearly defined, the perimeter of R-3, especially its southwest corner, is almost intact, and the missing segments can be traced on account of its identifiable features. Except for its northeast corner, the perimeter of R-5, the only enclosure of the group whose remains are fossilised in the farmland, is also practically unbroken. As to R-6, only one of its sides, coinciding with the edge of the terrace, has been clearly identified.

R-7 is located somewhat apart from the rest of the group, on a terrace 15 m higher, in an area that has been

substantially altered by building activity. As regards R-8, only its southern sector has been documented to date, for its northern part had already been altered by the time of the inter-ministerial flight in the 1970's. Only the west side and the northwest corner of R-9 have been affected by a path. It should not be ruled out that, as in the case of R-5, the enclosure was never completed. Only one of the sides of R-10, which intersects with R-11, has been identified. R-11, which intersects with R-10 and R-12, has also only been documented in part, this being restricted to its southeast section, due to a building. For its part, R-12 has been comprehensively altered by constructions and communication routes, for which reason only its south side and northwest corner have been conserved.

Moving on to R-13, its perimeter is still visible, except for its south side which has not been identified in any aerial photo and is currently affected by buildings and a road. Only the northeast corner of R-14 has been documented in some flights. Moreover, its remains are now located under a building. It warrants noting that the Roman road connecting *Legio* with *Asturica Augusta* most likely ran parallel to the north side of R-14, with a

enclosure	surface <i>actus quadratus</i>		documented perimeter	major axis	minor axis	W side	N side	E side	S side
R-1	11.5	<i>pedes</i>	1,619.9	507.3	326.3	328.7	507.3	323.6	513.7
		<i>actus</i>	13.5	4.2	2.7	2.7	4.2	2.7	4.3
R-2	8.4	<i>pedes</i>	1,366.2	422.7	287.5	422.7	286.4	422.7	290.8
		<i>actus</i>	11.4	3.5	2.4	3.5	2.4	3.5	2.4
R-3	9.5	<i>pedes</i>	1,473.5	449.8	304.4	307.7	448.1	299.3	454.9
		<i>actus</i>	12.3	3.8	2.5	2.6	3.7	2.5	3.8
R-4	6.3	<i>pedes</i>	1,172.8	364.2	252.6	253.0	362.9	251.3	365.9
		<i>actus</i>	9.8	3.0	2.1	2.1	3.0	2.1	3.1
R-5	*16.4	<i>pedes</i>	1,557.7	563.4	422.7	563.4	*414.6	561.4	427.1
		<i>actus</i>	13.0	4.7	3.5	4.7	*3.5	4.7	3.6
R-6	-	<i>pedes</i>	1,055.1	-	-	-	-	625.0	-
		<i>actus</i>	8.8	-	-	-	-	5.2	-
R-7	-	<i>pedes</i>	1,165.4	-	382.8	-	383.8	-	-
		<i>actus</i>	9.7	-	3.2	-	3.2	-	-
R-8	-	<i>pedes</i>	627.0	-	-	-	-	-	356.8
		<i>actus</i>	5.2	-	-	-	-	-	3.0
R-9	*4.2	<i>pedes</i>	834.6	284.1	214.7	214.7	*284.1	214.1	283.4
		<i>actus</i>	7.0	2.4	1.8	1.8	*2.4	1.8	2.4
R-10	-	<i>pedes</i>	461.6	-	-	-	-	344.9	-
		<i>actus</i>	3.9	-	-	-	-	2.9	-
R-11	-	<i>pedes</i>	533.6	-	-	-	-	-	-
		<i>actus</i>	4.5	-	-	-	-	-	-
R-12	-	<i>pedes</i>	555.6	-	313.5	-	-	-	-
		<i>actus</i>	4.6	-	2.6	-	-	-	-
R-13	-	<i>pedes</i>	1,471.5	723.7	-	-	*723.7	-	-
		<i>actus</i>	12.3	6.0	-	-	*6.0	-	-
R-14	-	<i>pedes</i>	243.5	-	-	-	-	-	-
		<i>actus</i>	2.0	-	-	-	-	-	-
R-15	25.2	<i>pedes</i>	2,370.8	691.6	525.9	689.9	527.6	690.6	525.2
		<i>actus</i>	19.8	5.8	4.4	5.8	4.4	5.8	4.4
R-16	3.2	<i>pedes</i>	842.1	249.2	187.0	248.6	186.7	250.3	187.7
		<i>actus</i>	7.0	2.1	1.6	2.1	1.6	2.1	1.6
R-17	4.1	<i>pedes</i>	954.3	243.5	240.1	245.9	238.4	241.1	241.1
		<i>actus</i>	8.0	2.0	2.0	2.1	2.0	2.0	2.0
R-18	*4	<i>pedes</i>	608.7	282.4	245.2	270.5	233.3	*277.3	*253.6
		<i>actus</i>	5.1	2.4	2.0	2.3	1.9	*2.3	*2.1

Table 2. Dimensions of the military forts in Roman measurements (*actus*: 35.439 m; *pes*: 0.2957 m; *actus quadratus*: 1,259 m<sup>2</sup>).

gap of around 5 m between the two. Although R-15 has also been much affected by building activity, it is still identifiable in the graphic material obtained during the inter-ministerial flight in the 1970's. This enclosure is located very close to R-14 and has the same orientation

and characteristics, as well as running parallel to the ancient road.

In the graphic material obtained during the above-mentioned inter-ministerial flight, R-16 is clearly visible, even though it does not appear at all in that obtained

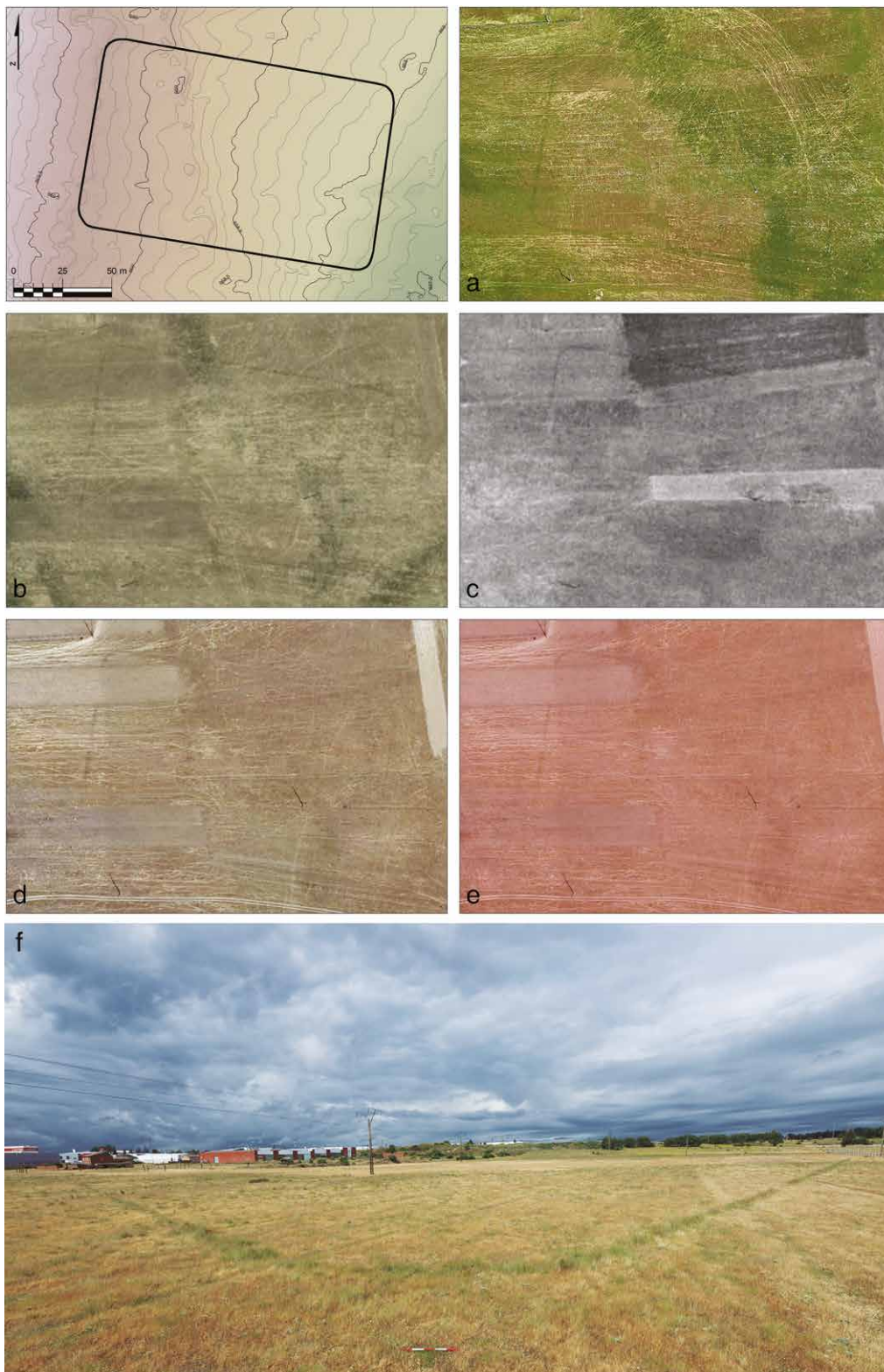


Figure 3. R-1 (Trobajo del Camino, San Andrés de Rabanedo). Planimetry with level curves every 10 cm and sequential documentation of aerial photography. a. Google Earth 2016; b. PNOA 2011; c. Inter-ministerial 1973-1986; d. PNOA 2008; e. PNOA 2008 false-colour infrared image; f. Image of the northeast corner with crop marks.



in subsequent flights. Located on a ledge on the edge of the terrace, R-17 is the only military enclosure with a square floorplan, as documented in the 1957 and the inter-ministerial flight, but not in any subsequent one. Lastly, R-18 occupies a more southern sector of the same platform, although separated from the rest. The only camp with apparently two ditches with a gap of 2-2.5 m between them, its southeast corner is buried under a building on the edge of the terrace.

The formal study was completed by a location analysis employing a geographic information system (GIS), with very homogeneous results. This is consistent with the location of the military forts, namely, the platform formed by the terrace overlooking the river Bernesga, which was not a good vantage point for monitoring the surroundings or the valley. This contrasts with the location of *Legio*, occupying the watershed between the rivers Bernesga and Torío and offering commanding views of both the surroundings and the valley.

However, it is indeed possible to appreciate the intervisibility between the military practice camps and *Legio*. All of which indicates that the choice of this location did not have anything to do with strategic factors, but with its spatial and visual relationship with *Legio* and with the existence of a naturally adequate terrain for carrying out these works – a wide, flat area with sedimentary soils that were easy to work – which are interpreted here as practice camps. The proximity of the road between *Legio* and *Asturica Augusta* was doubtless another crucial factor.

### Archaeological sondages

Sondages, consisting in 10 trenches, measuring 10 m long and 1.5 m wide, cutting across the *fossae* of the military practice camps, were conducted in the summer of 2022, in the same places in which the tomography had been performed in 2021, with the aim of contrasting the data obtained. It was thus possible to determine the characteristics of three of the best conserved military enclosures at ground level, namely, R1 and R4-5. The existence of negative structures, which unquestionably correspond to ditches (*fossae*) surrounding the defence system in the shape of ramparts (*aggeres*), has been verified in all the forts. The conserved widths of all the ditches, which have the characteristic 'V' profile of Roman works of this type, range from 1.2 to 1.4 m, reaching 1.8 m at some points, while their depth with respect to the current land level varies between 0.80 and 1.1 m. In the best conserved forts, there is a difference of up to 0.3 m in the height of the two sides of the ditches, which indicates the presence of the remains of ramparts, which once bordered them, deposited inside them. Some river pebbles and stones from the top of the ramparts have also been found in the deepest part of the ditches, contrasting with the more purified clay of the rest of the ramparts. Although the outline of the rounded

corners (*coxae*) is perfectly visible, no gateways have been identified to date. During the fieldwork, no materials that help to date these forts have been discovered, albeit a matter of course with structures of this types. Therefore, the frame of reference of a general chronology should be maintained, considering their ground plans and proximity to *Legio*, this being between the mid-first of the 1<sup>st</sup> and the beginning of the 3<sup>rd</sup> century AD.

### Interpretation

The characteristics of this series of military settlements suggest that they were practice camps built by military units stationed in *Legio*. To this evidence should be added other indications that have been researched over the past few years (Von Schnurbein 2006, 138; Jones 2017, 523-24) and which highlight an essential aspect of the training of soldiers: the excavation and construction of the different defensive features of military camps. In this case, moreover, it seems that special attention was paid to the rounded corners (*coxae*). This proposal is also consistent with the evidence of different modules and orientations, their relationship with the road and the existence of unfinished practice camps. Certainly, in some cases subsequent alterations might have obscured part of these enclosures, as in the case of R-10-12 which intersect.

The construction of practice camps was a task regularly performed by the army in both times of peace and war (Vegetius *Epitoma Rei Militaris* 1.25-27; Appianus Alexandrinus *Iberica* 86). On the one hand, these works enabled troops to familiarise themselves with building, orientation and modulation techniques. These last techniques required topographical knowledge and tools which *metatores* and *mensores* possessed. On the other, castrametation was one of the Roman army's hallmarks of efficiency and organisational capacity, for which reason it was one of the pillars of military training and discipline (Vegetius *Epitoma Rei Militaris* 1.24.1-5, 1.25.1-5 and 3.8.1-3), for it involved teamwork, order and hierarchy (Phang 2008, 67-70). Each *contubernium* would have been assigned a sector, but his work had to be coordinated with that of the rest of the *contubernia* of the *centuria*. They had to learn how to build campaign or marching camps quickly, adapting them to the lie of the land and the size of military units (Vegetius *Epitoma Rei Militaris* 2.10.1 and 2.25).

To the practice camps of León can be added other similar ones, akin to the fortresses of *Bonna* (Bonn, Schollar 1965; Bödecker 2012) and *Vetera Castra* I (Alpen-Veen-Menzeler, close to Xanten, Horn 1987, 332-334, fig. 279 and 280; Bödecker, 2013, 2014). This series of camps in Ueden-Hochwald is one of the most important exemplars, with 50 more or less complete camps, with different orientations, on both sides of the Roman road and half a day's march from the fortress. Also indispensable is

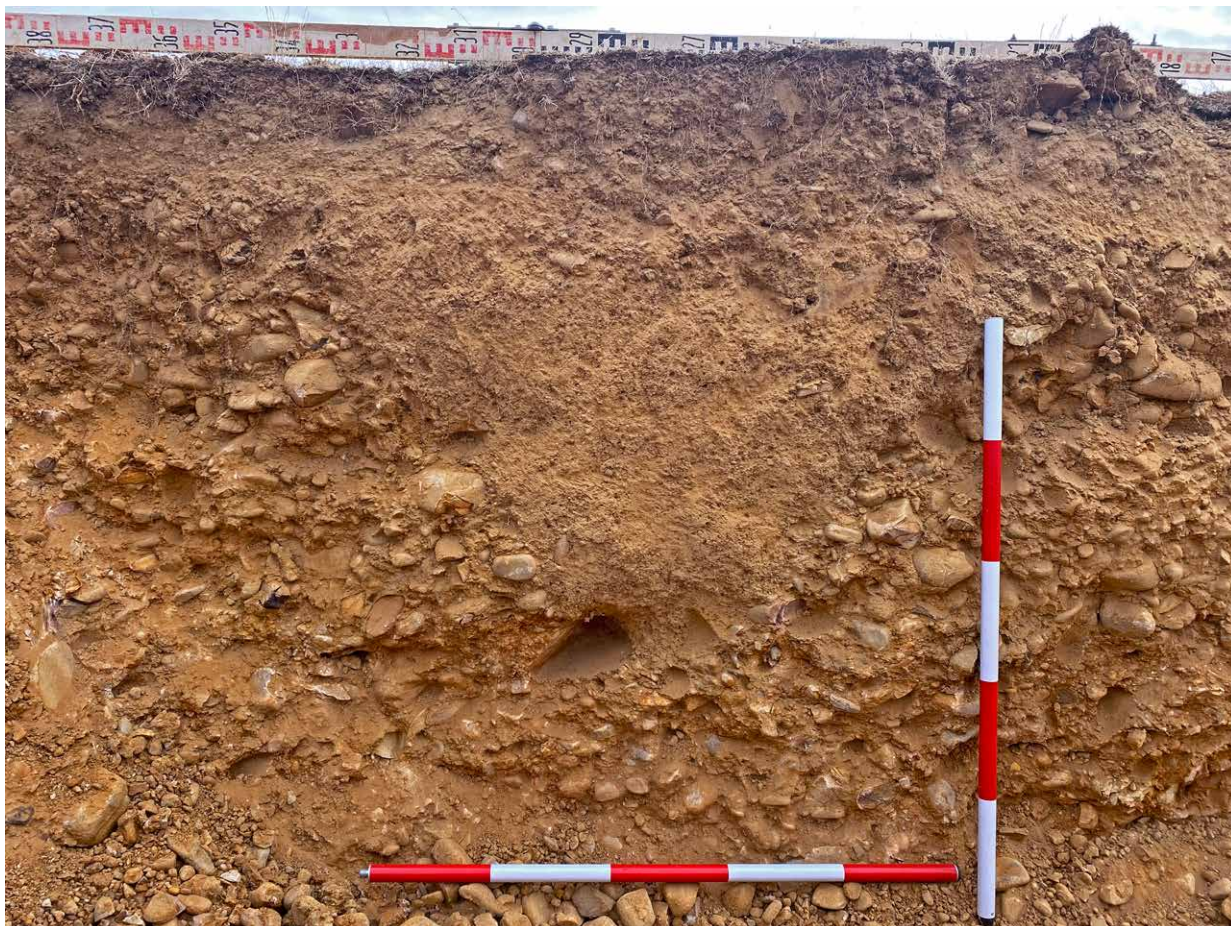


Figure 4. East profile of survey 1 A performed in R-1.

the Pannonian fortress of *Brigetio* (Komárom, Hungary), next to which there are 19 complete or unfinished enclosures, some of which seem to have been temporary forts, although others overlap and, therefore, are regarded as practice camps (Visy 2003, 34-38, fig. 36a and 55b; Számado-Borby 2003, 78-79). In both cases, aerial and ground surveys have been successfully combined.

There are also remains considered as evidence of practice camps in Wales. Four such practice camps were discovered in Llyn Hiraethlyn in 1996, 4 km from the camp of Tomen y Mur (Merioneth). Five had already been identified in Dolldinas, 3 km from the main camp, while in 2001 those of Dolbelydr were discovered to the north of the enclosure of Mur-llwyd. There are some 15 structures associated with the camp of Tomen y Mur, plus overlapping and unfinished elements. Furthermore, it is one of the best examples of the efficiency of aerial photography (St. Joseph 1977, 151; Musson 1994, 86-87; Lynch 1995, 108-109; Crew *et al.* 1996, 26-30; Burnham *et al.* 1997, 397-399, fig. 4; Davies *et al.* 2006). Still in Wales, next to the camp of Castell Collen (Llandrindod Wells, Radnorshire) there are 22 small forts, some of which were only used for training troops to

build gateways (Davies *et al.* 2006). Close to the military facilities of Chester and York there are also practice camps with the same characteristics, interpreted as practice camps and/or those employed for billeting troops on manoeuvres (Philpott 1988; Welfare *et al.* 1995, 135; Johnston 2003; Davies *et al.* 2006, 143-146).

This overview is completed by several references to *Hispania*, where some already documented enclosures might have been practice camps. This is the case of Castrocalbón (León), located on both sides of Via XVII of the *Itinerarium provinciarum Antonini Augusti* (Loewinsohn 1965; Jones 1976, 59; Le Roux 1982, 107-8). Loewinsohn identified three roman forts with surface areas ranging from 1.4 to 4.0 ha, relating them to *Cohors IV Gallorum*, due to their proximity to the *termini* mentioning this unit. Additional ridges on the ground, which seem to correspond to two other forts, have recently been identified (Costa García *et al.* 2016, 58-59). Similarly, in the province of León, located 19 km from *Asturica Augusta* and 15 km from Castrocalbón, on both sides of Via XVII, the practice camps of Villamontán de la Valduerna (Celis *et al.* 2016; Martín Hernández volume 1), only partially identified,



also perhaps correlate to the same type of practice camp. Mention should also go to the series of camps of A Chá de Santa Marta, very close to the road running from *Lucus Augusti* to *Dactonium* (Orejas *et al.* 2015) and that of La Matilla (Herramelluri, La Rioja), located next to a crossroads in the vicinity of the Roman city of *Libia* (Didierjean *et al.* 2014, 166-168). Remote sensing has recently been employed to identify several series of the same type close to the camp of Herrera de Pisuergra (Martín Hernández *et al.* 2020, 150-151).

In all these cases, it has not yet been possible to confirm whether they were camps for troops on the march or manoeuvres or practice camps, since the differences between them do not tend to be that evident (Jones 2017, 523). The 18 military forts of Rabanedo-León share a number of features that are inherent to those identified as practice camps, including their closeness to a road (which was used as a reference in some layouts), the proximity of an important military base (for billeting troops), the concentration of remains, enclosures and modules of different sizes (with a predominance of smaller ones), the building of especially complex elements, such as gateways and corners, and their location on unproductive and well-drained land. The relationship with *Legio* is clear, but there is still a lack of precise information on the dating of the enclosures of Rabanedo-León. They might have been built at a precise moment or at several moments during the long period when *Legio* was a military base, from the Tiberian age to the 3<sup>rd</sup> century AD.

## Acknowledgements

This contribution is part of the results of the following research projects: 'Local economies, imperial economy: Western Iberia (II B.C.-II AD) (LOKI)' (PID2019-104297GB-I00) funded by MCIN/ AEI/10.13039/501100011033/; 'Cultural landscapes of N and NW Iberian peninsula: urban, agrarian and mining territories (NyNO)' (PIE CSIC 202010E147); 'AVRARIA: gold from Hispania' (2019-T1/HUM-14288); 'Ambiguous records: local communities and indigenous settlement in the *metalla publica* of northwest Iberia (INDIGENAE)' (PID2020-114248GA-I00) and 'Landscape and militarized territory in Roman Hispania: mobility and cultural transfer (2<sup>nd</sup> century BC – 4<sup>th</sup> century AD) (MILITRANSFER)' (PID HAR2017-85929-P), funded by MEIC, AEI and FEDER. Complementary funding from the Castilla y León Regional Government (Servicio de Planificación, Investigación y Difusión, Consejería de Cultura y Turismo) has supported fieldwork (B2020/005934 and 2022 22/066-LE).

## Bibliography

Baradez, J., 1949: *Fossatum africae. Recherches aériennes sur l'organisation des confins sahariens à l'époque romaine*, Paris.

- Bödecker, S., 2012: Römische Übungslager im Hinterland von Bonn, in: P. Henrich (ed.), *Der Limes vom Niederrhein bis an die Donau. 6. Kolloquium der deutschen Limeskommission*, 15/16. März 2011 in Mainz, Stuttgart (Beiträge zum Welterbe Limes 6), 21-27.
- Bödecker, S., 2013: Ein Übungslagerareal im Hochwald bei Uedem, *Der Limes. Nachrichtenblatt der Deutschen Limeskommission* 7/2, 10-13.
- Bödecker, S., 2014: Airborne Laserscanning am Niedergermanischen Limes. Ein Übungslagerareal im Hochwald Xanten, in: P. Henrich (ed.), *Der Limes in Raetien, Ober- und Niedergermanien vom 1. bis 4. Jahrhundert*, Darmstadt (Beiträge zum Welterbe Limes 8), 187-191.
- Burnham, B.C., L.J.F. Keppie, A.S. Esmonde-Cleary & R.S.O. Tomlin, 1997: Roman Britain in 1996, *Britannia* 28, 395-472.
- Celis, J., F. Muñoz & F. Valderas, 2016: Núcleos romanos en torno a la Vía XVII. Los campamentos de Villamontán y la mansio de Argentium, in: *III Jornadas Internacionales Evolución de los espacios urbanos y sus territorios en el Noroeste de la Península Ibérica*, 22 de abril de 2016, Astorga (unpublished).
- Costa, J.M., J. Fonte, A. Menéndez, D. González, M. Gago, R. Blanco-Rotea & V. Álvarez, 2016: Roman military settlements in the northwest of the Iberian Peninsula. The contribution of historical and modern aerial photography, satellite imagery and airborne LiDAR, *Newsletter of the Aerial Archaeology Research Group* 52, 43-51.
- Davies, J.L. & R.H. Jones, 2006: *Roman camps in Wales and the Marches*, Cardiff.
- Didierjean, F., A. Morillo & C. Petit-Aupert, 2014: Traces des guerres, traces de paix armée. L'apport de quatre campagnes de prospection aérienne dans le nord de l'Espagne, in: F. Cadiou & M. Navarro-Caballero (eds), *La guerre et ses traces. Conflits et sociétés en Hispanie à l'époque de la conquête romaine (III<sup>e</sup>-I<sup>er</sup> s. a.C.)*, Bordeaux, 149-179.
- Horn, H.G., 1987: *Die Römer in Nordrhein-Westfalen*, Stuttgart.
- Johnston, M., 2003: Excavations at Monk's Cross, *Yorkshire Archaeology Today* 5, 1-3.
- Jones, R.F.J., 1976: The Roman military occupation of North-West Spain, *Journal of Roman Studies* 66, 45-66.
- Jones, R.H., 2017: What is a Roman camp?, in: N. Hodgson, P. Bidwell & J. Schachtmann (eds), *Roman Frontier Studies 2009. Proceedings of the XXI International Congress of Roman Frontier Studies (Limes Congress) held at Newcastle upon Tyne in August 2009*, Oxford (Archaeopress Roman Archaeology 25), 521-530.
- Le Roux, P., 1982: *L'armée romaine et l'organisation des provinces ibériques d'Auguste à l'invasion de 409*, Paris.

- Loewinsohn, E., 1965: Una calzada y dos campamentos romanos en el Conventus Asturum, *Archivo Español de Arqueología* 38, 26-49.
- Lynch, F., 1995: *Tomen y Mur and Doldddinas practice camps. A guide to ancient and historic Wales*, Gwynedd, 106-109.
- Martín-Hernández, E., A. Martínez-Velasco, D. Díaz-Alonso, F. Muñoz-Villarejo & L. Bécares, 2020: Castrametación romana en la meseta norte. Nuevas evidencias de recintos militares en la vertiente meridional de la cordillera cantábrica (provincias de Burgos y Palencia), *Zephyrus* 86, 143-164.
- Morillo, Á., 2012: Investigación científica y arqueología urbana en la ciudad de León, in: J. Beltrán & O. Rodríguez (eds), *Hispaniae urbes. Investigaciones arqueológicas en ciudades históricas*, Sevilla, 211-256.
- Morillo, Á., A. Adroher, M. Dobson & E. Martín-Hernández, 2020: Constructing the archaeology of the Roman conquest of Hispania. New evidence, perspectives and challenges, *Journal of Roman Archaeology* 33, 35-52.
- Morillo, Á., B.X. Currás, A. Orejas & A. Nobilini, 2021: El conjunto de campamentos romanos para prácticas de Trabajo del Camino (San Andrés de Rabanedo) y Oteruelo de la Valduncina (León). Una aproximación preliminar, *Gladius* XLI, 91-119.
- Morillo, Á. & R. Durán Cabello, 2017: Territorios militares en Hispania. Nuevas perspectivas, *Gerión* 35/2, 511-536.
- Morillo, Á., V. García-Marcos, J. Salido & R. Durán, 2018: El vicus militar de Ad Legionem (Puente Castro, León). Las intervenciones arqueológicas de los años 2000-2001, *Spal* 27/1, 145-183.
- Musson, C., 1994: *Wales from the air. Patterns of past and present*, Aberystwyth.
- Phang, S.E., 2008: *Roman military service. Ideologies of discipline in the Late Republic and Early Principate*, Cambridge.
- Poidebard, A., 1934: *La Trace de Rome dans le désert de Syrie. Le Limes de Trajan à la Conquête Arabe. Recherches aériennes (1925-1932)*, Paris.
- Orejas, A., F.J. Sánchez-Palencia, A. Beltrán, J.A. Ron, L.F. López, B.X. Currás, D. Romero, E. Zubiaurre, J.L. Pecharromán & L. Arboledas, 2015: Conquista, articulación del territorio y explotación de recursos en el límite entre el convento lucense y el de los astures (Proyecto IVGA), in: J. Camino Mayor, E. Peralta Labrador & J.F. Torres Martínez (eds), *Las Guerras Astur-Cántabras*, Gijón, 247-259.
- Orejas, A., F.J. Sánchez-Palencia, B.X. Currás, J.A. Ron & L.F. López, 2019: Campamentos militares durante la primera ocupación romana del noroeste de la península Ibérica, in: B. Vallori Márquez, C. Rueda Galán & J. P. Bellón Ruiz (eds), *Accampamenti, guarnigioni e assedi durante la Seconda Guerra Punica e la conquista romana (secoli III-I a. C.). Prospettive archeologiche*, Roma, 97-111.
- Philpott, R.A., 1998: New evidence from aerial reconnaissance for Roman military sites in Cheshire, *Britannia* 29, 342-353.
- Sánchez-Palencia, F.J., 1986: El campamento romano de Valdemeda, Manzaneda (León). Ocupación militar y explotación aurífera en el NW peninsular, *Numantia* 2, 227-235.
- Scollar, I., 1965: *Archäologie aus der Luft, Arbeitsergebnisse der Flugjahre 1960 und 1961 im Rheinland*, Düsseldorf.
- St. Joseph, J.K., 1977: Air reconnaissance in Roman Britain, 1973-76, *Journal of Roman Studies* 67, 125-161.
- Számádó, E. & L. Borby, 2003: Brigetio temporary camps, in: Zs. Visy (ed.), *The Roman army in Pannonia. An archaeological guide of the Ripa Pannonica*, Budapest, 78-79.
- Visy, Zs., 2003: *The Ripa Pannonica in Hungary*, Budapest.
- Von Schnurbein, S., 2006: Camps d'étape et camps d'entraînement, in: M. Reddé, R. Brulet, R. Fellmann, J.-K. Haalebos, S. Von Schnurbein & P. Aupert (eds), *Les fortifications militaires, L'architecture en Gaule romaine*, Bordeaux (Documents d'archéologie française 100), 136-139.
- Welfare, H. & V. Swan, 1995: *Roman camps in England. The field archaeology*, London.

# The location of the *Legio X Fretensis* fortress in Jerusalem after 70 AD

Back to the unsolved question – a new proposal

Ran Ortner



Figure 1. An abbreviated engraving inscription of Legio X Fretensis discovered in the 'Western Wall tunnel' excavations (Ran Ortner).

*“Caesar gave orders that they should now demolish the entire city and temple but should leave as many of the towers standing as were of the greatest eminency: that is, Phasaelus, and Hippicus, and Mariame, and so much of the wall as enclosed the city on the west side. This wall was spared, in order to afford a camp for such as were to lie in garrison...”* (Flavius Josephus *De Bello Iudaico* 7.1, below BJ).

*“He (Titus) sent away the rest of his army to the several places where everyone would be best situated: but permitted the Tenth Legion to stay as a guard at Jerusalem and did not send them away beyond Euphrates, where they had been before”* (BJ 7.3).

## Ran Ortner

Independent scholar,  
Har-Hermon 4, Qiryat-Ono 5502504, Israel, ortner.ran@gmail.com

Josephus Flavius' account is the only remaining historical text concerning *Legio X Fretensis* fortress (legionary camp) establishment circumstances. It also relates to its general whereabouts in Jerusalem right after its destruction in 70 AD, at the end of the First Jewish Revolt by Rome's legions. Besides this very general information, there is no further information regarding the fortress' qualities or exact location. Although the legion camped for a considerably long period in Jerusalem (for over 200 years), which is one of the more

explored and excavated cities of the ancient world, except for a variety of small archaeological finds (Tsafrir 1999, 115-166, review of finds and references in Bdolah-Weksler 2014, 219, note 1; 2017, 159; 2019, 4), no significant finds or structural remains that can be associated firmly with the fortress have been revealed to this point. However, archaeological research confirms Jerusalem's final capture and destruction, as described (*BJ* 7.1) and Josephus' testimony regarding the Tenth Legion's presence in unrestored Jerusalem after 70 AD.

This unsolved question puzzled scholars for 130 years. As it posed difficulties to draw and reconstruct post-70 AD Roman Jerusalem (later known as *Aeila Capitolina*), based on interpreting Josephus's account in a manner where Herod's palace towers (today's 'David citadel', fig. 3) incorporate an unknown constellation in the city defence line and perhaps in the fortress, and archaeological finds with *Legio X Fretensis* stamps from this region and throughout the city. Most Scholars suggest locating the fortress in different proportions in the 'southwestern hill' (today's 'Jewish and Arminian quarter'), 'Herod Palace', Mount Zion, the southwest and southeast of the city adjacent to Temple Mount and Tyropoeon Valley (fig. 2-3). The fortress was considered temporary by some researchers (Geva 1982; 1994; Stiebel 2000, 68-69; Bdolah-Weksler 2017, 163-165; Abramovich 2012, 317-318). Later, a permanent fortress (*castra stativa*) was set up nearby or at another location, as proposed by Stiebel (2000, 68-70), Mazar E, (2000, 60-61) and Bdolah-Weksler (2014, 219-220; 2017, 124-135; 2019, 6-13). Yet, most suggested sites do not fit considering their topography and estimated size of 300 × 200 m (Safrai 2017, 213, 226). Therefore, it is unlikely that those areas could accommodate a standard Roman legion or even half a legion (fig. 2-3). Considering the estimated fortress size and its extensive facilities, and assuming it was a standard fortress with fortification (for the importance of walls as fortress markers *BJ* 3.76-84; Vegetius *Epitoma Rei Militaris* 1.17; Isaac 1999, 4), barracks, and headquarters it is unlikely to have been overlooked or missed in the numerous post-Herodian excavated sites in Jerusalem's broader area (Isaac 1993, 280; 1999, 5 and 167-168; Bdolah-Weksler 2019, 6-14; Bahat 2020, 100). A reasonable explanation is that the fortress simply did not exist in those areas. The exciting finds are small and can be moved or used secondarily. Hence, they can only indicate the Tenth Legion's overall presence but cannot define or mark the fortresses' location where they were found.

In light of all this, it is necessary to reexamine the existing location suggestions and existing discoveries in a slightly unusual way than has previously been done (Ortner in press):<sup>1</sup>

1 This article presents abbreviated, concise sections of the research due to editing and space constraints. The archaeological evidence discussion supporting the proposed suggestion and a detailed new approach can be found in Ortner, in press.

1. Implementing a model of a non-Jewish civilian 'satellite village' similar to a *canabae legionis*. Those settlements typically did not exceed 300 m from the fortresses they were associated with, thus effectively marking their location.
2. Searching for the fortress in areas not excavated so far. There are very few such areas in Jerusalem. Accordingly, the Temple Mount's upper surface should be the most acceptable and obvious, as it was not excavated by scientific standards due to its religious and political status.
3. Examining the security, political, and strategic conditions from the Roman military and administrative point of view after the Great Jewish Revolt was suppressed and a fortress was established.

### The known group of 'military buildings from the late Roman period' – a new meaning

Based on a group of buildings and findings defined as 'military buildings from the late Roman period,' discovered in the southwest Temple Mount excavation by B. Mazar (1975). E. Mazar (2000), Stiebel (2000), and Abramovich (2012) pointed out their 'military characteristic' and locating the fortress below the southwest corner of the Temple Mount podium along Tyropoeon Valley (including the 'western wall' Plaza and tunnel excavation sites), south of the city and a worship compound atop the temple mount (fig. 2. 3-4). However, stamped legion bricks on the 'bakery' floor (*furnaria*) and latine inscribed bread stamps, which supposedly indicate a 'military building' and military bread production, raise the question of whether it is destined to be used only for military personnel or the civilian population as well.

This led to another question, is it sufficient to determine the fortress' location, where economic activities associated or related to the legion are identified? It seems as if not always, as it is quite possible, that the discussed buildings were service shops and production workshops which, after the Herodian city destruction, produced Roman military surplus to Jerusalem dwellers at that stage; soldiers, pagan civilians, and perhaps even Christians and Jews. Safrai (2017, 214-215) believes that was the case in Shu'afat settlement, a north Jerusalem suburb.

Regarding those buildings and other buildings discovered between the 'eastern cardo' and the Temple Mount, Bdolah-Weksler (2017, 190 and 200) noted they were an integrated and non-separate part of the later Roman city. She believed (Bdolah-Weksler 2019, 45-47) they are not to be identified as military structures but rather as civilian in nature and use. Similarly, we should examine the big bathhouses and latrines with legion-stamped tiles and bricks described as well 'military bathhouses,' as the study of bathhouses within Roman

**Overall view of the Deferent researcher's location suggestions for the Tenth Legion Camp in Jerusalem from the End of the 19<sup>th</sup> century till today**

1. **D. Bear** suggestion for the legion base location, on north-western hill, at present days, "Christian quarter." (1993)
2. **G. Stiebel** suggestion below the south-west corner of the 'Temple Mount' ( 2000)
3. **E. Mazar** suggestion: below the south-west corner of 'Temple Mount' and on part of 'Temple Mount' podium. At present days "Jewish quarter". (2000)
4. **C. S. Wilson** suggestion (1905) Arminian quarter
5. **F.J. Bliss and A.C. Dickie** (1898) suggestion. Mount Zion

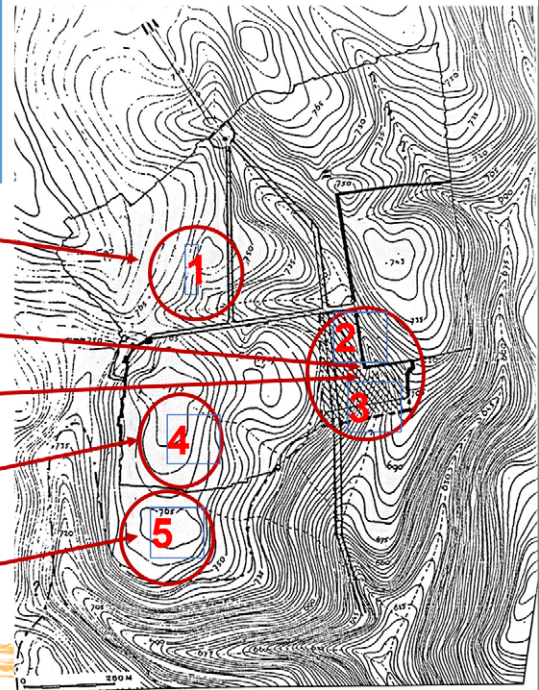


Figure 2. Map with the suggested locations of the fortress (after E. Mazar 2000, 67, fig 13, with modifications by R. Ortner).

forts and civilian satellite settlements in the western part of the Empire showed they were identical (Le Bohec 1994, 158-161; Sion 2011, 349).

In this light, a different interpretation should be made; actually, we are dealing with a group of functional buildings and finds typical to a (non-Jewish) civilian settlement that 'escorts' a fortress. This phenomenon is known mainly in the Roman West, where such settlements (usually called *canabae legionis*) developed spontaneously along the main road leading to a fortress while maintaining symbiotic economic and service relations (Isaac 1981, 342-343; Hanel 2007, 395). Therefore, the discussed buildings, and a recently discovered large building with 'military characteristics' at 'pilgrim's way' (Bdolah-Weksler 2017, 181; 2019, 38-40; Szanton *et al.* 2018, 251-273; Uziel *et al.* 2019), should all be included in the territory of this civilian settlement and constitute its remains (fig. 3). Perhaps this settlement should be seen as the Jerusalem *canabae legionis* (Isaac 1981, 359; 1999, 10-11; Bdolah-Weksler 2014, 231). As it is known that *canabae* maintained close interaction relations with fortresses (Isaac 1999, 10-11; Hanel 2007, 395; Bdolah-Weksler 2017, 184; Szanton *et al.* 2018, 265-267), the fortress should be located nearby within a short range that will not exceed 200 m. In these circumstances, the most likely place where it should be is the Temple Mount's upper surface and not at the southwestern hill which would be far beyond this range.

The advantage of the suggested *canabae* concept is that some of the existing evidence for the legion's presence

in Jerusalem (below) are integrated and reorganized as a military-government complex on the Temple Mount podium and a semi-civilian settlement at its foot. Additional evidence for the possible existence of a *canabae legionis* in Jerusalem can be found among various archaeological finds discovered in the wider Jerusalem area, mainly in the south of the city, and particularly around the Temple Mount (Ortner in press; Henig personal communication; an important 'Temple Mount Gemstone's assemblage' and jewellery, may testify to **women's presence in the civilian settlement**, Elkayam *et al.* 2016, 307-319; Peleg-Barkat 2011, 273-284).

### **Establishment of the fortress atop the Temple Mount: factors and circumstances**

The fortress in Jerusalem, which was destroyed and replaced by a fortress is an exceptional case as the usual Roman practice kept civilians and fortresses separate and avoided placing legionary troops within cities (Goodman personal communication; Tacitus *Annales* 2.55, 13.35 and 15.26). Hence the question arises, what was the reason for establishing a fortress within Jerusalem's urban boundaries? This is a subject of broad discussion for itself. However, this paper suggests the reason for the unusual decision lies in the extraordinary circumstances the Romans faced in 70 AD: A persistent and widespread Jewish rebellion greatly increased suspicions about Jewish loyalty. Therefore, their strategic primary goal



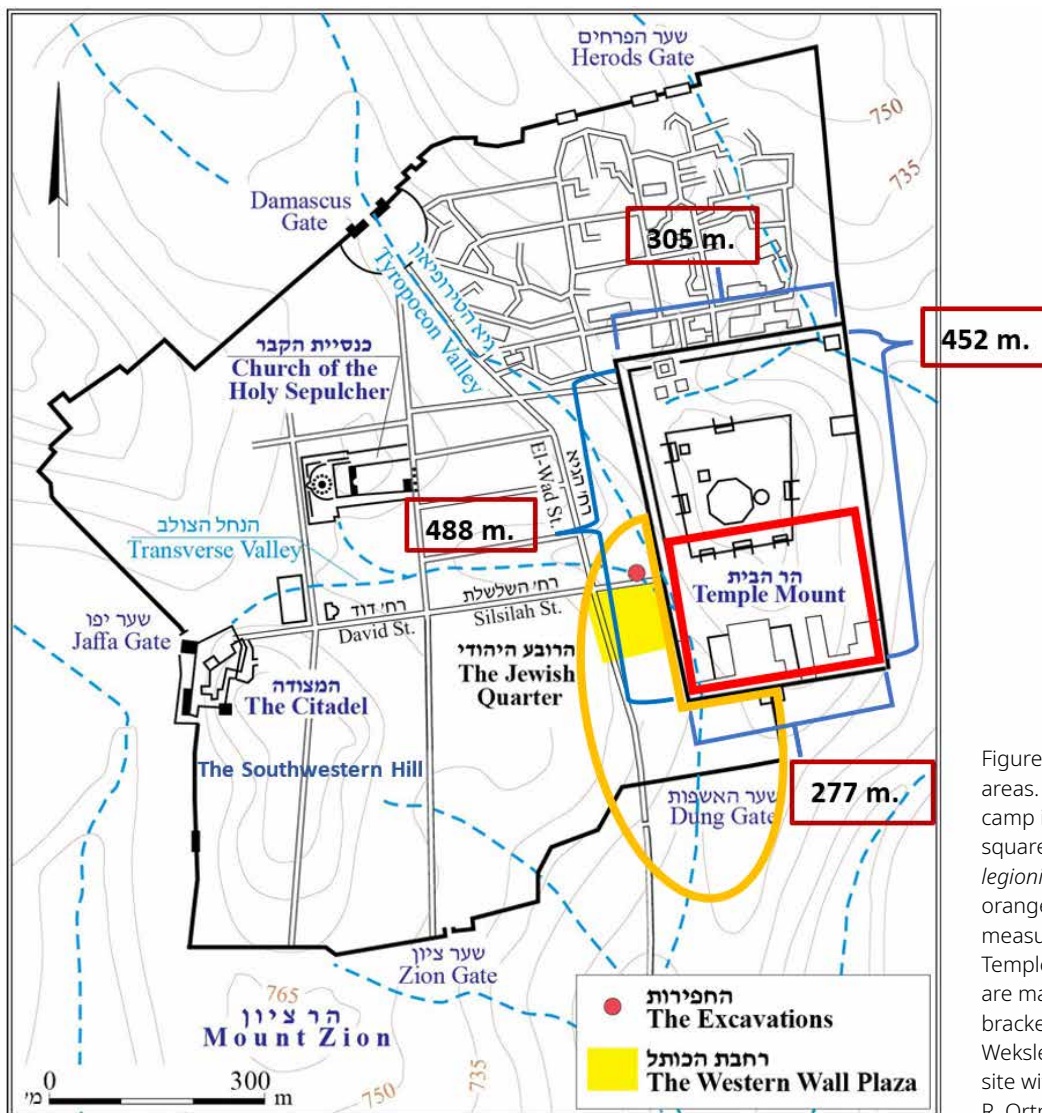


Figure 3. Map of sites and areas. The suggested camp is marked in red square, and the *canabae legionis* general area in orange oval-circular. The measures of the Herodian Temple Mount Podium are marked in blue brackets (after Bdolah-Weksler 2022, 1, fig. 1. IAA site with modification by R. Ortner).

was to prevent the Jews from taking back the Temple compound during a future uprising (Bear 1993, 37, note 1; E. Mazar 2000, 59-60). Another goal was to address the primary motivation for rebellious Jewish potential against their role – the religious Jewish messianic element (Safrai 2017, 216; Ortner 2017, 70-74). This could be done by eliminating the Temple, an extraordinary measure for itself (B. Mazar 1975, 236-239; Safrai 2017, 213-216; Ortner 2017, 162-167) and by physical limitation and preventing the renewal of its worship by loyalist Jewish believers. Practically meaning, maintaining a constant military presence atop the Temple Mount. Accordingly, several monuments and imperial military structures were constructed; a *sacellum*, *principia*, and *praetorium* were probably among them (Lander 1984, 11-17 and 33-34). The later reports of Jupiter's Capitoline Temple (Bdolah-Weksler 2017, 185; 2019, 110-111), and

accessibility activities on the Temple Mount and around it may support this.

### Location considerations and shape of the fortress

Generally speaking, an optimal and preferable condition for Roman planners when establishing a fortress is an open flat area without any previous urban construction. However, the dense urban ruins in destroyed Jerusalem were the exact opposite and pose extraordinary difficulties. Hence, Jerusalem's more common fortress layout reconstruction suggestions are non-regular formation. However, this paper suggests that the 'Roman planners' chose and aimed right from the beginning, for a 'Western modal' fortress (also known as rectangular 'card modal') that could be fitted well to the flat wide rectangular podium of the Temple Mount. They sought



to control (fig. 3). Such a fortress could have used the podium's massive retaining walls. Furthermore, the rectangular formation, measuring about 300 m between its east and west retaining walls, provided sufficient length for the wide axle that fits a standard fortress, as well as the distance (452-488 m) between the southern and northern walls (Bahat 2020, 100-107), which could be used for the length axle. The known example of the large-scale *Legio VI Ferrata* fortress discovered at el-Lajjun near Megiddo (Tepper *et al.* 2016, 91-123; Eck & Tepper 2019, 117-128), presented a high match to the Western rectangular Card model reinforces this concept.

By military and practical aspects, the uplifted and well-protected Temple Mount podium, which strategically dominates its urban surroundings and other parts of the city, provided ideal conditions for a large square-formed fortress (fig. 3). The central Jewish temple building was located on the podium centre. Therefore, it is probable that the Romans focused on its southern part and retaining wall, where fewer buildings existed. Hence, fewer ruins and more vacant space for constructing the main fortress (Goodman personal communication; Safrai personal communication). This was not the case in other parts of the city. The massive fine temple-chiselled stone remains could make it easier for the Romans to reuse them (Baruch & Reich 2006, 250; Bahat 2020, 102-103), and to shorten the construction time of the fortresses' facilities and perimeter walls.

Alternatively, the fortress could have no walls as it took advantage of the colossal Herodian elevated podium natural protection. This may seem like some deviation from the typical fortress layout pattern. However, the Romans were known for their pragmatic approach as they needed to adjust to the given condition at the temple mount (Henig personal communication), the Romans built the camp's *sacellum* and later Hadrian's Jupiter temple on the site of the previous Jewish Hall. Their known tendency to 'merge' gods makes it possible to combine divinity and architecture in a newly constructed structure.

Another major demand for placing fortresses was a good water supply and drainage system. This necessity could have been met by reconstructing the pre-existing, sophisticated Herodian water supply system to the temple compound, whose great potential could quickly identify and restored by Roman engineers. The discovery of the 'Great Causeway' and 'Wilson's Arch' (fig. 3, red dot) support this idea (Sion 2011, 247-248; Bdolah-Weksler 2017, 185; Bahat 2020, 106). The fortress's compound (E. Mazar 2000, 59-60, note 31) metrical size (minimal) is estimated at 15 Hectar (150 D). 12 Hectar (120 D) on the podium's upper surface and 3 Hectar (30 D) on its southwestern slope main *canabae* designated area.

## The archaeological evidence for the fortress on the Temple Mount

So far, the fortresses' circumstances, layout, and location have been discussed theoretically. On a practical level, we should look at and examine material-archaeological findings that are the basis for this paper's location suggestion most material finds associated with the legion originate from the south of the city, the Temple Mount, and its southern and western slopes (B. Mazar 1975, 232-233). The following is a brief concise summary of the most notable finds, which are divided into two categories: upper-surface finds and near-surface finds.

### Finds discovered near the Temple Mount complex

The outer wall of a 'Roman building' identified as a bathhouse bears an abbreviated Tenth Legion (FRET) inscription (fig. 1, Abramovich 2012, 319-324; Bdolah-Weksler 2019, 128). This inscription and other finds (described as 'industrial, military activity of legion soldiers') from the Western Wall tunnel and Plaza (Abramovich 2012, 319-323; Uziel *et al.* 2018; 2019 identify them as a *praetorium*, bathhouse/*principia*) and the nearby Eastern Cardo site (fig. 3). These finds have dual military and civilian uses and were found very close to the Temple Mount complex. Hence, they testify more to civilian activity associated with the nearby fortress on the Temple Mount.

**The Great Causeway** is a long arched Roman period bridge that extends between the southwestern hill of the city and the Temple Mount upper podium (Bdolah-Weksler 2017, 181, length: 90-100 m, width 6 m and dated to 70-130 AD). Its first stage was built for military purposes in the year 70 or shortly after (Abramovich 2012, 319-324; Bdolah-Weksler 2017, 181). This find raises a big question, why did the Romans need to construct a massive access bridge to the demolished and abandoned temple area, after their war efforts to destroy it a short time ago? In Bdolah-Weksler's (2017, 181) opinion, the bridge's purpose was to allow a wide access road from the fortress (that she identifies as the southwestern hill) to the Temple Mount due to its former historical-religious importance and being an urban-religious centre in *Aelia Capitolina*. However, a more plausible explanation is an inversion of Bdolah-Weksler's proposed layout. The bridge was intended first and foremost, to allow legionnaires access and connection from the fortress and government complex established on the Temple Mount towards the western parts of Roman-restored Jerusalem where probably clay workshop for bricks, tiles, and stone processing of the Herodian Upper City ruins operated (Sion 2011, 343-367). This remarkable effort indicates the compound's strategic importance in the eyes of the Roman Army command.

Two rare **milestones columns** bearing imperial military dedication inscriptions from the commander

of the Tenth Legion to Emperors Vespasian and Titus were discovered in the B. Mazar and the Reich and Billig excavations near the southwestern corner of the Temple Mount (Bdolah-Weksler 2017, 168; 2019, 37. Column A was found by B. Mazar (1975, 232) and column B was found in the same area, by Reich & Billig 2003, 243-247). The unusual stone columns were part of a commemorative monument; a distinct mark of a Roman military administrative presence. The inscription originated from a building associated with the legion, probably opposite the fortress gate or its *principia* and *praetorium* (Gichon & Isaac 1974, 118-119; B. Mazar, 1975, 232-233; E. Mazar 2000, 58; Stiebel 2000, 82-83; Bdolah-Weksler 2017, 168; 2019, 37). According to Gichon and Isaac (1974, 121), column A rolled down to the Tyropoeon Valley from a high location inside the fortress. They located the fortress above the Tyropoeon Valley western cliff. Assuming the fortress was located atop the Temple Mount (above the east cliff of the Tyropoeon Valley), the dedication columns could also roll down to their discovery site. (For their possible connection to the suggested *canabae* (see Ortner in press).

Another important evidence of legion soldiers and non-Jewish citizen's presence was discovered in the nearby 'Western Wall' Plaza excavations, a big burned **waste dump**, recovered underneath a late Roman Period (the 'Eastern Cardo') pavement. Among the significant findings were three military bread stamps dated about 100 AD (Bdolah-Weksler 2017, 169; 2019, 38), an exceptional assembler of organic material; 60 % of it were 'domesticated pig' bones, a most common ingredient in Roman soldiers' diet. According to the excavators (Bdolah-Weksler 2017, 169; 2019, 38), many fragments of vessels are associated with the Roman army officers' quarters at the fortress, which they suggest was at the top of the southwestern hill (fig. 2, overlap areas 4-5) It was possible, however, to use the exact dump site location (in the *canabae* suggested area) when the fortress is located east of it, at the top of Temple Mount Hill. At this location, the waste disposal distance is the same.

## Finds from the upper Temple Mount surface

The fact that today the Temple Mount complex is an active place of worship does not allow formal archaeological excavations by scientific standards. This condition poses noticeable limitations and difficulties in this aspect. However, there is an overtake way to examine the presence of fortress facilities on the Temple Mount through the **Temple Mount Sifting Project (TMSP)**<sup>2</sup>. Quantitative

analysis (Barkai & Zwieg 2006, 215-216 and 220-226; 2012, 77-78) by percentage of tile fragments, pottery, typical nutrition (pig bones), and other small finds from the late Roman-Byzantine Period (Barkai & Zwieg 2012, 76-78; Zwieg & Barkai 2021. Sifting activities in 2019, found Roman *caliga* nails. Stiebel (2011, 333-345) discusses metal objects from the Temple Mount and their connection to the Roman presence there. All these finds yield indicative 'markers' for the legion's presence. "More than 12,000 tiles fragments were discovered through the sifting process ... which indicates that large public buildings stood on the Temple Mount during this period." It also "demonstrates that human activity on the Temple Mount after 70 AD, the late Roman and Byzantine periods were continuous and without gaps" (Barkai & Zwieg 2006, 213-217, 220, 222-223, 228; 2007, 53; 2012, 77-78). Statistics show: most late Roman pottery finds are related to military activity and less to civilian life.

In light of this, it can be assumed that the origin of all public and 'military buildings', on the Temple Mount and below it, is in the previous period: 70-130 AD. Shortly after 70 AD the Tenth Legion established its monumental government buildings complex on the Temple Mount. During this period, civilian public buildings appeared in the *canabae* area. In the late Roman-Byzantine period, some of those buildings changed use or served as foundations for temples, basilicas, baths, and churches. They also provided building blocks for secondary use.<sup>3</sup>

One of the rare cases in which an excavation occurred under the Al-Aqsa Mosque can demonstrate this idea. Hamilton (1949), who documented the works, stated that the excavation inside the mosque reached a depth of 4 m, and a Jewish ritual bath (Herodian period) was discovered, a decorated mosaic floor of a public building from the Byzantine Period, and many other ancient architectural items. Among them is an unusual frieze of a Centaur glyph, possibly linked to the suggested Roman complex on the temple mount. The fragment of this frieze or gable of a Roman temple bearing a **centaur carved in high relief** from the Temple Mount (fig. 4 up) was described by Barkai and Zweig (2009, 214-215; Zwieg 2008, 2-4). They concluded that the relief "may have been part of a spin, originating from a series of reliefs that decorated the walls of a Roman temple that stood on the Temple Mount." If this is the case, "...the Centaur relief is significant evidence for the existence of a pagan temple on the Temple Mount".

A similar case and conclusion is an unusual architectural **decorated wood beam**, found on the Temple Mount podium. The unique beam was initially part of a large, monumental structure from the Roman-Byzantine period that was later adapted for secondary use as an

2 A team of archaeologists led by Barkai and Zwieg (2006; 2007; 2012) retrieved rare dumped archaeological material from the Temple Mount by sifting it. Over the years, it has grown into an experiential project of international significance.

3 For a wider description and discussion of additional relevant findings from the TMPS see Ortner in press.

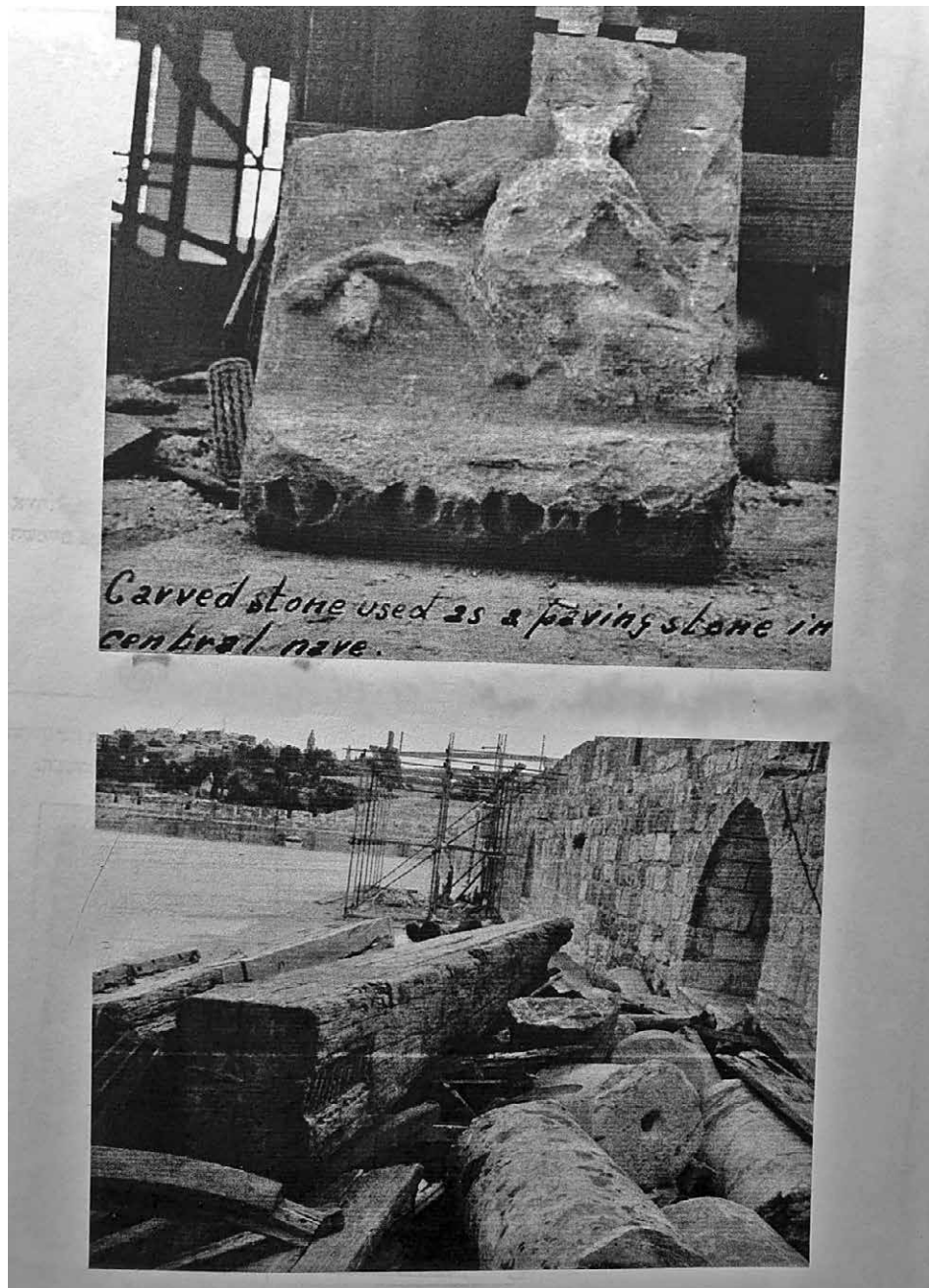


Figure 4. Up fragment of a frieze or gable of a Roman temple with a figure of a Centaur carved in high relief. Down a decorated wood beam from the Roman Period, removed from the Al-Aqsa nave hall (R.W. Hamilton 1949, 63-66, fig. 111-112).

internal support beam in the roof structure of Al-Aqsa Mosque (fig. 4 down). According to Reuven (2009, 221-223) the classically decorated beam “constitutes an extremely rare architectural item that originates from one of the monumental buildings of Jerusalem in the Roman period.”

Another significant find in this regard is a fragment of a **monumental inscription** (fig. 5) that was first documented and described by Tibor Grull (2006, 183-200). He saw the inscription fragment in 2003 at the Waqf Islamic Museum on the Temple Mount and believed it indicated the presence of the Tenth Legion in Jerusalem as part

of a ‘consecration arch’ in honor of the Flavian dynasty, that stood on the territory of the fortress established on Jerusalem ruins in 70 AD “at the place where the last battle over Jerusalem was fought, on the Temple Mount itself.” Based on this inscription, Abramovich (2012, 325, note 14-15) concluded that the Temple Mount complex adjacent to the Tenth Legion fortress was used as a ritual complex for the legionary soldiers. Although Grull’s (2006, 185-187) hypothesis seems somewhat circumstantial and debated (Bdolah-Weksler 2019, 44, note 79; Cotton & Eck 2009, 102, note 19), the inscription can still be traced

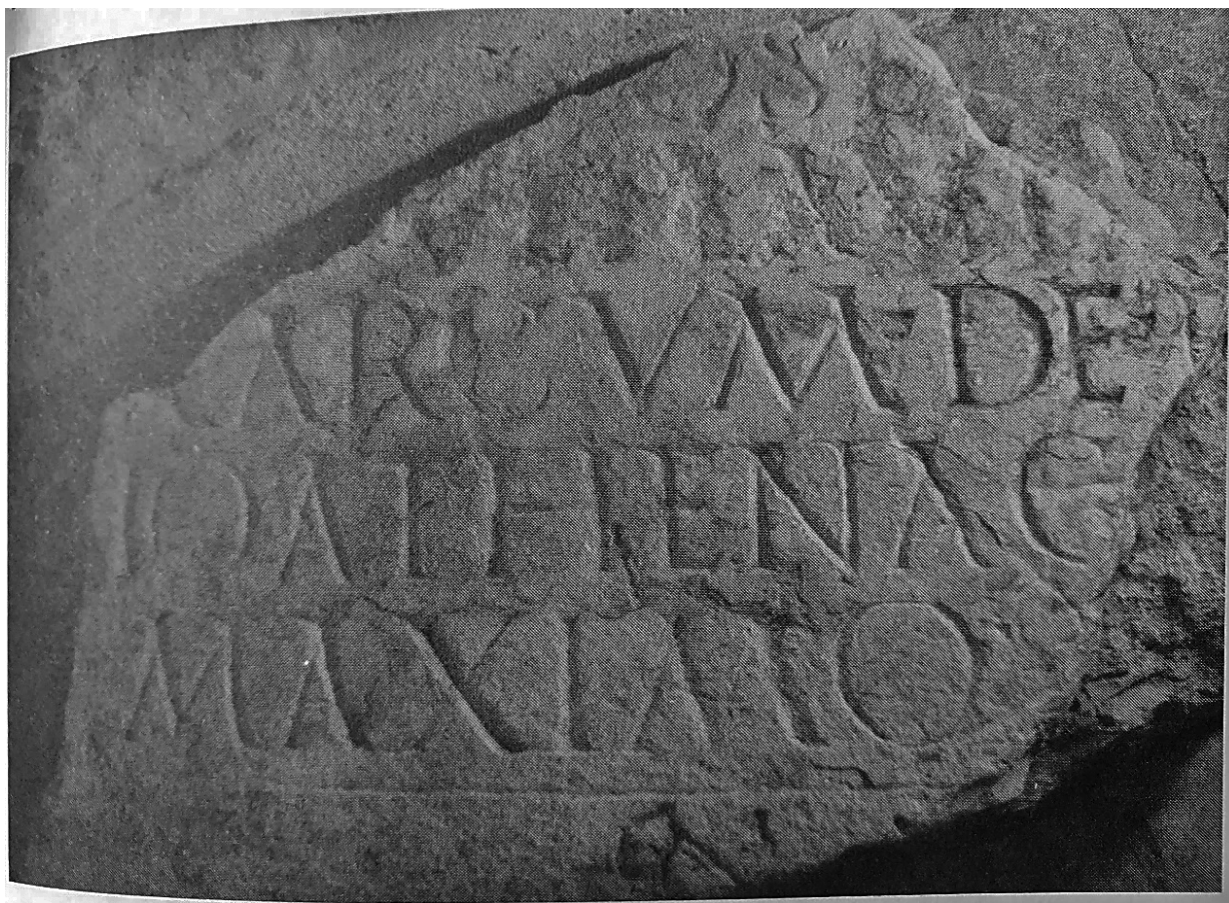


Figure 5. Monumental Roman formal inscription found atop the Temple Mount, today at the Islamic museum, Temple Mount, Jerusalem (after Gröll 2006, 184, fig. 2).

to the Temple Mount and its immediate surroundings, probably from the Roman legion and military government buildings on the temple mount.

A unique marble **eagle's head sculpture** found in 1882 was integrated into the Temple Mount wall in the southeast corner area. Reuven (2007, 94-95) described and identified the statue as 'Eagle', an attribute of Jupiter-Zeus. He further suggested associating it with the presence and worship of Jupiter Capitoline, which some scholars believed (Mazar, E. 2000, 59-60; Bdolah-Weksler 2017, 184-185; 2019, 110-111) took place atop the Temple Mount. However, Abramovich (2012, 325) claimed the eagle is in fact, a raptor vulture that should be identified as 'Aquila' vulture – the symbol of the Roman army and legions. Hence, in his opinion, "...the vulture... is the symbol of the Tenth Legion. (...) It stood in high probability at the fortress' temple, which was probably on the Temple Mount". Although this eagle may indicate a civil cult of Capitoline Jupiter on the Temple Mount, the statuette size (about 70 cm), its visual characteristics, and the area it was discovered can as-well strengthen its

possible identification as an imperial Aquila. In this case, the vulture statue is another indication of Roman military presence near and atop the Temple Mount. Possibly, an attribute of the Roman army or one of its legions, or perhaps in a fortress' *sacellum* (Bdolah-Weksler 2014, 229, note 9).

## Conclusions

Since so far, no comprehensive archaeological excavations have been conducted on the Temple Mount, there are difficulties in finding the exact location of the fortress there. However, the following conclusions can be drawn: Recent excavations around the Temple Mount complex have emphasized its importance in the urban structure of Roman period Jerusalem and provided insights into the nature of the buildings that once stood on the Temple Mount. 60 years before the foundation of *Aelia Capitolina*, the Temple Mount complex was reconnected to the southwestern hill and the rest of the city. Tenth Legion soldiers restored the 'Great Causeway,' aqueducts, set up stone-bearing inscriptions, Flavian dedication columns,

and monuments, and eventually integrated the civil-military administration buildings with the fortress.

The discovery of various archaeological finds such as coins, inscriptions, stamped tiles, and bricks, as well as the so-called 'military buildings', 'waste dump', and restored access facilities around the south and west slopes of the Temple Mount and the important TMPS project, supports the identification of the upper Temple Mount podium as the primary site of the fortress. They also indicate that the legion's buildings and facilities were primarily located in its southern part (below today's Al-Aqsa Mosque).

Shortly after the year 70 AD, a civilian 'satellite village' emerged near the legion fortress along the Tyropoeon valley, at a short distance of 200 m, which corresponds well with the Temple Mount location. It was similar to the *canabae* pattern near other military fortresses throughout the western parts of the Roman Empire. The 'canabae model' can better explain the significance and dual-use nature of the discussed Roman Period civilian-military buildings and the 'large building' at 'pilgrims way'. The semi-civilian *canabae* was part of a Roman military and government complex around the Temple Mount podium, mainly to its south and west. Legionaries maintained close economic relationships with civilians and veterans' families of the *canabae*.

It is unclear when the construction of the destroyed Temple Mount complex was completed. It may seem, they were carried out in earlier stages. The 'Flavian milestone' could indicate this process began between 70 to 79 AD. In this case, Vespasian, who may have ordered the construction of a Roman temple and possibly a triumphal monument on the Temple Mount to commemorate the victory over the Jewish Great Revolt, stationed the legion there to maintain control and display Roman power over the sacred complex. Historical and archaeological evidence suggests that emperor worship occurred on the Temple Mount, most likely during Hadrian's reign.

Establishing a military fortress on the remains of the Jewish Temple in the heart of Jerusalem made sense from a strategic standpoint, as it allowed for maximum control over the leading cause of Jewish unrest and rebellion. Retrospectively, this action accomplished its primary goal by preventing a repeat takeover of the Temple Mount complex when the Second Jewish revolt broke out in 132 AD.

## Acknowledgment

For information, notes, and ideas, as well as for the permission to use them here, it is a pleasant duty to express my gratitude to: Martin Goodman, in a series of meetings during post-doctorate research under his supervision at Oxford University, Clarendon OCHJS Institute 2019-2020; Zeev Safrai, in a series of meetings at his home and Bar-Ilan University; Martin Henig, in a series of interviews

at Oxford University, 2019-2020; Norbert Hanel, in person during a meeting at the 25<sup>th</sup> Limes Congress in Nijmegen 2022; Benjamin Isaac, in meetings at Tel-Aviv University, 2022.

## Bibliography

- Abramovich, A., 2012: A new proposal for the location of the Tenth Legion camp (Legio X Fretensis) in Jerusalem, in: E. Baruch, Y. Levin & A. Levy-Reifer (eds), *New Studies on Jerusalem* 18. *Proceedings of the eighteenth Conference*, Ramat Gan, 317-333 (Hebrew).
- Bahat, D., 2020: *The Temple Mount. The Holy precinct in Jerusalem*, Jerusalem (Hebrew).
- Barkai, G. & Z. Zwiig, 2006: Temple Mount Sifting Project. A preliminary report, in: E. Baruch A.Z. Greenhut & A. Faust (eds), *New Studies on Jerusalem* 11. *Proceedings of the Eleventh Conference*, Ramat Gan, 213-238 (Hebrew).
- Barkai, G. & Z. Zwiig, 2007: News in the Temple Mount Sifting Project. A second preliminary report, in: E. Meiron (ed.), *City of David Studies of Ancient Jerusalem. The 8<sup>th</sup> Conference*, Jerusalem, 28-67 (Hebrew).
- Barkai, G. & Z. Zwiig, 2009: A Roman relief of a centaur from the Temple Mount, in: E. Baruch, A. Levy-Reifer and A. Faust (eds), *New Studies on Jerusalem* 13. *Proceedings of the Fifteenth Conference*, Ramat Gan, 213-219 (Hebrew).
- Barkai, G. & Z. Zwiig, 2012: The Temple Mount Sifting Project. A third preliminary report, in: E. Meiron (ed.), *City of David Studies of Ancient Jerusalem. The 13<sup>th</sup> Conference*, Jerusalem, 48-95 (Hebrew).
- Baruch & Reich 2006: Roman Remains near the Southeastern Corner of the Temple Mount, in: E. Baruch, Z. Greenhut & A. Faust (eds), *New studies on Jerusalem* 11, 247-262 (Hebrew).
- Bdolah-Weksler, S., 2014: The Tenth Legion's camp. Nonetheless on the Southwestern Hill, in: E. Baruch & A. Faust (eds), *New studies on Jerusalem. Collected papers* 20, 219-238 (Hebrew).
- Bdolah-Weksler, S., 2017: Jerusalem in the Roman Period. The camp of the Tenth Legion and Aelia Capitolina, in: A. Faust, E. Baruch & J. Schwartz (eds), *Jerusalem. From its beginning to the Ottoman Conquest*, Ramat-Gan, 159-213 (Hebrew).
- Bdolah-Weksler, S., 2019: *Aelia Capitolina – Jerusalem in the Roman Period. In light of archaeological research*, Leiden/Boston.
- Bdolah-Weksler, S., 2022: Jerusalem. The Western Wall Tunnels, *Hadashot Arkheologiyot* 134 ([https://www.hadashot-esi.org.il/report\\_detail\\_eng.aspx?id=26195&mag\\_id=134](https://www.hadashot-esi.org.il/report_detail_eng.aspx?id=26195&mag_id=134), 25-12-2022).
- Bliss, F.J. & A.C. Dickie, 1898: *Excavations in Jerusalem 1894-1897*, London.

- Bear, D., 1993: The southern border of Aelia Capitolina and the location of the camp of the Tenth Roman Legion, *Cathedra* 69, 37-56 (Hebrew).
- Cotton H.M. & W. Eck, 2009: An imperial arch in the Colonia Aelia Capitolina. A fragment of a Latin Inscription in the Islamic Museum of the Haram ash-Sharif, in: J. Geiger, H. Cotton & G. Stiebel (eds), *Israel's Land. Papers presented to Israel Shatzman on his jubilee*, Jerusalem, 97-118.
- Eck, W. & Y. Tepper, 2019: Latin inscriptions of the Legio VI Ferrata from Legio / Lajjun and its vicinity, *Scripta Classica Israelica* 38, 117-128.
- Elkayam, Y., Z. Amar, G. Barkai & Z. Zwieg, 2016: Semi-precious stones from the Temple Mount Sifting Project and their significance, in: E. Baruch & A. Faust (eds), *New studies on Jerusalem. Proceeding of the 21<sup>st</sup> Conference*, Ramat-Gan, 307-320 (Hebrew).
- Geva, H., 1982: Was there a 'camp' of the Tenth Legion in Jerusalem. An archaeological reconsideration, *Cathedra* 25, 3-28 (Hebrew).
- Geva, H., 1994: The Tenth Roman Legion did camp on the southwest hill, *Cathedra* 73, 181-186 (Hebrew).
- Gichon, M. & B.H Isaac, 1974: A Flavian inscription from Jerusalem, *Israel Exploration Journal* 24/2, 117-123.
- Grull, T., 2006: A fragment of a monumental Roman inscription at the Islamic Museum of the Haram as-Sharif, Jerusalem, *Israel Exploration Journal* 56/2, 183-200.
- Hamilton, R.W., 1949: *The structural history of the Aqsa Mosque. A record of archaeological gleanings from the repairs of 1938-1942*, Jerusalem/London.
- Hanel, N., 2007: Military camps, canabae, and vici. The archaeological evidence, in: P. Erdkamp (ed.), *A companion to the Roman army*, Oxford.
- Isaac, B., 1981: Roman colonies in Judaea. The foundation of Aelia Capitolina, in: A. Oppenheimer, U. Rappaport & M. Stern (eds), *Jerusalem in the Second Temple Period. Abraham Schalit Memorial Volume*, Jerusalem, 340-361 (Hebrew).
- Isaac, B., 1993: *The limits of Empire. The Roman Army in the East*, Oxford (revised edition).
- Isaac, B., 1999: Jerusalem from The Great Revolt to The Reign of Constantine' 70-312 CE, in: Y. Tsafrir & S. Safrai (eds), *The history of Jerusalem. The Roman and Byzantine periods (70-638 CE)*, Jerusalem 1-15 (Hebrew).
- Lander, J., 1984: *Roman stone fortifications. Variation and change from the first century A.D. to the fourth*, Oxford (British Archaeological Reports International Series 206).
- Le Bohec, Y., 1994: *The imperial Roman army*, London.
- Mazar, B., 1975: *The Mountain of The Lord*, Garden City NY.
- Mazar, E., 2000: The Tenth Legion camp at the foot of the southwestern corner of the Temple Mount complex in Jerusalem, in: A. Faust & E. Baruch (eds), *New Studies on Jerusalem 5. Proceedings of the fifth Conference*, Ramat Gan, 52-67 (Hebrew).
- Ortner, R., 2017: *The Roman Empire fighting the Jewish revolts. Strategic and tactical aspects. First to second century CE*, Ramat Gan (PhD thesis Bar-Ilan University).
- Ortner, R., in press: The lost Camp of Legio X Fretensis in Jerusalem. The Temple Mount. A new solution to an old question? (Hebrew).
- Peleg-Barkat, O., 2011: Engraved gemstones from the temple mount excavations, in: E. Mazar (eds), *The Temple Mount excavations in Jerusalem 1968-1978 directed by Benjamin Mazar. Final reports IV. The Tenth Legion in Aelia Capitolina*, Jerusalem (Qedem 52), 273-284.
- Reich, R. & Y. Billig, 2003: Another Flavian inscription near the Temple Mount of Jerusalem, *Atiqot* 44, 243-247 (Hebrew).
- Reuven, P., 2007: An eagle statue with a monogram medallion found on the Temple Mount, in: Y. Patrich & D. Amit (eds), *New studies in the archaeology of Jerusalem and its region 1*, Jerusalem, 94-98 (Hebrew).
- Reuven, P., 2009: A decorated beam from the Roman period located in the Temple Mount Plaza, in: E. Baruch, A. Levi-Reifer & A. Faust (eds), *New Studies on Jerusalem 13. Proceedings of the Fifteenth Conference*, Ramat Gan, 219-230 (Hebrew).
- Safrai, Z., 2017: The Jews of Jerusalem after the destruction of the Second Temple, in: A. Faust, E. Baruch & J. Schwartz (eds), *Jerusalem. From its beginning to the Ottoman Conquest*, Ramat Gan, 213-227 (Hebrew).
- Sion, O., 2011: A pool from the time of Aelia Capitolina in Jewish Quarter of Jerusalem, in: E. Baruch, A. Levy-Reifer & A. Faust (eds), *New Studies on Jerusalem 17*, Ramat Gan, 343-367 (Hebrew).
- Stiebel, G.D., 2000: The whereabouts of the Tenth Legion and the boundaries of Aelia Capitolina, in: A. Faust & E. Baruch (eds), *New Studies on Jerusalem 5. Proceedings of the fifth Conference*, Ramat Gan, 68-103.
- Stiebel, G.D., 2011: Metal finds from the Temple Mount excavations, in: E. Mazar (ed.), *The Temple Mount excavations in Jerusalem 1968-1978 directed by Benjamin Mazar. Final reports IV. The Tenth Legion in Aelia Capitolina*, Jerusalem (Qedem 52), 333-345.
- Szanton, N., T. Liberman & M. Hajgbi, 2018: The waters that flow to the city. A post-First Revolt large building and its Importance for understanding the significance of the Tyropoeon Valley in the development of Aelia Capitolina, in: J. Uziel, Y. Gadot, Y. Zelinger, O. Peleg-Barkat & O. Gutfeld (eds), *New Studies in the Archaeology of Jerusalem and its Region. Collected Papers XII*, Jerusalem, 251-273 (Hebrew).



- Tepper, Y., J. David & M.J. Adams, 2016: The Roman VI<sup>th</sup> Legion Ferrata at Legio (el-Lajjun), Israel. Preliminary report of the 2013 excavation, *Strata* 34, 91-123.
- Tsafrir, Y., 1999: the topography and archaeology of Aelia Capitolina, in: Y. Tsafrir & S. Safrai (eds), *The history of Jerusalem. The Roman and Byzantine periods (70-638 CE)*, Jerusalem, 115-165 (Hebrew).
- Uziel, J., T. Liberman & A. Solomon, 2018: *New stone courses discovered in the Western Wall Tunnels reaching the depths of the Western Wall: Ancient Theater Discovered as Well* ([https://www.antiquities.org.il/Article\\_eng.aspx?sec\\_id=25&subj\\_id=240&id=4315&hist=1](https://www.antiquities.org.il/Article_eng.aspx?sec_id=25&subj_id=240&id=4315&hist=1), 10-01-2023).
- Uziel, J., T. Liberman & A. Solomon, 2019: Jerusalem, the Old City, Wilson's Arch, Preliminary report, *Hadashot Arkheologiyot* 131 ([https://www.hadashot-esi.org.il/report\\_detail\\_eng.aspx?id=25662&mag\\_id=127](https://www.hadashot-esi.org.il/report_detail_eng.aspx?id=25662&mag_id=127), 22-1-2023).
- Wilson, C.S., 1905: The camp of the Tenth Legion at Jerusalem and the City of Aelia, *PEFQSt.* 37, 138-144.
- Zwieg, Z., 2008: New information from various Temple Mount excavations from the last hundred years, in: E. Baruch, A. Levi-Reifer & A. Faust (eds), *New Studies on Jerusalem. Proceedings of the fourteenth Conference*, Ramat Gan, 1-50 (Hebrew).
- Zwieg, Z. & G. Barkai, 2021: Jerusalem. The Temple Mount Sifting Project. Preliminary report, *Hadashot Arkheologiyot* 133 ([https://www.hadashot-esi.org.il/Report\\_Detail\\_Eng.aspx?id=25963](https://www.hadashot-esi.org.il/Report_Detail_Eng.aspx?id=25963), 10-5-2021).



# The fortress of *Vindonissa*

State of research

Jürgen Trumm

## ***Vindonissa* in brief**

Roman *Vindonissa*, today Windisch and Brugg, Kanton Aargau in northern Switzerland, was located in the south of the *provincia Germania superior*. Presumably already during the Gallic Wars 58-51 BC, Rome took military control over an earlier Celtic settlement and its fortification. The site was situated at an important junction of traffic routes by land and by water, where the rivers Aare, Reuss und Limmat come together at the so-called swiss water-castle, between the waterway of the Rhine and the mountain passes over the Alps. Around 17 AD, a first military fort was established, which was gradually expanded into a veritable fortress. It was built on a high plateau, about 30 m above the water-table, overlooking the confluence of the rivers Aare, Limmat and Reuss. The Roman fortress was first garrisoned by *Legio XIII Gemina*, followed by *Legio XXI Rapax* and *Legio XI Claudia Pia Fidelis*, accompanied by various auxiliary troops such as *Cohors III Hispanorum*, *VI Raetorum*, *VII Raetorum* and *XXVI Voluntariorum Civium Romanorum*. The presence of these troops is attested by inscriptions, graffiti and brick stamps. The toponym *Vindonissa* itself is recorded twice by the Roman historian *Tacitus*, as well as on the *Tabula Peutingeriana* and on wooden writing tablets from the so-called Schutthügel known as the famous rubbish-dump. Already abandoned around 101 AD in the course of the Dacian wars of the emperor Traianus, the former *castra* and its *canabae legionis* developed into a modest civilian settlement (*vicus*), which was not fortified again until late antiquity as *castrum Vindonissense*. Despite the existence of a bishop's seat in the early Middle Ages, the once important settlement lost its significance over the centuries. Today, Windisch is located about halfway between the cities of Basel and Zürich, has about 8000 inhabitants.

## **Excavations, publications, presentations**

Systematic archaeological research has been carried out in and around *Vindonissa* since 1897 – initially by the *Gesellschaft Pro Vindonissa*, later on by Kantonsarchäologie Aargau, the Cantonal Department of Archaeology. Today, *Vindonissa* is one of the best-known sites in Roman Switzerland (fig. 1). Currently more than 800 excavations and investigations have been located inside and outside the fortress. The historical record of *Vindonissa* is deposited in the archive at the Departement of Archaeology, currently containing some 55 m of files with more than 1100 excavation reports. Since 1906, the archaeological research has been regularly published in the annual journal *Jahresbericht der Gesellschaft Pro Vindonissa*. Today, this journal is fully accessible

### **Jürgen Trumm**

Kantonsarchäologie  
Aargau, Industriestrasse 3,  
CH – 5200 Brugg (Schweiz),  
juergen.trumm@ag.ch

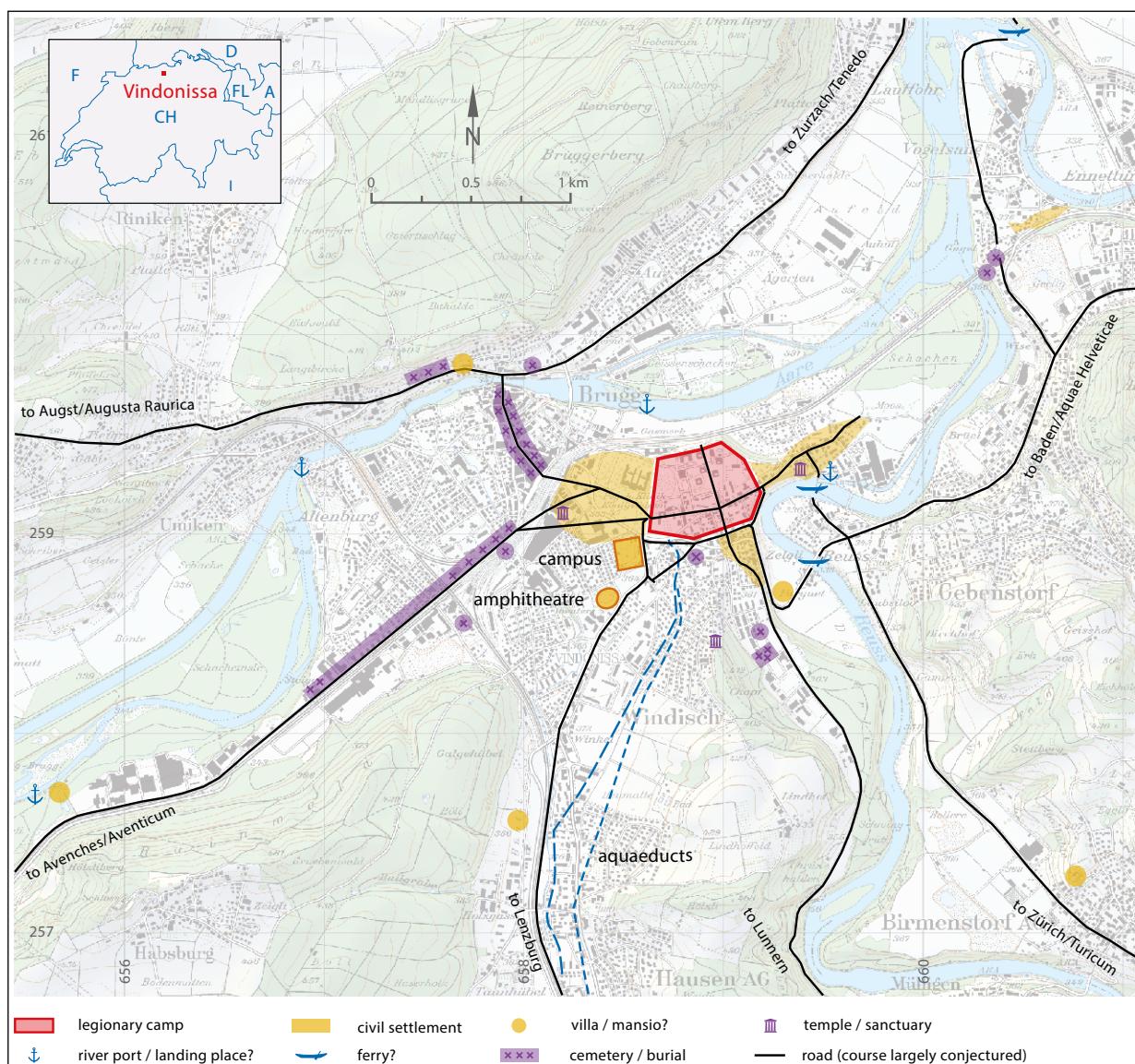


Figure 1. General plan of Vindonissa and its surroundings in the late 1st century AD. State of the research 2022 (© Kantonsarchäologie Aargau).

online.<sup>1</sup> Moreover, 27 monographs are published so far in the series *Veröffentlichungen der Gesellschaft Pro Vindonissa*. Since 2013, these publications are accessible online too.<sup>2</sup> In the course of decades of fieldwork, a huge amount of finds, numbering in the millions, have been recovered. A best-of-selection is on

display in the *Vindonissa-Museum*, opened in 1912 and renovated 2007-2011 (Hintermann 2012). In addition, one can also visit Vindonissa today on the *Legionärspfad*, i.e. the legionary trail, and spend a night in a reconstructed military barracks.<sup>3</sup>

### An updated state of research

Presented at the Congress of Roman Frontier Studies in Bulgaria 2012, the last research overview on Vindonissa was published in 2015 (Trumm 2015a). Following on from this, this paper will summarise some of the most important

1 All relevant scientific journals in Switzerland are available online, mostly with a moving-wall of only one year: <https://www.e-periodica.ch/>.

2 Complete pdf of the monographs are available on the homepage of Kantonsarchäologie Aargau: <https://www.ag.ch/de/verwaltung/bks/kultur/kulturpflege/archaeologie/forschung-publikationen/publikationen>.

3 Information and calendar of events are constantly updated: <https://www.museumaargau.ch/legionaerspfad>.

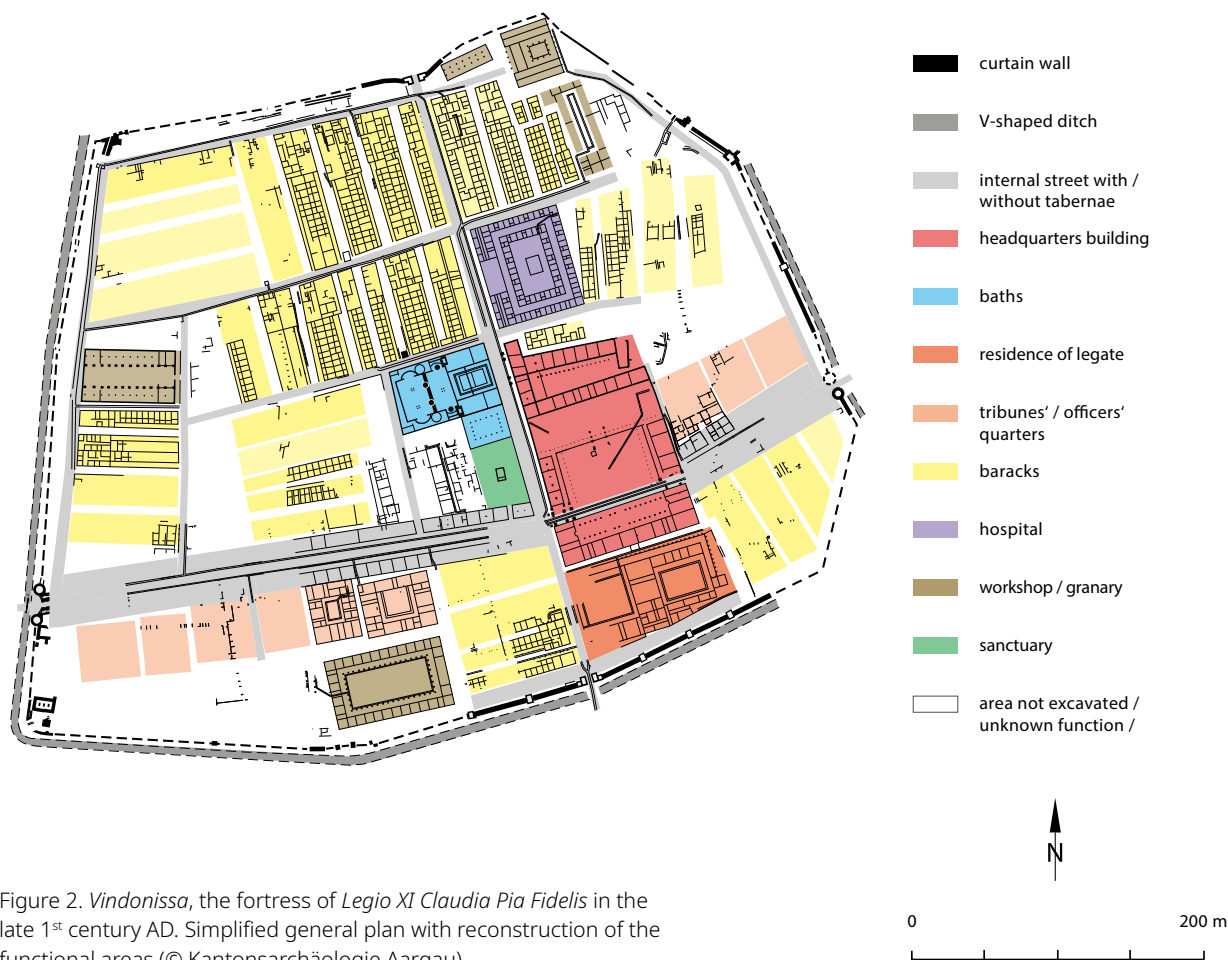


Figure 2. *Vindonissa*, the fortress of *Legio XI Claudia Pia Fidelis* in the late 1<sup>st</sup> century AD. Simplified general plan with reconstruction of the functional areas (© Kantonsarchäologie Aargau).

discoveries of the last decade. In the period 2013-2022, a total of 24 archaeological investigations and monitorings of construction sites have been carried out within the fortress, and 135 in the *canabae legionis* and beyond. Of the latter, almost a third concerned the two Roman water conduits, one of which is still in operation today. Between 2015 and 2022, four virtual reconstructions were developed for the respective historical time windows, i.e. late Celtic period, 1<sup>st</sup> century AD, 2<sup>nd</sup> century AD and late antiquity (Trumm 2016; Trumm *et al.* 2022). Moreover, an updated supplementary ground plan (fig. 2) replaces an older overall plan compiled in 1986, which was still published in 2012 in a popular and useful handbook on fortresses (Bishop 2012, 114).

### The first roman fortress of *Legio XIII*. New findings on its fortification

There was not a Roman military post at the beginning of ancient Windisch, but a fortified Celtic settlement, probably a small-scale *oppidum* of the *Helvetii* tribe (Martin-Kilcher 2015). More data is now available on this complex, as the results of excavations 2002-2004 in

the area of the Celtic fortification have recently been published (Flück 2022). The fortification, probably already named *Vindonissa*, was built shortly before or even during the Gallic Wars of Caius Julius Caesar on top of a natural spur, overlooking the rivers Aare and Reuss. It covered an inner area of only 5 ha, protected by a V-shaped ditch, roughly 20 m wide and 7 m deep and a 12 m wide rampart.

*Extra muros*, there was a cemetery and most probably a sanctuary. Under Emperor Augustus, probably in the final decade BC, a roman military post or stronghold was placed in the former Helvetic *oppidum*. At the same time, a civil settlement developed to the west of the military post, with clear evidence of a highly romanized population (Hagendorn *et al.* 2003). The aforementioned publication shows that the former Celtic fortification and the following Roman military post was systematically abandoned not earlier than between 14 and 20 AD (Flück 2022). In other words, it was not until the early years of emperor Tiberius that a fortress was built by *Legio XIII Gemina* or at least by a *vexillatio* of the former. This also means that *Vindonissa* was neither the direct predecessor, nor





Figure 3. *Vindonissa*, excavation 2019: The negatives of the V-shaped ditch and the postholes of the north gate of the first timber fortress, seen from the east. The photo is overlaid with a virtual reconstruction of the defence system (© Kantonsarchäologie Aargau).

the direct successor of a vexillation fortress of *Legio XIX* at Dangstetten, founded some 15 km to the northeast of *Vindonissa* in connection with the Alpine campaigns of Drusus and Tiberius 15 BC.

The first defence system of *Legio XIII Gemina*, covering a perimeter of probably under 16 ha, was smaller than the subsequent fortresses of *Legio XXI Rapax* and *Legio XI Claudia Pia Fidelis*, which finally occupied an area of about 20 ha. Throughout its existence during the 1<sup>st</sup> century AD, the fortress had an irregular polygon outline, probably due to the desire to control the important west-east road across the glacial terrace. This road, originally from Celtic times and being part of a supra-regional connection from river Rhine to the Alpine passes, was then incorporated into the *via principalis*. Curiously, the northern front of the first fortress did not follow the natural edge of the terrain. Instead, its northern defence ran about 100 m, or 3 Roman *actus*, south of the steep terrace edge down to the river Aare.

Until recently, only small sections of the V-shaped ditch of this first legionary or vexillation fortress were known. Gates, intermediate towers and the construction of the wall itself had not been proven at all. Thus, an excavation in 2019 provided important new evidence, although this investigation took place in an area that had apparently already been completely excavated in 1937/1938. The early V-shaped ditch was accompanied by two rows of mighty post negatives. These belong to a rampart 8 Roman feet wide. Fortunately, we were able to uncover remains of a timber gate of the oldest fortress for the first time. Massive postholes indicated the location of the eastern part of the Roman gateway which presented a typical ground plan with recessed gate and six-post flanking towers. As only the eastern part of the gate was in the excavation pit, the width of the original passage remains unknown at present (Trumm 2020, 96-99). Thanks to this discovery, we have obtained for the first time definite indices for the internal organisation of the first fortress (fig.3).





Figure 4. Virtual reconstruction of Roman *Vindonissa* with *castra* and *canabae legionis* in the late 1<sup>st</sup> century AD, viewed from the south (© Kantonsarchäologie Aargau & Ikonaut GmbH, Brugg).

### The fortress of *Legio XI*. Location of the eastern gateway of the stone wall

Moving forward in time, the fortress of *Legio XI Claudia Pia Fidelis*, which came from *Burnum* (Dalmatia) to *Vindonissa* around 71/72 AD and replaced *Legio XXI Rapax*, is quite well known. It was not until the reign of emperor Vespasian that the wooden defences of the fortress were rebuilt in stone. By archaeological means, i.e. stratified small finds, we can date the construction of the defensive curtain wall of the stone fortress to Flavian times (Trumm 2022b). Moreover, it seems to be possible that an inscription, over 9 m wide, of emperors Vespasian and Titus, which is only attested by two fragments (CIL XIII.5199 = 11519) found in the Middle Ages, refers to the large-scale expansion of the fortress in 72/73 AD. A new virtual reconstruction shows the fortress and its surroundings in the late 1<sup>st</sup> century AD, as seen from the south (fig. 4).

Until a few years ago, the location of the east gate, the *porta principalis sinistra*, was largely certain, but no excavation has yet been carried out at this site to prove its existence. This was mainly because a busy road of modern Windisch overlapped the presumed location of the missing gate. It took until autumn 2014 to get to the crucial spot for the first time, where we carried out a small-scale investigation in a neighbouring plot of land. Despite the limited survey area, traces of the southern tower of the eastern gate came to light (Trumm 2015b, 72-75). The remains of its robbed foundations showed that the tower had once a polygonal ground plan. According to this, the Roman gateway at the eastern entrance of the *via principalis* probably had the same appearance as the

west gate, the *porta principalis dextra*, which was already discovered and uncovered over a large area in 1919. In contrast, the north gate, the *porta decumana*, and the south gate, the *porta praetoria*, had a ground plan with L-shaped flanking towers, while the upper storeys of the towers were built entirely of wood. Thus, a similar phenomenon can apparently be observed in *Vindonissa* as in *Novaesium* (Neuss): stone gates at fortresses with different ground plans in the late 1<sup>st</sup> century AD.

### New insights outside the fortress. The *canabae*, a possible circus and a river embankment

As mentioned above, the focus of fieldwork 2013-2022 was on the areas outside the *castra legionis*. Large-scale rescue excavations were carried out in particular in the western and southern *canabae legionis*. In the eastern civilian settlement, on the other hand, no recent investigations took place during the period in question. Instead, new findings came to light about the well-known rubbish-dump just outside the north gate of the fortress (Trumm 2018; Sichert *et al.* 2021). A detailed study which deals with a section of the western civilian settlement was published by Flück (2017), preliminary reports concerning rescue-excavations were written by Flück (2014), Lawrence (2018a) and Streit (2022). Another monograph dealt with stamps on Roman *mortaria* founded inside and outside the fortress (Pfahl 2020). Thanks to these excavations and publications, important foundations have been laid to better recognize differences and dependencies of soldiers and civilians *intra* and *extra muros* of a Roman legionary garrison. This topic also includes the religious context,

which has been illuminated by Lawrence (2018b) in a comprehensive study based on archaeological and inscriptional sources of official and private religious life at *Vindonissa*. A pit with mysterious contents recovered in 2016 in the southern civil settlement most probably belongs to the latter private sacred sphere: The pit yielded 22 complete oil lamps, 21 bronze coins struck under Nero, and fire debris with burnt bones from 22 thighs of sheep or goats. This complex bears no parallels thus far, and enhances our idea of *Vindonissa*'s sacral topography by an extraordinary component (Trumm *et al.* 2019).

In addition to the usual residential and commercial buildings of the *canabae legionis*, two other large buildings were located to the southwest in front of the fortress, an amphitheatre and a possible *campus* (Trumm 2014a). Just a little further to the south-east, on the occasion of a rescue excavation in autumn 2013, a semicircular basin with a radius of some eight Roman feet was discovered. The internal walls and the bottom of the basin were covered with waterproof mortar, *opus signinum*. As yet there are only sparse indications of further Roman buildings in the immediate vicinity (Trumm 2014b). One possible interpretation seems a little far-fetched at first. Similar basins come from Roman *circuses*, where they were built at the *meta*, the turning point at the end of the *euripus* or *spina*, i.e. the dividing barrier of the *circus*. The basin at *Vindonissa* has similar dimensions as a comparable structure of the Roman circus at *Camulodunum* (Colchester), discovered in 2004. Certainly, given the current state of knowledge, it is unlikely that a circus was actually part of a modest Roman settlement that was legally speaking not a veritable city, i.e. a *colonia* or a *municipium*. Nevertheless, the possibility that the water basin could have belonged to a very simply designed *circus* should be taken into consideration, as now been realized in the virtual reconstruction (fig. 4).

On the same illustration, however, a Roman river harbour is missing. Despite more than 125 years of archaeological research, no such installation has yet been proven beyond doubt. On the other hand, there is no question that *Vindonissa* was largely supplied with food, grain, livestock and wood by waterway, i.e. on the rivers Aare, Reuss and Limmat. A recent reconsideration of older excavations to the east of the fortress yielded some new results. North of the river Reuss, rescue excavations between 1996 and 2007 uncovered a massive wooden structure over a length of more than 260 m, built in the second half of the 1<sup>st</sup> century AD. However, micromorphological analyses and hydrographical considerations led to the conclusion that this linear structure could be rather interpreted as a Roman river embankment, protecting the adjacent, higher ground with its civil settlement from periodical flooding (Trumm in press).

### ***Extra leugam*. A settlement, a brickyard, and practice camps**

In recent years, there has been increasing evidence for a bipolare settlement pattern around the legionary garrisons along the Rhine and the Danube. In fact, around the majority of legionary garrisons of the imperial period, two separate civil settlements, the *canabae legionis intra leugam* and a *vicus extra leugam* could be observed. In the course of the 2<sup>nd</sup> and early 3<sup>rd</sup> centuries, the latter often developed into a larger settlement, which was even able to obtain the legal status of a *municipium* or even a *colonia*. In the case of *Vindonissa*, the situation looked different, as Flück (2017, 469-474) pointed out. However, recent discoveries at a site some 2,2 km northeast of the legionary fortress, a site that had been known to researchers for some time, have revived the discussion. In that area immediately south of the river Limmat, massive Roman building structures were detected, including a large masonry cellar and foundations with buttresses. The finds consisted mainly of amphorae dating to the 1<sup>st</sup> century AD and of South Gaulish samian ware. Future archaeological investigations will hopefully reveal whether this is indeed the beginnings of a settlement *extra leugam* that was abandoned altogether after the withdrawal of *Legio XI* around 101 AD (Trumm 2022a, 79-81).

Whether a settlement *extra leugam* existed or not – the fortress and the surrounding settlement *intra leugam* had to be supplied with food and consumer goods during the 1<sup>st</sup> century AD. A large proportion of them must have been imported by waterway, primarily samian ware, brick and tile, but also grain, livestock and wood, supplying about 10,000 soldiers and civilians in all. The supplies were drawn mainly from the southwest, south and southeast, where the rivers Aare, Reuss and Limmat opened up the production areas. As a recent study pointed out, the demand for grain at *Vindonissa* could only be met from the immediate vicinity of the fortress towards the later 1<sup>st</sup> century AD. In the decades before, larger rural areas in the western part of the *civitas Helvetiorum* had to be included to supply the garrison (Schucany 2021).

On the other hand, it was most likely the army itself that operated a large brickyard 14 km upstream the fortress. A recently published study, based on large-scale excavations in 2002 and 2005, provides an in-depth insight into the functioning and organisation of this pre-industrial workplace, where also pottery and typical legionary ware were produced until the beginning of the 2<sup>nd</sup> century AD (Jeanloz 2022).

The last comments are about the newly discovered practice camps at Würenlingen/Döttingen, some 7.5 km north of *Vindonissa*. First detected by LiDAR and subsequently prospected with metal detectors, several earthworks with playing-card shape and *claviculae* can thus be interpreted as Roman practice camps (fig. 5). In analogy to the extensive



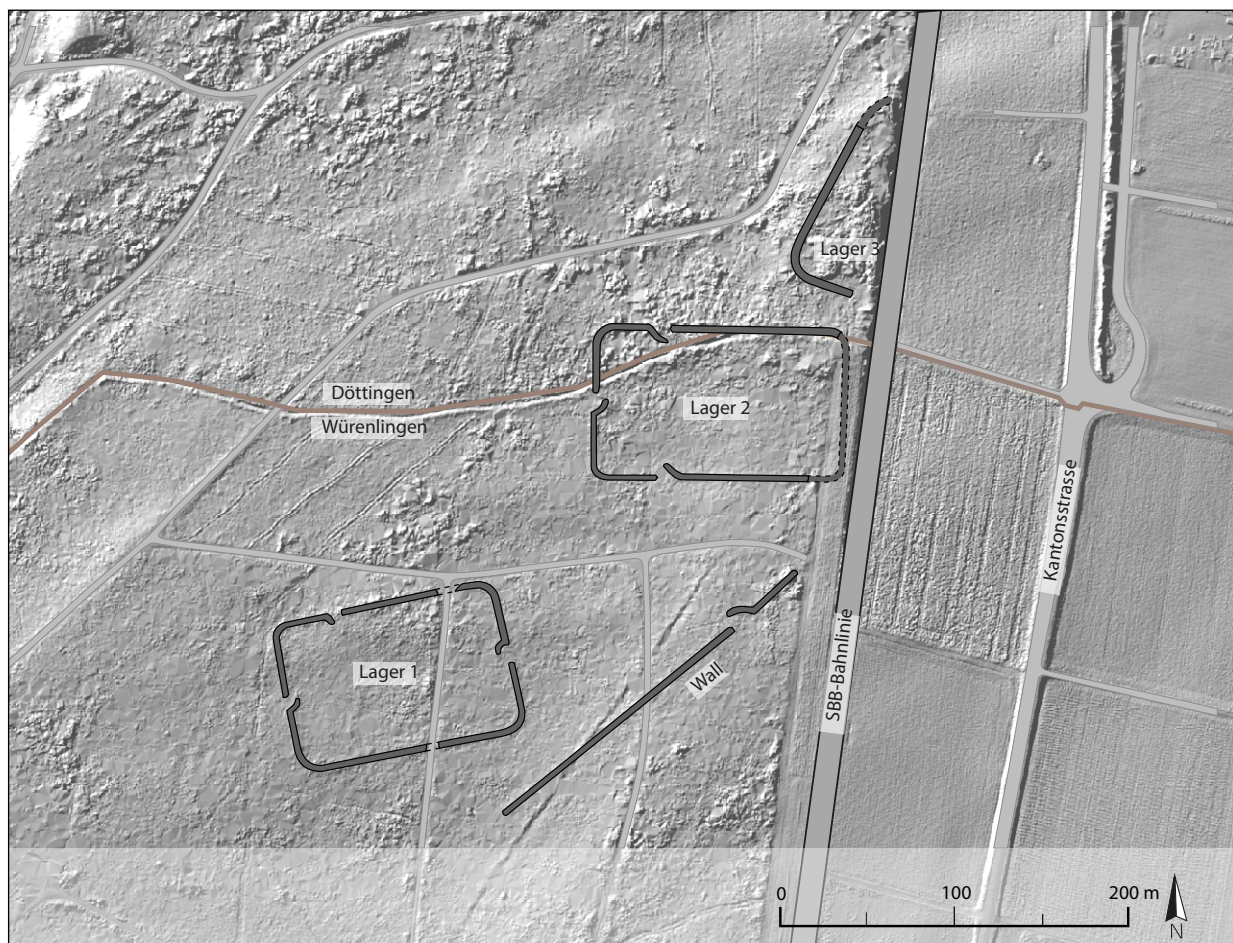


Figure 5. Thanks to LiDAR, three Roman practice camps with *clavicula* and a accompanying linear structure were recently discovered in the woodlands some 7.5 km north of *Vindonissa* (© Kantonsarchäologie Aargau).

military training grounds discovered in the vicinity of the fortresses of *Argentorate* (Strasbourg, F), *Bonna* (Bonn, D) and *Vetera* (Xanten, D), such installations could also to be expected in the surroundings of *Vindonissa* (Koch *et al.* 2022).

## Conclusion

In Roman *Vindonissa* (today: Windisch and Brugg, Canton of Aargau, Switzerland), extensive archaeological excavations have taken place every year for the last decade. Since the latest research overview, presented 2012 and published in 2015, our knowledge about the only fortress in Roman Switzerland has further increased. This paper shortly summarises some important new findings from 2013-2022, as well as the results of various publications in the same period. The focus is on the *castra legionis* of *Legio XIII Gemina*, *Legio XXI Rapax* and *Legio XI Claudia Pia Fidelis*, including the surrounding settlement of the *canabae legionis* during the 1<sup>st</sup> century AD. Additional remarks on find-spots *extra leugam*, on a Roman brickyard as well as on recently discovered practice camps round off this contribution.

## Acknowledgement

I would like to thank Gary White (Erfstadt D) for putting my English manuscript into a grammatically correct form.

## Abbreviation

CIL: *Corpus Inscriptionum Latinarum*

## Bibliography

- Bishop, M.C., 2012: *Handbook to Roman legionary fortresses*, Barnsley.
- Flück, H., 2017: *Vor den Toren von Vindonissa. Wohnen und Arbeiten in einem Handwerkerquartier in den canabae des Legionslagers (Windisch Zivilsiedlung West 2006-2008)*, Brugg (Veröffentlichungen der Gesellschaft Pro Vindonissa XXIII).
- Flück, M., 2014: Vindonissa – extra muros. Vorbericht zur Ausgrabung Windisch-Areal Linde 2013 (V.013.2), *Jahresbericht der Gesellschaft Pro Vindonissa* 2013, 65-91.

- Flück, H., 2017: *Vor den Toren von Vindonissa. Wohnen und Arbeiten in einem Handwerksquartier in den canabae des Legionslagers (Windisch Zivilsiedlung West 2006-2008)*, Brugg (Veröffentlichungen der Gesellschaft Pro Vindonissa XXIII).
- Flück, M., 2022: *Zu Gast bei Offizieren in Vindonissa. Von der spätlatènezeitlichen Befestigung zur Grossküche eines Offiziersgebäudes. Auswertung der Ausgrabung Windisch-Römerblick 2002-2004*, Brugg (Veröffentlichungen der Gesellschaft Pro Vindonissa XXVI).
- Hagendorn, A., H.W. Doppler, A. Huber, H. Hüster Plogmann, S. Jacomet, Ch. Meyer-Freuler, B. Pfäffli & J. Schibler, 2003: *Zur Frühzeit von Vindonissa. Auswertung der Holzbauten der Grabung Windisch-Breite 1996-1998*, Brugg (Veröffentlichungen der Gesellschaft Pro Vindonissa XVIII).
- Hintermann, D., 2012 (ed.): *Vindonissa-Museum Brugg. Ein Ausstellungsführer*, Brugg.
- Jeanloz, S., 2022: *Ziegel für Vindonissa. Die römischen Legionsziegeleien von Hunzenschwil-Rupperswil*, Brugg (Veröffentlichungen der Gesellschaft Pro Vindonissa XXVII).
- Koch, P., S. Straumann, J. Trumm & T. Doppler, 2022, Die neu entdeckten Übungslager bei Würenlingen/Döttingen und das römische Legionslager von Vindonissa, *Jahresbericht der Gesellschaft Pro Vindonissa* 2021, 41-60.
- Lawrence, A., 2018a: Vor der Nordwestfront des Legionslagers Vindonissa. Vorbericht zur Ausgrabung Windisch-Königsfelden 2016 (V.016.1), *Jahresbericht der Gesellschaft Pro Vindonissa* 2017, 3-17.
- Lawrence, A., 2018b: *Religion in Vindonissa. Kultorte und Kulte im und um das Legionslager*, Brugg (Veröffentlichungen der Gesellschaft Pro Vindonissa XXIV).
- Martin-Kilcher, St., 2015: Archäologische Spuren der römischen Okkupation zwischen Alpen und Hochrhein und die städtische Besiedlung der civitas Helvetiorum im 1. Jh. v. Chr., in: G.A. Lehmann & R. Wiegels (eds), *„Über die Alpen und über den Rhein...“. Beiträge zu den Anfängen und zum Verlauf der römischen Expansion nach Mitteleuropa*, Berlin/Boston (Abhandlungen der Akademie der Wissenschaften Göttingen N.F. 37), 235-281.
- Pfahl, St., 2020: *Mortariastempel von Vindonissa*, Brugg (Veröffentlichungen der Gesellschaft Pro Vindonissa XXV).
- Schucany, C., 2021: Das ländliche Umfeld von Vindonissa im 1. Jh. n. Chr. und seine Ressourcen, *Jahresbericht der Gesellschaft Pro Vindonissa* 2020, 25-30.
- Sichert, B.M., J. Trumm, R. Fellmann Brogli & S. Deschler-Erb, 2021: Vergessene Akten, verschollene Knochen und ein Berg aus Müll, *Jahresbericht der Gesellschaft Pro Vindonissa* 2020, 3-23.
- Streit, S., 2022: Leben und Sterben südwestlich vor dem Legionslager Vindonissa. Vorbericht zur Grabung Windisch-Zürcherstrasse 2020-2021 (V.020.4), *Jahresbericht der Gesellschaft Pro Vindonissa* 2021, 3-30.
- Trumm, J., 2014a: Rätsel um ein Rechteck. Anmerkungen zum sogenannten forum von Vindonissa, *Jahresbericht der Gesellschaft Pro Vindonissa* 2013, 49-63.
- Trumm, J., 2014b: Ausgrabungen in Vindonissa im Jahr 2013, *Jahresbericht der Gesellschaft Pro Vindonissa* 2013, 93-108.
- Trumm, J., 2015a: Vindonissa. Stand der Erforschung, in: L. Vagalinski & N. Sharankov (eds), *LIMES XXII. Proceedings of the 22<sup>nd</sup> International Congress of Roman Frontier Studies, Ruse, Bulgaria, September 2012*, Sofia (Izvestiâ na Arheologičeskîâ Institut 42 / Bulletin of the National Archaeological Institute 42), 93-102.
- Trumm, J., 2015b: Ausgrabungen in Vindonissa im Jahr 2014, *Jahresbericht der Gesellschaft Pro Vindonissa* 2014, 69-85.
- Trumm, J., 2016: Vindonissa aus der Vogelschau. Neue und alte Blicke auf das römische Windisch, *Jahresbericht der Gesellschaft Pro Vindonissa* 2015, 3-14.
- Trumm, J., 2018: Littering und Legionäre. Der Schutthügel von Vindonissa, in: C.S. Sommer & S. Matešić (eds), *LIMES XXIII. Proceedings of the 23<sup>rd</sup> International Congress of Roman Frontier Studies Ingolstadt 2015 / Akten des 23. Internationalen Limeskongresses in Ingolstadt 2015*, Mainz (Beiträge zum Welterbe Limes Sonderband 4), 239-248.
- Trumm, J., 2020: Ausgrabungen in Vindonissa im Jahr 2019, *Jahresbericht der Gesellschaft Pro Vindonissa* 2019, 89-112.
- Trumm, J., 2022a: Ausgrabungen in Vindonissa im Jahr 2021, *Jahresbericht der Gesellschaft Pro Vindonissa* 2021, 67-87.
- Trumm, J., 2022b: Die Umwehrung des römischen Legionslagers Vindonissa, in: M. Flück (ed.), *Murs d'enceinte du Haut-Empire dans leur context urbanistique*, Lausanne (Cahiers d'archéologie romande 189 / Avenicum XXIV), 149-172.
- Trumm, J., in press: Vindonissa. A Roman river port near the legionary fortress?, in: *Entre Mares. Proceedings of the International Congress of Roman Ports, Irun 2021*.

- Trumm, J., S. Deschler-Erb, R. Fellmann Brogli,  
A. Lawrence & M. Nick, 2019: Nachts vor dem  
Lager? Ein aussergewöhnlicher Depotfund aus  
Vindonissa (Kt. Aargau/CH), *Archäologisches  
Korrespondenzblatt* 49, 215-244.
- Trumm, J., M. Flück & P.-A. Schwarz, 2022: *Vindonissa  
in 40 Blickpunkten. Ein Geländeführer*, Brugg.





# Valkenburg ZH

An unexpected fortress near the mouth of  
the river Rhine (The Netherlands)

Wouter K. Vos, Edwin Blom and Jasper de Bruin

In 2020-2021, a huge Roman structure was found relatively unexpectedly in Valkenburg, province of South-Holland in the Netherlands (Vos *et al.* 2021). Given its dimensions of about 20 ha, it could house a large unit, most likely a Roman legion. This fortress was found on the location of a former Naval Airfield, that was closed 15 years ago and will be developed for housing. The open nature of the former airfield provided ample opportunities for excavations, but unfortunately much had also been disturbed by the airstrips, cables, pipes, and so on through the former airport facilities, plus the removal of unexploded remains from Second World War had caused much disturbance to the archaeological layers and soil. Moreover, the time of year for excavation was not the best, and because of the extremely wet season and the height of groundwater table, the trenches often looked more like open-air swimming pools than archaeological excavations. This made the work considerably more difficult, especially in terms of interpreting the fortress' interior.

Nevertheless, we can present here the outline of this Roman fortification and its significance for the history of Roman Valkenburg and also for the Early Roman period in the Netherlands and the Rhine delta. The main question of this paper is if the construction of this fortress is somehow connected to the 43 AD conquest of *Britannia*, hypothesising that the Rhine estuary also served as a springboard for this military campaign, in addition to the classic starting point of Boulogne-Sur-Mer in Northern France to invade the British island.

This paper is structured as follows: first, we briefly provide the context regarding Roman Valkenburg and the Lower German Limes. Secondly, the traces of the Valkenburg fortress are presented, and finally, the focus will be on the significance of this military base, and the role it may have played in Early Roman history at the time of the emperors Caligula and Claudius.

## Context

For decades, Valkenburg has been renowned for its Roman archaeology, thanks to an auxiliary fort that was excavated by A.E. van Giffen during and just after the Second World War (Van Giffen 1948; 1955). The Valkenburg fort was made famous by the fantastic remains of timber and stone structures, which were preserved in the 'wetlands' of the western Netherlands. Plenty of archaeological research has taken place in the vicinity of this fort over the last few decades. In short, around Second World War, the auxiliary fort was excavated, and later in the 1970's, 1980's and 1990's, parts of an extramural settlement

### Wouter K. Vos

Vos Archeo, Van Ewijkweg 41,  
6861 ZC Oosterbeek (the  
Netherlands),  
info@vosarcheo.nl

### Edwin Blom

Archeologisch Adviesbureau  
de Tijd  
Celebesstraat 53, 1521  
BS, Wormerveer (The  
Netherlands), edwinblom@  
aa-detijd.nl

### Jasper de Bruin

National Museum of  
Antiquities, Rapenburg 28,  
2311 EW Leiden (the  
Netherlands),  
j.debruin@rmo.nl



Figure 1. Plan of the Roman structures and the position of the fortress: 1. Auxiliary fort; 2. Veldzicht; 3. Marktveld/Weerdkampen; 4. Woerd; 5. Naval airfield; a. Buildings of the extra-mural settlement; b. Roads; c. Fortress; d. Rhine and gullies; e. Excavations.

were discovered with mixed structures of civilian, military, and rural nature, along the Roman road. The investigated areas (fig. 1) have toponyms like Veldzicht (Vos & Lanzing 2000), Marktveld (Van Dierendonck *et al.* 1993), Woerd (Vos & Van der Linden 2011), and Weerdkampen (Loopik & Vos 2021), and they all lie to the south of the fort site, near the modern village of Valkenburg. Not all the data from these explorations have, though, been scrutinised to the last sherd or soil discolouration, and in some cases work has largely stalled.

Zooming out to the Netherlands and considering the Roman frontier (limes) along the Rhine, about 15 to 20 possible auxiliary forts can be identified there, and one fortress at Nijmegen. In the past twenty years, quite a bit of archaeological research has taken place on the Roman military structures, providing new insights (Hessing *et al.* 2021). While it was previously thought that the forts were founded around 47 AD, when Claudius ordered Corbulo to retreat behind the Rhine (Tacitus *Annales* 11.19), we now think many were built in the early 40's AD. Dendrochronology and the combined dating of Samian pottery and coins

support this hypothesis (Kemmers 2004). This raises the question of what these forts were founded for, and at what historical moment.

The ancient writers Suetonius (*De vita Caesarum*, *Caligula* 46) and Cassius Dio (*Historia Romana* 59.25) inform us about this episode, although they influence us on our historical and archaeological interpretations as well. Nevertheless, they wrote about Caligula's intended expeditions into Germania and Britannia, and about the huge concentrations of troops the emperor brings to the 'Oceanus', apparently to invade Britain. It is generally assumed that these actions took place in Boulogne-Sur-Mer, and near Mainz where Caligula establishes two new legions, the Fifteenth and the Twenty-second according also to epigraphic evidence (Barrett 1991, 126; Campbell 2013, 49-50). But there are indications – like coins of Caligula without Claudian countermark plus two staves of wine barrels bearing the emperor's official name – that some of these events may have taken place in the Netherlands (Wynia 1999). This led in the 1990's to the idea that the famous shell-collecting story by Caligula's troops the ancient writers speak of, perhaps took place on the Dutch



Figure 2. Discovering timber foundations of the turf rampart and tower posts in the centre of the figure. On the right above, the V-shaped ditch is visible in the profile section.



Figure 3. View of the wooden gate seen from the outside of the fortress, with the site of the auxiliary fort below the church of the village of Valkenburg in the background.

North Sea coast. The building in the early 40's of several auxiliary forts might be seen as the spinoff of this event, e.g. many Dutch archaeologists believe that the forts represent an early Roman route along the Rhine, and associate this route with the conquest of *Britannia* in 43 AD. But this theory has never really been worked out nor explained how the role of the Rhine estuary must be interpreted.

### The fortress

The newly discovered fortress fits this above written context well. It has an dendrochronological dating, which matches beautifully with what the ancient sources wrote about; autumn 39 – winter 40 (Blom *et al.* 2024). The fortress is located on the western side of the already known Roman habitation of Valkenburg. During the



excavation, the traces of the west side of this fortress were found, consisting of a substantial V-shaped ditch and a foundation of horizontally laid wooden beams on top of which a rampart of turf had been built (fig. 2). This rampart (width c. 3.5 m) was sampled and is being investigated as part of the Earthen Empire project by T. Romankiewicz, B. Russell and colleagues, to find out how it was built and what it can tell us about the landscape and its surroundings. Furthermore, the excavators found posts of several towers (c. 3.5 × 3.5 m), the front ones of which were all placed inside this turf rampart. The rear posts of the towers, on the other hand, were situated outside the rampart, but inside the fortress on the *intervallum*. The overall construction is very similar to the first phase of the Valkenburg auxiliary fort. Next to the interval towers and a corner tower, a huge gate was excavated with a preserved front of 24 m (fig. 3). Almost all the uprights of towers and gate (ash or alder) were founded on horizontal wooden planks or beams (mostly oak) and a double gateway has been proved.

Thus, the main finding of the 2020-2021 survey was the reconstruction of the entire west side of the fortress. What was not known by then were the dimensions of the military site. It appeared that we had to look at an excavation from the 1980's, at Marktveld, specifically at the excavated Roman road. Several phases of this road had been found there on top of each other, the most obvious one was Hadrianic, made of oak and dating from 124-125 AD. The dating of its predecessor was not quite clear and at the deepest excavation level this 'oldest road' had been made up by planks or horizontal beams like a trackway as known from bogs or swampy areas. However, on closer inspection, knowing the rampart construction on the west side, that supposed trackway appeared to be the original foundation of the eastern rampart. Finally, the overall outline could be drawn and yielded 440 by 440 m; a good 19 ha of surface. The fortress lay with its front orientated towards the Rhine and the excavated gate on the western part could be interpreted as the *porta decumana*.

More pieces of the puzzle fall into place, e.g. during those 1980's excavations on Marktveld two granaries were also found measuring 30 by 9 m. Such storage buildings were usually placed securely within a defended perimeter, but the Marktveld granaries seemingly lay unprotected outside any known military installation. In addition, the large capacity for about 1000 men per year, was always misunderstood. However, now it suddenly became clear because these *horrea* lie perfectly within the fortress. Something similar applied to traces of possible barrack buildings that were found at the lowest excavation levels of Marktveld.

Unfortunately, less has been preserved from the interior at the former Naval Airfield. There are many ditches

and rows of piles, and they are certainly the remains of buildings. But a crystal-clear map with a standard layout with *principia*, *praetorium*, *valetudinarium*, and so on, cannot be given now. The traces were poorly preserved due to aircraft landing strips, roads, many drains, post-Roman ditches and covered with a partly erosive layer of clay and other sediment.

The poor visibility of the interior may also be related to the relative short duration of the encampment's use. It is not known exactly how long the fortress was in use (see further below), but there is only one building phase and no repairs were observed. The idea is that Romans demolished their fortress themselves (fig. 4). The rear posts of the towers and the gate on the inside of the fortress had all been pulled out, and the front posts excavated during the archaeological survey had all been buried in the rampart and broken off or sawed off at the top of that rampart. The turf rampart was partly pushed into the ditch.

There is still dispute over the interpretation and reconstruction of the interior buildings. The eastern half of the fortress, excavated in the 1980's, gave more clues, but that section still needs further analysis in the next years. Furthermore, the position of the presumed *praetorium* is remarkably empty, but perhaps we should think of an unfinished fort, similar to parts of Inchtuthil (Pitts & St. Joseph 1985). Finally, traces of the headquarters remain unknown, mainly because the site of the presumed position of the building has not yet been excavated.

## Caligula's masterplan

The features of the fortress appeal to the imagination, not only because of the preserved wood of the defences, but also because of its dating in 39/40 AD. It is tempting to link the construction of the fortress to the conquest of *Britannia* in 43. However, there are still some years to go between 39/40 and 43 AD, and the question is if they are really related. In order to get an answer, we have to assess the sources and filter out the right information to understand the Roman mind, and by linking these sources and formulating hypotheses, it is conceivable to keep in mind three words as a theoretical framework which are in our opinion: preparation for war.

With that in mind, the following may be conceptualized as a 'grand hypothesis' around these research questions: what happened in the 40's in the Dutch Rhine delta; Is it possible to recognize a kind of Roman masterplan in retrospect; and what was the role of the Valkenburg fortress within that? These questions will be answered in the research project 'Romans on the Rhine estuary' honored by the Dutch Research Council that will be carried out in 2022-2024 by the authors. Parts of the possible results that could come out of this research are argued in this paper as a preliminary plausible scenario.



Figure 4. Cross-section through a half-tower with the pit of the pulled-out post on the left and the beginning of the V-shaped ditch on the right.

Caligula might have had serious plans to expand the Empire and perhaps his idea was to conquer *Germania* and *Britannia*, as stated by the ancient writers. Behind this could be the ambitious task as an heir of Julius Caesar to fulfil this ‘family vow’. The second reason might have been that he was the son of the highly respected Germanicus, and that he wanted to surpass his father. Thirdly, why Caligula wanted to *Britannia* may be that he was responding to the internal unrest that had arisen on the island. One of the sons of the king Cunobelinus, named Adminius, had been sent away by his father and had surrendered to Caligula

(Suetonius *De vita Caesarum*, *Caligula* 44). The underlying thinking today, is that there had been disagreements in *Britannia* over the position of Cunobelinus’ throne for some time. These disputes will not have escaped the Roman Empire, and it is possible that client tribes who had been in *Britannia* since Caesar – and perhaps small contingents of Roman troops as well – asked Rome for help, and that we should interpret Adminius’ surrender in that light. This could also be read as a political-economic reason to protect Roman trade interests with *Britannia*, which had been there since Caesar’s time, and that would

be a good reason to intervene in *Britannia* precisely and annex it as a new province because of the unrest.

A final reason put forward here was raised by Rankov (2009, 163-165). He argues that 'the most extreme form of expansion – complete annexation of new territory – was a special event that in most cases followed a military campaign often led by a member of the imperial family or by the emperor himself.' Caligula's, and also later Claudius', direct command of the armies should be seen in this light and has everything to do with regaining control of a more or less mutinous army or army commanders, and this was especially the case with the Lower Rhine forces.

Whatever the reasons mentioned above, it could be stated that the focus was *Britannia* from the beginning (see below). In addition, it is commonly accepted that Caligula raised new legions. This suggests that Caligula might have had already a well-thought-out plan; although that is easy to conclude in retrospect. Nevertheless, the campaign must have been well prepared.

Whether the decision to conquer *Britannia* was taken by the emperor in 39 or 40, it was impossible to go in 40 AD as Caligula intended, according to the ancient sources. We suspect that the shell collecting story must be read in this context, meaning that Caligula may have been impatient. He desires a quick victory, but the troops saw the danger of poor and much too short preparation and did not want to embark and mutinied against the hasty emperor. Caligula eventually flees back to Rome, which does not mean that his masterplan has been cancelled. On the contrary, we would say because the conquest of *Britannia* remained of the highest priority (Rankov 2009, 165), even though preparations for war took more time. Modern authors (Fulford 2000; Peddie 2005, 23-46) suggest at least two years of building up infrastructure and proper planning, which means training new troops, collecting supplies, building boats, but also gathering enough weapons, artillery, horses, *etc.* Therefore, preparations continued after 40 AD and the interruption of Caligula's death in January 41 AD had no real impact, we believe, but perhaps only caused some delay in the masterplan. Eventually, when they are fully prepared, the Romans leave for *Britannia* in 43 AD. Claudius benefitted in that perspective from the masterplan launched by his 'insane' predecessor (Tacitus *Agricola* 13; Barrett 1991, 136-139; Winterling 2015), and he established a new province under direct military control.

### **Border security, power and influence**

The construction of the Valkenburg fortress and the line of auxiliary forts in the western part of the Rhine-delta fit well into this masterplan. *Britannia* is the target, but for that to happen, the Rhine as a highway and transport artery of people and goods must be made safe first, and the Germanic tribes subdued. In that sense, *Germania* and

*Britannia* have everything to do with each other, but it seems that Rome avoided to fight a war on both fronts. The Valkenburg fortress is set up as a forward base in 40 AD, as a campaigning unit, close to its anticipated area of operation (Dobson 2009, 29). The rest of the infrastructure – a secure supply line – soon followed by the erection of auxiliary forts, probably carried out by legionaries as Hanson (2009b, 33) assumes in general for 1<sup>st</sup>-century military construction work. Campaigning from the Valkenburg fortress may have taken place, but we expect there also a role for the Velsen fortress, where another legionary base from the early 40's is suspected (Bosman volume 4). From there, Germanic people like the Frisians and Chaucians could be controlled, to secure the supply line on the river Rhine to *Britannia*. The Valkenburg fortress might have served as a logistical hub of this supply line and was probably known as *Praetorium Agrippinae*, the headquarters named after Agrippina, Caligula's mother.

### **The British connection**

There are two more issues we would like to address concerning the 40's and the possible role of our fortress. First, there has been much discussion about the landing places in Roman Britain in 43 AD (Grainge 2005, 114-121; Peddie 2005; Manley 2007). To cut a long story short, most scholars prefer Richborough or the Walmer-Deal-Thanel area, but the Fishbourne/Chichester area is also still a candidate. It seems that the army sailed in three squadrons (Cassius Dio *Historia Romana* 60.19.4), and some authors have postulated the Romans landed on different places, so perhaps they split up their forces.

But if so, what can be said about the departure points then? Boulogne-Sur-Mer is without a candidate because it is attractive as the shortest route, the Strait is small, and one can see the other side. Nevertheless, in prehistoric periods and later, trade and sailing routes from the Netherlands to the British Isles have also been proven (McGrail 1983), as have the Nehalennia altars shown from Colijnsplaat in Dutch Zeeland (Stuart & Bogaers 2001). Therefore, the Rhine delta as a departure point is not strange or surprising either. In addition, to land and depart from different places is also much safer from a military point of view and strategically tactful. This is known as the pincer movement meaning that one approaches the enemy from the flanks and thus from different places.

We therefore do not exclude that part of the 43-invasion force, most of them stationed on the Rhine, came downstream to Valkenburg and sailed off from the Dutch coast, although we cannot prove it. Previously, we have suggested the involvement of the Twentieth Legion (Vos *et al.* 2021), on the basis that they are nearby stationed at Neuss. But perhaps all the legionary forces go to Boulogne-Sur-Mer on foot, and perhaps *vexillationes* or more plausibly, auxiliary troops sail off, along with supplies



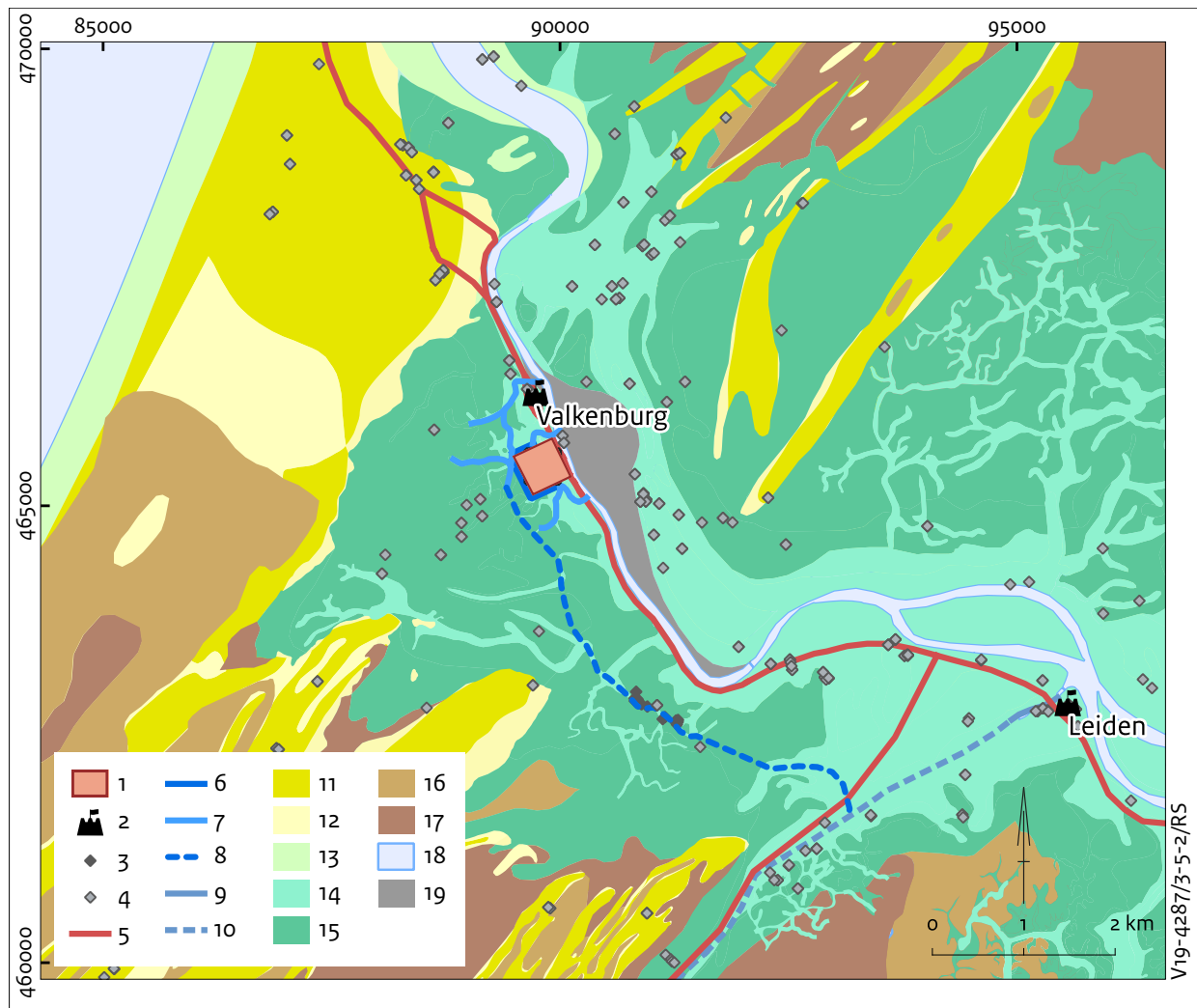


Figure 5. System of tidal creeks and gullies south of the Rhine and the town of Leiden, showing a possible sailing route between Valkenburg and the Corbulo Canal. 1. Fortress; 2. Fort; 3. Roman watercourse identified; 4. Roman settlement; 5. Road; 6. Ditches; 7. Creeks and gullies; 8. Possible connection; 9. Canal identified; 10. Canal assumed; 11. Dunes/coastal barriers; 12. Dune valleys/beach plains; 13. Shoals/sandbanks; 14. Riverbank; Raised levees and fossil creeks; 15. Back swamps; 16. Marsh lands, fens; 17. Peat bogs; 18. Open water; 19. Post-Roman erosion (source Hessing 2021, fig. 5.2).

such as horses, boats, and all other ‘products from the Rhine hinterland’ that were needed. The army then went offshore to sail southwest with the coastline to join the large force at Boulogne-Sur-Mer or, we prefer, to land at a third landing place perhaps somewhere on the Kent coast near the mouth of the river Thames. Whatever it may be, our fortress can be seen as a logistical hub, as a military base and supply depot at the end of the river-highway, and as an important link in the supply chain to *Britannia*.

### Corbulo's Canal

The last thing to mention about the Valkenburg fortress concerns the Corbulo period. We assume that when Claudius told Corbulo to retreat and he started digging his

famous canal (Tacitus *Annales* 11.20), this took place from Valkenburg (fig. 5). There is not only a 10 m wide northern ditch next to the fortress, but also in the hinterland of Valkenburg many natural gullies and creeks are present that can be combined to form a first phase of the canal (De Bruin 2019, 78; Hessing 2021, 179; Hessing volume 4). The legionaries, probably coming from Velsen, could be stationed in the Valkenburg fortress that still could be there, perhaps in some form of hibernation since 43 AD.

Furthermore, we assume that finally the fortress ends when three actions have been completed. Firstly, when Corbulo finished his canal around 51-52 AD; secondly, when the area north of the Rhine in the Frisian area was secured as no man's land or for military use only. We know

indirectly that the Frisians were pushed further north, because of the complaints by Malorix and Verritus in Rome (Tacitus *Annales* 13.54) about their lost and unused land in the military border zone. And finally, as the forts on the southern bank of the Rhine were completed, so when the Lower Rhine limes is basically operational. When these actions were finished, the Valkenburg fortress seem no longer necessary and most probably that will be in the Late Claudian or Early Neronian period. From then on storage and supplies were arranged elsewhere, and exchange of Rhineland-cargo from Zwammerdam boats to sea-worthy ships was organized in a more suitable place further south. It is very possible that a new warehouse dock appeared at the end of the Canal of Corbulo near Naaldwijk, where, not surprisingly, much material from *Classis Germanica* was also found (Van Zoolingen *et al.* 2021).

## Conclusion

To conclude, this paper presented a sneak preview scenario about the 40's and the role of the Rhine delta and the Valkenburg fortress we are going to study the next years. The main question was whether the fortress is linked to 43 AD and if there was a masterplan involved. Perhaps this is convincing, otherwise one might consider the possibility that the Rhine delta and the Valkenburg fortress are in some way connected to the invasion of Roman Britain. The many possibilities in which our fortress could have been operational, is interesting and relatively new and we think it opens a new window on Early Roman history, not only for the Rhine delta, but also to re-examine the departure, landing, and supply of 43 AD, and beyond.

## Bibliography

- Barrett, A.A., 1991: *Caligula. The corruption of power*, New York.
- Blom, E., J. Loopik & W.K. Vos, 2024: *Legionairs op vliegveld Valkenburg ZH. De opgraving van een onverwachte legerplaats uit de Vroeg-Romeinse tijd*, Amersfoort/Leiden (ADC-Rapport 6061 / Archol-Rapport 725).
- Campbell, D.B., 2013: Did Emperor Caligula plan to invade Britain? Caligula's capers on the North Sea coast, *Ancient Warfare* 6/6, 49-53.
- De Bruin, J., 2019: *Border communities at the edge of the Roman Empire. Processes of change in the civitas Cananefatium*, Amsterdam (Amsterdam Archaeological Studies 28).
- Dobson, B., 2009: The rôle of the fort, in: Hanson 2009a, 25-32.
- Fulford, M., 2000: The organization of legionary supply. The Claudian invasion of Britain, in: R.J. Brewer (ed.), *Roman fortresses and their legions*, London (Occasional Papers of the Society of Antiquaries of London 20), 41-49.
- Grainge, G., 2005: *The Roman invasions of Britain*, Stroud.
- Hanson, W.S. (ed.), 2009a: *The army and frontiers of Rome. Papers offered to David J. Breeze on the occasion of his sixty-fifth birthday and his retirement from Historic Scotland*, Portsmouth RI (Journal of Roman Archaeology Supplement Series 74).
- Hanson, W.S., 2009b: Building the forts and frontiers, in: Hanson 2009a, 33-43.
- Hessing, W.A.M., 2021: The Corbulo Canal zone from Leiden to Naaldwijk, in: Hessing, Vos & Van Ginkel, 177-184.
- Hessing, W.A.M., W.K. Vos & E.J. van Ginkel (eds), 2021: *Romans on the waterfront. Evaluation of archaeological interventions (1997-2020) along the Dutch part of the Lower Rhine and Coastal Limes*, Amersfoort (Nederlandse Archeologische Rapporten 71).
- Kemmers, F., 2004: Caligula on the Lower Rhine. Coin finds from the Roman fort of Albaniana (The Netherlands), *Revue Belge de Numismatique et de Sigillographie* 150, 15-49.
- Loopik, J. & W.K. Vos (eds), 2021: *Weerdkampen. Graven bij Valkenburg ZH*, Amersfoort (ADC Rapport 5400/ADC Monografie 29).
- Loopik, J. & Vos W. K. (eds), 2024: *Legionairs op vliegveld Valkenburg ZH. De opgraving van een onverwachte legerplaats uit de Vroeg-Romeinse tijd*, Amersfoort/Leiden (ADC-rapport 6061/ Archol rapport 725).
- Manley, J., 2007: *AD 43. The Roman invasion of Britain. A reassessment*, Chalford.
- McGrail, S., 1983: Cross-channel seamanship and navigation in the Late First Millennium BC, *Oxford Journal of Archaeology* 2/3, 299-337.
- Peddie, J., 2005: *Conquest. The Roman invasion of Britain*, Sparkford.
- Pitts, L.F. & J.K. St. Joseph, 1985: *Inchtuthil. The Roman legionary fortress. Excavations 1952-65*, Gloucester.
- Rankov, B., 2009: A 'secret of Empire' (imperii arcanum). An unacknowledged factor in Roman imperial expansion, in: Hanson 2009a, 163-172.
- Stuart, P. & J.E. Bogaers, 2001: *Nehalennia. Römische Steindenkmäler aus der Oosterschelde bei Colijnsplaat*, Leiden (Collections of the National Museum of Antiquities at Leiden 11).
- Van Dierendonck, R.M., D.P. Hallewas & K.E. Waugh (eds), 1993: *The Valkenburg excavations 1985-1988. Introduction and detail studies*, Amersfoort (Nederlandse Oudheden 15).
- Van Giffen, A.E., 1948: De Romeinsche castella in de dorpsheuvel te Valkenburg aan den Rijn (Z.H.) (Praetorium Agrippinae) I. De opgravingen

- in 1941, *Jaarverslag van de Vereniging voor Terpenonderzoek* 25-28, 1940-1944, 1-316.
- Van Giffen, A.E., 1955: De Romeinsche castella in de dorpsheuvel te Valkenburg aan den Rijn (Z.H.) (Praetorium Agrippinae) II. De opgravingen in 1942-1943 en 1946-1950, *Jaarverslag van de Vereniging voor Terpenonderzoek* 33-37, 1948-1953, 1-209.
- Van Zoolingen, R.J., J.A. Waasdorp, J. de Bruin & W.K. Vos, 2021: Coast. From Katwijk to Aardenburg, in: Hessing, Vos & Van Ginkel, 161-175.
- Vos, W.K., E. Blom, B. Cornelisse, J. de Bruin, J. Loopik, A. Ruiter, A. Tol & L. van der Feijst, 2021: A legionary fortress at Valkenburg. Discovering a springboard for the conquest of Britannia?, *Current World Archaeology* 108, 24-31.
- Vos, W.K. & J.J. Lanzing, 2000: *Valkenburg-Veldzicht. Onderzoek 1994-1997*, Amersfoort (Rapportage Archeologische Monumentenzorg 78).
- Vos, W.K. & E. van der Linden, 2011: *Rondom Romeinse rijtjeshuizen. Archeologisch onderzoek naar de Romeinse vicus van Valkenburg (ZH)* De Woerd, Leiden.
- Winterling, A., 2015: *Caligula. A biography*, Oakland.
- Wynia, S.L., 1999: Caius was here. The emperor Caius' preparations for the invasion of Britannia. New epigraphic evidence, in: H. Sarfatij, W.J.H. Verwers & P.J. Woltering (eds), *In discussion with the past. Archaeological studies presented to W.A. van Es*, Amersfoort, 145-148.



# What did and what did not change in the fortification system of *Novae* (Svishtov, Lower Moesia)

The legionary base of *Legiones VIII Augusta* and *I Italica*

Piotr Zakrzewski

## Introduction

The fortress at *Novae* (Svishtov, fig. 1) was established over the southern bank of the Lower Danube in the province of *Moesia* by *Legio VIII Augusta*, probably around the reign of Claudius (Sarnowski 1988, 27; Genčeva 2002, 11, but see Lemke 2018). At the time, it was the easternmost legionary base in the European part of the Roman limes. The extensive archaeological works were conducted between 1960-1990 by the Bulgarian-Polish Archaeological Expedition, followed by a decade-long post excavation project, *Per lineam munitionum*, devised and led by the late Tadeusz Sarnowski (Sarnowski *et al.* 2005; 2010; 2012; 2013; 2014a-b; 2016). Thanks to these excavations and post-excavation project, it was possible to recreate the history of two fortification systems, including their building sequence, later alterations, as well as repair and maintenance works well until the beginning of the 7<sup>th</sup> century AD, when they ceased to function (Sarnowski 2016; Zakrzewski 2017; 2018; 2020; 2021; Jaworski & Zakrzewski 2021).

The first fortification system was composed of a loess rampart and wooden palisade placed on top of it, together with square wooden towers and system of V-shaped ditches. Archaeological evidence demonstrated that these fortifications remained in use without visible alterations until the departure of *Legio VIII Augusta* in AD 69. Following the arrival of *Legio I Italica*, probably in AD 72 (Sarnowski *et al.* 2014b, 81-83), and until the early 2<sup>nd</sup> century AD, the entire military base underwent numerous modifications. Most notably, the main camp buildings and the defensive structures were rebuilt in stone. Although these changes greatly affected the architectural design and the defensive properties of the new fortification system, the layout and the localization of its main elements were apparently very similar to those of their earth and wooden predecessors. Nonetheless, in the case of some sections of the fortification system, the construction of new stone defences led to slight deviations of the main axes of the fortress and changes in its internal area.

## Piotr Zakrzewski

Polish Centre of  
Mediterranean Archaeology,  
University of Warsaw  
eugeniusz.zakrzewski@  
uw.edu.pl



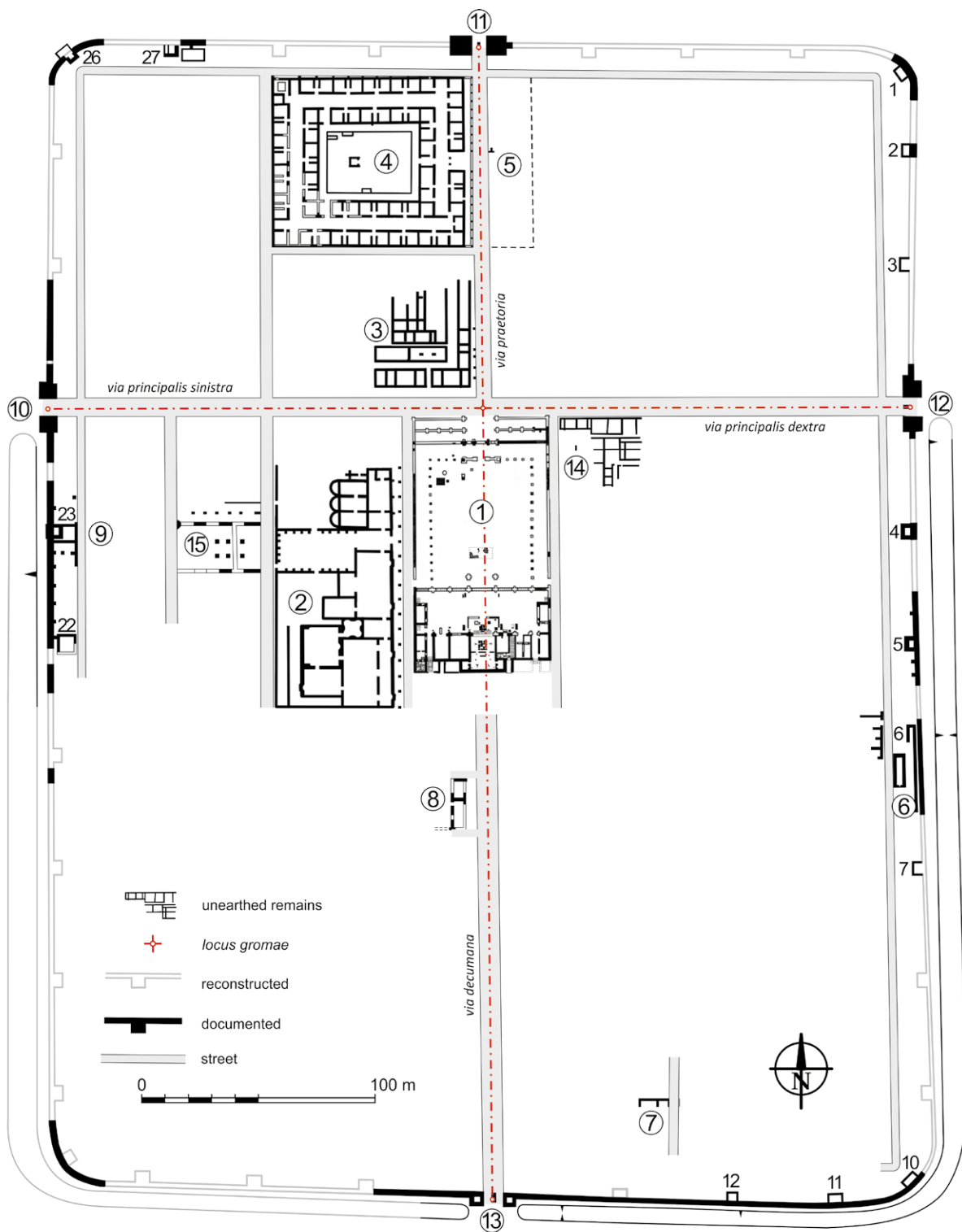


Figure 1. *Novae* (Svishtov). Fortress in the 2<sup>nd</sup> and 3<sup>rd</sup> centuries AD. An outline plan. 1. Headquarters building (*principia*); 2. Bath house (*thermae*); 3. Officer's house; 4. Hospital (*valetudinarium*); 5. Granaries (*horrea*); 6. Water tank; 7. Cavalry barrack; 8. *Praetorium* (?); 9. *Fabrica* (?); 10. West gate (*porta principalis sinistra*); 11. North gate (*porta praetoria*); 12. East gate (*porta principalis dextra*); 13. South gate (*porta decumana*); 14. Barracks of the First Cohort (?); 15. Water tanks (?). Figures along the curtain wall refer to the numbers of interval towers (T. Sarnowski, J. Kaniszewski and P. Zakrzewski, based also on detail drawing by M. Lemke, P. Dyczek and A.B. Biernacki).

## Fortification system

Owing to the aforementioned post-excavation project and later works, the defence system of the fortress has now a well-established chronology. Furthermore, the documentation comprises precise and tied into the local benchmark planigraphy, fully-digitalized archive plans and photographs, detailed architectural drawings, and 3D visualizations. These materials will be published in a forthcoming monograph by the present author (Zakrzewski in press). The chronology of the *Novae* (Svishtov) fortifications can be divided into four main consecutive construction phases (I-IV) and two subphases (IIa and IIb), which also reflect important events in the history of this archaeological site as well as the Lower Danube provinces (Zakrzewski 2020; 2021).

### Phase I. The Claudian-Neronian period

Construction works of the initial fortifications, carried out by the legionaries of *Legio VIII Augusta*, started most probably with the digging of sections of defensive ditches (*fossae*), in the form of a single line of V-shaped ditches (*fossa fastigata*). Their dimensions ranged from c. 2.00-5.60 m in width and c. 1.00-2.90 m in depth. Such a variation could have reflected the perceived threat level posed by enemy attack, but to an even greater extent, it most likely depended on the terrain configuration. In fact, no traces of those defensive measures were found in the northern part of the eastern side of the fortress, probably due to the proximity of a deep ravine descending towards the Danube. In many instances, the lower part of the ditches revealed traces of a basal slot, 30 cm wide, acting perhaps as the so-called ‘ankle-breaker’ (Bishop 2012, 22 and 40).

The earth obtained from the digging of the ditches, specifically yellow or light brown loess, was used to raise the main line of the fortifications – the trapezoidal rampart (*vallum*). It was composed of several layers of compact loess and sundried bricks that were placed on its outer surface. It was also most likely topped with a palisade. The rampart was founded directly on the ground surface, though on the eastern side of the fortress (towers nos 2 and 6), its inner slope was additionally supported by a shallow retaining wall (c. 0.65-0.90 m wide) made of unworked stones bonded with loess or grey mortar. Based on the best-preserved remains of the rampart, unearthed around tower no. 6, it was possible to estimate its dimensions as 3.00 m wide and at least 2.80 m high. Perpendicular to the line of the earthen embankment, usually in the immediate vicinity of a tower, a ramp (*acensus*) of over 2.00 m wide was placed to provide access to the top of the rampart. Both the rampart and the ramps were erected almost simultaneously, hence the materials and techniques used in their construction were the same. The remains of a ramp documented on the north side of the fortress had clear traces of burning between

layers of compacted loess, which would indicate that a fire-hardening technique was used during its construction to strengthen its structure and prevent landslides. It is likely that the same method was also used in the erection of the rampart. Both defensive works were separated by a flat area (berm), though its width in all sections is difficult to determine due to the later rebuilding of the fortifications in stone.

Wooden towers constitute the last important component of the first fortification system, built prior to or during the raising of the *vallum* and evidenced by post-holes clearly discernible by the colour of the strata. The towers were supported on six wooden poles, probably oak, c. 30 cm in diameter, that were inserted into the ground at a depth of at least 2.00 m. For this purpose, the legionary builders dug rectangular pits in the virgin soil, embedded the pillars and then backfilled the pits with several layers of heavily compacted loess, supplemented in some cases with stones and brick fragments. The analysis of the post-holes demonstrated that the inner supports were square in cross-section, while the outer ones were round. As a set of six post-holes was unearthed in the vicinity of tower no. 6, it was possible to estimate the minimum dimensions of the upper platform as 6.00 by 3.00 m.

### Phase IIa. c. AD 72

The first observed structural changes to the original defence system of the fortress date to the early 70's, when *Novae* became a permanent base of *Legio I Italica*, which replaced *Legio VIII Augusta*. It seems that, at least for the first several years, soldiers of the newly arrived legion continued to use the fortifications constructed by their predecessors, introducing only some minor improvements. Probably their first building activity concerning the fortifications consisted in maintenance works of the defensive ditch system, clearly evidenced around tower no. 6. The surface of the ditch, which had been renewed several times before, was at some point covered with a layer of dirty earth indicating its natural silting up, which means that the defensive work was abandoned for some unspecified time. Only later, but probably still in the Flavian period, the ditch was cleaned to a certain level and remained in use until the construction of the stone fortifications.

Another noticeable alteration was the creation of an additional U-shaped ditch (*fossa punica*) near the south gate (fig. 2). Its unusual dimensions – the relatively small width (0.90 m) compared to its depth (1.60 m) – could be explained by the fact that, at the time, it ran across the full width of the gate, the beginning of which was marked by the rounded end of the previously dug inner V-shaped ditch. Consequently, a wooden footbridge must have been placed over it to aid the access. It also appears that the earth dug from the new ditch was used to build a small embankment located to the south of it.

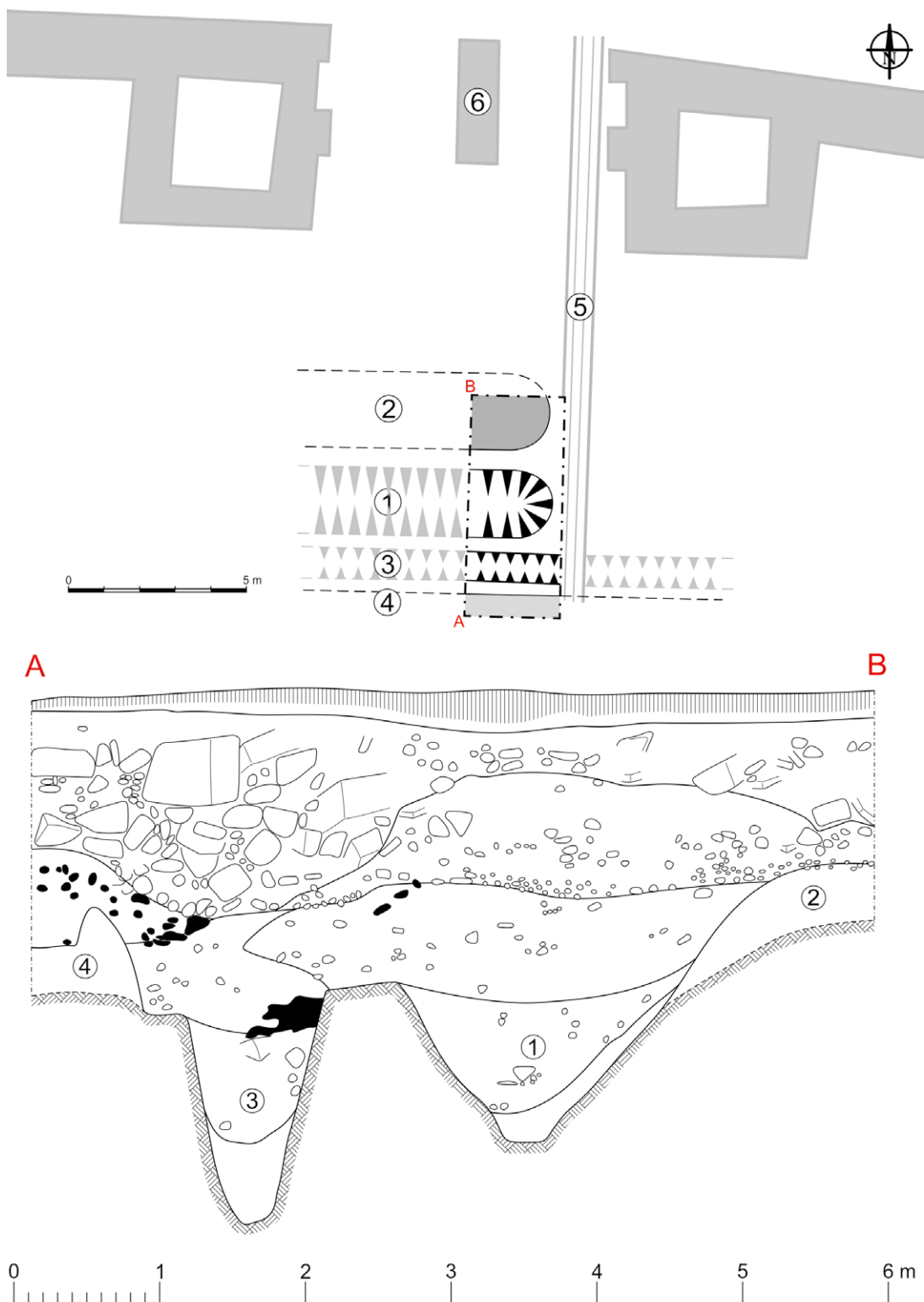


Figure 2. Test trench near the south gate. Plan and section. 1. Phase I defensive ditch; 2. Rampart; 3. Phase IIa defensive ditch; 4. Embankment; 5. Course of the aqueduct; 6. Phase IIb south gate outline (by M. Momot and P. Zakrzewski, based on T. Sarnowski 1980).

## Phase IIb. The reign of Trajan

The most significant changes in the fortification system at *Novae* occurred at the beginning of the 2<sup>nd</sup> century AD (IGLNov 52), when the wooden and earthen fortifications were replaced with their stone counterparts. Their location and course were similar or even almost identical to the previous wooden and earthen ones. The erection of the defensive structures in stone coincided with the two campaigns Trajan waged against the Dacians. The same can be said about the construction of the legionary hospital (*valetudinarium*), which surely must have been envisaged for future veterans of battles, as well as other structures inside the fortress. Again, this major construction effort was preceded by large earthworks, mainly related to the backfilling of all previous defensive ditches. Their fill consisted mostly of the material obtained from the partial demolition of the *vallum*. At the same time, a new system of much larger, though still V-shaped ditches was dug. Their dimensions, like those of their predecessors, were not uniform. In the case of the eastern side of the fortress, where the defensive ditch was best preserved, it was possible to determine its dimensions to be c. 9.00 m wide and 4.00 m deep.

In order to incorporate the stone wall into the existing earthwork fortifications, the outer side of the rampart was cut out. The remaining inner part served as an additional surface for the wall-walk. This solution provided support for the stone structure and undoubtedly increased its overall defensive qualities. The degree of demolition of the earthen rampart and the location of the line of the wall in relation to it varied according to the section of the fortress' fortifications. Probably also at this stage of the work, a change was made in the orientation of the ramps, which from then on ran parallel to the defensive wall.

Even before the stone wall was erected, the wooden towers belonging to the previous defence system were dismantled. Apparently, the wooden pillars supporting them were considered to be very valuable material. Archaeological investigations in the area around tower no. 27 demonstrated, in the case of remnants of two inner posts found there, that in order to recover and reuse them, a deep pit was dug almost to the very end of the buried elements, which were then pulled out, leaving only a small fragment in the ground.

The stone defensive wall was set on 1.10-1.80 m deep foundations consisting of large, irregular stones bonded together with a significant amount of yellowish sand mortar. The wall footing was made without free access in narrow building trenches. The top line of the foundations was marked on the wall by at least one offset, the position of which usually corresponded with the ground level.

The defensive wall itself was constructed out of medium-sized stones, only partially worked. Its core was filled with stone rubble and fragments of building ceramics, while the

whole was bonded with a solid white mortar consisting of lime and river gravel. The stonework comprised primarily of locally acquired material, mainly sandstone, but also limestone. The width of the defensive curtain of this phase ranged from 1.30 to 2.50 m, with the thickest sections located near the gateways. The curtain wall was jointed with the remaining earthwork by buttresses in the form of elongated, narrow walls (1.00-1.50 by 0.60-1.20 m). The intervals at which they were placed were extremely uneven and ranged from 3.00 to 16.00 m. Undoubtedly, these structures not only reinforced the defensive wall itself, but also prevented it from tilting.

The construction works related to the defensive wall also included the erection of a rectangular stone interval and corner towers, which were already jointed at the level of the foundations, located usually at a similar depth. Both the internal and the overall sizes of the stone towers were not uniform. The thicknesses of the three walls of the towers adjacent to the defensive wall ranged from 0.75 to 1.60 m and were usually consistent for each structure. It should be also noted that the widths of the walls of the towers and the curtain wall were correlated and had an average ratio of 1:2. The towers receding to the inside of the fortress were distributed along the defence wall analogously on each front at fairly regular intervals, namely between 28.00 and 42.00 m.

Due to their function, the gates represent one of the most important elements of the defensive system of the *Novae* fortress. Their design in phase IIb had several characteristic structural solutions – most notably the position of the towers protruding (by c. 3.00-4.00 m) beyond the outer face of the defensive wall. This layout defined the later development and construction project of these structures. Archaeological investigations carried out in the area of the four gates of *Novae* have shown that these were multi-phase structures, which were subject to later alterations (Zakrzewski 2017).

## Phase III. AD 250-350

The chronology of the next phase of the construction and functioning of the *Novae* legionary base remains quite broad due to the lack of more detailed indications. Nonetheless, this phase is related to several important events, which ultimately led not only to significant changes in the shape of the fortifications, but also to the transformation of this fortified garrison into a late antique civilian town (Lemke 2015a). It should be stressed that the reconstruction of the defensive works at that time was still the responsibility of legionary builders, who erected them according to solutions and designs characteristic of military architecture in the broadest sense. At the same time, it was also during this period that the area of *Novae* was extended further to the east to include a so-called 'annex', occupying an area of more than 11 ha (fig. 3).

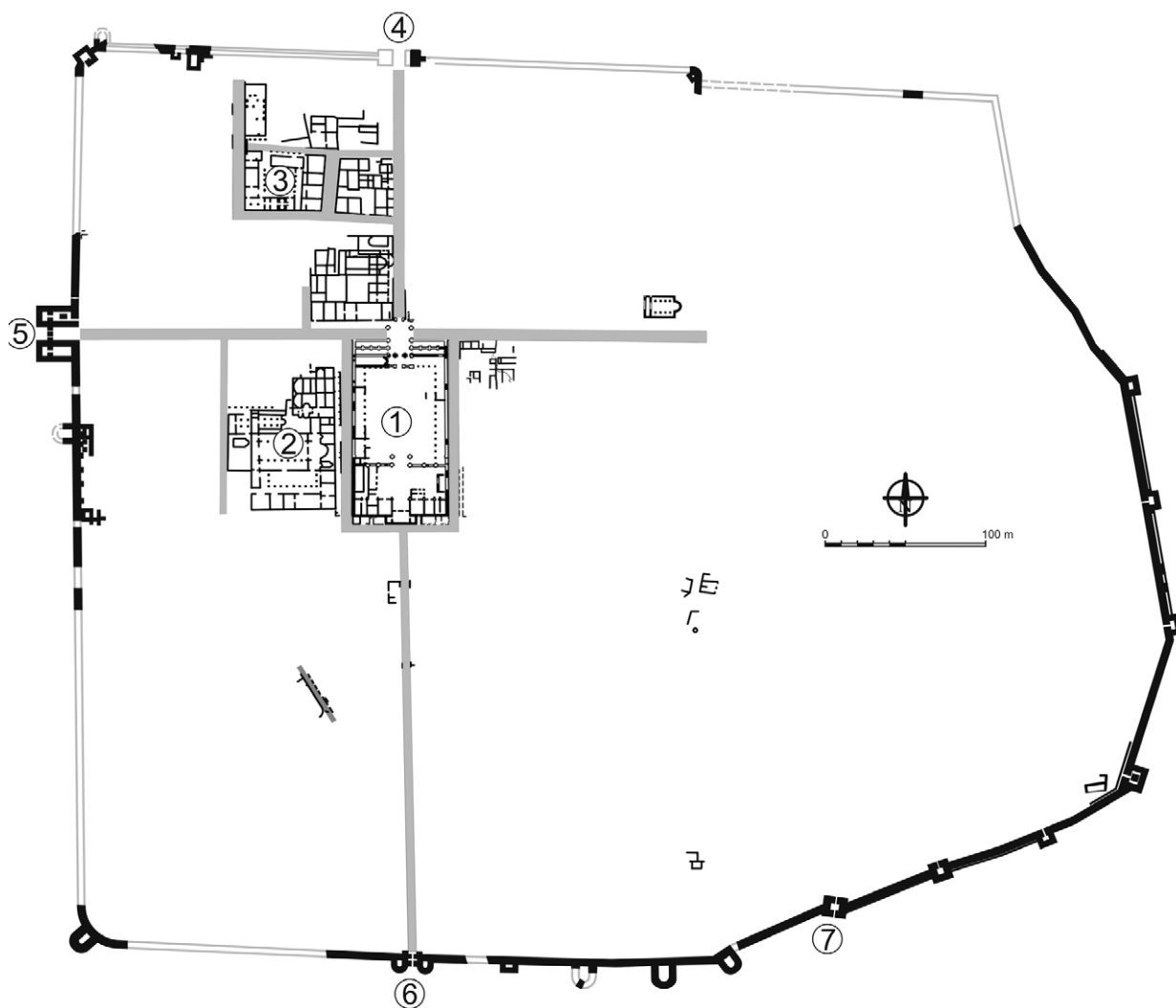


Figure 3. *Novae* in late antiquity. 1. Central building; 2. Episcopal complex; 3. Residence; 4. North gate; 5. West gate; 6. South gate; 7. Annex gate (M. Momot and P. Zakrzewski, based on drawings and information from T. Sarnowski, M. Lemke, P. Dyczek and A.B. Biernacki).

The eastern defensive curtain wall of the fortress was dismantled and the obtained building material was used to erect a new line of fortifications.

The most noticeable structural changes to the *Novae* fortifications concerned the new appearance of the gates, for which different architectural solutions were employed. Three of them: *porta principalis sinistra*, *decumana* and *praetoria* received a more developed form of construction and were significantly enlarged (Zakrzewski 2017). The interval and corner towers also underwent major modifications. They were not only rebuilt outside the line of the wall, but were also given a U-shape form. Furthermore, many of the uncovered structures of this phase were constructed in the *opus mixtum* technique, which is rather characteristic for this period.

Phase III construction works also included thickening of the curtain wall, as was recorded around tower no. 27, where a new wall (1.15 m wide) was added in front of the older one, as a kind of a retaining wall. The used pinkish lime mortar, containing ceramic gravel, was also found on the surface of the earlier curtain wall, which means that its conservation was carried out at this time as well. In addition, the southern curtain wall was widened by the construction of not one, but two additional walls on both sides of it.

#### Phase IV. The beginning of the 6<sup>th</sup> century AD

The last major construction activity concerning the fortifications at *Novae* dates to the early Byzantine period, when the restoration or expansion of the defensive



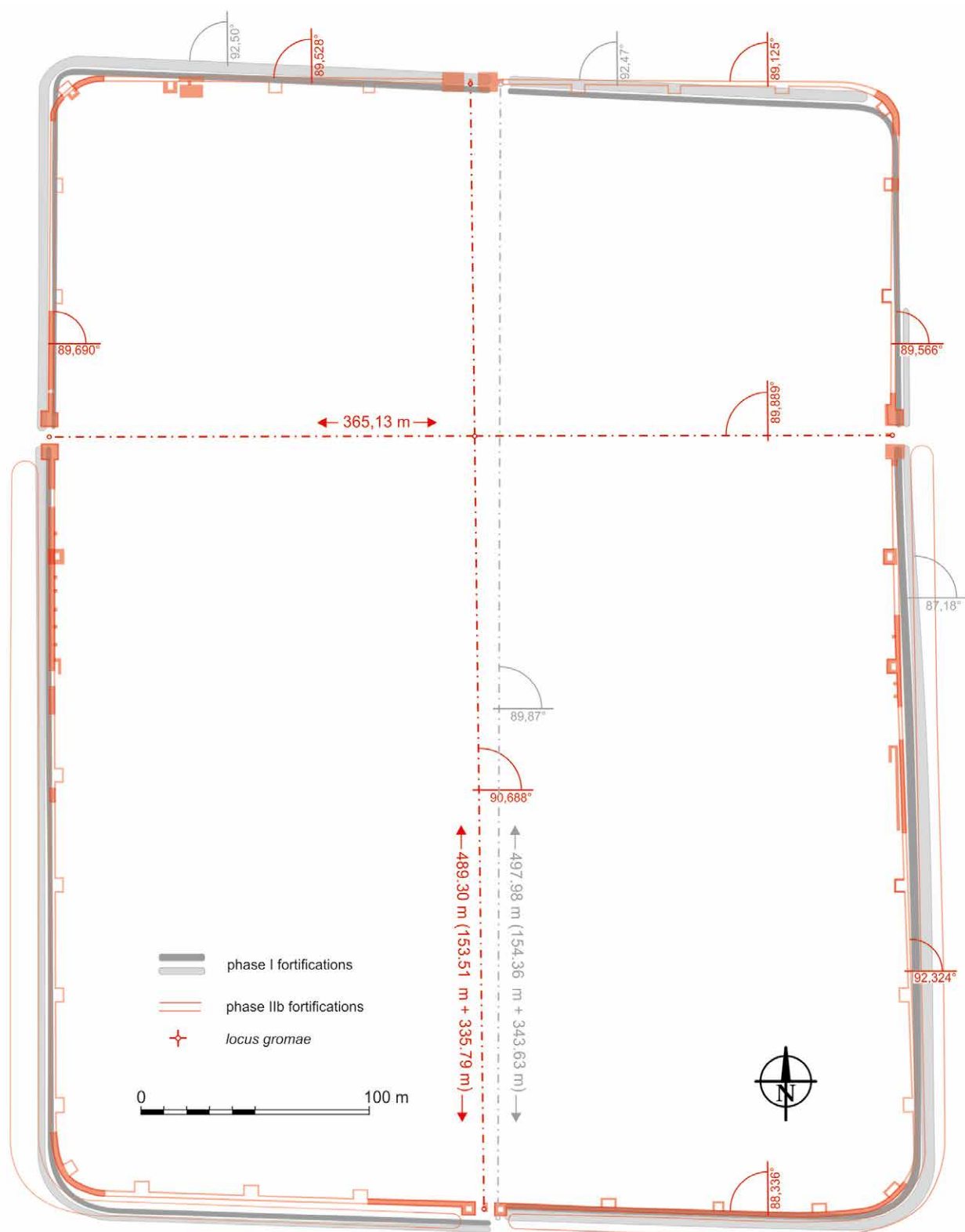


Figure 4. Reconstructed outline of Phase I and IIb fortifications and observed changes in the main axes (P. Zakrzewski).

systems of many urban and military sites located in the Lower Danube provinces was carried out (Dinchev 2007; Băjenaru 2010). Following the turbulent events taking place in the 5<sup>th</sup> century AD, particularly the invasion of the Huns and the subsequent takeover of the area south of the Danube by the Goths, the Balkan area was subjected to an extensive building program involving military (but not only) installations as early as the reign of Anastasius I. It seems highly probable that it was then, or slightly earlier, that certain repairs observed in the fortification system of the city of *Novae*, which was then an important bishop's seat, were carried out. However, the most noticeable changes in the design of the defensive structures can be seen in the elaborate construction of the western gate, dating to the reign of Justinian I.

The existing gateway structure was extended to the west by the construction of new rooms for both towers, so that they protruded beyond the outer face of the defensive curtain wall reaching an impressive 18.85 m at their maximum point. New walls were also much thicker (2.40-3.50 m), probably in order to support more than one floor, and constructed from massive, rectangular and very well-chamfered limestone blocks in the *anathyrosis* technique, making the use of mortar virtually unnecessary (Parnicki-Pudełko 1990). What is more, most of the blocks preserved *in situ* had decoration in the form of rustication on their outer face. Sometime after the construction of the new structure, the northern passage was blocked with a crude brick wall. Its base was found on a layer containing large amount of ashes and burnt pottery, which makes it possible to link this construction to the last period of the *Novae* fortifications around the Slav and Avar invasions (c. AD 575-625).

In time, most of the defensive works comprising the *Novae* fortification system were abandoned and partially demolished. These activities are well represented by the construction of a paving (1.20 m wide), dated to the 6<sup>th</sup>/7<sup>th</sup> century AD. It was built from small stones and fragments of building ceramics bound by a layer of clay, which was laid on the foundations of the dismantled defensive curtain about 12.00 m south of tower no. 23. With the departure of the last inhabitants of *Novae*, probably in the Middle Ages (Dyczek 2008), the unused buildings, including the defensive structures, fell into ruin and their surviving remains became a source of building material for the surrounding settlements. Despite this, their traces were still clearly visible from a considerable distance as late as in the 18<sup>th</sup> century, as evidenced by the account of L.F. Marsigliani (Lemke 2015b).

### **Observed deviations between fortification system of *Legiones VIII Augusta* and *I Italica***

The construction of the stone fortifications of Phase IIB involved some changes in the axis of the fortress and a

reduction in the area it occupied to about 18 ha. These can be observed by comparing the position and the course of fortifications erected by *Legio VIII Augusta* and those built after the arrival of *Legio I Italica* in *Novae* (fig. 4). The most significant changes included the removal of the western part of the southern defensive line by about 8.00 m inwards, the extension of the eastern part of the northern front, and the shift in the main axis marked by the *via decumana* and *praetoria*. The difference in the axis is clearly visible in the area of the south gate (fig. 2). As a matter of fact, the passage between the towers of the stone gate does not correspond with the presumed entrance to the camp of the Claudian-Neronian period, which can be reconstructed with a very high probability based on the location of the ends of the earthen rampart and the defensive ditch dated to this period. Conversely, as shown by the rounded end of the Phase I defensive ditch, revealed directly in front of the stone remains of the northern platform of *porta principalis dextra* (fig. 5), the east-west axis ran in approximately the same place and did not change after the reconstruction of the fortification system. These changes in the axis can also be seen in the fortress' internal layout, for example the outer walls of the first and second phase of the headquarters building (*principia*) (Sarnowski *et al.* 2010, 156 and 160). Another apparent difference is the discrepancy in the positioning of the wooden towers and their stone equivalents, observed only in the case of the northern front of the fortress. This situation may have been caused by the change in the location of the northeast corner (Sarnowski *et al.* 2005, 151-152), which from the beginning of the 2<sup>nd</sup> century AD was located further east and down the ravine. It seems that the angles at which the fortification lines of the defensive system ran also changed somewhat, as can be seen by comparing, for example, the offset of the face of the Trajanic wall with the edge of the early defensive ditch at tower no. 27.

### **Conclusions**

Apart from the obvious differences in the form and the design of *Legiones VIII Augusta* and *I Italica* fortification systems, there is no evidence of any major change in the general course of the defences. Still, the modifications are clearly visible and need to be taken into consideration in future research. A majority of the documented alterations were introduced for practical reasons, as in the case of the northern front and the shift in the location of the north-east corner tower. However, the most extensive changes, especially those related to the main axes of the fortress, cannot be explained with certainty. It can only be assumed that they stemmed from the same pragmatic mindset and were connected with the construction of the stone fortifications rather than the spatial organisation within the fortress.

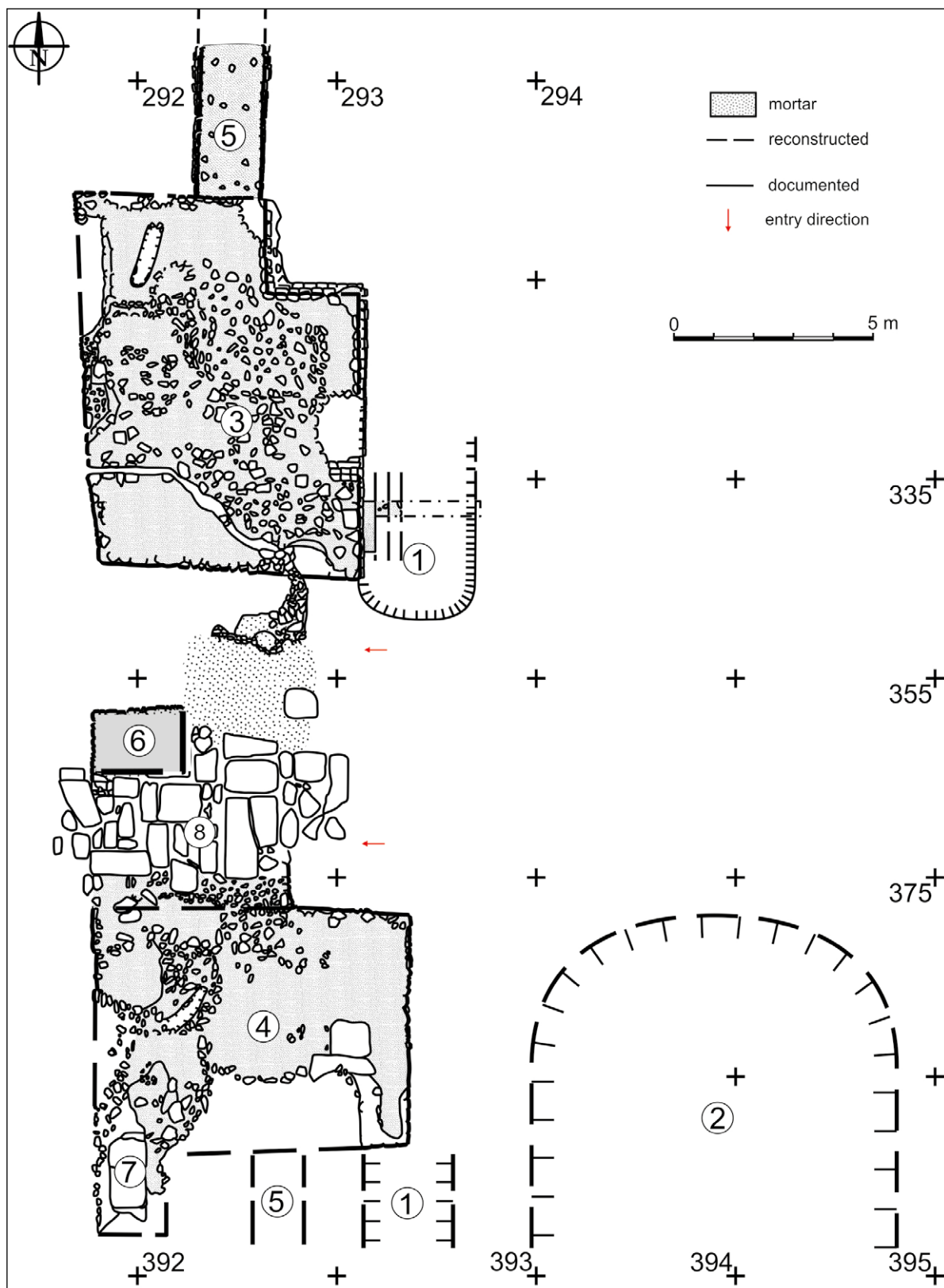


Figure 5. East gate. 1. Phase I defensive ditch; 2. Phase IIb defensive ditch; 3. North platform; 4. South platform; 5. Curtain wall; 6. *Spina*; 7. Staircase (?); 8. Stones blocking the southern passageway (P. Zakrzewski).

## Abbreviation

IGLNov: Kolendo & Božilova 1997

## Bibliography

- Băjenaru, C., 2010: *Minor fortifications in the Balkan-Danubian area from Diocletian to Justinian*, Cluj-Napoca.
- Bishop, M.C., 2012: *Handbook to Roman legionary fortresses*, Barnsley.
- Dinchev, V., 2007: *The fortresses of Thrace and Dacia in the early Byzantine period*, in: A. Poulter (ed.), *The transition to Late Antiquity, on the Danube and beyond*, Oxford, 479-546.
- Dyczek, P., 2008: The latest settlement in Novae, in: T. Derda, P. Dyczek & J. Kolendo (eds), *Novae. Legionary fortress and Late Antique town I. A companion on the study of Novae*, Warszawa, 235-245.
- Genčeva, E., 2002: *Parvijat voenen lager v Novae, provinciia Miziya (Severna Balgariya)*, Sofia/Warszawa.
- Jaworski, P. & P. Zakrzewski, 2021: The defense of the Roman legionary fortress at Novae (Lower Moesia) and coin finds from the “Per lineam munitionum” project. Numismatic and archaeological interpretation, *Polish Archaeology in the Mediterranean* 29/2, 357-406 (DOI: 10.31338/uw.2083-537X.pam29.2.16).
- Kolendo, J. & V. Božilova, 1997: *Inscriptions grecques et latines de Novae (Mésie inférieure)*, Bordeaux.
- Lemke, M., 2015a: The dwindling legion. Architectural and administrative changes in Novae (Moesia inferior) on the threshold of Late Antiquity, in: R. Collins, M. Symonds & M. Weber (eds), *Roman military architecture on the frontiers. Armies and their architecture in Late Antiquity*, Oxford, 90-97.
- Lemke, M., 2015b: Marsigli's Moesia. The limes sites in Bulgaria as seen in the 18<sup>th</sup> century, in: A. Tomas (ed.), *Ad Fines Imperii Romani. Studia Thaddaeo Sarnowski septuagenario ab amicis, collegis discipulisque dedicata*, Warszawa, 173-192.
- Lemke, M., 2018: Advocatus diaboli. What if it was not the Eighth Legion that built Novae?, *Novensia* 29, 73-86.
- Parnicki-Pudelko, S., 1990: *The fortifications in the western sector of Novae*, Poznań.
- Sarnowski, T., 1980: Rejon bramy południowej – odcinek VIII. Ślady umocnień ziemnych, in: A. Biernacki, L. Mrozewicz, T. Sarnowski, W. Szubert, A. Wyrwa, S. Zawadzki & S. Parnicki-Pudelko (eds), *Novae – Sektor zachodni*, 1978. Sprawozdanie tymczasowe z wykopalisk Ekspedycji archeologicznej Uniwersytetu im. Adama Mickiewicza w Poznaniu, *Archeologia* 31, 146-150.
- Sarnowski, T., 1988: Wojsko rzymskie w Mezji Dolnej i na północnym wybrzeżu Morza Czarnego, *Novensia* 3, 7-219.
- Sarnowski, T., 2016: Legionary fortress at Novae in Lower Moesia. Old and new observations made during the recent work per lineam munitionum, in: C.-G. Alexandrescu (ed.), *Troesmis. A changing landscape. Romans and the others in the Lower Danube Region in the first century BC-third century AD. Proceedings of an international colloquium, Tulcea, 7<sup>th</sup>-10<sup>th</sup> of October 2015*, Cluj-Napoca (Biblioteca Istro-Pontică 12), 175-188.
- Sarnowski, T., L. Kovalevskaja & J. Kaniszewski, 2005: Novae – Castra legionis, 2003-2005. Preliminary report on the excavations of the Warsaw University Archaeological Expedition, *Archeologia* 56, 141-152.
- Sarnowski, T., L. Kovalevskaja & A. Tomas, 2010: Novae – Castra Legionis, 2006-2009. Preliminary report on the excavations of the University of Warsaw Archaeological Expedition, *Archeologia* 59, 153-172.
- Sarnowski, T., A. Tomas, L. Kovalevska & P. Zakrzewski, 2012: Novae 2012. Munitiones Castrorum, legionary defences, *Światowit* 10/A, 145-150.
- Sarnowski, T., A. Tomas, L. Kovalevska, P. Zakrzewski, T. Dziurdzik & E. Jęczmienowski, 2013: Novae 2013. Legionary defences and headquarters building, *Światowit* 11/A, 179-186.
- Sarnowski, T., A. Tomas, L. Kovalevska, P. Zakrzewski, T. Dziurdzik & E. Jęczmienowski, 2014a: Novae 2014. Legionary defences and the rear part of the fortress, *Światowit* 12/A, 185-192.
- Sarnowski, T., L. Kovalevskaja, A. Tomas, R. Chowaniec & P. Zakrzewski, 2014b: Novae – Castra Legionis, 2010-2012. Preliminary report on the excavations of the University of Warsaw Archaeological Expedition, *Archeologia* 62/63, 75-90.
- Sarnowski, T., A. Tomas, L. Kovalevskaja, P. Zakrzewski, T. Dziurdzik & E. Jęczmienowski, 2016: Novae – castra, canabae, vicus 2013-2015. Preliminary report on the excavations and prospection surveys of the University of Warsaw Archaeological Expedition, *Archeologia* 65, 177-203.
- Zakrzewski, P., 2017: The gates of the legionary fortress at Novae (Lower Moesia) and changes in their layout design, *Archeologia* 66, 7-26.
- Zakrzewski, P., 2018: Portae Castrorum. Reconstructing the gates of the Roman legionary fortress at Novae (Lower Moesia), in: C.S. Sommer & S. Matešić (eds), *LIMES XXIII. Proceedings of the 23<sup>rd</sup> International Congress of Roman Frontier Studies Ingolstadt 2015 / Akten des 23. Internationalen Limeskongress in Ingolstadt 2015*, Mainz (Beiträge zum Welterbe Limes Sonderband 4), 343-349.

- Zakrzewski, P., 2020: Reconstructing the phases of the fortifications of the legionary fortress at Novae (Lower Moesia), *Journal of Roman Archaeology* 33, 432-447 (DOI:10.1017/S1047759420001105).
- Zakrzewski, P., 2021: New information about construction and development of stone fortifications of the legionary fortress at Novae (Lower Moesia), in: D. Tončinić & L. Zerbini (eds), *Traian and the Danubian Provinces. The political, economic and religious life in the Danubian Provinces. Proceedings of the 4<sup>th</sup> International Conference on the Roman Danubian Provinces Zagreb, 15<sup>th</sup>-17<sup>th</sup> November 2017, Zagreb*, 165-171.
- Zakrzewski, P., in press: *Munitiones Castrorum. The fortification system of the legionary fortress of Novae in the Principate period.*





## PART 4

### **FINES**

THE MECHANISMS AND POLITICS  
OF FRONTIER COLLAPSE,  
AND THE AFTERLIFE OF  
FRONTIER INSTALLATIONS



# L'abandon des frontières dans le nord-ouest de la Gaule: le rôle des Francs

Raymond Brulet

Les Francs ont joué un rôle dans le maintien et l'abandon des frontières de la Gaule du Nord par l'armée romaine. Il faut mettre leur rôle en relation avec l'évolution de ce peuple dont l'expansion et le statut sont en continuelle mutation. Qu'on leur attribue un territoire où se fixer dès le IV<sup>e</sup> siècle dans une zone abandonnée, qu'on les recrute dans l'armée régulière ou comme auxiliaires, qu'ils soient considérés comme alliés, dans le cadre de traités ou qu'ils conquièrent des territoires impériaux au V<sup>e</sup> siècle, leur présence est massive et la place qu'ils occupent est déterminante pour le devenir de la frontière.

## La nouvelle conscience des frontières

Pour les frontières, il faut distinguer l'importance du symbole dans les yeux des contemporains et la matérialité des infrastructures militaires. Durant le Haut-Empire, les Romains conquièrent des peuples, pas des territoires (Isaac 1990, 395). Mais la perception change ensuite. Au Bas-Empire, les Romains ont tendance à considérer les frontières comme territoriales et non plus seulement comme des divisions entre les peuples. L'association directe du terme 'limes' avec les rivières reflète son utilisation au IV<sup>e</sup> siècle et le statut des rivières en tant que frontières joue un rôle au moins dans la nouvelle conscience des frontières.

Dans les textes des Panégyristes, par exemple, les frontières deviennent un indicateur crucial de la force de l'Empire (Graham 2006, 40-50). Le *Codex Theodosianus* traite des questions militaires et témoigne de l'importance de la frontière dans son *Liber 7*. Il y a aussi une valeur juridique appliquée à la zone frontalière qui est importante au Bas-Empire: le *Tractus* est un vaste espace militaire sur lequel s'appliquent des régimes d'exception à l'égard des barbares et des *dediticii* étrangers exclus de la citoyenneté (Kerneis 2016, note 21).

## La frontière-zone

Dans le nord de la Gaule, la 'frontière-zone' a considérablement changé au Bas-Empire par rapport à ce qu'elle était auparavant. Elle s'est étendue sur une profondeur beaucoup plus importante pour des raisons multiples. D'un point de vue géographique, l'arrière-pays du limes est constitué par deux zones hétérogènes en termes de qualité des sols. La première est proche des frontières, sous influence maritime puis formée de sables du Pleistocène. La seconde, située à une centaine de kilomètres de la mer ou au sud des grands fleuves, est loessique, appropriée à développer une économie lucrative et

Raymond Brulet

UCLouvain, raymond.brulet@uclouvain.be

accueil des villas de type traditionnel. Ceci entraîne une différenciation des systèmes économiques, des modes d'habitat et de la culture matérielle, un phénomène bien antérieur à l'époque romaine tardive.

Les changements géomorphologiques affectent les côtes et les estuaires, avec un recul important ou partiel de la ligne de rivage. On a longtemps attribué ces modifications à la transgression marine Dunkerque II, intervenue entre le III<sup>e</sup> et le VIII<sup>e</sup> siècles. Mais il peut aussi s'agir d'un piège dans lequel se sont enfermées plusieurs générations d'archéologues soucieuses d'expliquer la rareté de vestiges dans les zones littorales: "confrontés à la faiblesse d'indices archéologiques et historiques, notamment pour le haut Moyen-Âge, les historiens et les archéologues ont eu régulièrement recours à la mer et à ses 'transgressions' pour justifier l'absence d'occupation" (Lançon & Boulen 2019, 329), voire plus fondamentalement pour associer le recul de la mer à une période faste et les phases transgressives aux périodes de crise.

L'idée même de transgression reflue grâce aux découvertes effectuées dans le cadre de l'archéologie préventive. La mer est loin d'avoir envahi toute la plaine maritime, comme ce devrait être le cas en présence d'un phénomène ainsi nommé. On a sans doute exagéré la portée de cet envahissement des zones côtières par la mer, le phénomène est daté sans précision et on ne sait pas s'il a été véritablement durable. Des enquêtes minutieuses ont été menées dans les différents pays modernes concernés par cette problématique. En France, l'épisode du Dunkerque II est mal représenté à Saint-Omer et à Watten, ce qui fait penser plutôt à des invasions marines brèves, contrôlées par des ruptures de cordons dunaires côtiers et à des surcotes de tempête exceptionnelles, produisant un ennoiment récurrent qui est souvent confondu avec une transgression (Gandouin *et al.* 2007). En Belgique, la question de l'interaction entre la transgression et la régression de l'habitat a aussi été critiquée et les modifications du paysage côtier ont été nuancées (Baeteman 2006; 2016); aux Pays-Bas, l'intérêt pour cette problématique est réel (Bazelmans *et al.* 2004, 4 et carte; Weerts *et al.* 2005; Vos 2015).

Si le modèle général de la transgression et sa datation précise sont remis en cause pour l'Antiquité tardive, la plaine maritime et les grands estuaires sont sensibles aux grandes marées et les inconvénients d'une montée des eaux suscitée périodiquement par de nombreuses tempêtes et des submersions impactent lourdement l'habitat, les activités et le paysage, même si ces événements ne sont pas synchrones dans toute la plaine. Essentiellement, ce sont les chenaux de marée qui jouent un rôle déterminant, provoquant des variations sédimentaires, reflets des changements dans le paysage côtier sans compter que l'impact est davantage perceptible dans les grands estuaires (Baeteman 2008; 2016, 25).

Un autre paramètre est l'état de **dépeuplement** de ces zones. Le processus est précoce, et pas seulement lié à la dérégulation du paysage côtier. Des recherches sérieuses ont montré que l'habitat dont la présence est bien enregistrée jusqu'au milieu du III<sup>e</sup> siècle avait périclité ensuite, notamment au nord de Tongres et qu'il en était de même au IV<sup>e</sup> siècle pour les habitats ruraux des Cananéfates et des Bataves, dégageant l'impression d'un abandon massif des territoires situés au nord de la route Bavay-Cologne (Heeren 2017, 155-158).

Dans ces paysages sablonneux, l'abandon à grande échelle des habitats indigènes est patent pour la seconde moitié du III<sup>e</sup> siècle, les témoins d'occupation de la première moitié du IV<sup>e</sup> siècle demeurent exceptionnels (Heeren 2015), en contraste marqué avec la situation reconnue au nord du Rhin (Roymans *et al.* 2020, 277 et notes 41-42). L'hinterland du limes est donc bien concerné par ce phénomène dans la zone entre Rhin et Meuse au nord-ouest jusqu'au territoire des Bataves (Heeren 2009, 201-213; Van Enckevort *et al.* 2017, 35) et sur le bas Rhin (Brüggl *et al.* 2017, 30-31), il se révèle plus parlant encore grâce aux inventaires des sites ruraux dressés pour la région d'entre Meuse-Demer-Escaut (Heeren 2015, tableau 5; complété dans Roymans *et al.* 2020, fig. 8). Cette dégradation dans le taux d'occupation affecte même au IV<sup>e</sup> siècle la 'région des villas' dans l'arrière-pays de Cologne (Brüggl *et al.* 2017, 30). Les zones situées au nord de la province de Belgique seconde sont aussi concernées par le dépeuplement des campagnes nerviennes et ménapiennes qui ont, dès le Haut-Empire, des caractéristiques très éloignées du modèle gallo-romain attendu (De Clercq 2010).

À l'issue d'une période plus ou moins longue qu'on place à la fin du IV<sup>e</sup> et au début du V<sup>e</sup> siècle, les données archéologiques de différente nature plaident en faveur d'une repopulation des zones sinistrées dont la réalité repose sur l'immigration. Ce processus a été remis en cause par un certain nombre de chercheurs révisionnistes à cause du rejet de l'interprétation ethnique qui lui était sous-jacente, mais Stijn Heeren a bien démontré que la culture matérielle pouvait être valablement utilisée comme indicateur de la migration et de la mobilité des groupes humains (Heeren 2017, 163).

Le **contexte administratif** de la *Germania secunda* est problématique, seules les *civitates* de Tongres et de Cologne sont attestées dans la *Notitia Galliarum*, tandis que, pour le V<sup>e</sup> siècle, la *Notitia Dignitatum* fait défaut sur la structure militaire de cette province. Faut-il admettre que les autres cités étaient démembrées au moment de la rédaction de la *Notitia Galliarum* ou même plus tôt, dès le IV<sup>e</sup> siècle? On peut évidemment penser que ce fût le cas pour les cités des Frisiavons et des Cannanéfates, mais est-ce la même chose pour les Bataves et les *Traianenses*, tout dépend de la signification que l'on accorde à Nimègue (Valkhof) et Xanten (*Tricensimae*) à

partir de la période valentinienne, jouant le rôle de ville ou endossant principalement une fonction militaire (cette interprétation est discutée: Bridger 2003; Otten & Ristow 2008; Heeren 2017, 155; Roymans *et al.* 2020, 16).

Du point de vue **militaire**, en tenant compte du silence de la *Notitia Dignitatum*, on peut penser qu'il n'y avait plus d'armée régulière aux frontières d'une province abandonnée (Heeren 2017, 167; 2020), mais il y a d'autres avis: la perte de la feuille correspondante (Hoffmann 1973, 15-16, note 124) ou au moins de la page annoncée dans l'index qui devait évoquer les unités commandées par le *Dux limitis Germaniae primae* (Van Enckevort *et al.* 2017, 160). Si effectivement, il n'est pas question d'un duché spécifique à la province de Germanie seconde, l'organisation de la frontière militaire a pu continuer d'échoir un certain temps au *Dux Germaniae Primae*, comme ce fût le cas en 368 (Charietto, dans Ammianus Marcellinus *Res Gestae* 27.2).

Ce silence de la *Notitia Dignitatum* à propos de la structure militaire de la province de Germanie seconde reste étonnant pour la zone du Rhin moyen, l'inexistence d'une unité militaire régulière à Cologne au début du V<sup>e</sup> siècle est peu vraisemblable. On ne peut donc pas conclure qu'un traité ait été signé à ce moment pour que toute la défense de la province soit déléguée aux Fédérés. D'un point de vue géopolitique, ces zones frontalières ne sont pas identiques. Pourquoi ne pas supposer qu'elles puissent avoir eu une histoire différente?: un *Litus Saxonicum* nordique plus rapidement abandonné, un limes rhénan avec des tronçons qui ne connaissent pas d'abandon simultané: entre la zone des estuaires et Xanten ou Qualburg et le tronçon du Rhin moyen, encore sanctuarisé par l'armée régulière.

## Les Francs comme ennemis et comme partenaires

Les Francs se révèlent comme des ennemis redoutables ou comme des partenaires, dans le cadre d'alliances conclues par un traité, comme recrutées pour l'armée régulière ou plus souvent pour les unités auxiliaires, éventuellement sous la conduite d'un chef de guerre, sans oublier l'habitude des empereurs et usurpateurs de lever des troupes en Germanie libre pour leur confrontation mutuelle. Il n'est pas aisé de savoir à quels Francs nous avons affaire au fur et à mesure qu'ils apparaissent, mais il faut de toute manière distinguer ceux de l'intérieur et de l'extérieur de l'Empire, à partir du milieu du IV<sup>e</sup> siècle.

**Les Francs, des ennemis à combattre** La première forme sous laquelle on rencontre les Francs est celle d'ennemis à combattre sur la rive droite du Rhin ou qui tentent de pénétrer le territoire dès la fin du III<sup>e</sup> siècle. Postume recrute des troupes d'origine germanique, notamment des Francs contre Gallien et protège aussi les Gaules contre toutes les incursions ainsi qu'Aurélien tribun qui écrase les Francs près de Mayence.

Constantin expurge de la terre batave diverses tribus franques et les déporte sur le territoire romain (*Panegyrici Latini* 7.5.3: "*terram Bataviam sub ipso quondam alumno suo a diversis Francorum gentibus occupatam omni hoste purgavit*"). Il célèbre contre eux des victoires en territoire ennemi à l'est de Cologne, ce qui montre qu'il existe dès cette époque une pression sur deux tronçons de la frontière. Le panégyriste de Maximien et Constantin évoque les victoires de Constance Chlore en 293 qui a massacré et emmené en captivité des milliers de Francs ayant envahi la Batavie et d'autres terres situées en deçà du Rhin (*Panegyrici Latini* 6.4.2: "*Multa ille Francorum milia qui Bataviam aliasque cis Rhenum terras invaserant, interfecit, depulit, cepit, abduxit*", suite à quoi, il installa dans le pays batave un groupe de Francs Saliens.

Le panégyriste de Constance Chlore donne des renseignements sur la localisation d'une composante spécifique du peuple franc dans le nord-ouest: "cette région engloutie en quelque sorte par la férocité des Francs a-t-elle moins sombré que si les fleuves qui l'entourent et la mer qui la baigne l'avaient submergée?" (*Panegyrici Latini* 5.18.3: "*feritate Francorum velut hausta desiderat quam si eam circumfusa flumina et mare adluens operuisset*"). Les Francs de la première heure sont fréquemment associés aux Saxons et aux Frisons, ainsi on ne s'étonnera pas qu'ils soient considérés comme un peuple maritime, enclins aux pillages des terres littorales. Fait notoire, Constance Chlore les prend comme *dediticii*, des barbares soumis et acceptés à l'intérieur des provinces bénéficiant de certains privilèges.

Le groupe installé en Batavie subit une pression importante des Saxons et doit être relogé dans l'Empire, À l'inverse, les Francs du Rhin doivent être combattus et Constant leur impose la paix en 342 après les avoir défaits (Eutropius *Breviarium Historiae Romanae* 10.5); Libanios écrit qu'ils sont soumis à l'autorité de Rome (Libanios *Oratio* 18.75). Ils s'étaient déjà étendus plus au sud, entre Meuse et Escaut, car une pression majeure des Saxons les aurait délogé de Batavie et ils devinrent demandeurs d'asile selon Zosime (*Historia Nova* 3.6). Petit à petit se forme donc dans l'extrême nord-ouest de la Gaule, au sud des grands fleuves, une entité ouverte à l'occupation franque.

Vers 355, une nouvelle menace se profile à l'est: Francs et Alamans concrétisent le danger qu'ils représentent à partir de la rive droite du Rhin, en attaquant Cologne. Julien les combat dans les vallées du Rhin et de la Meuse, mais Rome doit aussi combattre les Francs occidentaux que les Saxons ont à nouveau repoussé un peu plus loin. Ce ne sont pas les mêmes Francs. Ammien Marcellin dénomme ces derniers pour la première fois 'les Francs Saliens'. Ayant gagné l'intérieur du territoire, il faudra bien consentir à reconnaître la Toxandrie (fig. 1) comme leur pays d'accueil, après qu'ils se soient rendus (Ammianus Marcellinus *Res Gestae* 17.3-4). Il s'agit là d'un

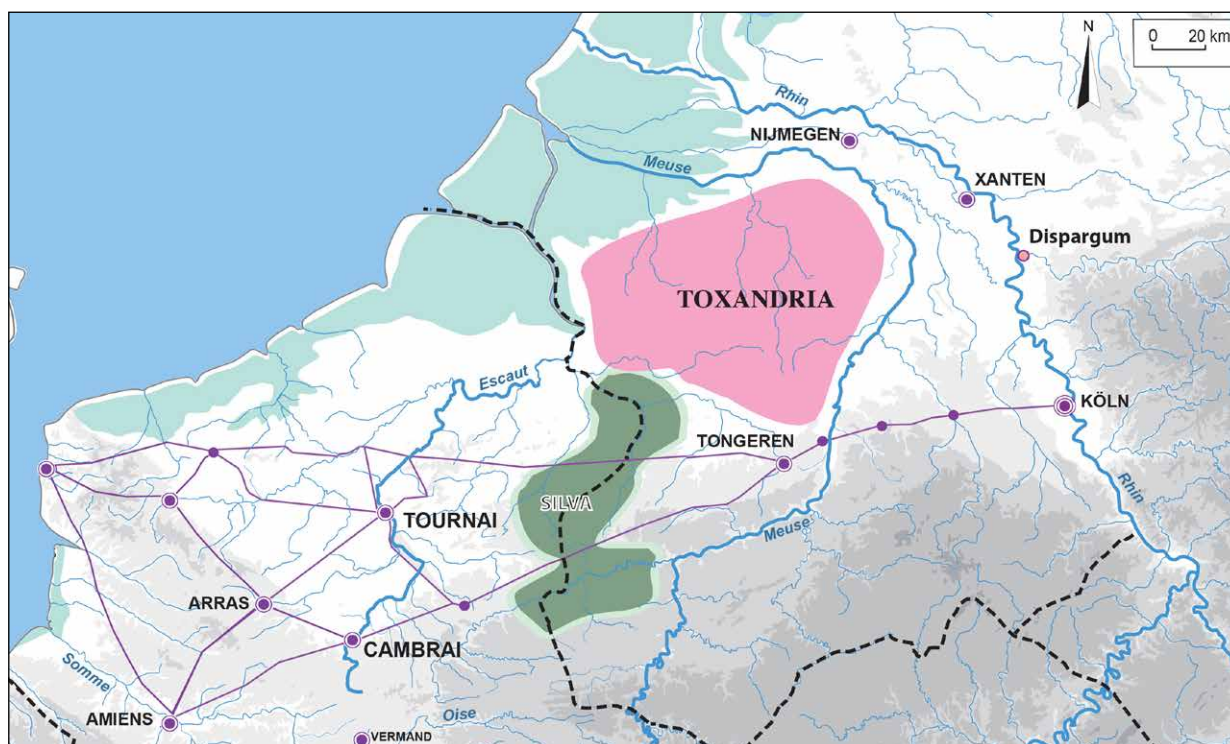


Figure 1. Le Nord de la Gaule au milieu du V<sup>e</sup> siècle lors de l'expansion des Francs du groupe occidental au moment de la progression de Clodion à partir de Dispargum, avec la localisation approximative de la Toxandrie et de la *Silva Carbonaria* (© R. Brulet, UCLouvain).

premier mouvement significatif d'intégration des Francs dans l'Empire au sein d'espaces d'ailleurs peu habités. Mais on n'en est pas encore là pour les Francs du Rhin, comme le prouve le fait que les Chamaves, voisins de ces derniers, bénéficient d'une paix accordée, après avoir été défaits, à condition de retourner sur la rive opposée du Rhin (Ammianus Marcellinus *Res Gestae* 17.5).

**Le choc migratoire de 406/407** Le choc principal de cette invasion est tenu avec un succès partiel, par les Francs de l'extérieur et de l'intérieur qui interviennent volontairement ou non contre les migrants composés de Vandales, d'Alains et de Suèves. L'enrôlement de soldats francs en grand nombre et la situation de ce peuple proche des provinces de *Belgica* et de *Germania secunda*, tout naturellement, les désignait comme des alliés, à l'inverse des Saxons et des Alamans, hostiles ou moins dévoués à la cause romaine (Demougeot 1979, 120). Les groupes frontaliers libres sont les premiers concernés par la défense de la zone correspondant en partie à leur propre territoire, lors du choc subi dans le cadre de la grande migration.

Certains d'entre eux, alliés de Rome, réapparaissent comme soldats de l'usurpateur Jovin en 411 (Lebedynsky 2012, 33) La quantité de trésors romains tardifs de *solidi* et leur répartition dans la zone frontalière

du Bas-Rhin reflètent les tentatives des autorités romaines d'exploiter le potentiel militaire des groupes francs qui y vivaient. La plupart des trésors sont du règne de Constantin III. L'or était versé aux Francs saliens participant à l'armée romaine à cette époque, à l'intérieur et à l'extérieur du limes (Roymans 2017; Roymans & Heeren 2017). Le recours aux traités avec les Francs de l'extérieur devient de plus en plus habituel.

**L'expansion franque** La deuxième étape de l'expansion des Francs est une avancée vers l'intérieur de la Gaule dans les années 30 du V<sup>e</sup> siècle. Les intentions sont conquérantes. Le territoire des Francs s'étend toujours sur la rive droite du Rhin, mais aussi dans l'Empire qui a concédé ou laissé à l'abandon un espace très étendu s'étirant entre la Mer du Nord et la basse Meuse. D'une manière générale, les groupes francs constitués sont très nombreux, comme rapporté par l'auteur du *Panegyrique* de 310 qui parle de l'existence de *diversae Francorum gentes* pour le IV<sup>e</sup> siècle (*Panegyrici Latini* 7.5.3).

Finalement deux groupes principaux émergent dont les historiens modernes font grand cas, eu égard à l'avenir dynastique qu'ils auront, en s'appuyant sur les données géographiques: les Francs rhénans et les Francs de l'Ouest qu'on nommait avant les **Francs Ripuaires** et les **Francs Saliens**, établis en Toxandrie (Ammianus



Marcellinus *Res Gestae* 17.8.3-4); Caius Sollius Apollinaris Sidonius (*Panegyricus* d'Avitus, *carmen* 7.63) utilise encore ce mot, en 456, avant qu'il ne disparaisse des sources mérovingiennes, tandis que celui de Ripuaire, avec Cologne pour centre, n'apparaît qu'au VII<sup>e</sup> siècle (Heuclin 2014, 83). Le terme de Saliens ne convient pas pour caractériser le groupe occidental. Le terme est d'ordre juridique et doit s'appliquer à tous les Francs, c'est-à-dire à ceux qui vivaient sous la loi salique (Springer 1997).

Le **groupe rhénan** se distingue du groupe occidental, il reste plus longtemps installé au-delà du Rhin tandis que l'autre a rapidement un pied-à-terre dans le territoire romain. Les Francs rhénans organisent de fréquents raids depuis l'autre côté de la frontière et Salvianus de Marseille (*De Gubernatione Dei* 6.13) explique combien de fois la ville de Trèves en a payé le prix après 410. Aetius les expulse en 428, mais un accord est signé vers 435 pour le début d'une occupation de la rive gauche. Plus tard, Aegidius sera définitivement vaincu par les Francs rhénans.

On attribue au **groupe occidental** une progression dans le nord de la province de *Belgica secunda*, selon plusieurs étapes (Dierkens & Périn 2003). On ne peut pas savoir s'il y a un projet politique défini derrière cette avancée ou si ce sont les circonstances qui permettent de la réaliser. On peut se demander si l'initiative en question prise par le roi Clodion doit être attribuée au groupe de l'ouest ou au groupe rhénan. L'auteur de cette progression franque, pour tout dire assez fulgurante, résidait dans sa forteresse de *Dispargum*, avant de lancer l'opération de conquête (Bechert 2017). Les passages concernés par cette épopée ne concordent pas, mais la solution du *Liber Historiae Francorum* paraît plus réaliste que celle de Grégoire de Tours, on préférera rejeter l'hypothèse de situer Duisburg à la frontière des Nerviens (Renard 2014) et de s'accorder sur Duisburg sur la rive droite du Rhin, aux confins des *Thoringorum* pour identifier cet emplacement (Lebecq 2019, 13): Clodion aurait traversé le fleuve avec une grande armée, avant d'entrer dans la forêt charbonnière et de prendre la ville de Tournai, avant celle de Cambrai et d'Arras (*Liber Historiae Francorum* 5). Les confins du territoire des Tongres (la région des Thuringiens est ici exclue) ne sont pas si éloignés du Rhin d'autant que, en cas de disparition de l'entité des *Cugerni*, ce qui est presque certainement le cas à cette époque, seul le territoire des Tongres est reconnu en deça du Rhin).

Une réaction du pouvoir romain est connue grâce à Sidoine Apollinaire, avec Majorian et Aetius qui combattent Clodion (Sidoine Apollinaire *Panegyricus* de Majorianus, *carmen* 5.36: "*post tempore parvo, pugnastis pariter, Francus qua Cloio patentes, Atrebatum terras pervaserat*"), prouvant que le roi conquérant était considéré comme un ennemi. Il est contraint de reculer et d'accepter un traité par lequel il gardait le contrôle sur la moyenne vallée de l'Escaut. Le premier véritable royaume franc à se développer avant le

milieu du V<sup>e</sup> siècle couvre donc en *Belgica secunda* toute sa partie septentrionale, loin du limes et de la Toxandrie, que Clodion en soit originaire ou non.

Selon Priscus, Mérovée avec Aetius, aurait participé à la bataille contre Attila en 451, en tant qu'allié. Il y aurait donc rupture de comportement entre les Francs de Clodion et ceux de Mérovée, qui collaborent plutôt qu'ils ne s'opposent au pouvoir romain. Une attitude également adoptée par Childéric.

## Conclusions

Les forts nommés dans la *Notitia Dignitatum* intégrant le système de défense du *Litus Saxonicum* le long de la côte nord-ouest ne sont pas identifiés, on peut penser qu'ils se situaient au sud de la *Belgica secunda* et que la façade de la Manche, entre Aardenburg et l'embouchure du Rhin, ne pouvait plus accueillir de sites militaires permanents au IV<sup>e</sup> siècle. Le fort d'Oudenburg qu'on croit abandonné dans la seconde décennie du V<sup>e</sup> siècle montre qu'à ce moment il avait changé de statut, en n'étant plus contrôlé par l'armée romaine régulière. La culture germanique imprègne la dernière communauté occupant le site.

La frontière romaine du Rhin inférieur connaît un destin similaire, les fortifications fluviales sont peu nombreuses à être rigoureusement maintenues jusqu'en amont de Xanten, on constate un changement de paradigme dans la défense du territoire, car l'arrière-pays a été largement déserté et la frontière ne représente plus de valeur, en dehors de l'intérêt qui s'attache à défendre le couloir du fleuve lui-même pour protéger la circulation des biens. Peu d'obstacles subsistent pour endiguer la migration des populations septentrionales au V<sup>e</sup> siècle d'autant que l'organisation administrative du nord de la province de *Germania secunda* est sans doute passée aux oubliettes. Du coup, il a été proposé que la défense de cette zone incombe désormais presque naturellement aux Fédérés (Heeren 2020). En revanche, on ne peut pas admettre que le couloir du Rhin moyen n'ait pas été protégé par l'armée régulière, jusqu'au milieu du V<sup>e</sup> siècle, ce qui n'empêche pas que beaucoup de recrues soient d'origine franque. Enfin, l'hinterland de la frontière, dans le nord, s'assimile à la Toxandrie, qui devient une zone tampon de grande envergure et, par conséquent, il n'est pas surprenant de voir qu'elle sera sécurisée au sud par une mise en défense systématique de la route de Cologne à Bavi (Brulet 2017).

Le rôle qui échoit aux Francs est aussi celui de l'expansion du peuple au sein du territoire romain à partir de noyaux préalablement installés sur le sol impérial, encore que nous n'ayons pas beaucoup d'indices de la présence de groupes très développés en Toxandrie dès le milieu du IV<sup>e</sup> siècle. L'expansion du groupe conduit par Clodion à partir de Duisburg, sur la rive droite du Rhin, ouvre une nouvelle page dans la progression des Francs

vers l'ouest de la Belgique seconde, tandis que la situation évolue sur le Rhin inférieur où de petits royaumes sont installés sur la rive droite.

Plus tard, Aetius assure la défense de la frontière dans le sud de la *Germania secunda*, mais il est très dépendant des auxiliaires et de ses alliances. Sous Aegidius, l'armée mobile continue de se développer avec des groupes ethniques étrangers. Les unités qu'elles soient celles des derniers maîtres de la milice ou celles des groupes indépendants qui accompagnent les chefs de guerre francs ou des fédérés et auxiliaires, s'inscrivent dans des stratégies qui caractérisent l'armée de manœuvre plutôt que celle de frontière, qui dès lors est amenée à disparaître.

Une certaine continuité existe avec la constitution de corps d'armée autonomes ou l'incorporation des forces franques dans l'armée royale mérovingienne. Les Mérovingiens ne maintenaient pas d'armée permanente professionnelle, elle se compose de deux groupes qui différaient par leur signification sociale et politique: les combattants à court terme exerçant d'autres professions et les membres du groupe royal impliqués dans la gouvernance du royaume (Sarti 2020).

## Bibliographie

- Baeteman, C., 2006: De laat holocene evolutie van de Belgische kustvlakte. Sedimentatieprocessen versus zeespiegelschommelingen en Duinkerke transgressies, in: A.M.J. de Kraker & G.J. Borger (dir.), *Veen-Vis-Zout. Landschappelijke dynamiek in de zuidwestelijke delta van de Lage Landen* (Geoarchaeological and Bioarchaeological Studies 8), 1-17.
- Baeteman, C., 2008: Radiocarbon dated sediment sequences from the Belgian coastal plain. Testing the hypothesis of fluctuating or smooth late-Holocene relative sea-level rise, *The Holocene* 18/8, 1219-1228.
- Baeteman, C., 2016: Modifications du paysage et possibilité d'activités humaines pendant l'Holocène dans la plaine maritime belge, *Revue du Nord* 24 (Hors série. Collection Art et Archéologie), 15-28.
- Bazelmans, J., M. Dijkstra & J. de Koning, 2004: Holland during the First Millennium, *Acta Archaeologica Lovaniensia Monographiae* 15, 3-36.
- Bechert, T., 2017: *Dispargum-Divsburg. Königshof und Kaiserplatz*, Duisburg.
- Bridger, C., 2003: Das spätantike Xanten. Eine Bestandsaufnahme, in: T. Grünewald & S. Seibel (dir.), *Kontinuität und Diskontinuität. Germania inferior am Beginn und am Ende der römischen Herrschaft*, Berlin/New York (Ergänzungsbände zum Reallexikon der Germanischen Altertumskunde 37), 12-36.
- Brüggler, M., K. Jeneson, R. Gerlach, J. Meurers-Balke, T. Zerl & M. Herchenbach, 2017: The Roman Rhineland. Farming and consumption in different landscapes, in: M. Reddé (dir.), *Gallia Rustica 1. Les campagnes du nord-est de la Gaule, de la fin de l'âge du Fer à l'Antiquité tardive*, Bordeaux (Mémoires 49), 19-96.
- Brulet, R., 2017: The Roman army and military defence in Northern Gaul and the Germanic provinces during the Late Empire, in: N. Roymans, S. Heeren & W. De Clercq (dir.), *Social dynamics in the northwest frontiers of the Late Roman Empire*, Amsterdam (Amsterdam Archaeological Studies 26), 39-56.
- De Clercq, W., 2010: Aux confins septentrionaux des Gaules, la 'romanisation' des campagnes du nord de la ciuitas Menapiorum, in: P. Ouzoulis & L. Tranoy (dir.), *Comment les Gaules devinrent romaines*, Paris, 213-229.
- Demougeot, E., 1979: *La formation de l'Europe et les invasions barbares*, Paris.
- Dierkens, A. & P. Périn, 2003: The 5<sup>th</sup>-century advance of the Franks in Belgica II. History and archaeology, in: E. Taayke, J.J. Looijenga, O.H. Harsema & H.R. Reinders (dir.), *Essays on the early Franks*, Groningen, 165-193.
- Gandouin, E., B. Van Vliet-Lanoë, E. Franquet, V. Andrieu-Ponel, D.H. Keen, P. Ponel, M. Meurisse, J. Brulhet & M. Brocandel, 2007: Analyse haute résolution de la transgression holocène dans un secteur subsident du littoral français. L'enregistrement du bassin-marais de St Omer (Pas de Calais, France), *Géologie de la France* 1, 11-32.
- Graham, M.W., 2006: *News and frontier consciousness in the Late Roman Empire*, Ann Arbor.
- Heeren, S., 2009: *Romanisering van rurale gemeenschappen in de civitas Batavorum. De casus Tiel-Passewaaij*, Amersfoort (Nederlandse Archeologische Rapporten 36).
- Heeren, S., 2015: The depopulation of the Lower Rhine region in the 3<sup>rd</sup> century. An archaeological perspective, in: N.G.A.M. Roymans, A.M.J. Derks & H.A. Hiddink (dir.), *The Roman villa of Hoogeloon and the archaeology of the periphery*, Amsterdam (Amsterdam Archaeological Studies 22), 269-292.
- Heeren, S., 2017: From Germania inferior to Germania secunda and beyond. A case study of migration, transformation and decline, in: N. Roymans, S. Heeren & W. De Clercq (dir.), *Social dynamics in the northwest frontiers of the Late Roman Empire*, Amsterdam (Amsterdam Archaeological Studies 26), 149-178.
- Heeren, S., 2020: Van Bataafse auxiliarii naar Frankische foederati. Migratie in de archeologie en nieuwe groepen in het grensgebied van Germania secunda, *Lampas* 53, 176-193.
- Heuclin, J., 2014: *Les Mérovingiens*, Paris (Biographies & Mythes historiques).
- Hoffmann, D., 1973: Die Gallienarmee und der Grenzschutz am Rhein in der Spätantike, *Nassauische Annalen* 84, 1-18.

- Isaac, B., 1990: *Limits of Empire. The Roman army in the East*, Oxford.
- Kerneis, S., 2016: Rome and the Barbarians. The privilege of law, *Revue électronique d'histoire du Droit*, 1-11.
- Lançon, M. & M. Boulen, 2019: Les occupations humaines de la plaine maritime flamande à l'Holocène supérieur. Un changement de paradigme?, *Quaternaire* 30/4, 311-334.
- Lebecq, S., 2019: *La geste des rois francs*, Paris (Liber Historiae Francorum).
- Lebedynsky, I., 2012: *La grande invasion des Gaules 407-409*, Clermont-Ferrand (Illustoria 15).
- Otten, T. & S. Ristow, 2008: Xanten in der Spätantike, in: M. Müller, H.J. Schalles & N. Zieling (Hrsg.), *Colonia Ulpia Traiana. Xanten und sein Umland in römischer Zeit*, Mainz (Geschichte der Stadt Xanten 1) 549-582.
- Renard, E., 2014: Le sang de Mérovée. 'Préhistoire' de la dynastie et du royaume mérovingiens, *Revue belge de Philologie et d'Histoire* 92, 999-1039.
- Roymans, N., 2017: Gold, germanic *foederati* and the end of imperial power in the Late Roman North, in: N. Roymans, S. Heeren & W. De Clercq (dir.), *Social dynamics in the northwest frontiers of the Late Roman Empire*, Amsterdam (Amsterdam Archaeological Studies 26), 57-80.
- Roymans, N. & S. Heeren, 2017: The Late Roman solidus hoard from Lienden. A window on Romano-Frankish contacts in the mid-5<sup>th</sup> century Lower Rhine region, *Archäologisches Korrespondenzblatt* 47/3, 397-412.
- Roymans, N., T. Derks & S. Heeren, 2020: Roman imperialism and the transformation of rural society, *Britannia* 51, 265-294.
- Sarti, L., 2020: The military and its role in Merovingian society, in: B. Effros & I. Moreira (dir.), *The Oxford handbook of the Merovingian world*, New York, 255-277.
- Springer, M., 1997: Gab es ein Volk der Salier?, in: D. Geunenich, W. Haubrichs & J. Jarnut (dir.), *Nomen et gens. Zur historischen Aussagekraft frühmittelalterlicher Personennamen*, Berlin/New York (Ergänzungsbände zum Reallexikon der Germanischen Alterumskunde 16), 58-83.
- Van Enckevort, H., J. Hendriks & M. Nicasie, 2017: *Nieuw licht op donkere eeuwen. De overgang van de laat-Romeinse tijd naar de vroege middeleeuwen in Zuid-Nederland*, Amersfoort (Nederlandse Archeologische Rapporten 58).
- Vos, P.C., 2015: *Origin of the Dutch coastal landscape. Long-term landscape evolution of the Netherlands during the Holocene described and visualized in national, regional and local palaeogeographical map series*, Utrecht.
- Weerts, H.J.T., W.E. Westerhoff, P. Cleveringa, M.F.P. Bierkens, J.G. Veldkamp & K.F. Rijdsdijk, 2005: Quaternary geological mapping of the lowlands of The Netherlands. A 21<sup>st</sup> century perspective, *Quaternary International* 133-134, 159-178.



# The abandonment of Roman military installations in the river Trebižat valley (Bosnia and Herzegovina)

Tomasz Dziurdzik, Michał Pisz and Mirko Rašić

## **Tomasz Dziurdzik**

National Museum in Warsaw,  
Collection of Ancient Art /  
University of Warsaw, Faculty  
of Archaeology. Muzeum  
Narodowe w Warszawie,  
Aleje Jerozolimskie 3,  
00-495 Warszawa, Poland,  
t.dziurdzik@gmail.com

## **Michał Pisz**

University of Warsaw, Faculty  
of Geology / University  
of Bradford, School of  
Archaeological and Forensic  
Sciences. Wydział Geologii,  
Uniwersytet Warszawski,  
ul. Żwirki i Wigury 93,  
02-089 Warszawa, Poland,  
michal.pisz@uw.edu.pl

## **Mirko Rašić**

University of Mostar, Faculty  
of Philosophy, Department  
of Archaeology, Filozofski  
fakultet, Odjel za arheologiju,  
Matice hrvatske b.b.,  
BA-88000 Mostar, Bosnia and  
Herzegovina, mirko\_rasic@  
ff.sum.ba

The end of Roman frontiers as a research topic is mostly dealing with large scale processes in the later periods of Roman history. However, for a variety of reasons some military installations have been abandoned also during earlier periods. This mostly happened on a more limited scale, and was often caused by developments and events at a regional level. Such processes could be top-down developments, resulting from strategic factors, but also bottom-up adjustments to changes in local conditions. A localised analysis of abandonment of military installations can show why and how individual features of military infrastructure were made redundant and ways in which the process took place. It can more convincingly discern what was the result of conscious planning, and what was mere reaction to undergoing developments. Thus, adapting a global perspective may help the observation of patterns and in turn allow a better understanding of reasons behind such changes on any level. This paper aims to analyse one such example of abandonment of military installations, in the lower river Trebižat valley within modern Ljubuški municipality (south-western Bosnia and Herzegovina) which happened probably in 3<sup>rd</sup> century. The importance of this case study lies in the fact that the broader region, Roman *Dalmatia*, at first had a strong garrison, including two legions, but was then gradually demilitarised, though with later episodes of temporarily increased military presence (those changes recently summarised in Radman-Livaja 2022). Some garrisons were replaced by token military presence, as units were divided into detachments placed in several bases. Their role was shifting from conquest, through occupation, preventing a new revolt against Roman rule (Sanader *et al.* 2019, 125-127) and also establishing permanent infrastructure, to a small force, policing and protecting the province from external threats (Radman-Livaja 2022). Observing why some installations were kept in use, while other not, sheds light on the workings of Roman military decision-making.

Debates continue whether the defences of *Dalmatia* constituted a planned system, about their definition as *limes Delmaticus*, and the time they were established (Šašel 1974; Wilkes 1977; Sanader 2002; Periša 2008; Tončinić 2015; Sanader *et al.* 2019). However, the south-east-north-west line (following the road connecting *Narona* to *Salona* through

the legionary base *Tilurium*, and continuing north-west to the second legionary base, *Burnum*), had obvious strategic importance in Roman occupation of *Dalmatia*. It formed the communication backbone for the army (Glavaš 2015, summarising the military role of Dalmatia's roads), regardless of whether the location of military bases on this line was planned or was the result of a sum of local developments. Some permanent forts and fortresses with stone defensive walls and interior constructions probably repeated the locations of earlier, temporary – Augustan and Caesarean – bases, following the directions of military advances towards Dalmatia's interior (Sanader 2002, 128). Even if there was no direct continuity, similar strategic needs could result in similar choices as the fortifications guarded river crossings and communication routes.

The case study area analysed in this paper, the lower river Trebižat valley, is located at the southern end of this line of military installations, where the *Salona-Narona* road turns south, to cross the line of hills into the coastal zone, towards *Narona*. This emporium turned Roman colony served as a bridgehead of Roman expansion in Western Balkans since the Republic (Zaninović 1980). As a port at the mouth of the river *Naro* (Neretva), it sat on a key transport and communication route into the Western Balkans. The military presence in this zone was initially aimed at protection of *Narona* and projection of force inland, both along the Neretva into the heart of the Balkans, and to the north, towards the *Delmatae*, major opponents of Roman rule. This resulted in some early military activity in the river Trebižat valley, evidenced mostly by stray finds. The existence of permanent early Augustan or even late Republican fortifications somewhere in this zone has been proposed (Miletić 2017), but this theory so far lacks concrete proof.

The main element of Roman military presence in the studied area was the fort at Gračine in Humac, sometimes identified with ancient toponym *Bigeste*. There was some confusion as to the nature of the site following the – rather poorly conducted and mostly unpublished – excavations in the late 1970's (Bojanovski 1981). It led some to even question the character of the site (Basler 1985, 22; Dodig 2011, rightly opposed by Miletić 2017). Recent geophysical research followed by verification excavations have finally clarified that we are indeed dealing with an auxiliary fort (Pisz & Dziurdzik 2019; Dziurdzik *et al.* in press). The fort was possibly accompanied by other military installations. Remains of watchtowers on the hills bordering the valley have also been reported on Gradina in Gornji Radišići (ALBiH 3, 25.116), Gračina in Orahovlje (ALBiH 3, 25.101), Grad in Vitina-Utvica (ALBiH 3, 25.105), and Gradina in Grljevići (ALBiH 3, 25.121), which would have excellent fields of vision, providing the unit stationed at Gračine with improved intelligence about the situation in the valley, as well as on the approaches to it. However,

the original data about the sites are mostly limited, with uncertain identification and preventing any attempts at dating. Perhaps some come from Late Antiquity, when the broader region saw a great increase in the number of defensive installations, mostly located on hilltops (Bulić 2013). Their verification by new fieldwork was mostly inconclusive (Dziurdzik 2018, 359, no. 13), because several of those positions were reused in later times as watch posts, including during 20<sup>th</sup> century, which mostly destroyed the remains of ancient constructions. Additional observation points have been suggested on the hills of Obale, Šehiti, Butorovica, Zelengora, and near the Ljubuški Castle (Bojanovski 1985, 88-90), but this was more of a hypothetical proposition.

While the presence of a Roman auxiliary garrison in the area started probably with the *bellum Batonianum*, the Pannonian-Dalmatian uprising in 6-9 AD, which was the final accord in the Roman conquest of *Dalmatia*, the establishment of the Gračine fort is difficult to date. This results from a combination of factors: unfavourable conditions at the site, including very low thickness of archaeological layers and poorly preserved stratigraphy (most of the remains are the foundations of walls rather than occupational layers) combined with the rather unfortunate way the excavations of the 1970's were conducted, regrettably results in more questions than answers.

During the excavations, stamps of private manufacturers from the Pansiana workshop, including the QCP Pansiana type, have been found (Bojanovski 1985, 78-83). Some authors date them to the third quarter of 1<sup>st</sup> century BC: 43/42 BC (Bojanovski 1988, 41), or 40-27 BC (Matijašić 1983, 964; Miletić 2017, 25-27). Meanwhile, other scholars date this type much wider, to 43 BC-14 AD (Righini 1998, 52; Pellicioni 2012, 51), to the period between the death of the original owner of the workshop, Gaius Vibius Pansa, and the reign of Tiberius, when the period of assured imperial ownership of the workshop begins. In some cases there is even more confusion, such as dating the same type both to 40-27 BC and early 1<sup>st</sup> century AD (Dodig 2007). The question is still open to debate.

New excavations have revealed that in the area of the barracks there were at least two stone construction phases (Rašić 2022, 336-337). Moreover, we can consider a possibility that the two central buildings of the fort could be a complex of connected *principia* and *praetorium*, typical for the early period of development of permanent Roman military bases, including Augustan sites (Pietsch 1993; Blagg 2000, 139-142; Von Schnurbein 2000), when the functions of headquarters and commander's house were not yet separated. Such organisation of space would not, however, also be direct proof of dating: it is still present in the times of Tiberius, and continues in marching and siege camps even in later periods. All in all, the chronology of the establishment of the fort and the construction of its



elements should be considered uncertain, until further research will hopefully allow a verification of data from the excavations in the 1970's.

A number of auxiliary cohorts were stationed in the area; the available evidence has been subject to numerous analyses (Marín *et al.* 2000; Marić 2016; 2019a; 2019b with references to earlier publications; Mayer-Olivé 2016; Miletic 2017). The results of geophysical research clearly show that the Gračine fort was sized for a single cohort only (Dziurdzik & Mech 2021, 133), but the sequencing of units is partly uncertain, especially in the first half of 1<sup>st</sup> century AD. There is also some ambiguity concerning the last of the units stationed there. *Cohors I Belgarum equitata* was present in *Dalmatia* from at latest 97 AD (Eck & Pangerl 2007). It could have stayed at Gračine throughout a large part of 3<sup>rd</sup> century (Radman-Livaja 2022, table 1). A detachment of *Cohors VIII voluntariorum civium Romanorum* was also present at an unknown point in 2<sup>nd</sup> or early 3<sup>rd</sup> century. It probably supported rather than replaced the garrison, perhaps helping in construction, as evidenced by stamped building material. It was suggested that the abandonment of the fort could have happened as late as the reign of Gallienus (Marić 2019a, 90), as part of measures undertaken to reorganise the army. This included the creation of a new cavalry formation, *Equites Dalmatae*, which probably was organised by combining mounted elements detached from various military units present in *Dalmatia* (Dziurdzik 2017, 227-229). Whether any troops were still at Gračine at this time is however very unclear.

Unfortunately, the site provides limited evidence concerning its late occupation. The majority of small finds from the 1970's excavations at Gračine can be dated to 1<sup>st</sup> century AD (Rašić 2022, 357). Far fewer artefacts can be associated with 2<sup>nd</sup> century, and only single finds come from both 3<sup>rd</sup> and 4<sup>th</sup> century. This discrepancy can be caused by one or more factors. Firstly, 2<sup>nd</sup> century and later layers were probably severely damaged by erosion and ploughing, its traces visible on the upper parts of wall foundations and street surfaces, meaning that occupational layers were destroyed. Secondly, there is a possibility that the garrison was reduced in size, perhaps using only a part of the fort. This would result both in fewer archaeological remains and possibly their uneven spatial distribution. As the number of units in *Dalmatia* was reduced, areas of responsibility of particular units probably increased, and cohorts were divided into detachments (Alföldy 1987, 273). Epigraphic monuments related to *Cohors I Belgarum equitata* were recorded in several other places in *Dalmatia* (Matijević 2011, 184; Marić 2016, 105). Obviously not all of them point to permanent stationing of a detachment, but at the very least show substantial mobility of soldiers and their engagement in various tasks in many locations. A similar situation concerned also *Cohors VIII voluntariorum*

*civium Romanorum* (Matijević 2009, 45-46). Thirdly, depending on the circumstances, the final abandonment of the fort could also involve the dismantling of buildings in order to salvage the materials. However, there is of course also a chance that the fort was abandoned earlier than assumed, and in the 3<sup>rd</sup> century the cohort was in fact already stationed elsewhere.

Even if it was accelerated by some political and military events, be it the reforms of Gallienus, or some event in late 2<sup>nd</sup>-early 3<sup>rd</sup> century, the abandonment of the Gračine fort seems to be a culmination of longer processes. It paradoxically stems from the very reasons why the garrison remained there during the 2<sup>nd</sup> century. The military presence was intricately connected with civilian settlement in the area (Dziurdzik *et al.* 2022, 481-482). During the Principate most settlements were located on lower slopes along the edges of river valley (Dziurdzik *et al.* 2022, 495), which combined ease of communication and access with the most efficient use of arable land. In Late Antiquity, the disappearance of the garrison coincided with profound changes in local settlement patterns. Many sites were discontinued and there was a shift towards locations that were harder to reach and/or find, such as hilltops or areas hidden behind hill ranges. This probably reflects a change in perceptions of safety. But looking on a larger scale, changes in civilian life could have also influenced military decision-making. The nearby city of *Narona*, whose protection was one of the tasks of the garrison at Gračine, witnessed a decline in economic activity, perhaps because its role as a gateway to the hinterland lost importance. This may have resulted from the development of the Danubian limes area as a major market, meaning that raw materials and produce once exported through *Narona* could have been diverted elsewhere.

In this context one should consider the economic factors concerning the presence of soldiers in the lower river Trebižat valley. Together with the veteran settlement (Glavičić & Pandža 2017), they were a major driving factor for economic development. But veterans could have been settled in this area precisely because of the needs of the military, in order to facilitate food supplies (Dziurdzik & Mech 2021, 134). The production surplus associated with villa-based model of agriculture was necessary to avoid the staggering costs and logistical problems of supplying the garrison by long-range transports. This is especially important in this area – the river Trebižat is non-navigable, causing reliance on land routes, and the closest seaports are on the opposite side of steep hill ranges.

In fact, issues of supply were perhaps some of the reasons why the Gračine fort continued to be intensively used by the military throughout 2<sup>nd</sup> century, even though the garrison of the province was gradually reduced. Firstly, the position was well developed, and with secured access to local supplies. This meant that it was easier to use it as a

base for operations conducted by detachments in various parts of the province, rather than move the whole unit to another location. Secondly, some of the tasks fulfilled by the auxiliary cohort could have in fact been connected to military supply systems. The role of a logistics centre or supply base is suggested by the number of monuments related to temporary presence of soldiers from various military units. Special attention must be given to two inscriptions found in the vicinity of the fort that are related to renovations made by the military to a sanctuary, and indirectly point to involvement in some matters related to provision of supplies (Dziurdzik & Mech 2021, 135).

The first inscription commemorates the reconstruction of a temple to Liber Pater together with its porticoes by a centurion from *Legio XI Claudia* (CIL III.1789 = 6363 = 8485). In the second inscription, probably the same complex of temple with porticoes (though this time it is dedicated not only to Liber Pater, but also to Libera) was renovated by *Cohors I Belgarum* under the command of Flavius Victor, a centurion from *Legio I Adiutrix pia fidelis* (CIL III.1790 = 6362 = 8484). Thanks to consular dating to 173 AD, the second inscription provides insight into the individual character of the religious act. The decision of the officer to renovate the sanctuary was motivated by who he was, the general military situation, and the role assigned to him and the unit he was in charge of. It was made in the year of a major offensive against the Quadi. Romans used *Brigetio* – the base of *Legio I Adiutrix* – as a staging ground and supply base for the invasion force. It was thus no coincidence that Flavius Victor was sent to command *Cohors I Belgarum* at Gračine. Part of his task at this posting was to ensure that his home base would be getting the supplies necessary for the major military operation. However, it is uncertain what they were. Grain as well as wine could be one of the possibilities, as are metals from the interior of *Dalmatia*, or perhaps animal skins and/or dried meat. All those supplies were vital for everyday functioning of the army, and in case of an operation such as the campaign against the *Quadi*, large quantities needed to be transported to a single location in a short period of time.

In this, Victor's decision to perform a religious act had multiple meanings. First, he aimed to gain divine support for his part of the undertaking or thank for its successful completion (Liber Pater was closely associated with military supplies, Birley 1978, 153; Sarnowski 2013, 144). Secondly, he commemorated his participation (though indirect) in his unit's major operation. He explicitly used the consular dating to make sure that the text would make obvious the link of his undertaking to a particular historical moment, and mark his involvement in it.

Perhaps one of the reasons why the Gračine fort was abandoned was that military supply routes switched directions (similarly to the trade going through *Narona*),

and rather than through the Adriatic, the produce of the interior of *Dalmatia* was transported towards the Danube. The pacification of the province meant that the fort was no longer needed also from a point of view of defences. Thus the end of military installations in the river Trebižat valley was an adaptation to the changes of a local nature and Empire-wide processes, as the 3<sup>rd</sup> century abandonment of the fort coincided with profound changes in local settlement patterns and economy. The decision could have been made consciously, as part of military planning. Alternatively, it may have resulted from external circumstances, such as that troops were transferred elsewhere simply did not return to the fort and no replacement was ever deemed necessary. The case study shows how the ways in which military installations ceased to exist result from the intertwining of local conditions with Empire-wide processes.

## Acknowledgements

Research on the lower river Trebižat valley within modern Ljubuški municipality (south-western Bosnia and Herzegovina) was conducted during a Lanckoroński Foundation Scholarship. Some of the data was collected during fieldwork performed within grant 2015/19/N/HS3/00886 awarded by National Science Centre (Poland), realised in 2016-2020 at Faculty of History, University of Warsaw. The first author would like also to express gratitude to the Scientific Committee of the XXV<sup>th</sup> Limes Congress for the award of a bursary for participation in the conference.

## Abbreviations

ALBiH: Čović 1988

CIL: *Corpus Inscriptionum Latinarum*

## Bibliography

- Alföldy, G., 1987: *Römische Heeresgeschichte. Beiträge 1962-1985*, Amsterdam (MAVORS Roman Army Researches 3).
- Basler, Đ., 1985: Nova postavka Muzeja Franjevačkog samostana Humac, in: D. Vukojević (ed.), *100 godina Muzeja na Humcu*, Ljubuški, 17-30.
- Birley, E., 1978: The religion of Roman army, 1895-1977, in: H. Temporini & W. Haase (eds), *Aufstieg und Niedergang der römischen Welt* II.16.2, Berlin/New York, 1506-1541.
- Blagg, T.F.C., 2000: The architecture of the legionary principia, in: R.J. Brewer (ed.), *Roman fortresses and their legions. Papers in honour of George C. Boon*, London/Cardiff, 139-147.
- Bojanovski, I., 1981: Gračine, Ljubuški. Rimski vojni logor, *Arheološki pregled* 22, 63-66.
- Bojanovski, I., 1985: Epigrafski i topografski nalazi s područja antičke Bigeste (Pagus Scunasticus), in:

- D. Vukojević (ed.), *100 godina Muzeja na Humcu*, Ljubuški, 65-94.
- Bojanovski, I., 1988: *Bosna i Hercegovina u antičko doba*, Sarajevo (Akademija nauka i umjetnosti Bosne i Hercegovine 66 / Centar za balkanološka ispitivanja 6).
- Bulić, D., 2013: The fortifications of the Late Antiquity and the Early Byzantine Period on the later territory of the South-Slavic principalities, and their re-occupation, in: S. Rudić (ed.), *The world of the Slavs. Studies on the East, West and South Slavs. Civitas, oppidas, villas and archaeological evidence (7<sup>th</sup> to 11<sup>th</sup> centuries AD)*, Belgrade, 137-233.
- Čović, B. (ed.), 1988: *Arheološki leksikon Bosne i Hercegovine 3. Arheološka nalazišta. Regija 14-25*, Sarajevo.
- Dodig, R., 2007: Pečat Pansiana na crijevu iz Ljubuškoga, *Hercegovina* 21, 39-48.
- Dodig, R., 2011: Rimski kompleks u Gračinama. Vojni tabor ili...?, in: A. Librenjak & D. Tončinić (eds), *Arheološka istraživanja u Cetinskoj krajini. Radovi kolokvija Rimska vojska u procesu romaniziranja provincije Dalmacije*, Zagreb (Izdanja Hrvatskog arheološkog društva 27), 327-345.
- Dziurdzik, T., 2017: The relation of Late Roman equites Dalmatae to Dalmatia, in: D. Demicheli (ed.), *Illyrica antiqua II. In honorem Duje Rendić-Miočević*, Zagreb, 223-233.
- Dziurdzik, T., 2018: Ljubuški Archaeological Project. Roman and Late Antique settlement in western Herzegovina, 2015, *Światowit* 13/14 (54/55) (2015/2016) Fascicle A/B, 355-363.
- Dziurdzik, T. & A. Mech, 2021: Securing the hostile hinterland. The Roman fort at Gračine and the defences of Narona, in: M. Eisenberg & R. Khamisy (eds), *The art of siege warfare and military architecture from the Classical World to the Middle Ages*, Oxford, 129-136.
- Dziurdzik, T., M. Pisz, A. Mech & M. Rašić, 2022: Reinterpreting a "Roman villa" site. First results of nondestructive archaeological research in Dračevica (Donji Radišići, Bosnia and Herzegovina), *Archaeological Prospection* 29/3, 479-499 (DOI: 10.1002/arp.1868).
- Dziurdzik, T., M. Pisz & M. Rašić, in press: Demystifying the Roman fort at Gračine (Bosnia and Herzegovina), in: *Proceedings of the 24<sup>th</sup> Limes Congress*.
- Eck, W. & A. Pangerl, 2007: Eine Konstitution für die Truppen der Provinz Dalmatien unter Nerva, *Zeitschrift für Papyrologie und Epigraphik* 163, 233-238.
- Glavaš, I., 2015: *Vojno značenje cesta u rimskoj provinciji Dalmaciji za principata*, Zadar (PhD thesis University of Zadar, <https://www.academia.edu/25343167/>
- Vojno značenje Denge\_cesta\_u\_rimskoj\_provinciji\_Dalmaciji\_za\_principata (PhD).
- Glavičić, M. & Ž. Pandža, 2017: Veterani pagi Scunastici, in: T. Fabijanić, M. Glavičić & M. Rašić (eds), *Zbornik radova. Znanstveni simpozij Kulturno povijesna baština Općine Ljubuški, Humac, 21. i 22. ožujka 2014*, Ljubuški, 49-77.
- Marić, A., 2016: Prva kohorta Belgâ i njeni pripadnici u Ljubuškom kraju, *Godišnjak Centar za balkanološka ispitivanja / Jahrbuch Zentrum für Balkanforschungen* 45, 105-118.
- Marić, A., 2019a: Cohortes equitatae in Humac. Kombinirane kohorte na Humcu u doba principata, *Acta Illyrica. Godišnjak Udruženja BATHINVS* 3, 79-96.
- Marić, A., 2019b: Rimske pomoćne kohorte na Humcu / Roman auxiliary cohorts in Humac, Mostar.
- Marin, E., M. Mayer, G. Paci & I. Rodà, 2000: Elementos para una puesta al día de las inscripciones del campo militar de Bigeste, in: Y. Le Bohec & C. Wolff (eds), *Les légions de Rome sous le Haut-Empire. Actes du Congrès de Lyon (17-19 septembre 1998)*, Lyon, 499-514.
- Matijašić, R., 1983: Cronografia dei bolli laterizi della figulina Pansiana nelle regioni adriatiche, *Mélanges de l'École française de Rome. Antiquité* 95/2, 961-995.
- Matijević, I., 2009: Cohors VIII Voluntariorum civium Romanorum i neki njezini pripadnici u službi namjesnika provincije Dalmacije, *Tusculum. Časopis za solinske teme* 2/1, 45-58.
- Matijević, I., 2011: Natpisi Prve kohorte Belgâ iz Salone / Inscriptions of the cohorts I Belgarum from Salona, *Vjesnik za arheologiju i povijest dalmatinsku* 104, 181-207.
- Mayer Olivé, M., 2016: La presencia de militares en Narona, Vid, Metković, Croacia, y las cohortes auxiliares de la zona, in: C. Wolff & P. Faure (eds), *Les auxiliaires de l'armée romaine. Des alliés aux fédérés. Actes du Sixième Congrès de Lyon (23-25 octobre 2014)*, Lyon (Collection études et recherches sur l'Occident romain 51), 431-444.
- Miletić, Ž., 2017: Rimski auksilijarni logor na Humcu kod Ljubuškog, in: T. Fabijanić, M. Glavičić & M. Rašić (eds), *Zbornik radova. Znanstveni simpozij Kulturno povijesna baština Općine Ljubuški, Humac, 21. i 22. ožujka 2014*, Ljubuški, 25-47.
- Pellicioni, M.T., 2012: *La Pansiana in Adriatico. Tegole romane per navigare tra le sponde / Pansiana na Jadranu. Rimska strešna opeka za plovbo med obalama*, Ferrara.
- Periša, D., 2008: Je li delmatsko područje presjekao rimski limes?, *Archaeologia Adriatica* 2/2, 507-517.
- Pietsch, M., 1993: Die Zentralgebäude des augusteischen Legionslagers von Marktbreit und die Principia von Haltern, *Germania* 71/2, 355-368.
- Pisz, M. & T. Dziurdzik, 2019: The good, the bad and the ugly (data). 100-year discussion over Roman fort in Herzegovina solved with shards of information,

- in: J. Bonsall (ed.), *New global perspectives on archaeological prospection. 13<sup>th</sup> International Conference on Archaeological Prospection, 28 August-1 September 2019, Sligo-Ireland*, Oxford, 32-35.
- Radman-Livaja, I., 2022: The Roman army in Dalmatia. An updated overview, *Mélanges de l'École française de Rome. Antiquité* 134/1, 31-60.
- Rašić, M., 2022: *Rimsko nalazište na Gračinama kod Ljubuškog. Istraživanja 1977.-1980.*, Zadar (PhD thesis University of Zadar).
- Righini, V., 1998: I bolli laterizi di eta romana nella Cispadana. Le Figlinae. Parte prima, in: V. Righini (ed.), *Le Fornaci Romane, produzione di anfore laterizi con marchi di fabbrica nella Cispadana orientale e nell'Alto Adriatico*, Rimini, 29-52.
- Sanader, M., 2002: Tilurium, Burnum, Bigeste. Novi prilog dataciji Delmatskog limesa, *Arheološke studije i ogledi* 6, 120-128.
- Sanader, M., M. Vukov & D. Bužanić, 2019: Pax Romana između Burna i Tilurija. Krajolik sukoba? / Pax Romana between Burnum and Tilurium. Landscape of conflicts?, *Prilozi Instituta za arheologiju u Zagrebu* 36, 121-134.
- Sarnowski, T., 2013: Accepta parietoria und pastus militum. Eine neue Statuenbasis mit zwei Inschriften aus Novae, *Tyche* 28, 135-146.
- Šašel, J., 1974: Die Limes-Entwicklung in Illyricum, in: D. M. Pippidi (ed.), *Actes du IX<sup>e</sup> Congrès International d'Etudes sur les Frontières Romaines (Mamaia, Romania, 1972)*, București/Köln, 194-199.
- Tončinić, D., 2015: Der Donaulimes in Kroatien, von Augustus bis Claudius, von Dalmatien zur Donau, in: L. Zerbini (ed.), *Culti e religiosita nelle province danubiane. Atti del II Convegno Internazionale Ferrara 20-22 Novembre 2013*, Bologna, 335-345.
- Von Schnurbein, S., 2000: The organization of the fortresses in Augustan Germany, in: R.J. Brewer (ed.), *Roman fortresses and their legions. Papers in honour of George C. Boon*, London/Cardiff, 29-39.
- Wilkes, J.J., 1977: Augustan Limes in Illyricum?, in: D. Haupt & H.G. Horn (eds), *Studien zu den Militärgrenzen Roms II. Vorträge Des 10. Internationalen Limeskongresses in der Germania inferior*, Köln (Bonner Jahrbücher Beiheft 38), 245-246.
- Zaninović, M., 1980: Područje Neretve kao vojni mostobran rimske antike, in: Ž. Rapanić (ed.), *Dolina Neretve od prethistorije do ranog srednjeg vijeka. Znanstveni skup Metković 4-7. X 1977*, Split, 173-180.

# ***Apud limitem latina iura ceciderunt***

Processes of continuity and collapse on the middle  
Rhine frontier and its hinterland in late antiquity

Ferdinand Heimerl

This paper assesses the literary sources against the archaeological evidence with regard to the latest Roman military activities from the middle Rhine frontier from the hinterland up to the imperial residence at Trier. While interpretation of the historical sources have traditionally inferred a collapse of the Rhine border in 406/407 for a long time, recent studies argue for an intact middle Rhine frontier until at least the mid-5<sup>th</sup> century. A short summary on the literary sources and their impact on scholarship will be followed by a reassessment of features and finds in the area between Trier, Andernach and Worms. This study contributes to the debate on processes of frontier collapse and the afterlife of military installations at the border and its hinterland.

## **Literary sources on 5<sup>th</sup> century conflicts**

In context of the exhibition 'The Fall of the Roman Empire' at the Rheinisches Landesmuseum Trier, L. Schwinden (2022, for the following literary sources with references) recently compiled textual sources on military conflicts of the 4<sup>th</sup> and 5<sup>th</sup> century. For the study area of the middle Rhine frontier and its hinterland, several sources had a major impact on scholars and are therefore briefly listed. According to Zosimus (*Historia Nova* 6.2.2) and Claudius Claudianus (*De bello Gothico* 416-417 and 450-461), Stilicho withdrew troops from the Rhineland and Britain in order to secure Italy against Alaric and his warriors in 401/402. Scholars have long assumed that the pullback was comprehensive (Prien 2022, 89-93). Therefore, the passage of the Vandals, Alans and Suevi across the Rhine in 406/407 were seen as the consequence of military weakness (Prien 2022, 90-93).

Trier clearly lost its status after the transfer of the imperial residence to Milan and the see of the *praefectus praetorio Galliarum* to Arles in the late 4<sup>th</sup> century (Hupe 2022, 231). Passages by Salvianus of Marseille (*De gubernatione Dei* 6.39, 72-75 and 82-89), Renatus Profuturus Frigiredus (at Gregorius of Tours *Historiae Francorum* 2.9) and the so-called chronicle of Fredegar (*Fredegarii et aliorum chronica. Monumenta Germaniae Historica, Scriptores rerum Merovingicarum* 2.60 (edition B. Krusch); Anton 1987, 44-48; Heinen 1985, 366-371) have been associated with four raids of Trier by Franks in 410/411, 413, 419/420 and 435. In 428, Aetius fought against the Visigoths and Franks in Gaul on behalf of Gallia Placidia and was able to restore the Rhine border. Along with Hunnic *foederati*, he expelled the Burgundians from *Belgica* in 436. It is questionable whether

**Ferdinand Heimerl**

Universität Trier,  
Universitätsring 15,  
54286 Trier, Germany,  
heimerl@uni-trier.de

the Huns under Attila devastated Trier before they were defeated by Aetius in the Battle at the Catalaunian Fields in 451 (Anton 1987, 49; Börm 2022, 245). Literary sources also infer that Trier was briefly captured by the Franks sometime between 450-470 (Anton 1987, 49).

From c.470 onwards, letters by bishop Sidonius Apollinaris of Clermont-Ferrand and bishop Auspicius of Toul discuss the reign of a certain *comes* Arbogast in the area of Trier (Anton 1987, 50-59). These testimonies shed light on the last phase of Roman authority in the region around Trier, as well as the situation on the frontier. An excerpt of Sidonius Apollinaris' letter to Arbogast (*Epistula* 4.17.2; Anderson 1965, 126-129) is particularly relevant: "Thus the splendour of the Roman speech, if it still exists anywhere, has survived in you, though it has long been wiped out from the Belgian and Rhenic lands: with you and your eloquence surviving, even though Roman law has ceased at our frontier (*apud limitem Latina iura ceciderunt*), the Roman speech does not falter".

According to Sidonius, Roman law had ceased at the limes. By contrast, the bishop referred to Arbogast's eloquence and praised Arbogast as one of the last bulwarks of *romanitas*. Without any doubt, this source must be critically reviewed with respect to its historical context and the euphuistic style of late Roman speech. First, Sidonius was bishop in Clermont-Ferrand and we do not know how well informed he was about the situation on the frontier. Second, in using the term limes, it is unclear whether Sidonius was referring to the Rhine frontier, the border to the growing Frankish area of influence in northern Gaul, or to the borders of the Roman Empire in general. Third, one might critically ask whether Sidonius' wording of the 'end of Roman law' implied the end of all frontier defences as well as the end of the Roman way of life for the region. Nevertheless, the letter suggests that Arbogast was the sophisticated head of a Roman community who still had administrative authority, even if the military resources at his disposal are a matter of debate (Ewig 1954, 56-60; Anton 1984, 22-51; 1987, 50-59; Witschel 2004/2005, 246).

To summarise, on one hand, there are several literary sources on military conflicts in the 5<sup>th</sup> century, which reveal the vulnerability of the frontier. On the other, these successive events could also be interpreted with respect to a particular long-term resilience. That Sidonius' letter to Arbogast advises processes of collapse and continuity could vary substantially from region to region is striking. This implies that taking a more nuanced, regional approach when looking at these processes is critical.

### Organization of the army according to the *Notitia Dignitatum*

The main source for the 5<sup>th</sup> century organisation of the army in the survey area is the *Notitia Dignitatum*, providing a list of

military units, their commanders and overall organisation. The completion of the western half of the *Notitia* is dated to the 420's (Neira Faleiro 2005, 40-41; Scharf 2005; Brulet 2017, 43). However, modern scholarship has argued that the text's author problematically combined information from varying periods in late Roman history. For the northern part of *Germania prima* along the Rhine, eleven *praefecti militum* are attested under the command of a *vir spectabilis dux Mogontiacensis* (*Dignitatum occidentalis* 41.14-34; Seeck 1876; Scharf 2005; Heising 2023). The listing is in geographical order from south to north and gives the name of each site in its locative case in Latin: *Saletione* (Selz), *Tabernis* (Rheinzabern), *Vico Julio* (Germersheim), *Nemetis* (Speyer), *Alta Ripa* (Altrip), *Vangiones* (Worms), *Mogontiaco* (Mainz), *Bingio* (Bingen), *Bodobrica* (Boppard), *Confluentibus* (Koblenz) and *Antonaco* (Andernach). The *Notitia* does not mention smaller fortifications on the Rhine, such as the *burgi* of Niederlahnstein or Biblis-Zullenstein that are known through the archaeological record. We also lack information on the field army and on the forts of the hinterland, such as Alzey or Bad Kreuznach, that were certainly elementary for the late Roman defence of the interior (Konrad & Witschel 2011, 8-9 and 18-22; Brulet 2017, 47-53).

In *Belgica prima*, a *praefectus laetorum Lingonensium per diversa dispersorum* and a *praefectus laetorum Actorum* based in *Epuro* (Ivoy-Carignan) are listed under the command of the *magister militum praesentalis a parte peditum* (*Notitia Dignitatum occidentalis* 42.37-38, Seeck 1876; Janniard 2019, 27). Modern scholarship has interpreted the *laeti* as settled immigrants or released prisoners of war, some of whom worked in agriculture or served in the late Roman army, although their specific role in the army and their organisational structure are a matter of debate (Roosens 1968, 90-92; Brulet 2017, 44; 2018, 484). For Trier, the *Notitia* (12.26, 11.58 and 9.37-38, Seeck 1876) attests state officials in charge of weaving mills (*procurator rei privatae gynaeciorum Triberorum*; *procurator gynaecii Triberorum*) as well as state arms factories for the production of shields (*Triberorum scutaria*) and artillery (*Triberorum balistaria*). With regard to payments by the state, the *praepositus thesaurorum Triberorum*, the *procurator monetae Triberorum* and the *praepositus barbaricarium sive argentarium Triberorum* should also be mentioned (11.77 and 35 and 44). Whether state institutions such as the arms factories still existed at the time of the final editing of the *Notitia* or were re-established under Aetius is the subject of controversial discussion (Martin 2017, 277-279) for an overview of the discussion.

### Impact of literary sources on archaeological interpretation

The historical event of the crossing of the Rhine in 406/407 arguably has had one of the most overestimated



impacts on archaeological interpretation (Oldenstein 1994, 83-110; Heising 2023, 67). One of the reasons why the narrative of this military downfall has lasted so long is that it was apparently supported by numismatic findings. *Aes* 4 coins of the *Victoria Avgg(g)* type from Gallic mints and of the *Salus Rei Publicae* type from Italic mints are among the most recent bronze coin finds in Northeastern Gaul (Wigg-Wolf 2016, 227-230; Kemmers 2022, 139-143). The Gallic mints ceased to produce bronze coinage after 395 and the influx from the longer-producing Italian mints into Gaul ebbed away. The minting of gold and silver coins continued in the 5<sup>th</sup> century, but it is not certain whether the precious metal coinages of the usurpers Constantine III (407-411), Jovinus (411-413) and Sebastianus (412-413) were minted in Trier itself or at a mobile mint (Gilles 2014, 73-74). The latest official precious metal coinages of Trier were struck under Theodosius II and Valentinian III (type of the seated Roma), but these are as rare in settlements and fortifications as the later imitations, the so-called pseudo-imperial argentei (type of the seated Roma or Victory to left; Gilles 2014, 74-75; Chameroy 2020, 212-219). Current numismatic research assumes that the bronze coins of the late 4<sup>th</sup> century were still in circulation in the 5<sup>th</sup> century, even though payment options might have changed over time with respect to payment in kind (on the discussion Kemmers 2022, 142-143; Van Heesch 2022, 302-308). However, the supposed lack of coin finds after 388/402 heavily influenced the material culture studies of the second half of the 20<sup>th</sup> century, leading to the adoption of circular reasoning in the interpretation of the archaeological record (Scharf 2005, 6; Heising 2023, 73-77). The combination of a dramatic historical event and the absence of diagnostic material for the dating of finds and phases led to circular argumentation that the crossing of the Rhine was a catastrophic event from which the region never fully recovered.

For 5<sup>th</sup> century chronology, one must therefore refer to materials other than coins, being aware that the historically derived date of 406/407 is still and sometimes subliminally anchored in important reference works (Heising 2023, 73-77). One of the most frequently and often uncritically cited examples is the publication of the late Roman pottery from the Trier imperial baths (Hussong & Cüppers 1972). Recent studies have shown the work's chronological dependence on historical data and have proposed a revision that goes well beyond the middle of the 5<sup>th</sup> century (Bernhard 2015, 608-609; Heimerl 2021b, 127-128). Since the imperial baths publication has served as a reference work for half a century, it is a desideratum to critically re-evaluate all of the finds assemblages based on the chronology of the imperial baths. Methodological progress has been made in the field of Argonne sigillata and late Roman Mayen ware. This approach should be extended to other finds categories in order to bridge

the alleged gap of the 5<sup>th</sup> century (Bakker 2015a; Bernhard 2015; Grunwald 2016).

## Archaeological evidence for the final phases of frontier defences on the Middle Rhine

The following is a brief overview of the state of research on the latest Roman phase of military sites (fig. 1) on the middle Rhine between Andernach and Worms (Heising 2023, 86-102). According to the *Notitia*, the *milites Acincenses* were based at Andernach (Lehner 1901). The late Roman and early medieval grave finds, early Christian inscriptions and the development of the early medieval palatinate indicate an uninterrupted continuity of settlement, whereas the end of military activity cannot be precisely defined (Ament 1979, 351-356; Brückner 1999, 134-142). New results are expected from U. Stockinger's dissertation on the features and finds of the 'Weißheimer Gelände' within the Andernach fortification. Based on finds from the Valentinianic *burgus* of Engers, on the right bank of the Rhine near the confluence of the Saynbach, as well as the nearby cemetery of Mülhofen, L. Grunwald concluded that the *burgus* was occupied until the middle of the 5<sup>th</sup> century, partly by Germanic mercenaries in Roman service (Grunwald 2007, 30-35). Recent excavations in Koblenz have yielded new results on the defensive wall, where the *milites defensores* were garrisoned according to the *Notitia* (Henrich 2020, 24-27). The construction of the fortification can be archaeologically dated between the end of the Gallic Empire and the first quarter of the 4<sup>th</sup> century. However, we know little about the end of the site's maintenance. On the spur of the Ehrenbreitstein fortress on the right bank of the Rhine, militaria finds, among others, were associated with a late Roman fortification lasting into the early 5<sup>th</sup> century (Von Berg 2011, 64-66). L. Grunwald (2006, 374-375) has argued that new populations did not settle the region of the Moselle estuary until 460/480. The finds of the 1914 and 1926 excavations in the Valentinianic *burgus* of Niederlahnstein were published in 2014 and provide further evidence. A burnt layer within the *burgus* and the backfill of the surrounding ditch was dated around 450/460 and interpreted by L. Bakker (2014a, 108-113) with the end of military use. According to him, the handmade pottery that was present in these fills points to Germanic mercenaries in Roman service. It is uncertain whether the burnt layer is due to orderly clearing or destruction by enemy. Bakker associated several pits inside and outside the *burgus*, as well as a burnt layer, with a Germanic after-use until about 500. The fortress of Boppard was probably built around 330/340, presumably for a detachment of about 1000 men of *Legio XXII* from Mainz (Bakker 2017, 250-255). The *milites balistarii* mentioned in the *Notitia*

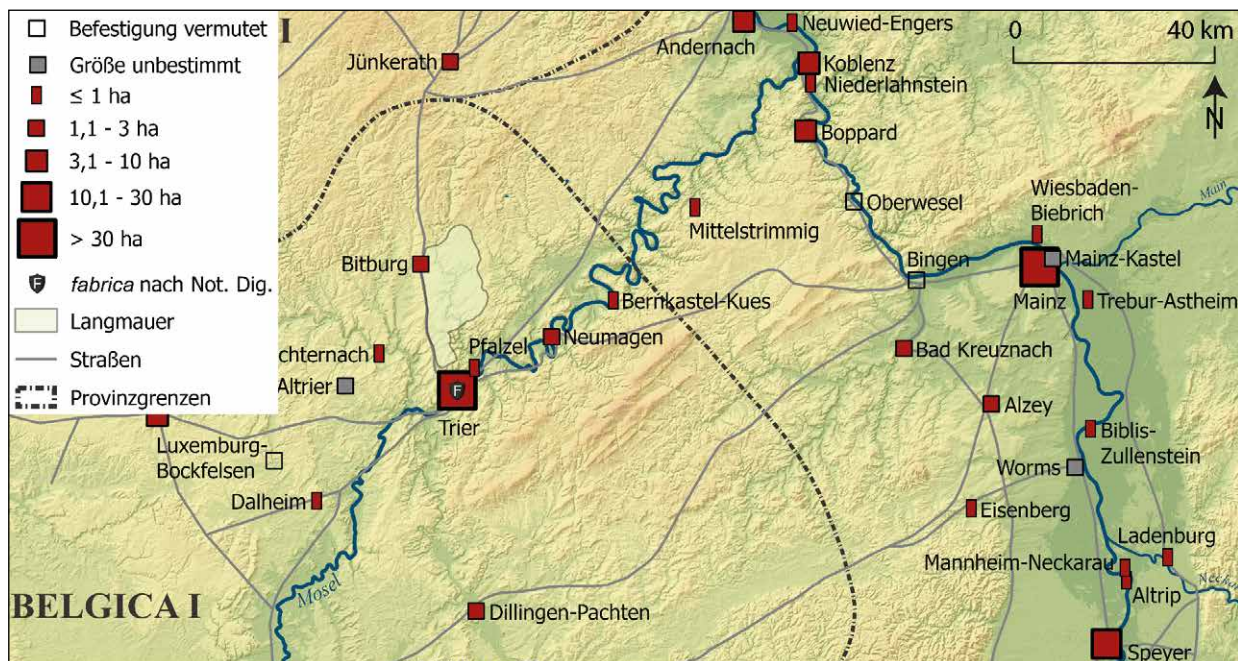


Figure 1. Map of the research area (modified after Heimerl 2021a, 117, fig. 52).

were probably garrisoned under Valentinian I. There is no evidence of handmade pottery. According to Bakker, the coarse ware and the Argonne sigillata from the bath building prove a use of the fortification until around 450/460. The *Notitia* lists the *milites Bingenses* at Bingen. So far, a late Roman ditch (numismatic *terminus post quem* 284/293) has been excavated, which can be used to estimate the location of the fortification (Heising 2002, 8-11). According to A. Heising, the ditch stood open for almost 300 years until it was quickly filled in and overbuilt with pit houses around 600. The remains of a wall belonging to a possible *burgus* in Wiesbaden-Biebrich do not offer any insights into the dating of its occupation (Prién 2020, 143). The *Notitia* testifies to the military importance of the provincial capital Mainz as the seat of the *dux Mogontiacensis*. It was most probably under Valentinian I that the area of the city walls in Mainz was reduced to about 118 ha (Heising 2008, 181-202). Small finds and grave goods prove continuous settlement activity throughout the 5<sup>th</sup> century and beyond in the 6<sup>th</sup> and 7<sup>th</sup> centuries (Knöchlein 2011, 275-282; Heising 2020, 23). The *milites armigeri* mentioned in the *Notitia* might have been housed in the west of the enclosure, in the area of the former fortress.

Remarkable evidence for a late Roman soldier at Mainz is the tomb slab of Florentius with the inscription *H(ic) iacet Florent(ius) milix vixit an(n)os vigint[i] et VI mensis III*, which can be dated to the 4<sup>th</sup>-5<sup>th</sup> century (CIL XIII.7207; Boppert 1971, 40-42). The famous shipwrecks from Mainz also provide important insights

into late Roman river defence. The latest wreck has been dendrochronologically dated to 431±10 and shows that the fleet was still operational in the second quarter of the 5<sup>th</sup> century to patrol along the river (Bockius 2016, 35-36). For the early 5<sup>th</sup> century, recruits far from the east are indicated by the content of a hoard at Mainz-Kastel, the fortified bridgehead on the right bank of the Rhine opposite Mainz (Radnóti-Alföldi & Quast 2018, 81-102). The Valentinianic *burgus* of Trebur-Astheim, also on the right bank of the Rhine, was investigated by geophysics and evaluation trenches; according to A. Heising (2012, 162-164), the pottery from the site indicates occupation until at least 430/450; fragments of grooved beakers of the second half of the 5<sup>th</sup> century are associated with a subsequent Germanic phase of occupation. The *burgus* of Biblis-Zullenstein at the mouth of the Weschnitz into the Rhine was also part of the Valentinianic river protection system. Handmade pottery from the site was interpreted as evidence of Germanic people in Roman service; the overall assemblage points to an intact military post until a fire destruction around 450/460 (Bakker 2014a, 144-149). We lack detailed information on the garrison of the *milites secundae Flaviae* at Worms, but at least the course of the fortification has been clarified on three sides (Grünwald 2012, 12-14). Grave inscriptions and grave finds with a Germanic component are attested in the first and second half of the 5<sup>th</sup> century (Grünwald 2012, 12). Finds inside and outside the fortress (Argonne sigillata and coarse ware from Mayen) indicate a functioning infrastructure until around 450.

## 5<sup>th</sup>-century fortifications between the middle Rhine and Trier

Below, the fortifications between the Middle Rhine and the former imperial residence at Trier, in Rhine-Hesse, in the Moselle valley and in the Eifel are discussed. At the Valentinianic fort of Alzey, J. Oldenstein (2009, 348-352) was able to identify a third phase of the fortification, which can be dated after 425 at the earliest; the fort was destroyed in the middle of the 5<sup>th</sup> century and there was no settlement activity thereafter. The range of Argonne sigillata from the fortification of Bad Kreuznach largely corresponds to that from Alzey; according to L. Bakker (2012, 6-7), Bad Kreuznach may have been occupied until around the middle of the 5<sup>th</sup> century. Based on ceramic evidence, a similar dating can be assumed for the Valentinian *burgus* of Eisenberg (Schönemann 2018, 51). In the case of hilltop settlements in the Hunsrück mountains, the Eifel mountains and the Moselle valley, a decline in the number of sites occupied into the 5<sup>th</sup> century can be observed. Often, only stray finds are available, so the picture may be distorted. Whether these sites were also part of the regional military concept is a widely debated topic (Hunold 2011, map 5 and 6; Prien 2018). Moving on to the Moselle valley, a previously unknown fortification was excavated at Bernkastel-Kues in 2013/2014; pottery finds indicate an occupation from the early 4<sup>th</sup> to the late 5<sup>th</sup> century (Gilles 2016, 33-36). At the Constantinian fortification of Neumagen, red-brown slipped ware and glass finds were found, which can be dated to the middle and second half of the 5<sup>th</sup> century. A funerary inscription of the 5<sup>th</sup> or 6<sup>th</sup> century also attests to the presence of a Roman provincial population: HICR[equiscit Io]VINIAN[us qui vixit] ANNOS [...titvlvm] POSVIT ... SOROR [in pace]; (CIL XIII.4187; Gilles 1982, 302-305). The fortification of Bitburg in the Eifel mountains north of Trier has a ground plan very similar to that of Neumagen. Here, Argonne sigillata, red-brown slipped ware and glass finds also point to a period of use in the middle and second half of the 5<sup>th</sup> century (Heimerl 2021a, 127-129).

Looking at the former imperial residence of Trier, it is questionable how long the city wall was maintained. The Early Christian funerary inscriptions show a high percentage of Roman names and a continuous epigraphic habit from the 4<sup>th</sup> to the 8<sup>th</sup> century (Merten 2018, 28). The 5<sup>th</sup>-century destructions attested by the written sources cannot be verified by archaeology. It is also unclear where the state factories mentioned in the *Notitia* are to be located in the city area. Nevertheless, historians have assumed that even after the withdrawal of the imperial residence and the praetorian prefecture, Trier still functioned as one of the military bases of the *magister militum* in Gaul in the first half of the 5<sup>th</sup> century (Anton 1987, 40 and 50; Martin 2017, 282). This assumption is supported by the revised chronology of small finds, such

as brooches and belt fittings that can be associated with the *militia*. Material that was formerly attributed to the late 4<sup>th</sup> century, is rather to be dated to the first half and the middle of the 5<sup>th</sup> century (Martin 2017, 280-282). In combination with a revised ceramic chronology, the finds from Trier support the historical conclusion of a continuous Roman way of life during the second half of the 5<sup>th</sup> century. Bitburg and Neumagen were still of strategic importance for the protection of the surrounding area of the city of Trier under Arbogast.

## Conclusion

Due to post-Roman settlement continuity, modern destructions and the rarity of large scale excavations within fortifications, we are badly informed on the latest phases of Roman occupation and military presence on the Rhine. Whether the installations were built and manned by the military or built as civilian protective measures and later garrisoned is debated, as is the question where the *milites* were accommodated (Konrad & Witschel 2011, 24-28). A key methodological problem is the extent to which civilian and military, let alone 'Roman' and 'Germanic' components can be strictly separated at all in late Antiquity. Only recently has research devoted more attention to the so-called dark earth, which in the past was often dug up without being documented. A combined approach of archaeology and soil science has the greatest potential here to better understand the transition from late antiquity to the early Middle Ages. Consequently, much depends on material chronology, which only recently has begun to break away from dependencies on the literary record. Progress has been made with red-brown slipped ware, Mayen ware and Argonne sigillata. So-called Christian patterns (e.g. Unverzagt/Chenet 181-185 or Chenet 257-259) of Argonne sigillata and other so-called complicated patterns (e.g. Unverzagt/Chenet 168 and 329) of the middle of the 5<sup>th</sup> century are found for example in the Meuse region, at Luxemburg-Bockfelsen, Echternach, Aachen, Jülich, Zülpich, Bitburg and Trier. On the Rhine, the latest examples are known so far only with single finds from Cologne, Andernach and Niederlahnstein. In contrast, these finds are missing in larger assemblages from Krefeld-Gellep, Dormagen, Haus Bürgel, Cologne, Cologne-Deutz, Bonn, Remagen, Koblenz, Boppard, Mainz, Biblis-Zullenstein, Bad Kreuznach, Alzey, Biesheim-Kunheim 'Oedenburg', Illzach and Breisach (Bakker 2014b, 222; 2015b, 145; Heimerl 2021a, 95). L. Bakker (2015a, 372) has interpreted these finds as indications of intact trade connections and an existing frontier defence until the middle of the 5<sup>th</sup> century. Only after 450/460 were the settlements and military sites on the Rhine no longer supplied with Argonne sigillata, with few exceptions. Through new excavation and reassessment of older assemblages, the evidence for an

intact frontier defence into the middle of the 5<sup>th</sup> century is becoming stronger. In the area around Trier, the finds point to a high degree of continuity even in the second half of the 5<sup>th</sup> century, appearing to confirm the narrative given by Sidonius Apollinaris in his letter to Arbogast.

## Abbreviations

CIL: *Corpus Inscriptionum Latinarum*

## Bibliography

- Ament, H., 1979: Mayen und Andernach im Übergang von der Spätantike zum frühen Mittelalter, in: J. Werner & E. Ewig (eds), *Von der Spätantike zum frühen Mittelalter. Aktuelle Probleme in historischer und archäologischer Sicht*, Sigmaringen (Vorträge und Forschungen 25), 347-356.
- Anderson, W.B., 1965: *Sidonius, poems. With an English translation*, Cambridge MA/London.
- Anton, H.H., 1984: Trier im Übergang von der römischen zur fränkischen Herrschaft, *Francia* 12, 1-52.
- Anton, H.H., 1987: *Trier im frühen Mittelalter*, Paderborn/München/Wien/Zürich.
- Bakker, L., 2012: Rädchenverzierte Argonnen-Terra-Sigillata aus dem Kastell Bad Kreuznach, in: P. Jung & N. Schücker (eds), *Utere felix vivas. Festschrift für Jürgen Oldenstein*, Bonn (Universitätsforschungen zur Prähistorischen Archäologie 208), 1-22.
- Bakker, L., 2014a: Spätromische Schiffsländen am Rhein. Die Burgi von Niederlahnstein und Biblis "Zullenstein", *Berichte zur Archäologie an Mittelrhein und Mosel* 20, Koblenz, 33-155.
- Bakker, L., 2014b: Spätromische Rädchen-Terra-Sigillata in Köln. Funde von St. Gereon, Breite Strasse und Heumarkt, *Kölner Jahrbuch* 47, 215-236.
- Bakker, L., 2015a: Spätromische Rädchen-Terra-sigillata in Köln II. Die Grabungen südlich und westlich des Kölner Doms IV, *Kölner Jahrbuch* 48, 363-395.
- Bakker, L., 2015b: Rädchenverzierte Argonnensigillata von Goch-Asperden, *Bonner Jahrbücher* 214, 135-162.
- Bakker, L., 2017: Zur Baudatierung des Badegebäudes und des Kastells von Bodobrica/Boppard, Rhein-Hunsrück-Kreis, *Berichte zur Archäologie an Mittelrhein und Mosel* 20, Koblenz, 149-260.
- Bernhard, H., 2015: *Studien zur Spätantike. Civitas Nemetum*, Speyer (Forschungen zur Pfälzischen Archäologie 7).
- Börm, H., 2022: Ein Zeitalter der Bürgerkriege. Der Untergang des Römischen Reiches und die Erosion der Zentralgewalt, in: Generaldirektion Kulturelles Erbe Rheinland-Pfalz (Hrsg.), 2022, 244-253.
- Bockius, R., 2016: Zur Topographie des Fundplatzes 'Mainz-Löhrstrasse', in: F. Brechtel, Ch. Schäfer & G. Wagner (eds), *Lusoria Rhenana. Ein römisches Schiff am Rhein. Neue Forschungen zu einem spätantiken Schiffstyp*, Hamburg, 33-44.
- Boppert, W., 1971: *Die frühchristlichen Inschriften des Mittelrheingebietes*, Mainz am Rhein.
- Brulet, R., 2017: The Roman army and military defence in Northern Gaul and the Germanic provinces during the Late Empire, in: N. Roymans, S. Heeren & W. De Clerq (eds), *Social dynamics in the Northwest Frontiers of the Late Roman Empire. Beyond decline or transformation*, Amsterdam (Amsterdam Archaeological Studies 26) 39-56.
- Brulet, R., 2018: Ad intima Galliarum, in: S. Matešić & C.S. Sommer (eds), *Limes XXIII. Proceedings of the 23<sup>rd</sup> International Limes Congress in Ingolstadt 2015 / Akten des 23. Internationalen Limeskongresses in Ingolstadt 2015*, Mainz (Beiträge zum Welterbe Limes Sonderband 4) 480-486.
- Brückner, M., 1999: *Die spätromischen Grabfunde aus Andernach*, Mainz (Archäologische Schriften des Instituts für Vor- und Frühgeschichte der Johannes Gutenberg-Universität Mainz 7).
- Chameroy, J., 2020: Les numéraires d'argent des V<sup>e</sup>-VI<sup>e</sup> siècles découverts en Gaule. Nouvelles considérations sur les ateliers et les pouvoirs émetteurs, in: J. Chameroy & P.-M. Guihard (eds), *Argentum Romanorum sive barbarorum*, Mainz (Römisch-Germanisches Zentralmuseum Mainz Tagungen 41), 209-230.
- Ewig, E., 1954: *Trier im Merowingerreich. Civitas, Stadt, Bistum*, Trier.
- Generaldirektion Kulturelles Erbe Rheinland-Pfalz (Hrsg.), 2022: *Der Untergang des römischen Reiches. Begleitband zur Ausstellung 25. Juni-27. November 2022 in Trier*, Darmstadt (Schriftenreihe Rheinisches Landesmuseum 44).
- Gilles, K.-J., 1982: Zur spätromischen und frühmittelalterlichen Topographie von Bitburg und Neumagen, *Trierer Zeitschrift* 45, 293-308.
- Gilles, K.-J., 2014: *Der Trierer Goldschatz*, Darmstadt (Schriftenreihe Rheinisches Landesmuseum 39).
- Gilles, K.-J., 2016: Princastellum/Bernkastel. Eine spätantike Befestigung oberhalb der Mosel, *Funde und Ausgrabungen im Bezirk Trier* 48, 30-39.
- Grünwald, M., 2012: *Unter dem Pflaster von Worms. Archäologie in der Stadt*, Lindenberg im Allgäu.
- Grunwald, L., 2006: Postumus – Valentinian I. – Avitus und dann? Anmerkungen zur Geschichte des Moselmündungsgebietes vom 3. bis in das 5. Jahrhundert n. Chr., *Berichte zur Archäologie an Mittelrhein und Mosel* 11, Koblenz, 363-375.
- Grunwald, L., 2007: Engers von der Spätantike zum Frühmittelalter, in: Arbeitskreis 650 Jahre Stadtrechte Engers (Hrsg.), *Engers. Der Ort. Seine Geschichte*, Horb am Neckar, 26-43.

- Grunwald, L., 2016: Mayen in der Eifel und die Herstellung der "Mayener Ware" von der Mitte des 4. bis in die 1. Hälfte des 6. Jahrhunderts, *Archäologisches Korrespondenzblatt* 46, 345-361.
- Heimerl, F., 2021a: *Das römische Beda/Bitburg. Kaiserzeitlicher vicus, spätantike Befestigung und Bestattungen*, Wiesbaden (Trierer Zeitschrift Beiheft 39).
- Heimerl, F., 2021b: Zur Chronologie der rotbraun engobierten Ware des 5. Jahrhunderts und der "Umbaukeramik" der Trierer Kaiserthermen, in: M. Gierszewska-Noszczyńska & L. Grunwald (eds), *Zwischen Machtzentren und Produktionsorten. Wirtschaftsaspekte von der römischen Epoche bis in das Hochmittelalter am Rhein und in seinen Nachbarregionen*, Mainz (Römisch-Germanisches Zentralmuseum Mainz Tagungen 44), 119-137.
- Heinen, H., 1985: *Trier und das Trevererland in römischer Zeit. 2000 Jahre Trier* 1, Trier.
- Heising, A., 2002: Nova moenia veteri Vinco. Neue Mauern um das alte Bingen. Stadtarchäologie in Bingen 2000, *Mitteilungsblatt für Rheinhessische Landeskunde, Neue Folge* 4, 5-16.
- Heising, A., 2008: *Die römische Stadtmauer von Mogontiacum – Mainz. Archäologische, historische und numismatische Aspekte zum 3. und 4. Jahrhundert n. Chr.*, Bonn.
- Heising, A., 2012: Der Schiffslände-Burgus von Trebur-Astheim. Schicksal einer Kleinfestung in Spätantike und frühem Mittelalter, in: W. Ræck & D. Steuernagel (eds), *Das Gebaute und das Gedachte. Siedlungsform, Architektur und Gesellschaft in prähistorischen und antiken Kulturen*, Bonn (Frankfurter Archäologische Schriften 21), 151-166.
- Heising, A., 2020: Mogontiacum/Mainz in der Spätantike, *Der Limes. Nachrichtenblatt der Deutschen Limeskommission* 14, 20-23.
- Heising, A., 2023: Der spätantike Mainzer Dukate an Mittel- und Oberrhein. Quellen, Aufgaben, Strukturen, in: S. Brather (ed.), *Die Dukate des Merowingerreiches. Archäologie und Geschichte in vergleichender Perspektive*, Berlin/Boston (Reallexikon der Germanischen Altertumskunde Ergänzungsbände 139), 65-102.
- Henrich, P., 2020: Am Zusammenfluss von Rhein und Mosel. Die spätantike Wehrmauer von Confluentes/Koblenz, *Der Limes. Nachrichtenblatt der Deutschen Limeskommission* 14, 24-27.
- Hunold, A., 2011: *Die Befestigung auf dem Katzenberg bei Mayen und die spätromischen Höhenbefestigungen in Nordgallien*, Mainz (Römisch-Germanisches Zentralmuseum Mainz Monografien 88).
- Hupe, J., 2022: Brüche, Transformationen, Kontinuitäten. Trier an der Wende von der Spätantike zum Frühmittelalter, in: Generaldirektion Kulturelles Erbe Rheinland-Pfalz (Hrsg.), 2022, 230-235.
- Hussong, L. & H. Cüppers, 1972: *Die Trierer Kaiserthermen. Die spätromische und frühmittelalterliche Keramik*, Mainz (Trierer Grabungen und Forschungen 1/2).
- Janniard, S., 2019: Le nord de la Gaule, de Probus à Valentinien III. Le cadre politique et militaire, in: D. Bayard & J.-P. Fourdrin (eds), *Villes et fortifications de l'Antiquité tardive dans le nord de la Gaule*, Villeneuve-d'Ascq (Revue du Nord, Hors série, Collection Art et Archéologie 26), 25-34.
- Kemmers, F., 2022: Alte Münzen – Neue Werte, in: Generaldirektion Kulturelles Erbe Rheinland-Pfalz (Hrsg.), 2022, 138-143.
- Knöchlein, R., 2011: Ad urbem, quam Mogontiacum appellarunt. Vom Legionslager Mainz zu den Anfängen der Stadt des Mittelalters, in: M. Konrad & Ch. Witschel (eds), *Römische Legionslager in den Rhein- und Donauprovinzen. Nuclei spätantik-frühmittelalterlichen Lebens?*, München (Abhandlungen der Bayerischen Akademie der Wissenschaften, Philosophisch-Historische Klasse, Neue Folge 138), 265-286.
- Konrad, M. & Ch. Witschel 2011: Spätantike Legionslager in den Rhein- und Donauprovinzen des Imperium Romanum. Ein Beitrag zur Kontinuitätsdebatte, in: M. Konrad & Ch. Witschel (eds), *Römische Legionslager in den Rhein- und Donauprovinzen. Nuclei spätantik-frühmittelalterlichen Lebens?*, München (Abhandlungen der Bayerischen Akademie der Wissenschaften, Philosophisch-Historische Klasse, Neue Folge 138), 3-44.
- Lehner, H., 1901: Antunnacum, *Bonner Jahrbücher* 107, 1-36.
- Martin, M., 2017: Der Trierer Silberfund von 1628 und das Tafelsilber des 5. Jahrhunderts, in: A. Kaufmann-Heinimann & M. Martin (eds), *Die Apostelkanne und das Tafelsilber im Hortfund von 1628. Trierer Silberschätze des 5. Jahrhunderts*, Trier (Trierer Zeitschrift Beiheft 35), 213-284.
- Merten, H., 2018: *Die frühchristlichen Inschriften aus St. Maximin bei Trier*, Trier (Kataloge und Schriften Bischöfliches Dom- und Diözesanmuseum 8).
- Neira Faleiro, C., 2005: *La Notitia Dignitatum. Nueva edición crítica y comentario histórico*, Madrid (Nueva Roma 25).
- Oldenstein, J., 1994: Die letzten Jahrzehnte des römischen Limes zwischen Andernach und Selz unter besonderer Berücksichtigung des Kastells Alzey und der Notitia Dignitatum, in: F. Staab (ed.), *Zur Kontinuität zwischen Antike und Mittelalter am Oberrhein*, Sigmaringen (Oberrheinische Studien 11), 69-112.

- Oldenstein, J., 2009: *Kastell Alzey. Archäologische Untersuchungen im spätrömischen Lager und Studien zur Grenzverteidigung im Mainzer Dukat*, Mainz.
- Prien, R., 2018: Spätantike Höhensiedlungen in der Pfalz. Militärische oder zivile Plätze?, in: A. Schubert & A. von Berg, U. Himmelmann, R. Prien & Ch. Witschel (eds), *Valentinian I. und die Pfalz in der Spätantike. Begleitband zur Ausstellung vom 16. September 2018 bis 11. August 2019 im Historischen Museum der Pfalz*, Heidelberg/Ubstadt-Weiher/Speyer/Basel, 82-85.
- Prien, R., 2020: Der spätantike burgus von Ladenburg. Eine Neubewertung, in: R. Prien & Ch. Witschel (eds), *Lopodunum VII. Ladenburg und der Lobdengau zwischen 'Limesfall' und den Karolingern*, Wiesbaden (Forschungen und Berichte zur Archäologie in Baden-Württemberg 17), 121-146.
- Prien, R., 2022: 406/407 n. Chr. Der Untergang der Rheingrenze als Anfang vom Ende des Weströmischen Reiches?, in: Generaldirektion Kulturelles Erbe Rheinland-Pfalz (Hrsg.), 2022, 88-93.
- Radnóti-Alföldi, M. & D. Quast, 2018: *Der spätantike Schatzfund von Mainz-Kastel. Fremde Krieger am Rhein*, Bonn (Studien zu Fundmünzen der Antike 16).
- Roosens, H., 1968: Laeti, Foederati und andere spätrömische Bevölkerungsniederschläge im belgischen Raum. *Archaeologia Belgica* 104, 89-109.
- Scharf, R., 2005: *Der Dux Mogontiacensis und die Notitia Dignitatum. Eine Studie zur spätantiken Grenzverteidigung*, Berlin/New York (Reallexikon der germanischen Altertumskunde Ergänzungsband 50).
- Schönemann, L., 2018: Der spätantike Burgus von Eisenberg, in: A. Schubert & A. von Berg, U. Himmelmann, R. Prien & Ch. Witschel (eds), *Valentinian I. und die Pfalz in der Spätantike. Begleitband zur Ausstellung vom 16. September 2018 bis 11. August 2019 im Historischen Museum der Pfalz*, Heidelberg/Ubstadt-Weiher/Speyer/Basel, 50-51.
- Schwinden, L., 2022: Erhebungen und Empörungen. Machtkämpfe und Krisenbewältigung im spätrömischen Westen, in: Generaldirektion Kulturelles Erbe Rheinland-Pfalz (Hrsg.), 2022, 42-63.
- Seeck, O., 1876: *Notitia Dignitatum accedunt notitia urbis Constantinopolitanae et laterculi prouinciarum*, Berlin.
- Van Heesch, J., 2022: The end of the small change economy in Northern Gaul in the fourth and fifth centuries AD, in: J. Mairat, A. Wilson & Ch. Howgego (eds), *Coin hoards and hoarding in the Roman World*, Oxford, 294-312.
- Von Berg, A., 2011: *Koblenz im Wandel. Von der Frühzeit zur modernen Stadt*, Koblenz (Archäologie an Mittelrhein und Mosel 22).
- Wigg-Wolf, D.G., 2016: Supplying a dying Empire? The mint of Trier in the late 4<sup>th</sup> century AD, in: J. Chameroy & P.-M. Guichard (eds), *Produktion und Recyceln von Münzen in der Spätantike*, Mainz (Römisch-Germanisches Zentralmuseum Mainz Tagungen 29), 217-233.
- Witschel, Ch., 2004/2005: Trier und das spätantike Städtewesen im Westen des römischen Reiches, *Trierer Zeitschrift* 67/68, 223-272.



# South Shields Roman fort as a case study in transition and abandonment at the end of Empire

An interim statement

Nick Hodgson

## Background

The Roman fort at South Shields, at the eastern end of Hadrian's Wall in Britain, was re-planned c. AD 300 (fig. 1). The north-western part of the fort continued to be a supply-base, with several granaries, but the south-eastern part was given a completely new layout. This included a new *principia* in the centre of the fort, and south of this 10 new barracks. In the east corner was a peristyle or courtyard house, the *praetorium*.

Excavations in the east quadrant between 1983 and 2008 involved complete excavation of the courtyard house (fig. 2), a barrack immediately to north-east, and the *via praetoria* to the south-west, and all underlying levels. The late- and post-Roman phases of these excavations are now being prepared by the author for final publication. The late sequence in the east quadrant as currently understood is summarised here and set in the context of earlier discoveries in other parts of the fort. The conclusions presented here are provisional and offered in the hope that colleagues may come forward with comments or observations that may be incorporated in the final report.

## The late-Roman sequence

**Period 7C** The final refurbishment of the courtyard house as a high-status Mediterranean-type residence occurred sometime after 353, as the re-surfacings of the north-west portico and Room 7 sealed unworn copies of coins of that date. The actual date of the refurbishment work probably fell in the decade 353-363 or slightly later. At this time the house was fully functional as an elite residence with its baths still operational. At some remove from this refurbishment, probably in the decade 370-380, a new building (shown in red on fig. 1 and 3), probably taking the form of an apsidal hall, was inserted on the opposite (south-west) side of the *via praetoria* to the courtyard house. A date within the 4<sup>th</sup> century is based on the fact that a drain from the evidently still functioning

**Nick Hodgson**

Independent Scholar, Nick.  
Hodgson@Durham.ac.uk

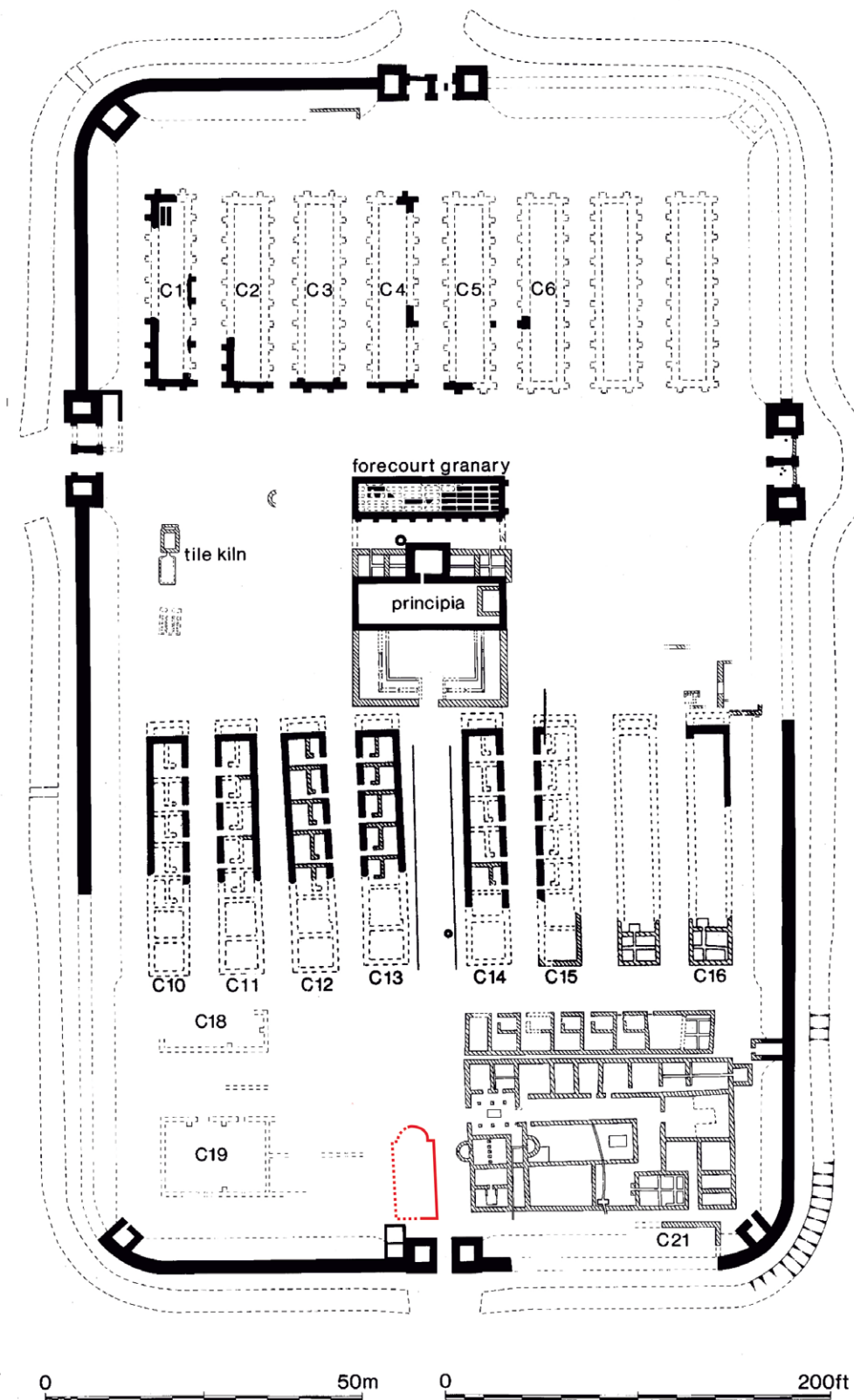


Figure 1. South Shields Roman fort as replanned c. 300, with apsidal hall added c. 370-380 shown in red.

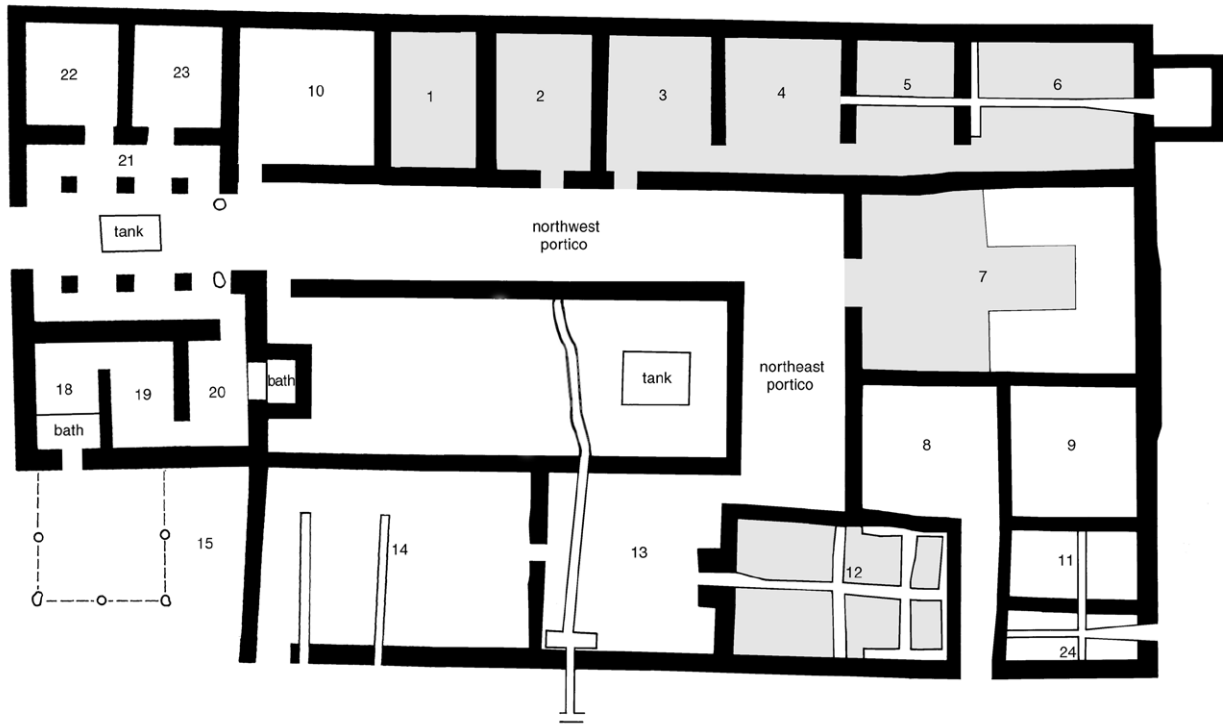


Figure 2. The courtyard house in the east quadrant of South Shields Roman fort as built c. 300.

baths of the courtyard house was apparently diverted to pass round the new building on the *via praetoria*. A later, say 5<sup>th</sup> century, date for the building is technically possible, if the course taken by the diverted drain was coincidental, but the building seems to offer the best explanation for the diversion. The hall-like building finds a parallel at Kellmunz, where an apsidal hall of earlier 4<sup>th</sup>-century date is interpreted as an *aula* (Mackensen 1995, fig. 60), showing that the South Shields structure is not necessarily to be interpreted as a church.

At the same time (based on the similarity of its pitched stone raft construction with that of the apsidal building), and at some remove from the refurbishment of the courtyard house dated to 353/360, a substantial new floor foundation was laid in the entrance court of the courtyard house. A possible church containing a table altar (recorded in the excavations of 1875) could possibly have been inserted into the *principia* at this time (Bidwell & Speak 1994, 103-104). A late-Roman (as opposed to post-Roman) date seems most likely in the light of resemblances between the possible construction technique of the 'church' – timber uprights socketed into sill-stones – and the apsidal *via praetoria* building and no other explanation has been advanced for the apparent table altar. Repairs using fine gravel and pebble metalling (the long-standing method of road construction and repair in the fort) were made to the *via praetoria* and side street north-west of the

barrack on the north-west side of courtyard house, these containing pottery of the period after 360.

The use of the courtyard house as a residence continued until late in the 4<sup>th</sup> century, when there is evidence for contraction of high-status activity to a nucleus in rooms 5 and 6 and abandonment of certain facilities. A hypocaust serving the 'porter's lodge' area was filled in at some remove from 360 (pottery evidence). Soil was accumulating over the formerly clean mortar floor of Room 5 at some remove from 370 (it contained slightly worn coins of 367-375), possibly not until the 380's. By this time the underlying hypocaust must have been disused and filled. Later still a corridor was inserted into this room, possibly contemporary with a transfer of the kitchen from Room 13 to Room 4. The mortar floor in adjacent Room 6, however, was apparently kept clean until 388-402 or later (date of unworn coin in overlying occupation soil). An archaeomagnetic date for the last firing of the baths suggests that this was no earlier than the late 4<sup>th</sup> century. The baths were however disused for a period before their hypocausts were demolished, as surfaces overlying the infilled furnace but predating Period 8 when the hypocausts were demolished show. These changes in the character of occupation in the courtyard house may have been contemporary with the partial filling of ditch F outside the south-west gate with debris fallen from the gate and pottery of the post-360 period.



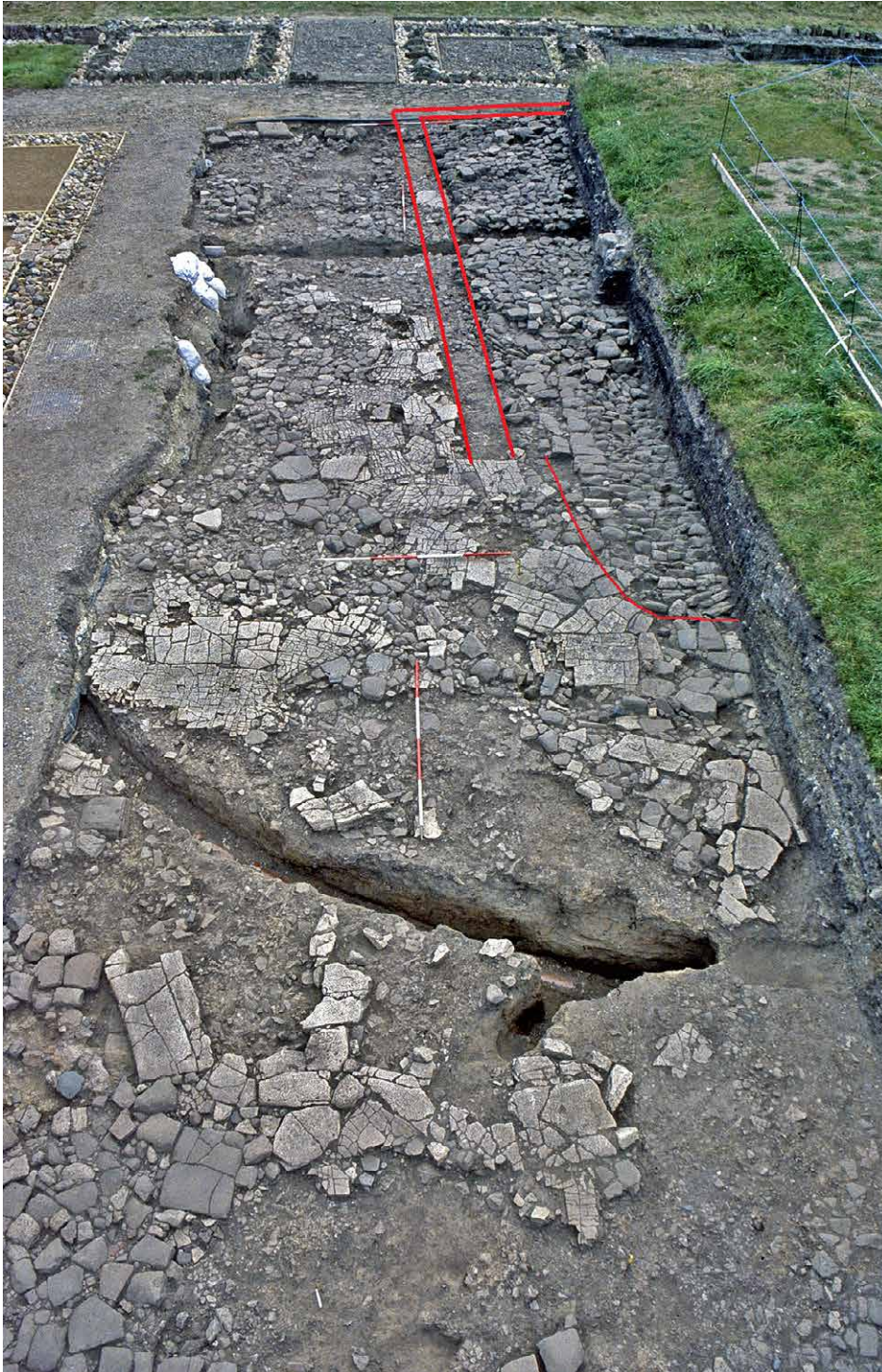


Figure 3. View to south-east along *via praetoria*. Courtyard house to left, outline of apsidal building shown to right, with internal paving of Period 9 in the part furthest from the viewer.

**Period 8** A distinct change in the character of occupation of the courtyard house occurred towards the end of the 4<sup>th</sup> century, and was broadly contemporary with a wholesale resurfacing of the surrounding streets in a different manner to previously. The occupation of the courtyard house was apparently no longer high-status military at this time. Room 5 became a workshop for the

manufacture of furniture or box decoration made from antler (Greep 2015), this activity dated by coins of 388-402, some unworn, some slightly worn. Former service rooms in the house (10, 1) were perhaps now used for stabling.

The *via praetoria* and street north-west of the courtyard house were crudely resurfaced using boulders, re-used facing stones, broken up sculpture and inscribed stones,





Figure 4. View of courtyard house, looking north-east, with paving of Period 9 (5<sup>th</sup>-century reoccupation?) in the north-west and north-east porticos.

and large cobbles, the method of construction marking a clear break from the road-engineering principles of the past, and indicating widespread demolition of structures to obtain the material. The work was however comprehensive and co-ordinated by a central authority, as the careful construction of drains at some points shows.

There is a direct stratigraphical link between this resurfacing and crude paved surfaces that were laid in the former baths-*prae-furnium*, stable (Room 14) and former kitchen (Room 13) inside the courtyard house. This surfacing inside and outside the house immediately followed the demolition of the baths (material from which lay directly below the Period 8 resurfacing). The central courtyard of the house was crudely repaired in the same way, also incorporating demolition material from the baths hypocausts. The same paving occurred in part of the barrack north-west of the courtyard house, overlying former wall-lines, and marks the first deviation from the plan of the barrack as first designed a century earlier.

The date of the crude repaving of the streets and areas of the house cannot be closely established. A slightly worn coin of 367-375 gives a *terminus post quem* for the paving in Room 13, and on the streets the new surface overlay worn metalling itself containing pottery of the period

after 360 and therefore on any reasonable reckoning cannot be any earlier than the late 370's or 380's. Although this is simply a *terminus post quem*, had this comprehensive resurfacing of the streets been significantly later than the 380's greater quantities of post-360 pottery types might have been expected from beneath it. Exactly similar crude surfaces of re-used material occur in the fort at Carlisle, where similarly they overlie more conventional street surfaces containing pottery later than 360 and 30 coins of which the latest was of 341-346. But the latest crude surfaces were in existence by the time of a structure associated with moderately worn coinage of 388-392 (Zant 2009, 327-331). There is no direct stratigraphical link between the crude paving and the workshop activity in Room 5, but broad contemporaneity seems probable on the basis the coins of the period 388-402.

In the *principia* area these changes may be equated with the filling of the sub-floor of the forecourt granary, dated by a worn coin of 375, showing an evident change of use of this building at the very end of the 4<sup>th</sup> century at the earliest, and at the south-west gate possibly by the laying of a crude road surface similar to those already described at a later date than a coin of 388-402 (Bidwell & Speak 1994, 103-105 and 126).

The comprehensive laying of new street surfaces using material from demolished structures indicates a distinct and abrupt change from preceding practice. It is tempting to wonder whether these changes denote the breakdown of regular administration and payment and supply of a military unit, and mark a transition to a different kind of community, perhaps with combined elements of the surviving military and of the civilian population (the latter perhaps indicated by the craft activity in the courtyard house, no longer functioning as an official residence) redefining the site to meet their needs (Petts (2013, 321-322) on a 'process of 'convergence', as previously disparate groups within the fort/vicus complex were increasingly integrated', in the context of the late sequence at Binchester).

In the courtyard house there followed a period of abandonment or neglect; a fire apparently brought the antler-workshop activity to an end, and burnt material also filled a drain contemporary with the Period 8 paving in the stable (Room 14). Dark silt accumulated in the porticos surrounding the courtyard, containing much fallen wall-plaster. The silt contained pieces of antler associated with the craft working episode adjacent Room 5, giving the silt accumulation a *terminus post quem* 388-402 on the basis of slightly worn coins of that date in the antler-working deposits. The silt itself contained worn coin issues of 375 and 378-383. There are some similarities elsewhere: a layer of mud lay over the road through the south-west gate. The 1875 excavations recorded evidence of burning in the *principia*, which might have affected the possible church. Of course, this does not prove that the whole site was abandoned, and these may have been localised occurrences.

**Period 9** In the courtyard house the dark silt in the porticos was overlain by a walkway constructed of re-used facing stones and blocks fitted together in a distinctive 'polygonal' or 'crazy paving' style (distinguishable in appearance from the crude metalling and paving of Period 8), displaying little wear (fig. 4). The paving therefore represents a development at some remove from the pre-silt horizon with the coins of 388-402, and therefore of very late 4<sup>th</sup>- or 5<sup>th</sup>-century date.

The walkway in the north-west portico gave access to the rooms in the north-west range, which were similarly paved, although only fragments survived. The walkway was abutted by a further paving of re-used facing stones and blocks, which showed no wear (fig. 5). Both styles of construction, perhaps especially the latter, resemble block paving recorded in a timber building set over the remains of the northern granary at Birdoswald and seen as the first of a sequence of two post-Roman 'halls' detected at that site (Wilmott 1997, 210-212, fig. 146 and plate 8).

A similar paving overlay the Period 8 surface in the central courtyard of the courtyard house, with traces

of a second or uppermost phase or repair evident. The Period 7C floor in the largest reception room (7) was overlain with a similar block paving and a crude block paving overlying dark silt in the north-east portico was at equivalent stratigraphic level to that in the north-east portico. The 'polygonal' or 'crazy' paving was not found overlying the crude Period 8 surfaces in rooms 13 and 14 of the courtyard house; presumably they simply remained in use, as did the surrounding street surfaces.

Polygonal paving of very similar character was also laid in the hall-like building on the south-west side of the *via praetoria*, with more evidence of wear (fig. 3). This was not the original floor here, which had apparently been removed, perhaps in the period of hiatus detected after Period 8 in the courtyard house. This phase of resurfacing and re-occupation may be equated with the laying of similar paving following the robbing out of metalling on the street north-east of the *principia* and the final demolition of the forecourt granary (Bidwell & Speak 1994, 105).

The site may have been refortified at this time, as a new ditch (H) with a *terminus post quem* of 388-402 was cut across the south-west gateway, replacing the silted ditches of Periods 7C-8 and this probably extended around the whole circuit (Bidwell & Speak 1994, 142). In the east quadrant, apart from the fragmentarily preserved stone surfaces, all other evidence of the Period 9 (very late 4<sup>th</sup>- or 5<sup>th</sup>-century) occupation had been removed by Victorian excavation.

**Burials in the courtyard house** Paving in the central courtyard which could have been of either Period 8 or 9 was cut by a burial pit containing the disarticulated skeletons of two individuals who had died from sword blows to their heads. Before burial the bodies had lain about in the open for long enough to be gnawed by animals and to partially decompose. Two high-precision <sup>14</sup>C dates obtained in 2023 gave dates at the 95 % probability level of cal AD 324-406 and cal AD 342-418 for the skeletons. Since the burials can hardly have been made before the phase of occupation indicated by the coins of 388-402, the date of this violent event is narrowed down to the very late 4<sup>th</sup> or very early 5<sup>th</sup> century. This would seem to mark a violent discontinuity in the history of the site. The fact that the bodies had lain in the open for time suggests that there was a complete break in the occupation of at least this part of the fort.

There are two possible interpretations of this burial. Either it marks the end of the sequence of occupation in the courtyard building, in which case the entire sequence described above, including the latest paving of 'Period 9', must be compressed into the late 4<sup>th</sup> to earliest 5<sup>th</sup> century, with this part of the site violently and permanently abandoned at this time, with the burials presumably made by people continuing to occupy other parts of the site. Alternatively, they could have been made by people re-occupying the courtyard building after the violent episode,





Figure 5. Paving of Period 9 (5<sup>th</sup>-century reoccupation?) in the north-west portico.

with the occupation signalled by the Period 9 paving following on from the burials. In either case the fact that the bodies were rather disrespectfully thrown into a pit, within the building, may indicate that there was not direct continuity of personnel with the latest community living in Roman fashion (*i.e.* Period 8). On the other hand there may have been cultural continuity: the burial of the bodies

in the exact centre point of the courtyard building may imply a ritualistic or reverential attitude by people with some affinity with the victims.

If Period 9 does represent a reoccupation of the house, it must have been brief: the lack of wear on the paving of this final phase was notable. The courtyard house seems to have fallen rapidly into complete ruin and quite soon

collapsed – there was little build-up of soil between the latest surfaces on the central courtyard and articulated wall-collapse from the building. Likewise there was not much soil build-up on the *via praetoria* between its disuse and walls collapsing onto it.

The fact that the bodies in the courtyard house were carefully gathered up and buried shows that someone had returned to or visited the site and had interest in it, or was occupying some other part of it. Worked antler in dark silt overlying one side of the *via praetoria* and sealed by the collapse of a barrack wall produced <sup>14</sup>C dates which combine to give a date range of cal AD 422-542 at 95 % probability. There was a long post-c. 400 structural sequence at the south-west gate, where Ditch H was eventually crossed by a causeway carrying a new road into the gate, which itself was remodelled in timber. The final phase here is an extra-mural cemetery, with two <sup>14</sup>C dates that combine to give a date range of cal AD 421-632 at 95 % probability (Bidwell & Speak 1994, 142-144). Despite these signs of mid- or later 5<sup>th</sup> century occupation on the site, the evidence from the east quadrant suggests there had been a rapid contraction of earlier 5<sup>th</sup>-century activity, leaving the east quadrant of the fort abandoned.

### **Interpretation. Transition and transformation, or abandonment and reoccupation?**

The discontinuities in the two phases discerned as the courtyard house moves from the 4<sup>th</sup> into 5<sup>th</sup> century might suggest a different ‘end of empire’ model from that which suggests the gradual transition of a late-Roman unit into a warrior band. The ‘war band’ model, as found, *e.g.*, in Wilmott (1997; 2000) or Collins (2012) predicts gradual change in the late 4<sup>th</sup>-century use of space, with, for example, official spaces such as granaries or the basilicas of *principia* becoming feasting halls; and a long 5<sup>th</sup>-century chronology in which functional replacements of former buildings emerge – *e.g.* at Birdoswald, a sequence of timber halls replacing the granary ‘feasting hall’.

The South Shields courtyard house evidence does not fit this model particularly well. The traditional function of the house is maintained until late in the 4<sup>th</sup> century. When military function ceases it is recognisable civilian Roman craft activity that colonises the house. The relatively sudden and very late change of function of the *praetorium* from residence to workshop space, and the contemporary resurfacing of all streets using *spolia* in a wholly unprecedented fashion (occurring no earlier than the 380’s), could suggest a sudden ‘end’ of regular military administration and mark a transition to a different kind of community, perhaps with combined elements of the surviving military and of the civilian population (Petts 2013).

Then, crucially, there is a phase of violent dislocation, indicating interruption rather than continuity of occupation. Following that there are no replacement ‘halls’ or other new buildings, instead, on one possible interpretation, a brief reoccupation of existing structures: the courtyard house and apsidal building. The phase of reoccupation (Period 9), signalled by paving of a quite different character, might suggest the arrival of newcomers, perhaps a Brittonic authority, a warlord or other regional authority with no necessary connection to latest ‘official’ Roman garrison. On the evidence available at the time of writing, it could equally represent the final phase of the last Roman military/civilian use of this part of the site.

Of course, while there are clear divergences here from the predictions of the ‘war-band’ model, the latter may be applicable at some fort sites, and clearly sites could have different histories. South Shields sat in an agriculturally rich ‘cultural core’ and had an exposed east coast situation. Birdoswald lay many miles to the west, in a much more remote landscape far beyond the zone of earliest Anglian penetration. These differences alone would lead us to expect differing 5<sup>th</sup>-century developments.

### **Anglo-Saxon use of the fort at South Shields**

Several objects of 7<sup>th</sup>- to 9<sup>th</sup>-century date were recognised some years ago from ploughsoil and modern overburden overlying the Roman levels in the east quadrant of the fort (one example recently published: Croom & Youngs 2021). These led to the expectation that a phase of Anglo-Saxon occupation might have taken place within or over the Roman buildings in this part of the fort, the evidence perhaps removed by Victorian excavation. This now seems unlikely considering the sequence described above, where probably 5<sup>th</sup>-century burials are apparently rapidly followed by the collapse of the courtyard house. Post-excavation analysis has now identified two formerly unrecognised cist-burials over the levelled remains of the barrack north-west of the courtyard house. These survived in an isolated area which had suffered less plough damage than usual and had escaped Victorian digging, and it is possible that they formed part of an extensive cemetery in this area of the fort, otherwise destroyed. Some of the burials noted in 1875 in the *principia* area may also be of this date. Although the two surviving graves in the east quadrant were badly plough-damaged, contained no skeletal material, and are inherently undatable (their alignment, not east-west, *might* indicate they are relatively early), the cemetery that they suggest probably offers the best explanation for the occurrence of 7<sup>th</sup>- to 9<sup>th</sup>-century objects over this area. If this is correct it means that the Roman buildings in the east quadrant were completely levelled by the time the site was used for burial. The towering wall of

the *principia* cross-hall at the centre of the fort may have stood for longer: in 1875 its collapse was found overlying a deep accumulation of earth.

Quite independently it has been suggested on circumstantial grounds that South Shields might have become an Anglian royal site, perhaps that from which the monastery at Jarrow was endowed (Wood 2008), and indeed the 16<sup>th</sup>-century antiquary Leland recorded a tradition that Oswin, King of *Deira*, was born in the fort at South Shields, which would have been in the early 7<sup>th</sup> century. The cemetery in the fort (if correctly deduced) means that there must have been a contemporary settlement, but this would not necessarily have been inside the Roman fort. An Anglian royal site might have lain somewhere outside its walls, the fort merely a royal possession, held as a source of valuable metals and other materials and at a later stage handed over to the church and used for burial. The fort at Binchester provides a close parallel, overlain by an extensive cemetery contemporary with that at South Shields (Ferris 2010, 94-5) and robbed for building materials for the church at Escomb, while the nucleus of the contemporary settlement remains undiscovered. Leland also recorded a tradition that South Shields fort was destroyed by the Danes. The dates recorded for the destruction of monasteries on the Tyne in Danish raids in 867 and 875 are consonant with the end of the date range for the objects which might emanate from a cemetery over the east quadrant of the Roman fort, and it was perhaps at this time that Anglian control of the site came to a close. The 1875 excavators claimed to have seen a system of paved roads and a burnt destruction level belonging to an occupation above the Roman levels, but no trace of this has been seen in any modern excavation.

## Bibliography

- Bidwell, P. & S. Speak, 1994: *Excavations at South Shields Roman Fort 1*, Newcastle upon Tyne.
- Collins, R., 2012: *Hadrian's Wall and the end of Empire*, London.
- Croom, A. & S. Youngs, 2021: An insular horse-harness fitting from South Shields Roman Fort, Tyne and Wear, *Medieval Archaeology*, 65/2, 224-237.
- Ferris, I., 2010: *The beautiful rooms are empty. Excavations at Binchester Roman Fort, County Durham 1976-1981 and 1986-1991*, Durham.
- Greep, S., 2015: A late fourth century/early fifth century furniture maker's workshop at the Roman Fort of South Shields, *Arbeia Journal* 10, 129-148.
- Mackensen, M., 1995: *Das spätrömische Grenzkastell Caelius Mons-Kellmünz*, Stuttgart.
- Petts, D., 2013: Military and civilian. Reconfiguring the end of Roman Britain in the North, *European Journal of Archaeology*, 16/2, 314-335.
- Wilmott, T., 1997: *Birdoswald. Excavations of a Roman fort on Hadrian's Wall and its successor settlements 1987-92*, London.
- Wilmott, T., 2000: The late Roman transition at Birdoswald and on Hadrian's Wall, in: T. Wilmott & P. Wilson (eds), *The late Roman transition in the North*, Oxford (British Archaeological Reports British Series 299), 13-23.
- Wood, I.N., 2008: *The origins of Jarrow. The monastery, the slake and Ecgfrith's minster*, Jarrow (Bedesworld Studies 1).
- Zant, J., 2009: *The Carlisle Millennium Project. Excavations in Carlisle 1998-2001 1. Stratigraphy*, Lancaster.



# The borderlands of Egypt's Western Desert in late antiquity

Paul N. Kucera

Almost all of Egypt's Western Desert (also Libyan Desert), is inhospitable with perhaps the exception of the coastal hinterland along the north. This hyper-arid zone forms the eastern margin of the Sahara covering a vast and seemingly endless area punctuated only by a handful of habitable oases located 100's of kilometres apart. These geographical and environmental characteristics alone render the Western Desert as a natural frontier. The five main Egyptian oases in this region are Siwa, Bahariya, Farafra, Dakhleh, and Kharga (fig. 1), and together they form a network linking the Nile Valley, including the Fayyum, with regions extending into Sudan, Libya, and beyond. Most of the oases have been integrated into the Egyptian sphere since the First Dynastic Period (c. 2,700 BC), and by the Roman period, strong Roman cultural influence and cohesive administration was apparent early on. Importantly, all were recognised as administrative districts or extensions of, and as *nomes* in the case of Kharga and Dakhleh, under jurisdiction of a civilian governor (Wagner 1987, 124-128, 131-134, 259-261 and 263). All may be considered as both fiscal zones and border districts or borderlands contained within the larger natural frontier, *i.e.*, the Western Desert. The firmest evidence for the existence of borders is derived and inferred from late 4<sup>th</sup> century AD Greek and Coptic texts from ancient *Kellis* (Ismant al-Kharab) in Dakhleh and ancient *Kysis* (Dush) in Kharga. The examples highlight the border as a demarcation along travel routes, a checkpoint of sorts, and all confirm the fiscal nature of the border where customs duties were due (Kucera 2020, 428-429). This forms the primary context in which to view borders of the Western Desert, and furthermore they are both internal and external in terms of administrative regions and the province itself. Considering military placement and presence, it likely coincided in part with these borders referred to in the ancient documents.

In terms of security and protecting the region, the last quarter of the 3<sup>rd</sup> century AD represents a key moment in time, when the western oases witnessed a fort-building programme, and which centred on Bahariya, Dakhleh, and Kharga. Though unlike its counterpart, the Eastern Desert (generally Maxfield 1996; 2000; Breeze & Reddé 2021), the development of fortification in the Western Desert is comparatively late. This programme in the west appears to be an early phase of the wider programme of fortification in Egypt that is largely attributed to Diocletian and the Tetrarchy spanning the late 280's to the 310's. The impetus for this may well have been related to threats posed by groups identified as 'Libyan' (including *Goniotae* and *Mastitae*) who conducted raids into parts of the northern Western Desert during the middle of the 3<sup>rd</sup> century, reaching the environs

## Paul N. Kucera

Director, Qasr Dakhleh  
Project, Adjunct Research  
Associate, Faculty of  
Religion, Culture and Society,  
University of Groningen,  
p.n.kucera@rug.nl



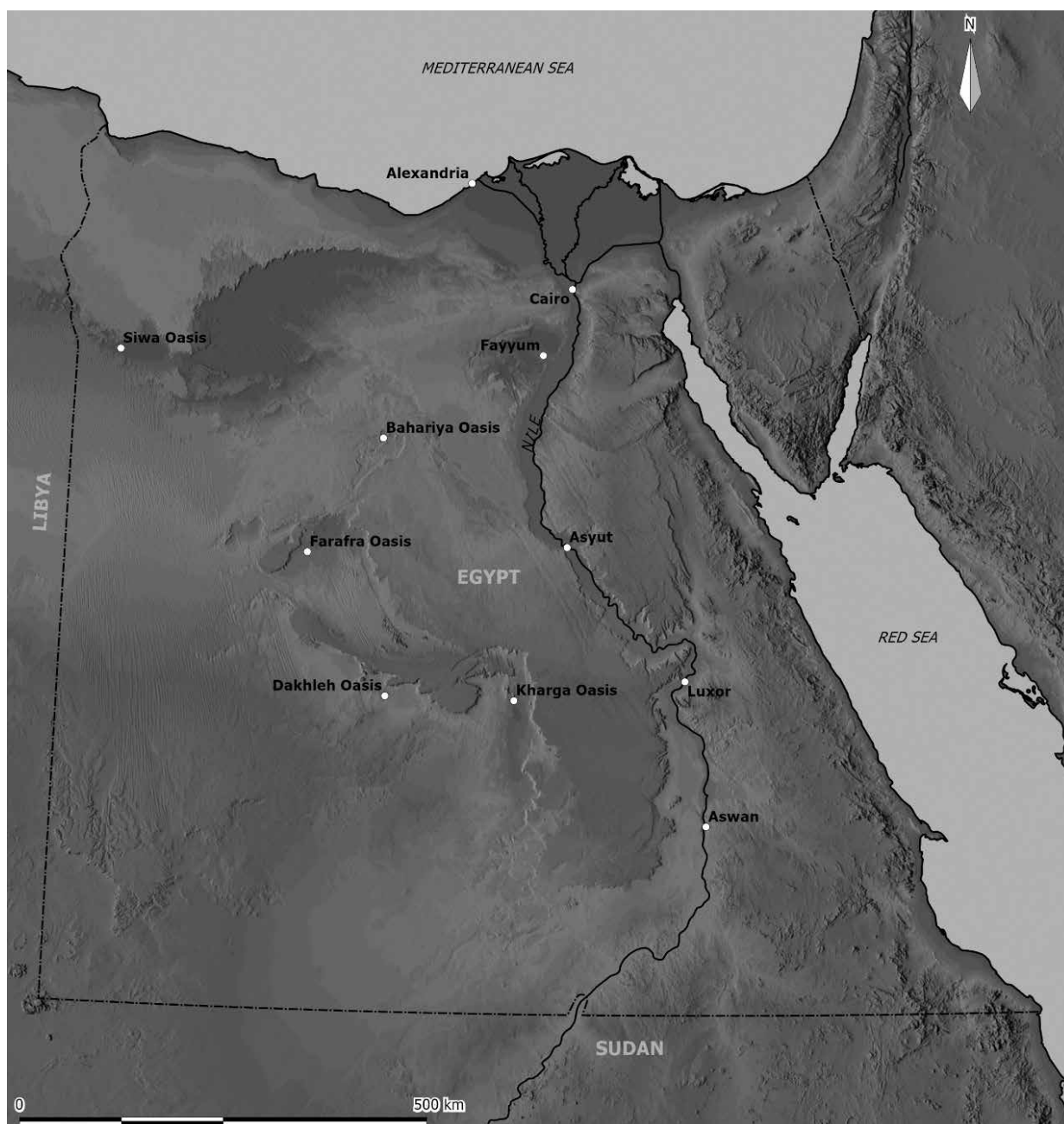


Figure 1. Map of Egypt and the Western Desert oases, with modern political boundary (P. Kucera, shaded relief base map derived from SRTMv3 DEM, courtesy NASA).

of the Fayyum and the Nile Valley (Kucera 2010, 139-141). However, there is no specific evidence that the oases were raided until much later (Reddé 1991, 485 and 492). In the current state of knowledge, the three abovementioned oases each received a military camp (*castrum*), with common fortification characteristics, similar layout, size, and design, while in Kharga there were several additional smaller forts also built, and all located in the north of that oasis. Numerous other large buildings found throughout

the oases have been proposed as Roman military in origin or suggested as having served as forts, indeed some pre-existing structures such as the temple enclosure at Dush in the south of Kharga were used by the military, but these buildings do not exhibit the adaptation of typical fortification elements (Kucera 2010, 54).

Focussing on the main purpose-built military installations, a remarkable example of a late Roman fort is located at el-Deir in Kharga Oasis, situated 22 km



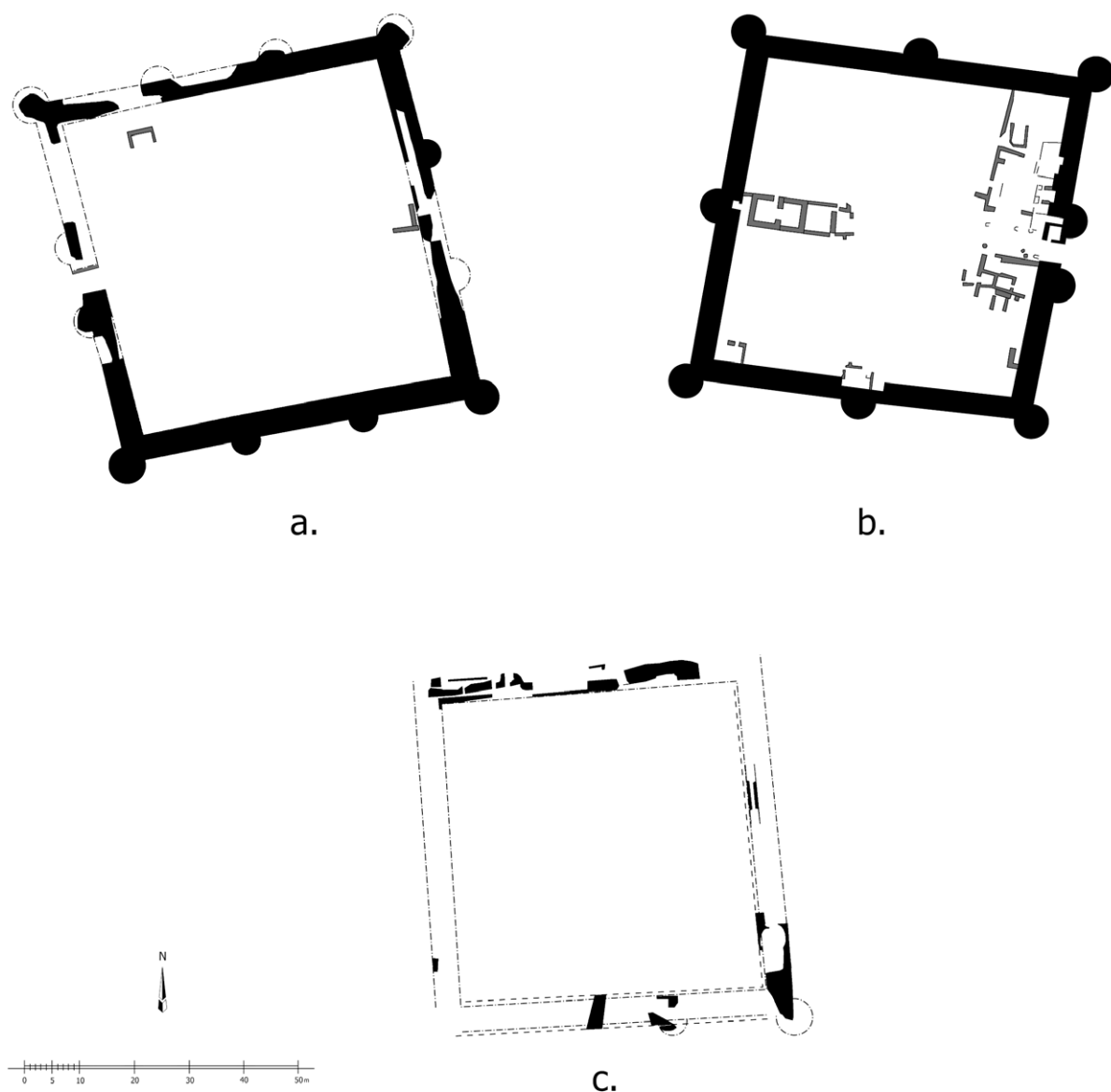


Figure 2. *Castra* plans: a. el-Deir, Kharga Oasis (after Brones & Duvette 2007, plate 1); b. Qaret el-Toub, Bahariya Oasis (after Colin 2012, fig. 1.3 and separate plan courtesy F. Colin); c. al-Qasr, Dakhleh Oasis (P. Kucera).

northeast of *Hibis* (Kharga City). The structure (fig. 2a) is built entirely of mud brick, square in plan covering an internal area of 3,422 m<sup>2</sup> (0.34 ha) with 12 circular, externally projecting wall towers, a single gateway, and walls still preserved up to 14 m in height with parapets (Naumann 1939, 2; Reddé 1999, 379; Brones & Duvette 2007, 6). Magnetometry survey inside the fort revealed many regular walls in a well-organised layout, and it seems to have a *sacellum* opposite the entrance and a well at its centre; a colonnaded portico leading from the entrance to the possible *sacellum* is also likely. It is probable that barracks were arranged along the interior

face of the circuit walls, and generally many aspects of the layout appear similar to the *Dionysias* fort (Qasr Qarun) in the Fayyum. Previous excavations conducted at el-Deir provided insights into some of the key structural features and ceramic material obtained from occupational deposits support a foundation date in the late 3<sup>rd</sup> century and occupation throughout the 4<sup>th</sup> and into later centuries (Brones & Duvette 2007, 12, 14 and 16-21). The fort was surrounded by agricultural fields and remnants of earlier settlement and its cemeteries, use of which does not appear to post-date the 4<sup>th</sup>-5<sup>th</sup> century (Tallet *et al.* 2012, 349-353; Dunand & Letellier-Willemin 2019, 238).

In Bahariya Oasis, c. 1 km west of *Psobthis* (Bawiti), is Qaret el-Toub. This fort is nearly identical to el-Deir in design and ground plan (fig. 2b), exhibiting the same type of wall towers and occupying an area of 3,100 m<sup>2</sup> (0.31 ha), though the edifice is heavily spoiled by farming-related activities (Colin *et al.* 2000a, 480-481; 2000b, 148 and 165; 2001, 508; 2003, 530 and 533). Like el-Deir, similarities to *Dionysias* are apparent in terms of the internal layout of the fort. Most importantly, aside from ceramic and numismatic evidence which help date this fort at Qaret el-Toub to the late 3<sup>rd</sup> century and its occupation into following centuries, fragments of a Latin inscription were discovered during excavation of the gateway (Colin 2012, 110-111, 120 and 140). The inscription contains a dedication to Jupiter, Hercules, and Victory, and reveals that the fort was built and consecrated under Diocletian and Maximianus (Colin 2012, 110). This likely took place in 288 AD, and this is significant in light of at least two other forts built in Egypt and dedicated at the same time: *Sile* (Tell Abu Sayfi) and *Hierakon* (Deir el-Gabrawi).

At al-Qasr in Dakhleh Oasis, the remnants of a similar late Roman fort are found nestled amongst the ruins of Ottoman period houses and situated around an old well. The fort's remains comprise a mixture of heavily spoiled wall sections, traces of alignment and of a wall tower, substantial foundations, and in some instances, wall sections that are wholly integrated into the later Islamic period structures. Overall, the traces of the structure (fig. 2c) indicate that the fort was a similar size, covering an estimated 3,364 m<sup>2</sup> (0.34 ha), and built using the same technique evident at el-Deir (Kucera 2012, 309). Ceramics obtained from important contexts associated with the wall foundations during excavations support a late 3<sup>rd</sup> century date for its construction and occupation through subsequent centuries. Al-Qasr is located 2 km north-northeast of *Trimithis* (Amhida), which was a major settlement during the Roman period. Considering auxiliary deployments in Egypt, this ties in with the *Notitia Dignitatum*, which lists *Trimithis* as the location for *Ala I Quadorum*, a late Roman cavalry unit under the command of the *dux Thebaidos* (*Notitia Dignitatum orientalis* 31.56; Seeck 1876). Undoubtedly the fort at al-Qasr served as the headquarters for this unit. Contemporaneous references to a military camp in documents from the oasis are often non-descript as to a toponym. Nevertheless, a dipinto dated after 325 AD that was found at Amhida substantiates the existence of a *castrum* within its environs and reveals the name of the commander: "Flavius Apollonius, *praepositus* of the camp of *Trimithis*...Julius Capito..." (Ast & Bagnall 2015, 3-4).

Like al-Qasr, the forts at el-Deir and Qaret el-Toub surely served as the primary camps (*castra*) for late Roman auxiliary units stationed in their oases, which were *Ala I Abasgorum* and *Ala II Armeniorum*, stationed at *Hibis* and

Small Oasis (*i.e.* Bahariya) respectively (*Notitia Dignitatum orientalis* 31.41-55 and 28.22). In the case of *Ala I Quadorum* and *Ala I Abasgorum*, both units are attested in the Great Oasis (Kharga and Dakhleh) within the first decade of the 4<sup>th</sup> century (Wagner 1987, 376-377). Moreover, it is plausible that these units were stationed in the oases earlier at about the time of the construction of the *castra* (Kucera forthcoming, 6-7). In terms of strategy, the location of the *castra* is significant (fig. 3). Each site is situated near the major passes in and out of the oases, all appear to integrate a water source, and there is a preoccupation with controlling the major desert roads. From el-Deir the shortest possible road between Kharga and the Nile Valley could be controlled. Al-Qasr marked the entry and exit point for Dakhleh on the road heading to/from Farafra. Qaret el-Toub was positioned near the junction of roads that connected Bahariya to the Fayyum, *Oxyrhynchus* (el-Bahnasa) in the Nile Valley, and the southern oases, and could also control the road to Siwa and beyond into Libya. These fort locations, combined with the types of units stationed in the oases suggests a strategy intended to control routes and monitor travel through the desert, with mobile soldiers on patrol. The smaller forts in Kharga also reflect this theme, where they are concentrated in the north of the oasis. Surveys and ceramic analyses all suggest that these localities were occupied from the 1<sup>st</sup> through to the 4<sup>th</sup> and 5<sup>th</sup> centuries, though the forts themselves are probably 4<sup>th</sup> century in date (Rossi & Ikram 2018, 554-558). All are situated along road networks through the north and are positioned close to water and alum sources and mining areas (see below). Small detachments from the main unit probably occupied these sites and provided security for this resource-rich zone.

As to roles, documentary evidence reveals that soldiers fulfilled multiple tasks. For example, surveillance activities (*agraria*) are confirmed in P.Bingen 121 (Gascou & Pintaudi 2000, 515-516) relating to military duties performed in Bahariya and were no doubt in support of general security measures. Another activity was the procurement of military supplies (*annona*), both within the oases and apparently in connection with units stationed in the Nile Valley, which is often reflected in the documentary evidence (*e.g.* O.Douch, O.Waqfa, P.Kell IV Gr 96, P.Bingen, O.Kell, O.Trim). Potentially, policing and monitoring of the key desert roads was as much related to the security of supply chains and perhaps trade as it was for security in general. Supporting state-owned monopolies that operated in this desert region was another role fulfilled by the military. In one papyrus from the Abinnaeus Archive (P.Abinn 9, Bell *et al.* 1962, 51), the unit stationed in Bahariya performed counter-smuggling activities on behalf of the natron monopoly. This highlights the importance of the fort locations and suggested function in facilitating the monitoring and control of desert roads.

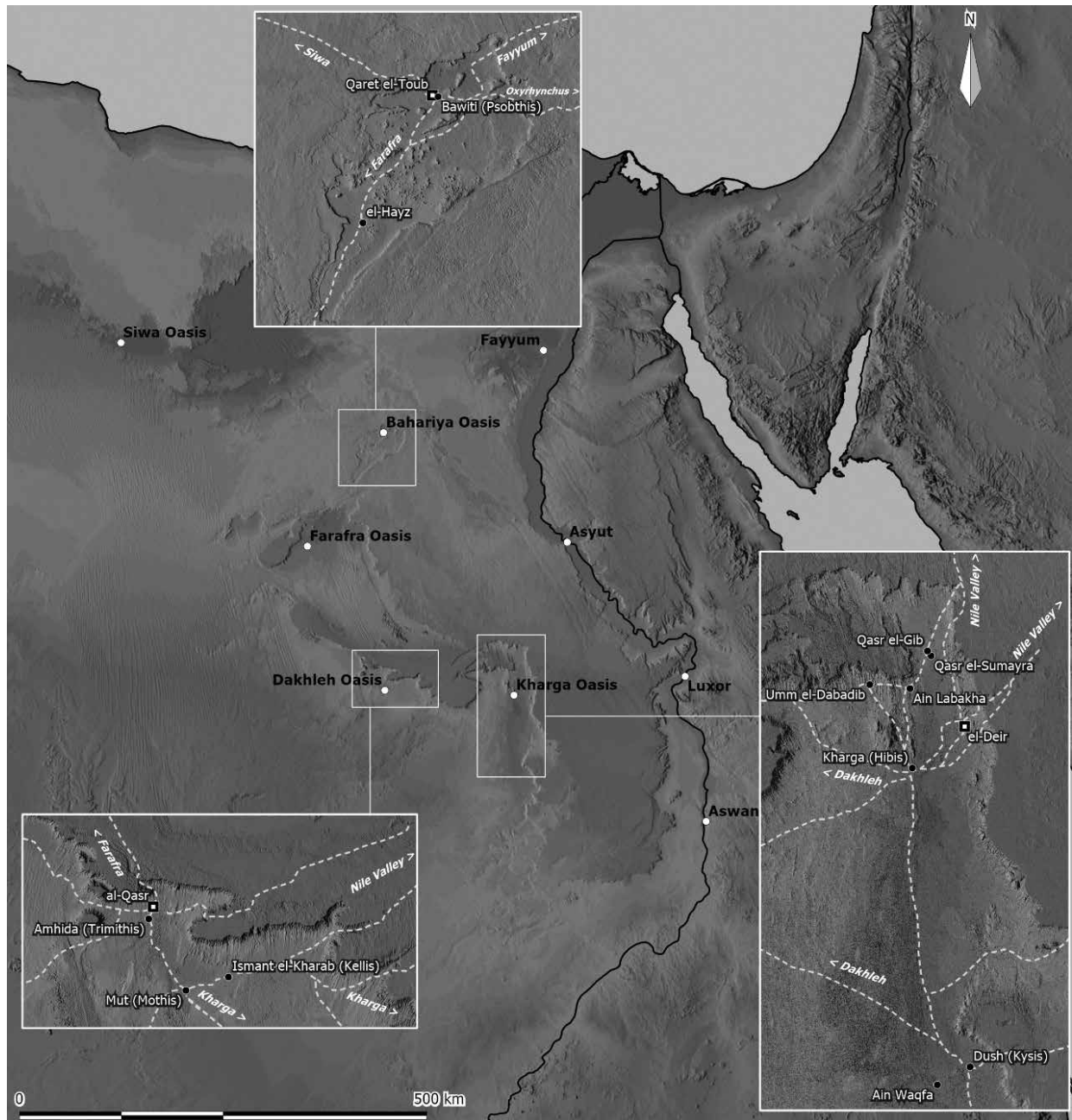


Figure 3. The oases and locations of the *castra* in relation to major desert roads. (P. Kucera, shaded relief base map derived from SRTMv3 DEM, courtesy NASA).

Securing state interests is clear and although natron does not occur naturally in the oases, the mineral alum does, and is unique to the Western Desert. Furthermore, there was an alum monopoly in operation during the Roman period and in the case of Kharga, there is an apparent spatial relationship between the forts and some of the known alum mining areas. Such a relationship is also valid for Dakhleh with respect to al-Qasr where alum mines are located nearby. By inference, the oasis-based units

must have also afforded the alum monopoly the same type of supporting role as it did for the natron monopoly (Kucera 2005, 29-30). With exploitative industries of natural resources such as this, it is possible to view the military presence in the Western Desert in a similar light to its counterpart, the Eastern Desert. There are other facets to the military presence and its function in the oases as well. Policing duties in cities and villages are implied in documents from *Kellis* and *Trimithis* and it is also possible

that soldiers were involved in customs-related duties at *Kysis* (Carrié 2004, 264-265; Kucera forthcoming, 9-10). In another instance from Dakhleh, horse-archers appear associated with *angariae* service (heavy transport) in the *cursus publicus*, possibly acting as escorts (Kucera 2010, 103-104; Ast & Bagnall 2015, 2).

Determining the timing as to when these roles were no longer fulfilled by the auxiliary units and when forts may have ceased to be occupied by soldiers is difficult to establish at present. Yet a Coptic *ostrakon* found at al-Qasr and dated to the late 4<sup>th</sup> to mid-5<sup>th</sup> century may provide some indication. It contains a partial letter addressed to the 'headmen of the imperial fort' (Gardner 2012, 473). The *ostrakon* confirms that al-Qasr was identifiable as a Roman fort, and initial thoughts were that it might relate to the military presence; however, the content is not military-related. The title used is also problematic. If indeed addressed to a camp commander and/or ranked officers the appropriate title of *praefectus* or *princeps*, or a functional one such as *praepositus* might be expected. Perhaps 'headmen' (may also be interpreted as 'great men') was intended as a mark of respect or polite gesture for a group of officers, similar to how 'very noble' occurs in a few late 4<sup>th</sup> century documents from Kharga where military personnel seem to have been addressed in this manner (Kucera 2010, 52). Although without a context to support this it is difficult to conclude this for the al-Qasr document. Other similar dated Coptic *ostraka* have been found at the site in well-stratified deposits but unfortunately all are quite fragmentary and have not revealed much useful information to aid with interpretation of this key document. Viewed plainly, 'headmen' as a title would seem to have more affinity to village elders or the managers of estates, the preeminent locals who became dominant across the landscape in later centuries. It invites us to question if at the time of writing the fort was no longer serving a strictly military purpose – i.e. had it now become the centre of an estate or village in which these managers now based themselves? It is not known if the fort was ever surrounded initially by a *vicus* or farms, such as el-Deir. Of course, the presence of a *vicus* would not negate that the fort still retained a military function with its garrison present, but perhaps the dynamics of those attached to or frequenting the fort changed around the beginning of the 5<sup>th</sup> century. Considering settlement abandonment and external threats, given the proximity of Amhida to al-Qasr one wonders whether the 'headmen' are the higher-level managers or elites from *Trimithis* (Gardner 2012, 472; Bagnall *et al.* 2015, 191) who may have relocated to the *castrum* and ushered in a new phase of occupation.

This can be contextualised within the broader scenario that existed across the region. Generally, the 4<sup>th</sup> century presents as one of relative prosperity, with diverse Christianity widespread and thriving, yet

significant problems also emerged. It is understood that nearby *Trimithis* experienced decline in the second half of the 4<sup>th</sup> century and was largely abandoned around 400 AD (Bagnall *et al.* 2015, 22-23 and 150-151). *Kellis*, another large settlement in the eastern half of the oasis, experienced similar abandonment by the end of the 4<sup>th</sup> century (Hope & Bowen 2022, 394). So too, Ain el-Gedida, a smaller rural settlement northwest of *Kellis*, was abandoned within the last decades of the 4<sup>th</sup> or beginning of the 5<sup>th</sup> century (Bagnall *et al.* 2015, 182). Interdisciplinary studies have identified changes to environmental conditions and provided probable reasons for some of the patterns of abandonment, including sand dune encroachment, lowering of the water table in some areas and drying up of wells, salination, and over-exploitation of soils. In areas such as Bahariya, studies suggest that increased aridity was already occurring from the second half of the 2<sup>nd</sup> century (Colin *et al.* 2020, 40). Over in Kharga similar problems relating to the environment arose (Bravard 2019), and patterns of site abandonment emerged there. Most of the northern Kharga sites and that of Dush in the south went into decline and were abandoned in the 5<sup>th</sup> century (Rossi & Ikram 2018, 558). Added to this was external threat from raiding parties. Possibly by the end of the 4<sup>th</sup> and certainly into the 5<sup>th</sup> and later centuries, the western oases were susceptible to raids by *Blemmyes*, *Nobatae*, *Mazikes*, and eventually *Lawata* Berbers (Kucera 2010, 152-160). Bahariya was raided in the early 430's by *Mazikes* and in Kharga, the capital *Hibis* was sacked by *Blemmyes* in 435 AD; destroyed buildings identified just south of the *Hibis* Temple enclosure may well be evidence of this event (Bagnall & Tallet 2019b, 85). A wall inscription found at *Kellis*, recently translated, and possibly dating to the 5<sup>th</sup> or 6<sup>th</sup> century, conveys a sense of the anxiety that communities must have felt, revealing that there were men on watch for 'the Ethiopians' (Hope & Bowen 2022, 395-396). However, it is unknown if they were soldiers.

And yet these factors did not spell the end of all settlements. Numerous sites in Kharga and Dakhleh continued through the 5<sup>th</sup> and into the 6<sup>th</sup> and 7<sup>th</sup> centuries, and even later. There are textual and archaeological indicators for occupation at *Hibis* and *Mothis* (Mut) to have continued (Bagnall & Tallet 2019b, 86-87; Hope & Bowen 2022, 394), both of which had substantial temple enclosures that add an element of defence, and between Mut and al-Qasr, the small Christian settlement Dayr Abu Metta reveals occupation from the 4<sup>th</sup> into the 6<sup>th</sup> centuries. The evidence from al-Qasr demonstrates it continued to be occupied. Stratified deposits on the outside of the fort wall bear 5<sup>th</sup>-7<sup>th</sup> century materials and there is also evidence of occupation in later centuries. Moreover, it is understood that the fort was still recognisable for a long period. The accounts of early Arab geographers Ibn Hawqal and al-Bakri of the 10<sup>th</sup> and 11<sup>th</sup> centuries both describe

al-Qasr as a significant town, having a fort with a well at its centre. Circumstantially, the context of abandonment, environmental challenges, and external threats can be viewed as a plausible scenario that brought change to a military site like al-Qasr and as it would seem that al-Qasr succeeded *Trimithis* perhaps an element of this transition is reflected in the abovementioned Coptic *ostrakon*.

Al-Qasr developed into a major settlement, becoming a new capital in the oasis, and continued to be an important town into the Ottoman period. The forts at Qaret el-Toub and el-Deir both show some signs of occupation/reoccupation following dilapidation of internal buildings into the 5<sup>th</sup>-10<sup>th</sup> centuries (Colin 2012, 96; Tallet *et al.* 2011, 185-186; Ballet 2019, 164-165). However, the nature and scale of activity is difficult to determine. These sites did not witness the same development, with Qaret el-Toub becoming a source of fertiliser for the fields while el-Deir survived to a considerable degree from pillaging, but apparently was not reoccupied in a major way.

There remain many gaps in knowledge as to these sites and what happened to the military in these locations. Although work at Qaret el-Toub has ceased, it is hoped that further archaeological investigations at al-Qasr and el-Deir will bring new insight to the military presence and help us understand better the longevity of military use of the forts and early developments that followed the end of their strictly military function.

## Abbreviations

O.Douch: *Les ostraca grecs de Douch*

O.Kell: *Greek Ostraka from Kellis*

O.Trim: *Ostraka from Trimithis*

O.Waqfa: *Les Ostraca grecs d'Aïn Waqfa (Oasis de Kharga)*

P.Abin: *The Abinnaeus Archive. Papers of a Roman Officer in the Reign of Constantius II*

P.Bingen: *Papyri in Honorem Johannis Bingen Octogenarii*

P.Kell IV Gr 96: *Papyri from Kellis, IV (Greek). The Kellis Agricultural Account Book*

The authoritative list of published documents, known as the *Checklist of Editions of Greek, Latin, Demotic and Coptic Papyri, Ostraca and Tablets*, including bibliographic details, may be found here: <https://papyri.info/docs/checklist>

## Bibliography

- Ast, R. & R.S. Bagnall, 2015: New evidence for the Roman Garrison of Trimithis, *Tyche* 30, 1-4.
- Bagnall, R.S., N. Aravecchia, R. Cribiore, P. Davoli, O.E. Kaper & S. McFadden, 2015: *An oasis city*, New York.
- Bagnall, R.S., P. Davoli & C.A. Hope (eds), 2012: *The Oasis Papers 6. Proceedings of the Sixth International Conference of the Dakhleh Oasis Project*, Oxford (Dakhleh Oasis Project Monograph 15).

- Bagnall, R.S. & G. Tallet (eds), 2019a: *The Great Oasis of Egypt. The Kharga and Dakhla Oases in Antiquity*, Cambridge.
- Bagnall, R.S. & G. Tallet, 2019b: The Great Oasis. An administrative entity from Pharaonic Times to Roman Times, in: R.S. Bagnall & G. Tallet 2019a, 83-104.
- Ballet, P., 2019: And the potsherds? Some avenues of reflection and synthesis on the pottery of the Great Oasis, in: R.S. Bagnall & G. Tallet 2019a, 152-167.
- Bell, H.I., V. Martin, E.G. Turner & D. van Berchem, 1962: *The Abinnaeus Archive. Papers of a Roman officer in the reign of Constantius II*, Oxford.
- Bravard, J.-P., 2019: Water resources and irrigation in two oases of the Western Desert of Egypt: Kharga and Dakhla, in: R.S. Bagnall & G. Tallet 2019a, 17-29.
- Breeze, D.J. & M. Reddé, 2021: *Frontiers of the Roman Empire. The Roman frontier in Egypt*, Oxford.
- Brones, S. & C. Duvette, 2007: Le fort d'El-Deir, oasis de Kharga. "État de lieux" architectural et archéologique. *Bulletin de l'Institut Français d'Archéologie Orientale* 107, 5-41.
- Carrié, J.-M., 2004: Portarenses (douaniers), soldats et annones dans les archives de Douch, Oasis Major, in: C. Balmelle, P. Chevalier & G. Ripoll (eds), *Mélanges d'antiquité tardive. Studiola in honorem Noël Duval*, Turnhout, 261-274.
- Colin, F., 2012: *Bahariya I. Le fort romaine de Qaret el-Toub I*, Cairo (La collection Fouilles de l'Institut Français d'Archéologie Orientale 62).
- Colin, F., E. Adly, G. Castel, P. Tallet, F. Charlier, L. Delvaux, C. Duvette, H. Ibrahim al-Amir, J.-L. Fissolo, M. Ibrahim Mohammad, F. Labrique, M. Mossakowska-Gaubert, M.-D. Nenna, N. Passera, S. Marchand, Y. Ahmad Mohammadin & K. Zaza, 2001: Bahariya, in: B. Mathieu, Travaux de l'Institut Français d'Archéologie Orientale en 2000-2001, *Bulletin de l'Institut Français d'Archéologie Orientale* 101, 507-513.
- Colin, F., R. Beuret, M. Caselles-Barriac, F. Charlier, F. Doyen, C. Duvette, H. Ibrahim al-Amir, M. Ibrahim Mohammad, F. Labrique, D. Laisney, C. Lejeune, M. Mossakowska-Gaubert, S. Marchand, I. Régen, J. Van Heesch, Y. Ahmed Mohammadeyn & K. Zaza, 2003: Bahariya, in: B. Mathieu, Travaux de l'Institut Français d'Archéologie Orientale en 2002-2003, *Bulletin de l'Institut Français d'Archéologie Orientale* 103, 527-534.
- Colin, F., F. Charlier, L. Delvaux, C. Duvette, M. Ibrahim, F. Labrique, D. Laisney, S. Marchand, S. Mauné & K. Zaza, 2000a: Bahariya, in: B. Mathieu, Travaux de l'Institut Français d'Archéologie Orientale en 1999-2000, *Bulletin de l'Institut Français d'Archéologie Orientale* 100, 479-486.
- Colin, F., D. Laisney & S. Marchand, 2000b: Qaret el-Toub. Un fort romain et une nécropole

- pharaonique. Prospection archéologique dans l'oasis de Bahariya 1999, *Bulletin de l'Institut Français d'Archéologie Orientale* 100, 145-192.
- Colin, F., A. Quiles, M. Schuster, D. Schwartz, C. Duvette, S. Marchand, M.-A. El Dorry & J. Van Heesch, 2020: The end of the "Green Oasis". Chronological Bayesian Modelling of human and environmental dynamics in the Bahariya Area (Egyptian Sahara) from Pharaonic Third Intermediate Period to Medieval Times, *Radiocarbon* 62/1, 25-49.
- Dunand, F. & F. Letellier-Willemin, 2019: Funerary practices in the Great Oasis during Antiquity, in: R.S. Bagnall & G. Tallet 2019a, 237-268.
- Gardner, I., 2012: Coptic Ostraka from Qasr el-Dakhleh, in: R.S. Bagnall, P. Davoli & C.A. Hope, 471-474.
- Gascou, J. & R. Pintaudi, 2000: Les archives du monastère memphite d'apa Antinos, in: H. Malaerts (ed.), *Papyri in honorem Johannis Bingen Octogenarii*, Leuven (Studia Varia Bruxellensia 5), 511-520.
- Hope, C.A. & G.E. Bowen, 2022: The abandonment of Kellis, in: C.A. Hope & G.E. Bowen (eds), *Kellis. A Roman-period village in Egypt's Dakhleh Oasis*, Cambridge, 391-406.
- Kucera, P.N., 2005: The Late Roman fort at Qaret el-Toub in Bahariya Oasis. Towards a contextual understanding, *The Artefact* 28, 23-34.
- Kucera, P., 2010: *The Roman military presence in the Western Desert of Egypt*, Clayton (PhD thesis Monash University).
- Kucera, P., 2012: Al-Qasr. The Roman castrum of Dakhleh Oasis, in: R.S. Bagnall, P. Davoli & C.A. Hope, 305-316.
- Kucera, P.N., 2020: An oasis border in the fourth century CE. The evidence from Dakhleh, in: A.R. Warfe, J.C.R. Gill, C.R. Hamilton, A.J. Pettman & D.A. Stewart (eds), *Dust, demons and pots. Studies in honour of Colin A. Hope*, Leuven (Orientalia Lovaniensia Analecta 289), 425-436.
- Kucera, P., forthcoming: The Roman military presence in Egypt's Western Desert in light of the *Notitia Dignitatum*, in: M. Jelusic, S. Roggo & A. Kaiser (eds), *Proceedings of the conference 'Ruling an Empire in a Changing World. Studies on origin, impact, and reception of the Notitia Dignitatum'*.
- Maxfield, V.A., 1996: The eastern desert forts and the army in Egypt during the Principate, in: D.M. Bailey (ed.), *Archaeological research in Roman Egypt. The proceedings of the Seventeenth Classical Colloquium of the Department of Greek and Roman Antiquities, British Museum, held on 1-4 December 1993*, Ann Arbor MI (Journal of Roman Archaeology Supplementary Series 19), 9-19.
- Maxfield, V.A., 2000: The deployment of the Roman auxilia in Upper Egypt and the Eastern Desert during the Principate, in: G. Alföldy, B. Dobson & W. Eck (eds), *Kaiser, Heer und Gesellschaft in der Römischen Kaiserzeit*, Stuttgart, 408-442.
- Naumann, R., 1939: Bauwerke der Oase Khargeh, *Mitteilungen des Deutschen Archäologischen Instituts Abteilung Kairo* 8, 1-16.
- Reddé, M., 1991: A l'ouest du Nil. Une frontière sans soldats, des soldats sans frontière, in: V.A. Maxfield & M.J. Dobson (eds), *Roman Frontier Studies 1989. Proceedings of the XVth International Congress of Roman Frontier Studies*, Exeter, 485-493.
- Reddé, M., 1999: Sites militaires romains de l'oasis de Kharga, *Bulletin de l'Institut Français d'Archéologie Orientale* 99, 377-396.
- Tallet, G., J.-P. Bravard, R. Garcier, S. Guédon & A. Mostapha, 2012: The survey project at el-Deir, Kharga Oasis. First results, new hypotheses, in: R.S. Bagnall, P. Davoli & C.A. Hope, 349-361.
- Rossi, C. & S. Ikram, 2018: *North Kharga Oasis Survey. Explorations in Egypt's Western Desert*, Leuven (British Museum Publications on Egypt and Sudan 5).
- Seeck, O. (ed.), 1876: *Notitia Dignitatum, accedunt Notitia urbis Constantinopolitanae et Latercula prouinciarum*, Berlin.
- Tallet, G., R.J. Garcier & J.-P. Bravard, 2011: L'eau perdue d'une micro-oasis. Premiers résultats d'une prospection archéologique et géoarchéologique du système d'irrigation d'El-Deir, oasis de Kharga (Égypte), in: C. Abadie-Reynal, S. Provost & P. Vipard (eds), *Histoire des réseaux d'eau courante dans l'Antiquité. Reparations, modifications, réutilisations, abandon, récupération*, Rennes, 173-188.
- Wagner, G., 1987: *Les oasis d'Égypte à l'époque grecque, romaine et byzantine d'après les documents grecs*, Cairo (Institut Français d'Archéologie Orientale du Caire 662).



# Das spätrömische *castellum* auf dem Aachener Markthügel

Andreas Schaub

Das römische *Aquae Granni* (Aachen, Schaub 2012; 2015; 2021) reicht zurück in Zeit des Augustus. Wesentlicher Standortfaktor waren heiße Mineralquellen, von denen in Aachens Innenstadt zwei und im eingemeindeten, rund 1,5 km entfernten Ort Burtscheid, eine weitere in römischer Zeit genutzt wurden. Im Umfeld zweier großer Heilbadekomplexe ('Büchelthermen' und 'Münsterthermen') entwickelte sich ein urbanes Gemeinwesen auf einer besiedelten Fläche von rund 30 ha. Straßenverbindungen bestanden nach *Coriovallum* (Heerlen) im Norden, nach *Iuliacum* (Jülich) im Nordosten, in Richtung Eifel *Varnenum* (Kornelimünster) nach Südosten und nach Maastricht im Westen.

Zwischen den beiden Thermenanlagen (Abb. 1.1-2) entstand ein Platz (Abb. 1.3), der nach jüngeren Überlegungen als Forum gedeutet wird. Eine Bauinschrift aus den ersten Regierungsjahren Traians, die den Kaiser selbst als Bauherren im Nominativ nennt, wird damit in Verbindung gebracht (Schaub & Scherberich 2016). Die Anlage des Platzes erfolgte im Rahmen eines umfangreichen Bauprogramms in dessen Zuge nahezu der gesamte Zentralbereich des Vicus umgestaltet wurde. Eine Vielzahl überwiegend militärischer Ziegelstempel fast aller in Niedergermanien stationierten Legionen (1., 6., 16., 22., 30. und *Vexillatio Exercitus Germanici inferioris*) belegt zumindest die staatliche Beteiligung, wenn nicht Initiative an dieser und anderen Baumaßnahmen im Vicus. Das darf als Beleg dafür gewertet werden, dass der Standort für die Provinzverwaltung von einiger Bedeutung war. Dies wird noch dadurch gestützt, dass spätestens seit der Mitte des 2. Jahrhunderts eine Benefiziarierstation am Ort bestand, deren Weihebezirk (Abb. 1.4) seit 2016 unmittelbar nördlich von 'Büchelthermen' und mutmaßlichem Forum lokalisiert werden konnte (Schaub & Scherberich 2018). Größe, Urbanität und mögliches Forum stützen Überlegungen, in Aachen möglicherweise den Hauptort einer Civitas zu sehen (Schaub 2018a, 455-460).

## Zerstörung der Siedlung und Bau des *castellum*

Im letzten Viertel des 3. Jahrhunderts kam es zu umfangreichen Zerstörungen, wie entsprechende Befunde an mindestens vier Stellen im Norden (Markt und Rathaus), Osten (Hof, Rommelsgasse) und Süden (Hartmannstraße) des Vicus zeigen (Abb. 1). Unmittelbar danach wurde das *castellum* auf dem Markthügel errichtet.

Den bislang besten Einblick in dessen Stratigrafie konnte man 2011 an der Westseite des Marktes gewinnen (Aktivitätsnummer des LVR-Amtes für Bodendenkmalpflege im Rheinland NW 2011/0066). Dort wurde ein mittelkaiserzeitliches Badegebäude – oder

**Andreas Schaub**

Stadtarchäologie Aachen,  
andreas.schaub@mail.  
aachen.de

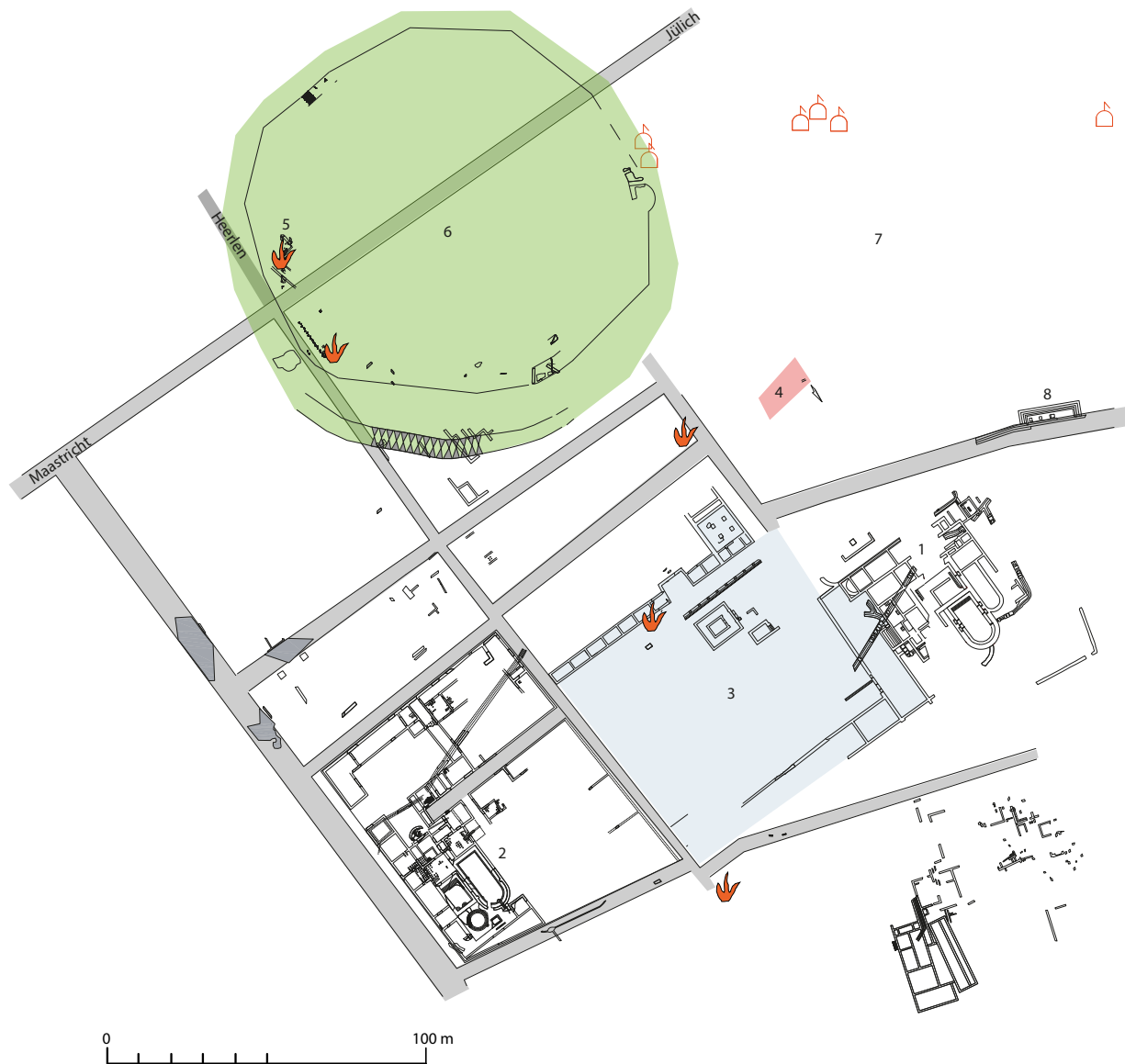


Abbildung 1. Schematisch ergänzter Stadtplan des Zentrums des römischen Aachen mit Eintragung wichtiger Bauten und nachgewiesener Zerstörungen des 3. Jahrhunderts. 1. "Büchelthermen"; 2. "Münsterthermen"; 3. Forum(?); 4. Weihebezirk von Benefiziariern; 5. Badegebäude am Markt; 6. *Castellum*; 7. Handwerkerzone; 8. Öffentliche Latrine (Andreas Schaub).

zumindest ein großer Baukomplex mit Badeeinheit – durch Brand vernichtet (Abb. 1.5, Schaub 2016, 69-70). In einem Raum lagen unmittelbar auf dem jüngstem Laufniveau des zerstörten Gebäudes verstreut mehr als 20 Metallgegenstände aus Eisen und Bronze, darunter auch fünf Münzen. Vier weitere Münzen lagen zwischen dem Versturz von Dach und Wänden und weitere fünf wurden in den darüber liegenden Planierungen des Zerstörungsschutts – noch unter dem ersten Laufniveau der nachfolgenden Bauperiode – gefunden. Offenbar gab es keine Möglichkeit, die abgebrannte Ruine nach Verwertbarem zu durchsuchen. Die Münzen wurden beim LVR-LandesMuseum Bonn durch

Claudia Klages bestimmt (Tabelle 1). Zum aufgefundenen Münzspektrum gehören einige Bronzenominalen des 1.-mittleren 3. Jahrhunderts sowie mehrere *antoninianae* und drei Barbarisierungen aus der Zeit des Gallischen Sonderreiches. Die spätesten datierbaren *antoninianae* entstanden in den Jahren 272/273 und tragen das Bild des Tetricus II. Bedauerlicherweise lassen sich die drei Barbarisierungen nicht genauer zuordnen und datieren. Ob das Ende der Münzreihe beziehungsweise der Zerstörungshorizont mit den Germaneneinfällen um 275 zusammenfallen kann, ist aus rein numismatischen Erwägungen heraus deshalb unsicher. Auf jeden Fall wäre es aber nach

Unmittelbar auf jüngstem Laufniveau des zerstörten Gebäudes	NW 2011/0066-21-138: Vespasian, As, stark abgenutzt, Typ ?	2011/0066-37-5: Philippus I., S 244-249 Rom, RIC 176	2011/0066-37-4: Tetricus I., Ant, Typ Spes(?)	2011/0066-21-161: Npr. (?), Gall. Sonderreich, Ant, Typ ?	2011/0066-37-6: Aes/Ant? Brandspuren, Typ ?
Aus dem Zerstörungsschutt/ Versturz von Wänden und Dächern	2011/0066-21-122: Sept. Severus, Dupondius (?), Typ ?	2011/0066-4-49: Tetricus II., Ant Ende 272-Anfang 273 Köln, Elmer 769	2011/0066-21-122: Tetricus I. (?), Ant 273 Köln, Elmer 772 Typ	2011/0066-21-139: Nicht bestimmt?	
Aus planiertem Zerstörungsschutt über Versturz von Wänden und Dächern	2011/0066-21-105: Antoninus Pius (Marc Aurel?), S, Typ ?	2011/0066-21-103, Tetricus I., Ant (272-273) Trier, Elmer 786/787	2011/0066-21-104: Tetricus II., Ant (272-273) Köln, Elmer 765	2011/0066-41-142: Npr. Gallisches Sonderreich, Ant, Typ ?	2011/0066-21-109: Npr (?) Gallisches Sonderreich, Ant, Typ ?

Tabelle 1. Münzen aus Zerstörungskontexten eines römischen Badegebäudes auf dem Aachener Markt (Bestimmung durch C. Klages, LVR-LandesMuseum Bonn).

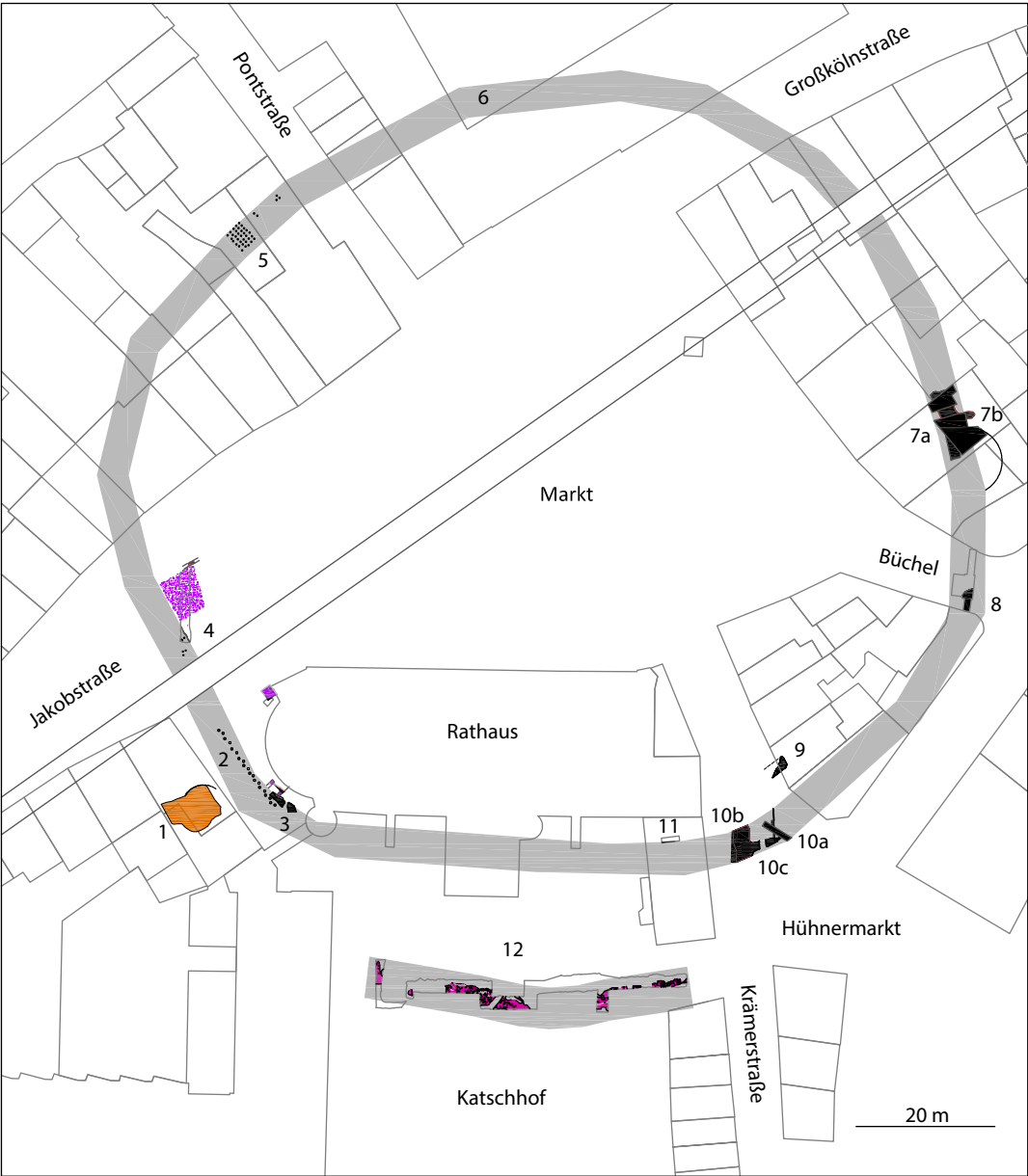


Abbildung 2. Das spätrömische *castellum* in Aachen. Rekonstruierter Verlauf mit Eintragung der bekannten Fundstellen.

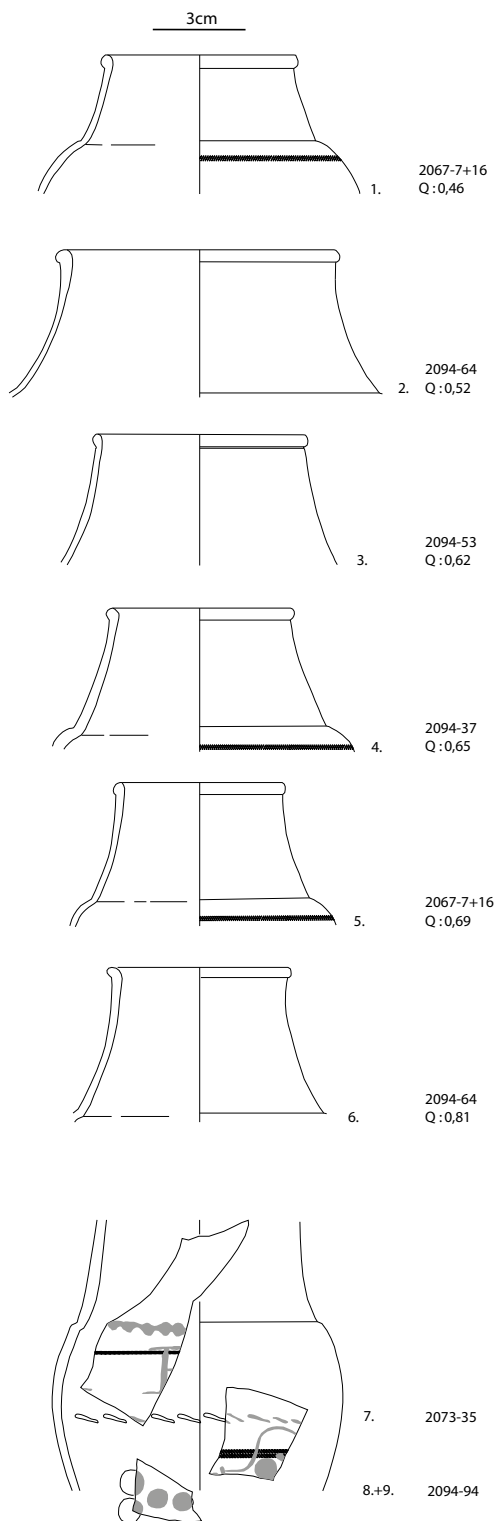


Abbildung 3. Engobierte Becher der Form Oelmann 33 aus der Zerstörungsschicht einer römischen Knochenschnitzerwerkstatt in Aachen, Rommelsgasse mit Angabe des Quotienten von Randhöhe zu Mündungsdurchmesser.

Ausweis der Münzfunde möglich, dass der Baubeginn noch vor der Wende zum 4. Jahrhundert – vielleicht unter Probus (276-282) – erfolgt sein könnte.

Das keramische Spektrum der Zerstörungsschichten umfasst fast ausschließlich Formen des so genannten Niederbieberhorizontes, wobei die Form Niederbieber 33 in metallisch glänzender Ware aus Trierer Produktion sowohl in einfacher Variante als auch in Form von mindestens einem Spruchbecher vertreten sind. Letzterer lässt sich der Produktionsgruppe III nach S. Künzl zuweisen (Künzl 1997, 63), die von ihr in die Jahre 270-280 datiert wird. Von einiger Bedeutung ist, dass Produkte aus den in den nachfolgenden Perioden zahlreich vertretenen Mayener Werkstätten ebenso fehlen, wie rädchenverzierte *terra sigillata* aus den Argonnen.

Nur ca. 15-20 m südöstlich der Grabungsfläche auf dem Markt wurde vor der westlichen Apsis des Rathauses – der karolingischen Königshalle – eine gut vergleichbare Stratigraphie angetroffen (Aktivitätsnummer NW 2013/1034). Reste eines Steingebäudes, dessen zugehöriges Laufniveau nur rund 20 cm tiefer lag als dasjenige des Badegebäudes auf dem Markt, wiesen deutliche Spuren einer Brandzerstörung auf. Nach erfolgter Planierung des Geländes, die sich in einer Mächtigkeit von mehr als 0,50 m zeigte, erfolgte der Bau des *castellum*.

Insgesamt wurden hier 108 Keramikscherben aus Schichten geborgen, die dem Bau des *castellum* unmittelbar vorausgingen bzw. aus solchen, die unmittelbar aus und über der verfüllten Baugrube des *castellum* lagen. Es dominieren wieder Formen des Niederbieberhorizontes (Oelmann 30, 32-33, 40, 89, 102 und 104). Unter den engobierten Bechern sind sechs aus Köln und drei aus Trier vertreten. Letztere dürften dem Typ Oelmann 33 zuzuordnen sein und mit ihrem schwarzmetallischen Glanz sicher in das fortgeschrittene 3. Jahrhundert datieren. Sie bilden den chronologischen Abschluss dieses Materials. Auch hier fehlen Mayener Waren und Argonnensigillaten.

Ein mit den Fundstellen am Markt und am Rathaus gut vergleichbares Fundspektrum fand sich südöstlich außerhalb des *castellum*-areals in der Rommelsgasse (Aktivitätsnummer NW 2013/1043), im Zerstörungsschutt einer Knochenschnitzerwerkstatt (Schaub 2018b). Dort waren, wie schon auf dem Markt, auffallend viele verwertbare Objekte im Boden verblieben, wie etwa Nadeln aus Knochen und Bronze und der pantherförmige Griff eine Bronzekanne, aber auch große Mengen von zur Weiterverarbeitung vorbereiteten Knochen für eine Nadelproduktion. Das Keramikinventar, von dem 3.400 Scherben geborgen werden konnten, bildet einen umfangreichen Bestand von Niederbieberformen ab (Oelmann 31-33, 40, 53a-b, 62, 65, 67, 75, 87, 89, 103-105, 111-112 und 120), die typologische Zusammensetzung des Bestandes ist also insgesamt dem 3. Jahrhundert zuzuordnen. Eindeutige

Formen oder Waren (etwa Mayen und Argonnen-*sigillata*) des 4. Jahrhunderts fehlen.

Unter den Formen der glatten *terrasigillata* dominieren solche des späten 2. und 3. Jahrhunderts, wie Oelmann 5b, Dragendorff 32 und vor allem die Reibschüsseln Dragendorff 45. Schärfere Datierungsanhaltspunkte liefern aber die engobierten Becher. Ein Trierer Spruchbecher lässt sich wie schon am Markt, der Produktionsgruppe III nach S. Künzl (1997) zuordnen. Bei sechs Bechern der Form Oelmann 33 war es möglich, metrische Angaben zu Randhöhe und Durchmesser abzugreifen (Abb. 3) und sie in das Chronologieschema von A. Heising (2003, 135) einzufügen. Mit den beiden jüngsten Bechern, deren Quotienten von Randhöhe zu Mündungsdurchmesser 0,69 bzw. 0,81 betragen, sind wir nach Heising (2003, 153) sicher in der zweiten Hälfte des 3. Jahrhunderts.

Ein kleiner Einblick in die Stratigrafie im Süden des Vicus, in der Hartmannstraße (Aktivitätsnummer NW 2020/0129), zeigte ebenfalls eine Zerstörung des 3. Jahrhunderts. Eine massive Dachziegelschicht, möglicherweise ein Versturz, überdeckte einen brandgeröteten Estrich. Im Schutt fanden sich der bronzene Griff und Beschlagteile einer Truhe. Unter den wenigen Keramikscherben aus den Schichten unterhalb der nachfolgenden Periode sind als jüngste Stücke wieder ein Becher der Form Oelmann 33 Trierer Provenienz sowie der Löwenkopfausguss einer Reibschüssel der Form Dragendorff 45.

Diese vier Fundstellen zeigen an, dass der Vicus *Aquae Granni* im späten 3. Jahrhundert offenbar flächendeckend Zerstörungen davontrug. Die vergleichsweise guten Datierungsgrundlagen der Befunde auf dem Markt und in der Rommelsgasse erlauben eine chronologische Einordnung in das letzte Viertel des 3. Jahrhunderts mit einem numismatischen *terminus postquem* von 273. Die Zugehörigkeit der Befunde insbesondere am Rathaus, aber auch in der Hartmannstraße zu diesem Horizont darf mit guten Gründen vermutet werden. All diesen Grabungen ist gemein, dass aus den Zerstörungsschichten und solchen, die nach dem Brand planiert wurden und noch vor dem Bau des *castellum* entstanden sind, weder Waren aus Mayen noch Rädchensigillaten aus den Argonnen stammen. Bei der vorliegenden Datengrundlage von mehr als 3.500 Keramikscherben ist dieser Schluss *e silentio* meines Erachtens statthaft.

Dass trotz der jeweils kleinen Grabungsflächen in den meisten Zerstörungsschichten größere Metallobjekte angetroffen wurden, kann als Hinweis darauf verstanden werden, dass keine Möglichkeit bestand, die Ruinen im Anschluss an die Zerstörungen nach wiederverwertbaren Materialien zu durchsuchen. Solche Umstände sind eher bei umfangreichen gewaltsamen Zerstörungen als bei lokal begrenzten Schadensfeuern zu vermuten. Bemerkenswert

ist ferner, dass in der Hartmannstraße und vor allem auf dem Markt nach der Zerstörung grundlegende bauliche Veränderungen erfolgten. In der Hartmannstraße wurde das vorherige Gebäude, von dem mehrere Räume angeschnitten wurden, zugunsten eines Punktfundamentes aufgegeben. Marmorfragmente in dessen Abbruchschutt deuten auf eine besondere Gestaltung des zugehörigen 'Bauwerks' hin – möglicherweise handelt es sich um ein Denkmal (?).

Auch auf dem Markt wurden die Bauten im Anschluss an die Zerstörung nicht wiederaufgebaut. Ihr Schutt wurde über den Versturzlagen von Dächern und Wänden flächendeckend ausplaniert. Dabei wurden – wie auch schon in der Hartmannstraße und in der Rommelsgasse – nirgendwo Schichten beobachtet, die einen längeren Hiatus anzeigen würden, wie etwa Humusbildung oder Einschwemmungen. Von der Oberfläche der Schuttplanierung wurde dann der Fundamentgraben der Umfassungsmauer des *castellum* eingetieft.

Bei aller Zurückhaltung, die nach A. Heising bei der Interpretation nachgewiesener Zerstörungsschichten als Nachweis der Barbareneinfälle der Jahre 275/276 geboten ist (A. Heising 2015, 172-174), scheint hier doch Vieles dafür zu sprechen, einen solchen Nachweis führen zu können. Die Zerstörung als Solche ist unstrittig, die Datierung beruht nicht in erster Linie auf den Münzen, die einen *terminus postquem* von 272/273 liefern, sondern vor allem auf der Zusammensetzung des vorhandenen wie fehlenden keramischen Spektrums.

Unter den typologisch gut vergleichbaren Anlagen von Jünkerath, Jülich und Bitburg ist letztere durch die jüngste Arbeit von Ferdinand Heimerl am besten aufgearbeitet und von dort liegen neben stratifiziertem Fundmaterial auch Analysen einzelner Fundgruppen vor (Heimerl 2021).

In Bitburg geht dem Bau des *castellum*, wie in Aachen, eine Brandschicht voraus. Das wenige stratifizierte Fundmaterial aus Schichten, die unmittelbar mit dem Bau der Umwehrung zusammenhängen, datiert vorwiegend in das 3. Jahrhundert mit einem numismatischen *terminus postquem* von 269 (Heimerl 2021, 100-102). Auch innerhalb der Befestigung konnte ein vorcastrumzeitlicher Brand des Vicus aus der Zeit "frühestens 272 n. Chr." nachgewiesen werden (Heimerl 2021, 102). Vor allem aufgrund stratigrafischer Überlegungen im Zusammenhang mit einem um beziehungsweise Ausbau der *intra muros* liegenden Bauten (Heimerl 2021, 102) und dem numismatischen Gesamtbefundes (Heimerl 2021, 80) tendiert Heimerl für eine Anfangsdatierung des *castellum* in Bitburg um 340 wenngleich er eine Errichtung im späten 3. Jh. letztlich nicht ausschließt.

### Das *castellum*. Der Befund

Die seit rund 140 Jahren in Aachen vermutete spätrömische Befestigung (Pohle 2015, 418-421) konnte





Abbildung 4. Aachen, Grabung Rathaus 2013. Von links nach rechts: Aufgehendes Mauerwerk des *castellum*, obere Fundamentlage mit Spolien, untere Fundamentlage, Mauerecke eines Gebäudes *intra muros*, Fundament und aufgehendes Mauerwerk karolingische Königshalle (Rathaus).

erst durch Grabungen zwischen 2011 und 2015 identifiziert und lokalisiert werden. In früheren Jahrzehnten bereits entdeckte Bestandteile der Anlage wurden jeweils nicht in einen entsprechenden Zusammenhang gebracht. Insgesamt können derzeit 14 Maßnahmen definiert werden, bei denen gesicherte Befunde des *castellum* dokumentiert bzw. beobachtet wurden (Abb. 2). Das *castellum* selbst besteht aus einer etwa kreisförmig-polygonalen Umfassungsmauer mit runden Türmen und einem zumindest teilweise vorgelagerten Spitzgraben. Der größte Durchmesser beträgt (ohne Graben) ca. 125 m, die Fläche innerhalb der Mauer ca. 0,93 ha, einschließlich der Mauer ca. 1,16 ha. Aufgrund fehlender Bodeneingriffe im Inneren der Anlage ist zur Innenbebauung nur wenig bekannt. Immerhin gibt es Hinweise auf wenigstens zwei Bauphasen.

### Umfassungsmauer

Die im Aufgehenden 4,46 m breite zweischalige Umfassungsmauer wurde bisher an elf Stellen nachgewiesen

(Abb. 2, Fundstellen 2-8, 10). Sie besteht aus sorgfältig und regelmäßig gestalteten Handquaderschalen, die ein dichtes und festes Gußmauerwerk (*opus caementitium*) verkleiden (Abb. 4). Während der sandige Versatzmörtel weiß und ohne weitere Zuschlagsstoffe erscheint, ist der Fugenmörtel rosarot gefärbt (Abb. 2, Fundstellen 3 und 10c), was durch die Magerung mit Ziegelmehl und Ziegelstückchen hervorgerufen wurde. Dieser hydraulische Fugenmörtel wurde teilweise über die Mauerköpfe verteilt und anschließend mit einem Fugenstrich versehen (sogenannte *Pietra rasa* Technik).

Die Mauer ruht auf einem 5,36 m breiten, mehrstufigen Fundament (Abb. 5). Letzteres besteht aus einer maximal bis zu 2,80 m tief eingebrachten Eichenpfahlgründung (Abb. 2, Fundstellen 2-6), über der sich eine mindestens 0,70 m mächtige, mit wenig Mörtel durchsetzte Steinschüttung erhebt. Darauf wiederum folgt eine ca. 0,30 m hohe, vermörtelte Quaderlage. Letztere besteht zum überwiegenden Teil aus Spolien (Abb. 2, Fundstellen 3, 7b, 10b). Nachgewiesen sind etwa ein



Grabstein eines Veteranen der 10. Legion (Abb. 2, Fundstelle 10b, CIL 13.12006) und Reste eines zerschlagenen Meilensteins (Abb. 2, Fundstelle 3).

Eine dendrochronologische Begutachtung zweier Gründungspfähle am Labor der Universität zu Köln (Dr. Thomas Frank) ergab, dass aufgrund vorliegender Wuchsform keine Datierung möglich ist. Eine AMS-<sup>14</sup>C Messung an der Universität zu Köln (Prof. Dr. Janet Rethemeyer) erbrachte eine Datierung von 250 (95.4 %) 418cal AD.

Im Jahr 2015 konnte bei einer Maßnahme der Firma SK ArchaeoConsult am Markt 46 (Kyritz & Schaub 2016) ein Kurtinenabschnitt mit Ansatz eines Rundturmes erfasst werden (Abb. 2, Fundstelle 7b). Soweit dies an dem kurzen Mauersegment ablesbar ist, hat der Turm einen Durchmesser von rund 9,7 m. Damit liegt er im Bereich der Türme der Anlagen von Neumagen (9,5 m), Jünkerath (9,4-10,5 m) und Bitburg (9,0-9,9 m, Heimerl 2021, 116).

Ungeklärt ist bislang Zugehörigkeit und Funktion eines massiven Mauerblocks an beziehungsweise vor der Westseite der Umfassungsmauer (Abb. 2, Fundstelle 1). Er wurde bei Ausschachtungsarbeiten im Jahr 1896 in einer Tiefe von 4,33 m unter damaligem Laufniveau entdeckt und reichte von dort noch mehr als 0,60 m tief. Der damals dokumentierte Grundriss erinnert ebenfalls an einen Mauerabschnitt mit rundem Turm, weshalb man hier eine römische Stadtmauer vermutete (Keller 2004, 99, Fundstelle 703/055 – Markt 36). Die Oberkante des Befundes liegt ca. 0,70 m tiefer als der am tiefsten erfasste Fundamentabschnitt, der in unmittelbarer Nähe 2013 am Rathaus dokumentiert wurde (Abb. 2, Fundstelle 3). Gesetzt den Fall, es handelt sich um einen Mauerabschnitt mit Rundturm, würde letzterer einen Durchmesser von ca. 6,5 m aufweisen, während der nach Westen ansetzende Kurtinenabschnitt rund 2,5 m breit wäre. Die Dimensionen von Turm und Mauer sind deutlich geringer als die der gesicherten Wehrmauer des *castellum*. Darüber hinaus ist der Verlauf der *castellum*-mauer an dieser Stelle in Richtung Nord-nordwest-Südsüdost gesichert, während der unklare Mauerabschnitt von 1896, auf gleicher Höhe gelegen, Westsüdwest-Ostnordost ausgerichtet ist. Es könnte sich also allenfalls um einen westlich vorspringenden Annex handeln. Wann eine solche Erweiterung vorgenommen worden wäre, bleibt völlig im Unklaren. Chronologische Anhaltspunkte wurden 1896 nicht gewonnen und der Umstand, dass die *castellum*-mauer erst in staufischer Zeit abgebrochen wurde, lässt auch eine mittelalterliche Entstehung des möglichen Annexes zu. Der Umstand, dass dieser Befund im Bereich eines der anzunehmenden Tore auftaucht könnte bedeuten, dass der Zugang zu einer späteren Zeit noch einmal stärker gesichert worden wäre.

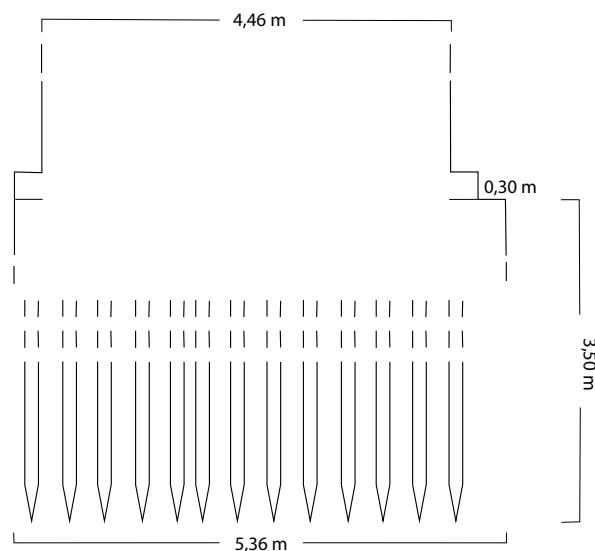


Abbildung 5. Schematischer Querschnitt durch die Umfassungsmauer des Aachener *castellum*.

## Wehrgraben

Die Wehrmauer wurde zumindest im Süden von einem Graben begleitet, der im Abstand von rund 16 m zur Mauer mit einer Breite von ca. 6 m und einer Tiefe von etwa 2 m und bisher über eine Länge von etwa 45 m nachgewiesen ist (Abb. 2, Fundstelle 12).

## Mögliche Durchgangsstraße und Tore

Von Südwest nach Nordost wurde das *castellum* von einer Straße durchquert. Ihr archäologischer Nachweis wurde bislang zwar erst westlich und östlich extra muros erbracht. Da ihr Verlauf aber auch im Mittelalter und – die Jakobstraße betreffend – sogar bis heute belegt ist, steht ihr Bestehen zur Zeit des *castellum* außer Frage. Somit dürften in Analogie zu den vergleichbaren Anlagen von Bitburg, Neumagen und Jünkerath an den jeweiligen Kreuzungspunkten von Straße und Wehrmauer rechteckige Tore mit einer einfachen Durchfahrt rekonstruiert werden.

## Innenbebauung

Aufgrund des Umstandes, dass bisher nur in geringem Umfang Bodeneingriffe innerhalb des *castellum* erfolgten, ist über die Struktur möglicher Gebäude und deren Anordnung nur sehr wenig bekannt. An vier Stellen (Abb. 2, Fundstellen 3-4 und 9) wurden Spuren einer mindestens zweiphasigen Bebauung entlang der bzw. nahe an der Umfassungsmauer entdeckt. In der Krämerstraße (Abb. 2, Fundstelle 9) handelt es sich um eine aus großen Sandsteinspolien errichtete Wand eines ansonsten unbekannten Gebäudes, welches parallel zur dort verlaufenden Umfassungsmauer ausgerichtet

ist. Die Wand wurde im hohen oder späten Mittelalter in einen Keller integriert, weshalb sie bis heute erhalten ist. Von leichteren Bauten zeugen an der Westseite des Marktes (Abb. 2, Fundstelle 4) zwei Tuffsteinquader, die vermutlich als Sockelsteine für einen Ständerbau dienten. In einer, nach einem (lokalen?) Brand errichteten zweiten Phase wurden die Tuffquader durch einen massiven Kalkmörtelestrich überdeckt. Raumbegrenzende Baubefunde sind für diesen Estrich aufgrund der kleinen Untersuchungsfläche nicht belegt. Ein aus Ziegelbruch und heterogenem Bruchsteinmaterial bestehendes, vermörteltes Fundament wurde vor dem Rathaus (Abb. 2, Fundstelle 3) erfasst. Es handelt sich um die südliche Ecke eines parallel zum begleitenden Kurtinenabschnitt ausgerichteten Gebäudes. Die Ecke liegt direkt gegenüber einer Stelle, wo auch die Umfassungsmauer stumpfwinklig abknickt. In einer zweiten Phase wurde eine flach fundamentierte Verbindungsmauer zwischen dem Mauerknick und der Gebäudeecke eingefügt.

Nur wenige Meter nördlich dieses Gebäudes wurde die Ecke einer holzverschalten Latrine angeschnitten. Vorbehaltlich einer noch ausstehenden Überprüfung der bislang noch mit Unsicherheiten behafteten Dendrodaten von  $372 \pm 10$ , die am Labor für Dendrochronologie an der Universität zu Köln (Dr. Thomas Frank) erhoben wurden, bestand die Latrine zur Zeit des *castellum*.

Über konkrete Nutzungen der Bauten lassen sich aufgrund der kleinen Untersuchungsflächen kaum Aussagen treffen. Lediglich aus dem Umfeld des Gebäudes mit Tuffsteinsockeln (Abb. 2, Fundstelle 4) konnten Hinweise auf eine Buntmetallverarbeitung gefunden werden. Neben dutzenden Fragmenten von Bronzeschrott fand sich dort ein Schmelztiegelbruchstück. Nicht völlig auszuschließen ist, dass die dort als 'Brandschuttschicht' bezeichneten Überreste zwischen den Laufniveaus der Phasen 1 und 2 gar nicht von einem Schadensfeuer sondern von dieser Handwerksausübung stammen.

## Chronologie

Während die Anfangsdatierung des *castellum* im letzten Viertel des 3. Jahrhunderts bereits oben ausführlich dargelegt wurde, sollen hier erste knappe Hinweise auf die zeitliche Einordnung von Umbauten, weiterer Nutzung und schließlich der Aufgabe des *castellum* erfolgen. Aus den oben erwähnten Brandschuttbereichen sowie aus dem Inneren des überdeckenden Estrichs (Abb. 2, Fundstelle 4) stammende, aber noch nicht abschließend bearbeitete Keramikfunde geben einen ersten Hinweis, wie die zweite Phase zeitlich einzuordnen ist. Neben einigen Gefäßresten Mayener Ware (u.a. Unverzagt 27-28), die vorläufig nur allgemein in das 4./5. Jahrhundert einzuordnen sind, ist hier auch rädchenverzierte *terra sigillata* aus den Argonnen nachgewiesen. Darunter konnte ein Fragment mit dem Stempelmuster Unverzagt/Chenet 57 inzwischen

durch Lothar Bakker in das späte 4. beziehungsweise in das erste Viertel des 5. Jahrhunderts datiert werden (Freundliche Mitteilung durch Lothar Bakker per Email vom 22.06.2022).

An derselben Fundstelle wurde über dem Estrich der zweiten Phase noch eine weitere Nutzungsschicht nachgewiesen, deren Entstehung sich offenbar über einen langen Zeitraum erstreckte. Dort fanden sich unter anderem ein Fragment spätrömisch-frühmittelalterlicher rotbraun engobierter Ware aus Mayen, mehrere Scherben der karolingerzeitlichen Mayener Ware ME, bis hin zu südlimburgischen Produkten aus den Töpfereien von Brunssum/Schinveldt des 11. beziehungsweise 12. Jahrhunderts nach Christus (Bruijn 1961). Erst von der Oberfläche dieser Schicht aus erfolgte der Ab- beziehungsweise Ausbruch der Umfassungsmauer des *castellum*.

Auch Funde der Grabung am Rathaus (Abb. 2, Fundstelle 3) aus der ersten Schicht über der abgebrochenen *castellum*-mauer belegen deren Abbruch im frühen 12. Jahrhundert. Neben zahlreicher Keramik aus Südlimburg und aus dem Maasgebiet (Andenne) wird die Datierung durch einen Denar aus dem Erzbistum Trier aus den Jahren 1104-1125 gestützt. In die gleiche Zeit datierende Schichten in der Krämerstraße (Abb. 2, Fundstelle 10c) und an der Ostseite des Marktes (Abb. 2, Fundstelle 7b, Kyritz & Schaub 2016, 156) werden ebenfalls mit der Aufgabe der Wehrmauer in Verbindung gebracht. Daraus folgt, dass die Wehrmauer bis zum 12. Jahrhundert zumindest in weiten Teilen noch bestanden hat und die karolingerzeitliche Königshalle (heute Rathaus) somit in diese Festung integriert wurde. Lediglich der Wehrgraben wurde offenbar bereits im 5./6. Jahrhundert verfüllt und eingeebnet. Aus den Verfüllschichten wurde neben rädchenverzierter *terra sigillata* mit christlichen Motiven des mittleren 5. Jahrhunderts auch Fragmente merowingerzeitlicher Wölbwandtöpfe geborgen.

Über die Funktion oder die Art einer möglichen Besatzung des *castellum* ist nichts bekannt. Da die Besiedlung des Vicus außerhalb der Wehranlage aber kontinuierlich bis in das frühe Mittelalter hinein fortbesteht, handelt es sich nicht um eine Siedlungsreduktion infolge unruhiger Zeiten. Die Kontinuität zeigt sich auch daran, dass die Wehrmauer Teil der Pfalz Karls des Großen wurde: Seine *aula regia* wurde über beziehungsweise anstelle der Südflanke des *castellum* errichtet. Daraus lässt sich die Vermutung ableiten, dass auch die Anfänge der frühmittelalterlichen Pfalz Aachens, die bisher noch nicht lokalisierte Pfalz Pippins des Jüngeren, im weiter genutzten spätrömischen *castellum* zu suchen sind. Erst im 12. Jahrhundert wurden die Mauern der Wehranlage endgültig abgetragen. Damit lässt sich Aachen gut mit Nijmegen vergleichen, wo ebenfalls aus dem spätrömischen *castellum* die frühmittelalterliche Herrscherpfalz entstand (Hotz 1981, 39-42).

## Fazit

Wenngleich das lange für Aachen vermutete spätrömische *castellum* mittlerweile lokalisiert und datiert werden konnte, bleiben noch zahlreiche offene Fragen. Handelt es sich um ein offizielles militärisches Kastell mit entsprechender Besatzung und wenn ja, welche Einheit könnte man sich hier vorstellen? Handelt es sich um eine zivile Umwehrung im Sinne einer Stadtmauer? Wenn dem so wäre, warum wurden dann beispielsweise die weiterhin genutzten und für Aachen so wichtigen Heilthermen nicht in die Umwehrung einbezogen? Auch zeigt die Fundverbreitung spätrömischer Objekte keinerlei Anzeichen auf eine Reduktion der Siedlungsfläche auf die Zone *intra muros*. Ist es also – mit den vergleichbaren Anlagen von Jülich, Jückerath, Neumagen und Bitburg – eher eine staatlich initiierte Maßnahme zum temporären Schutz der Bevölkerung im Hinterland vor akuten germanischen Einfällen? Nach Heimerl (Heimerl 2021, 123) handelt es sich bei diesen Orten in der Regel um verkehrsgeografisch wichtige mittelkaiserzeitliche Zivilsiedlungen, die in der Spätantike kleinere Befestigungen (maximal 2 Hektar) bekamen und dadurch eine strategische Bedeutung für die Sicherung Ostgalliens bekamen. Für eine solche Funktion bedarf es aber nicht nur der wehrhaften Bauten sondern in erster Linie auch der in Quantität und Qualität geeigneten Personen, die solche Anlagen besetzten, in Funktion hielten und im Bedarfsfall verteidigen konnten. Antworten auf viele dieser Fragen können vermutlich erst dann gefunden werden, wenn innerhalb der *castella* einmal großflächige Forschungen möglich werden, was bisher an keinem der genannten Orte in ausreichendem Maße erfolgt ist (Heimerl 2021, 124).

## Abkürzung

Chenet: Chenet 1941

CIL: *Corpus Inscriptionum Latinarum*

Oelmann: Oelmann 1914

Unverzagt: Unverzagt 1916

## Bibliografie

Bruijn, A., 1961: Die mittelalterliche keramische

Industrie in Schinveld, *Berichten van de Rijksdienst voor het Oudheidkundig Bodemonderzoek* 10-11, 462-507.

Chenet, G., 1941: *La céramique Gallo-Romaine d'Argonne du IV<sup>e</sup> Siècle et la terre sigillée décorée à la molette*, Mâcon (Fouilles et documents d'archéologie antique en France).

Heimerl, F., 2021: *Das römische Beda/Bitburg.*

*Kaiserzeitlicher vicus, spätantike Befestigung und Bestattungen*, Trier (Trierer Zeitschrift Beiheft 39).

Heising, A., 2003, mit einem Anhang von Stefan F. Pfahl: Der Keramiktyp Niederbieber 32/33, in: B. Liesen &

U. Brandl (eds), *Römische Keramik. Herstellung und Handel. Kolloquium Xanten*, 15.-17.6.2000, Xanten (Xantener Berichte 13), 129-172.

Heising, A., 2015: Das Verhältnis von schriftlichen, numismatischen und archäologischen Quellen am Beispiel der "Invasions Germaniques" 275/276, in: P. Henrich, Ch. Miks, J. Obmann & M. Wieland (eds), *NON SOLUM ... SED ETIAM. Festschrift für Thomas Fischer zum 65. Geburtstag*, Rahden, 169-175.

Hotz, W., 1981: *Pfalzen und Burgen der Stauferzeit. Geschichte und Gestalt*, Darmstadt.

Keller, Chr., 2004: *Archäologische Forschungen in Aachen. Katalog der Fundstellen in der Innenstadt und in Burtscheid*, Bonn (Rheinische Ausgrabungen 55).

Künzl, S., 1997: *Die Trierer Spruchbecherkeramik. Dekorierter Schwarzfirniskeramik des 3. und 4. Jh. n. Chr.*, Trier (Trierer Zeitschrift Beiheft 21).

Kyritz, D. & A. Schaub, 2016: Neues vom Aachener Markt. Das spätrömische Kastell und sein Nachleben, *Archäologie im Rheinland* 2015, 154-157.

Oelmann, F., 1914: *Die Keramik des Kastells Niederbieber*, Frankfurt am Main (Materialien zur römisch-germanischen Keramik 1).

Pohle, F., 2015: *Die Erforschung der karolingischen Pfalz Aachen. Zweihundert Jahre archäologische und bauhistorische Untersuchungen*, Bonn (Rheinische Ausgrabungen 70).

Schaub, A., 2012: Aachen in römischer Zeit aus archäologischer Sicht. Versuch einer Neubewertung, in: R. von Haehling & A. Schaub (eds), *Römisches Aachen. Archäologisch-historische Aspekte zu Aachen und der Euregio*, Regensburg, 131-205.

Schaub, A., 2015: Thermen im römischen Aachen, in: H. Pösche (ed.), *Thermae in context, the Roman baths in town and in life. Actes du colloque de Dalheim Luxembourg de 22 au 24 février 2013*, Luxembourg (Archaeologia mosellana 10), 1-18.

Schaub, A., 2016: Übersicht über die Grabungen seit Beginn des Projektes, in: M. Krücken (ed.), *Offensichtlich verborgen. Die Aachener Pfalz im Fokus der Forschung*, Aachen, 64-93.

Schaub, A. & K. Scherberich, 2016: Eine Bauinschrift Trajans aus Aachen, *Bonner Jahrbücher* 215, 311-321.

Schaub, A., 2018a: Zentral und urban. Zur Stellung des römischen Aachen in der Germania inferior, in: M. Aufleger & P. Tutlies (eds), *Das Ganze ist mehr als die Summe seiner Teile. Festschrift für Jürgen Kunow*, Bonn (Materialien zur Bodendenkmalpflege im Rheinland 27), 455-460.

Schaub, A., 2018b: Steinreich durch Knochenarbeit, *Archäologie im Rheinland* 2017, 111-113.

- Schaub, A. & K. Scherberich, 2018: Benefiziarier in Aachen, in: Ch. Eger (Hrsg.), *Warenwege – Warenflüsse. Handel, Logistik und Transport am römischen Niederrhein*, Xanten (Xantener Berichte 32), 221-228.
- Schaub, A., 2021: Zum Stand des römischen und frühmittelalterlichen Aachen aus archäologischer Sicht. Forschungen und Perspektiven, in: M. Gierszewska-Noszczyńska & L. Grunwald (eds), *Zwischen Machtzentren und Produktionsorten. Wirtschaftsaspekte von der römischen Epoche bis in das Hochmittelalter am Rhein und in seinen Nachbarregionen*, Mainz (Römisch-Germanisches Zentralmuseum Tagungen 45), 153-172.
- Unverzagt, W., 1916: *Die Keramik des Kastells Alzei*, Frankfurt am Main (Materialien zur römisch-germanischen Keramik 2).

# The late antique fortified town *Castra Herculis* (?) in Nijmegen

Harry van Enckevort

The discovery of a ditch in a construction pit in 1969 confirmed for the first time the suspected existence of a fortified Late Roman settlement on the Valkhof plateau in the centre of Nijmegen (Bogaers 1969), built in an almost treeless landscape (Teunissen 2016). Later parts of the inner defensive perimeter (a turf rampart, (later?) reinforced on the outside by a stone facing, and two ditches) were recorded on the eastern, southern and western sides (Bloemers & Thijssen 1990, 138-142; Van Enckevort & Thijssen 2003; 2014; Bloemers 2016). On its northern side, the Valkhof plateau is bordered by a steep slope (fig. 1.1).

Parts of the outer defensive perimeter (two ditches) on the western, southern and eastern sides of the Valkhof were also excavated (Heirbaut & Van Enckevort 2010, 255-256, figs 163-164 and 258; Van Enckevort 2019, 42-44 and 108-109). Some small-scale excavations showed that the last remains of the eastern part of the inner and outer defences were largely destroyed by the construction of the Voerweg in the early 15<sup>th</sup> century and the Waal bridge in the 1930's (Van Schevichaven 1896, 242-244; Hoek & Wildenberg 2009; Van Enckevort 2019, 29-33). The results of these investigations were summarised in several publications (e.g. Willems & Van Enckevort 2009, 98-102), and incorporated into a map of Nijmegen showing the ditches and (presumed) roads from the Late Roman period (fig. 1). Since 1991, a large part of the fortified settlement at the Valkhof has been a protected archaeological national monument, and from 2021 onwards it is a World Heritage Site.

In 2014, a few Late Roman sherds were recovered from a c. 2 m thick occupation layer during corings inside the rampart (Boshoven & Van Oosterhout 2016). However, some subsequent very small-scale excavations did not reveal any traces of buildings inside the rampart, only some more Late Roman sherds (Van Enckevort 2017; 2018). Outside the defences, the remains of some 4<sup>th</sup>-century buildings were discovered. The postholes of a *horreum* were located south of the outer perimeter, along the road leading to the south to the 4<sup>th</sup>-century *castellum* at Cuijk (Heirbaut & Van Enckevort 2010, 258-261). Further east, traces of a sunken hut (part of a larger settlement) from the first half of the 4<sup>th</sup> century have been found (Willems & Van Enckevort 2009, 101-102).

Immediately to the south of the defences an extensive cemetery, in use between the late 3<sup>rd</sup> and 7<sup>th</sup> centuries, was excavated in several campaigns (fig. 1.4). Of the estimated 5,000 to 10,000 graves about 1,500 were documented so far, of which 834 have been published (Steures 2002a-b, 2003, 2004a-b; 2009; 2013, 45-156; 2019; Heirbaut & Van Enckevort 2010, 261-264). A second cemetery dating from the late 3<sup>rd</sup>

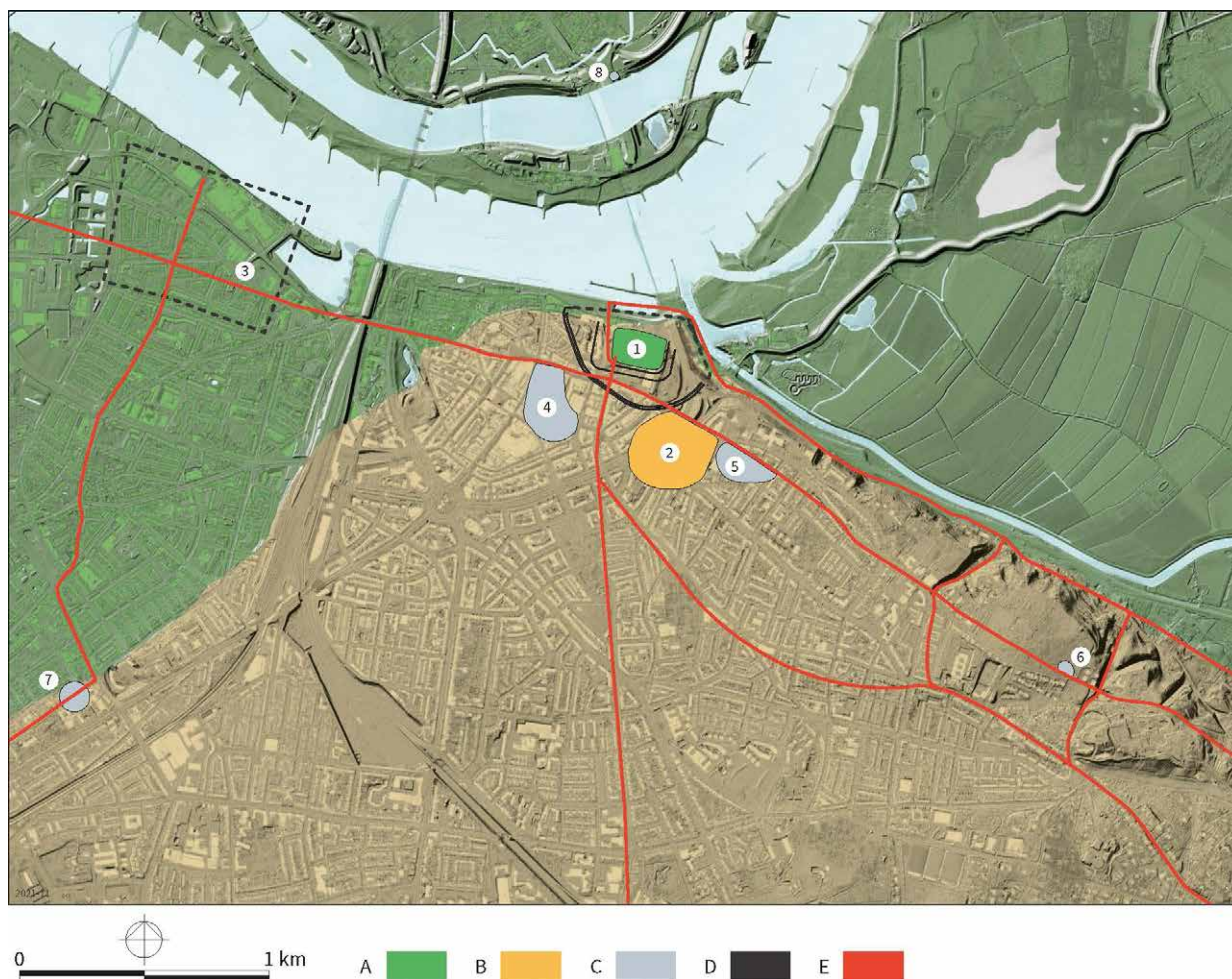


Figure 1. Overview of Nijmegen 270-450 AD. The brown shaded area covers the ice-pushed ridge and the sand above the 10 m contour line. A. Military settlement; B. Civil settlement; C. Cemetery; D. Ditch; E. Road; 1. Fortified settlement on the Valkhof plateau (*Castra Herculis*?); 2. Civil settlement; 3. Deserted Roman town (*Noviomagus*); 4-8. Cemeteries (Rob Mols/Leon Scheffer, Bureau Archeologie gemeente Nijmegen).

to the early 5<sup>th</sup> century was partially excavated on the Hunerberg east of the Valkhof (fig. 1.5). Of the estimated total of 1,000 to 2,000 graves, more than 600 were documented. To date, 489 have been published (Steures 2013, 157-257; Van Enckevort & Harmsen 2018, 32, fig. 21).

Some soldier graves were found in both cemeteries, as shown by the belt fittings, but by far the most of the graves investigated do not contain such grave goods. As the preserved human bones have not yet been examined, no conclusions can be drawn about the composition of the population at the time. The jewellery in several graves indicates that also women were buried here. The dimensions of the graves of the eastern cemetery, show that 25 % of them do not exceed 150 cm in length. It is likely that children were buried in such graves. This mixed composition suggests that the Valkhof settlement should be considered as a small fortified town with an area of about 3 ha in size rather than a *castrum*.

## Beginning and end of the fortified settlement

A selection of the ceramic material and some coins collected from the outer ditch of the inner defensive perimeter show that the Valkhof plateau was occupied until the 5<sup>th</sup> century (Bloemers & Thijssen 1990, 138-142; Boersma & Raap 2016; Erdrich 2016). The fortified settlement was then taken over by the Merovingian and Carolingian dynasties (Thijssen 2002; Van Enckevort & Thijssen 2003; 2014; Hendriks *et al.* 2014). Of the thousands of coins from this period found during various excavations and surveys, to date only a small part has been published (Reijnen 2010, 182-189, table 8 (project code Jo1); Kokke 2019a, 56-61, table 9 (Jor1); Kokke 2019b, 164-168, table 9.17 (Sch1-3); Aarts & Kokke 2021, 384-389, table 15.3 (Lb8)).

Figure 2 summarises the Late Roman coins from these four excavations by issue period. It should be noted



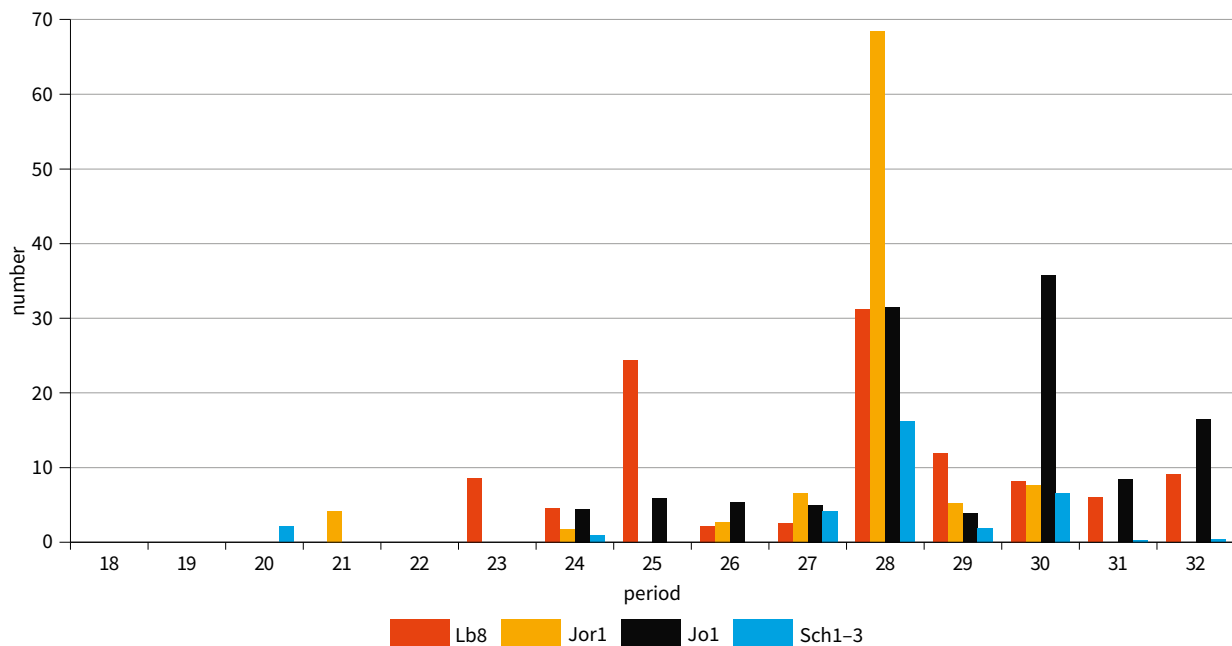


Figure 2. Distribution of lost Roman coins per 1000 m<sup>2</sup> by issue period from four excavations. 18 Severus Alexander (222-235); 19 Maximinus I (235-238); 20 Gordianus III (238-244); 21 Philippos I (244-249); 22 Trajanus Decius/Trebonianus Gallus (249-253); 23 Valerianus with Gallienus (253-260); 24 Gallienus and Gallic emperors (260-273); 25 Aurelianus/Diocletianus (273-294); 26 Diocletianus/Constantinus I (294-317); 27 Constantinus I with caesars (317-330); 28 Sons of Constantinus I until coin reform (330-348); 29 Constantius II/Julianus (348-364); 30 Valentinianus I/Valens/Gratianus (364-378); 31 Gratianus/Theodosius I/Magnus Maximus (378-388); 32 Theodosius I/sons of Honorius and Arcadius (388-402). For methodology Van Enckevoort 2021, 477-479 (Harry van Enckevoort, Bureau Archeologie gemeente Nijmegen).

however, that the date of issue cannot be equated with the date of loss. Coins may have been lost years after the date of production. The differences in numbers between the four sites cannot as yet be properly explained. The intensive use of a metal detector or post-depositional processes do not seem to be to blame, but rather differences in the use of the sites during the different periods of the Late Roman times will play a role in the explanation.

From the time of emperor Gallienus (253-268), the number of coins (mainly *antoniniani*) begins to increase. At the same time, the number of coins from the town of *Ulpia Noviomagus*, in the western part of Nijmegen (fig. 1.3), decreases, suggesting that the town ceased to be inhabited shortly after 270. The most recent specimens found in the town are *antoniniani* from the years 268-270 of the emperor Claudius Gothicus and his counter-emperor Victorinus (Reijnen 2013, 190-191). It is possible that the last inhabitants of the town moved to the new fortification on the Valkhof shortly afterwards, but it is also possible that this did not happen until in or shortly after 293 when the Roman general Constantius Chlorus brought the Lower Rhine area back under Roman rule (De Boone 1954, 61; Willems 1984, 433-434). In the latter case, there would have been a gap in the

occupation of Nijmegen. Exactly when the fortification on the Valkhof plateau was built remains unclear for the time being, but it is plausible on the basis of the coin finds from the investigated sites that this took place between 270 and 293; also because the *antoniniani* disappeared from circulation after 293/294 due to Diocletian's monetary reform. This date refutes the theory that the inhabitants of *Ulpia Noviomagus* left the town around 313 AD to settle on the Valkhof plateau (Steures 2009, 194 and 203; 2013, 395-397).

The loss of coins in the 4<sup>th</sup> century outlined in figure 2 shows that the Valkhof plateau and its surroundings were intensively used at least until the early 5<sup>th</sup> century, and possibly even longer, since no new coins from the imperial mint reached the Lower Rhine area after 402. However, imitations of late 4<sup>th</sup>-century coins seem to have been produced in the region during the first decades of the 5<sup>th</sup> century (Reijnen 2011, 95-97), but this has not yet been investigated for Nijmegen coins.

### ***Castra Herculis***

The historian Ammianus Marcellinus (c. 330-400 AD) reports that in 359 AD the future emperor Julianus rebuilt the defences of seven previously destroyed towns along the Rhine. One of these was *Castra Herculis*, which is

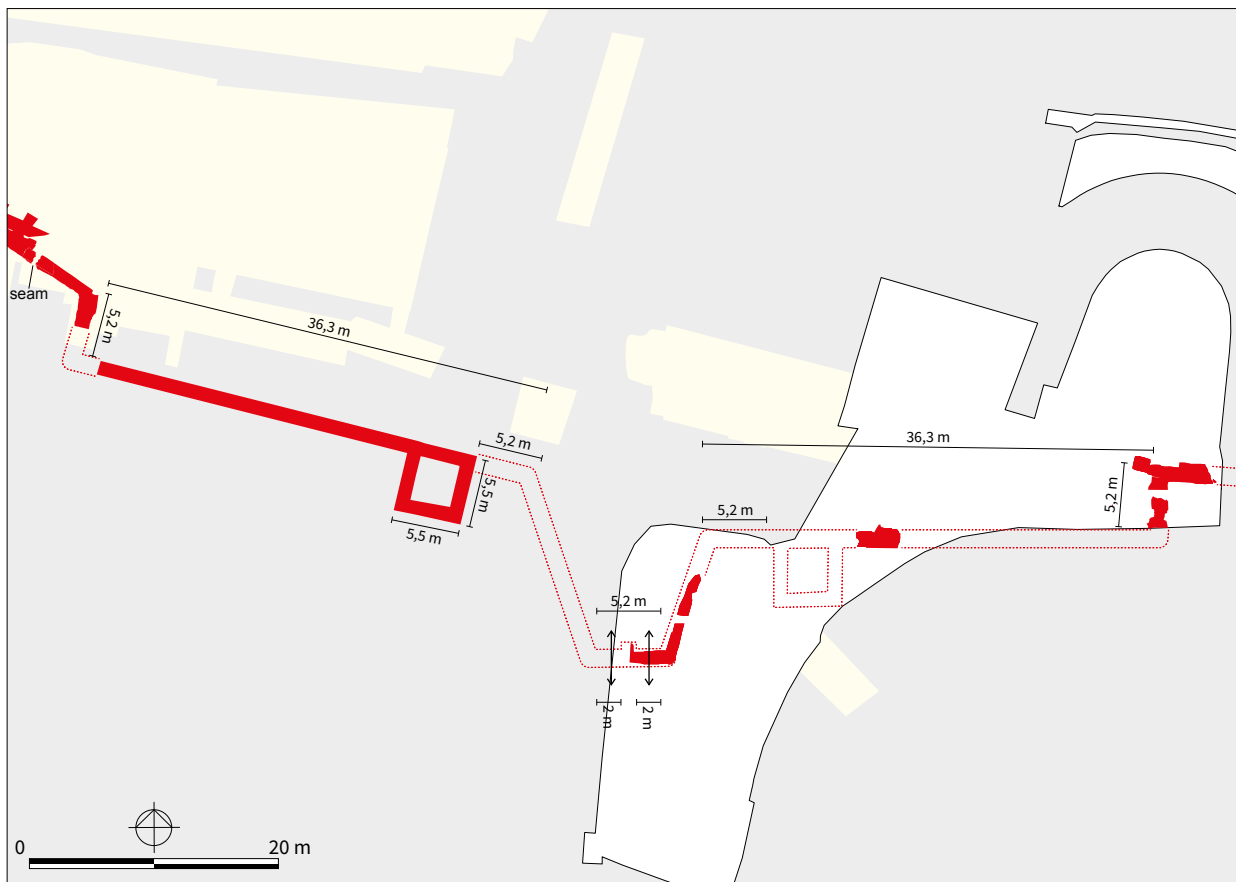


Figure 3. Reconstruction of the courtyard gate based on the remains of walls found during excavations (Rob Mols, Bureau Archeologie gemeente Nijmegen).

also mentioned on the *Tabula Peutingeriana*. This name is also mentioned by Amminianus Marcellinus (*Res Gestae* 27.9 and 18.2.3-6; Willems 1984, 195 and 277). Other sources are Libanius (*Oratio* 18.87) and Anonymus Ravennas (*Cosmographia* 4.24), if the latter's corrupted name is correctly interpreted (Bogaers 1960/1961, 310-311; 1968, 152).

The identification of this settlement has been the subject of considerable debate for a long time (Bogaers 1968, 153-154 and 156-157). Jules Bogaers identified the fortress of the Tenth Legion on the Hunerberg in the eastern part of Nijmegen (where hardly any Late Roman finds have been found) and the Valkhof plateau in Nijmegen as *Castra Herculis* (Bogaers 1968, notes 37-38. See also Kroon 1935, 322; Stolte 1938, 716). Willem Willems assumed that the remains of the Late Roman *castellum* at Meinerswijk near Arnhem were identical with *Castra Herculis* (Willems 1980a, 343; 1980b; 1981a, 70, note 219; 1984, 148 and 195-196. See also Bogaers (1981a, 19-20; 1981b) against Willems (1981b)). A more recent hypothesis, put forward by Jan Verhagen, argues instead that the name may be associated with the Augustan fortress and the

*castra* of *Legio X Gemina*, both on the Hunerberg in the eastern part of Nijmegen. In the late 3<sup>rd</sup> century, this name would have passed to the fortified settlement on the Valkhof plateau. The distance between the town of *Noviomagi* (*Ulpia Noviomagus*, fig. 1.3) abandoned in the late 3<sup>rd</sup> century, and *Castra Herculis* – both on the *Tabula Peutingeriana* – is 1 *leuga*, c. 2200 m (Verhagen 2013, 34-35; 2014, 545-546 and 555-557; 2022, 230-232; Verhagen & Heeren 2016).

That the Augustan fortress was already called *Castra Herculis* seems unlikely because the town was not named *Ulpia Noviomagus* until around AD 100 (Willems & Van Enckevort 2009, 76-77), and nothing more of the fortress was visible at that time. The actual distances between the eastern gate of *Ulpia Noviomagus* and the gates of the fortified settlement on the Valkhof plateau, the eastern gate of the Augustan fortress and the *castra* of the Tenth Legion are 1.465 m, 2.375 m and 2.600 m, respectively. None of these distances corresponds to 1 *leuga*. However it can be noted that the distance between the town and the fortified settlement is about 1 *milia passuum* (c. 1.475 m).



Figure 4. The walls on the Waalkade during excavations in the 1980's (Rob Mols).

### The fortified settlement on the north side. New insights

Between 2015 and 2018, excavations were carried out in a dry valley at the foot of the north-western side of the Valkhof plateau. Remains of a road were discovered. This showed that since the Augustan period, and probably even earlier, this small valley formed the connection between the upper plateau and the lower bank of the river Waal. Many of the coins found (fig. 2 project code Lb8) show that this road was still in use in the 4<sup>th</sup> century. The excavation also uncovered several remains of walls that were originally 1.5 m thick, indicating that a gate was built in the valley in the Late Roman period (Van Enckevort 2021, 480-485).

Broadly speaking, the (partly reconstructed) walls (fig. 3) seem to take into account the foot of the northern slope of the Valkhof plateau and the shape of the dry valley. Furthermore, a certain symmetry in shape and size can be seen in the construction of the walls on either side of the double gate: both passages allowed traffic in both directions and had not only the same width but probably also the same height (Van Tilburg 2008, 139). Square towers were built into the walls on either side of the gate. Only the remains of the western tower were actually found in the 1950's. This rectangular building was interpreted at the time as a 'cellar' (Brunsting 1955, 3).

The flanking towers could have protected the entrance to the gate, as was the case with many gate structures in the Late Roman period. Such structures are referred to as courtyard gates (*Hoftor*) and occur in several variants in the Greco-Roman world (see Winter (1971, 222, fig. 223) for the ideal type of such a gate). For example, a construction similar to the Nijmegen gate is known from Syracuse, and is dated between 344 and 338 BC (Gerding 2011, 15, fig. 6e). At *Ostia*, the rectangular courtyard of the Late Roman *Porta Romana* is protected on both sides by two rectangular towers (5.5 × 5.5 m), which are similar in size to the Nijmegen towers (Gering 2004, 312, fig. 2).

Continuing westwards, a cold seam follows after 6 m (fig. 3). The 1.4 m thick tuffa wall found to the west of this is founded 1.5 m deeper and has been mapped for tens of metres to the west thanks to several excavations in the 1950's and 1980's. In places it was as high as 4 m in the 1950's. On the northern visible side, remnants of the shell of well-cut tuffa blocks have been seen in several places (Anonymus 1954; Brunsting 1955; Van Tent 1973, 130-134).

In the 1950's, it was thought that parts of this wall belonged to a 'villa' built around AD 100. The whole has a jumbled appearance because the parts were built at different times, as archaeological research in the 1980's has shown (fig. 4). In some places, the remains of side walls

built at right angles to the north side of the wall have been found, which are probably the remains of rooms. Between them the remains of a lime kiln for the production of mortar, which were dated between 300 and 400. Any habitation remains from the 1<sup>st</sup>-4<sup>th</sup> centuries further north were washed away in the late Middle Ages by the south-flowing river Waal (Anonymus 1954; Brunsting 1955; 1956; Van Tent 1973, 130-134, especially fig. 8; Sarfatij 1986b. For the lime kiln Langereis & Kars 1990; Kisters 1991; Van Hoof *et al.* 1997, 155-162). At the point where the outer defences meet the northern escarpment of the plateau, excavations revealed a ditch at the foot of the escarpment which appears to be connected to the outer ditch of the outer defences (fig. 1). The inner ditch does not seem to continue at this point (Sarfatij 1986a, 45; Bloemers 2016, 217).

A coin of Constantius II, dated 337-341 AD, was found in a pit under one of the walls of the gate. It is quite possible that the construction of this gate and the connecting stone wall, as well as the two ditches of the outer defences on the plateau, were part of the building programme initiated by Julian in 359 AD, although a connection with Valentinian I cannot be ruled out, also because the latter probably visited Nijmegen on 20 September 368 (Willem 1984, 293).

Although not certain, it is plausible to infer from the *post quem* dating of the gate that construction began in 359 on Julian's orders. If that is the case, the fortified settlement on the Valkhof plateau would have had the name *Castra Herculis* at that time. The gate was probably built with stones from the old 'villa' nearby, but parts of the rear walls of this complex were left standing and incorporated into the new wall at the foot of the plateau (fig. 4). In addition, building materials were undoubtedly used from the ruins of the *Legio X Gemina* fortress on the Hunerberg to the east and the town *Ulpia Noviomagus* to the west of the centre of Nijmegen. During construction, quicklime was used to prepare the mortar, which was made in the lime kiln mentioned above from limestone taken from the same ruins and from old funerary monuments.

## Bibliography

Aarts, J. & B. Kokke, 2021: De Romeinse munten, in: H. van Enckevort (ed.), *Archeologisch onderzoek in de bouwput van Museum De Bastei in Nijmegen. Een Romeinse poort met wegdek alsmede vestingwerken en huizen uit de late middeleeuwen en nieuwe tijd*, Nijmegen (Archeologische Berichten Nijmegen Rapport), 375-389.

Anonymus, 1954: *Verslagen der rijksverzamelingen van geschiedenis en kunst* 76, 's Gravenhage, 113-114.

Bloemers, J.H.F., 2016, with contributions by J.S. Boersma, W. Dijkman, M. Erdrich, R.C.G.M. Lauwerier, J. Raap, D. Teunissen & J.R.A.M. Thijssen: The fourth-century defence system around the Valkhof and the problem of continuity during the early medieval period, in: J.H.F. Bloemers (ed.), *Four approaches to the analysis*

*of (pre-)Roman Nijmegen. Aspects of cultural evolution, acculturation, contextual function and continuity*, Amersfoort (Nederlandse Oudheden 19), 175-231.

Bloemers, J.H.F. & J.R.A.M. Thijssen, 1990: Facts and reflections on the continuity of settlement at Nijmegen between AD 400 and 750, in: J.C. Besteman, J.M. Bos & H.A. Heidinga (eds), *Medieval archaeology in the Netherlands. Studies presented to H.H. van Regteren Altena*, Assen/Maastricht (Studies in Prae- and Protohistorie 4), 133-150.

Boersma, J.S. & J. Raap, 2016: Numismatic evidence for the dating of the late Roman defence system, in: Bloemers, 193-194.

Bogaers, J.E., 1960/1961: Civitas en stad van de Bataven en Canninefaten, *Berichten van de Rijksdienst voor het Oudheidkundig Bodemonderzoek* 10/11, 263-317.

Bogaers, J.E., 1968: *Castra Herculis*, *Berichten van de Rijksdienst voor het Oudheidkundig Bodemonderzoek* 18, 151-159.

Bogaers, J.E., 1969: Ontdekkingen op de Lindenberg, *Numaga* 16/1, 1-4.

Bogaers, J.E., 1981a: Waarnemingen in Westerheem V, *Westerheem* 30, 19-20.

Bogaers, J.E., 1981b: Weerwerk voor Westerheem, *Westerheem* 30, 171-172.

Boshoven, E. & F. van Oosterhout, 2016, with a contribution by H. van Enckevort & M. Smit: *Herinrichting Valkhofpark, gemeente Nijmegen. Een inventariserend veldonderzoek (waarderend booronderzoek)*, Nijmegen (Archeologische Berichten Nijmegen Briefrapport 221).

Brunsting, H., 1955: Nijmegen. Opgravingen aan de Waalkade, *Opgravingsnieuws van de samenwerkende oudheidkundige instellingen* 1, 2.3-8 en 3.3.

De Boone, W.J., 1954: *De Franken van hun eerste optreden tot de dood van Childerik*, Amsterdam (PhD thesis Rijksuniversiteit Groningen).

Erdrich, M., 2016: Pottery finds from the late Roman fortifications at Nijmegen, in: Bloemers, 188-193.

Gerding, H., 2011: A courtyard gate at Thouroi, *Popuscula. Annual of the Swedish Institutes at Athens and Rome* 4, 7-18.

Gering, A., 2004: Plätze und Straßensperren an Promenaden. Zum Funktionswandel Ostias in der Spätantike, *Römische Mitteilungen* 111, 299-381.

Heirbaut, E.N.A. & H. van Enckevort, 2010: Het centrum van Nijmegen in de laat-Romeinse tijd, in: H. van Enckevort & E.N.A. Heirbaut (eds), *Opkomst en ondergang van Oppidum Batavorum, hoofdplaats van de Bataven. Opgravingen op de St. Josephhof in Nijmegen* 1, Nijmegen (Archeologische Berichten Nijmegen Rapport 16), 253-264.

Hendriks, J., A. den Braven, H. van Enckevort & J.R.A.M. Thijssen, 2014: Een noordelijk steunpunt. Vroegmiddeleeuws Nijmegen vanuit een archeologisch

- perspectief, in: H. Peterse, D. Verhoeven, R. Camps, R. Klein, B. Kruijsen, J. Kuys, M. Nicasie & M. Smit (eds), *Het Valkhof. 2000 jaar geschiedenis*, Nijmegen, 43-72.
- Hoek, R. & J. Wildenberg, 2009: *Mag het een onsje meer zijn. Een bescheiden onderzoek in het beschermd archeologisch monument Hunnerpark te Nijmegen*, Nijmegen (Archeologische Berichten Nijmegen Briefrapport 33).
- Kisters, M., 1991: Een Romeinse kalkoven in Nijmegen, *Westerheem* 40/1, 8-18.
- Kokke, B., 2019a: De munten, in: Van Enckevort, 55-62.
- Kokke, B., 2019b: Munten, in: R. Kloosterman, with contributions by H. Damen, J. van Hemert, H. Hundertmark, B. Kokke, D. Köther & W. Kuppens, *Archeologisch onderzoek op de Scheidemarkershof en Plein 1944 te Nijmegen. Proefsleuvenonderzoek, een opgraving en een opgraving, variant archeologische begeleiding*, Nijmegen (Archeologische Berichten Nijmegen Rapport 93), 160-176.
- Kroon, F., 1935: Het Nederlandse gedeelte van de Tabula Peutingeriana, *Tijdschrift van het Koninklijk Aardrijkskundig genootschap* 52 (Tweede Serie), 319-334.
- Langereis, C.G. & H. Kars, 1990: Archeomagnetic dating of a limestone kiln at Nijmegen (the Netherlands), *Geologie en Mijnbouw* 69, 319-326.
- Reijnen, R.W., 2010: Munten uit de zuidwesthoek van de St. Josephhof, in: H. van Enckevort & E.N.A. Heirbaut (eds), *Opkomst en ondergang van Oppidum Batavorum, hoofdplaats van de Bataven. Opgravingen op de St. Josephhof in Nijmegen 1* (Archeologische Berichten Nijmegen Rapport 16), 165-189.
- Reijnen, R.W., 2011: Munten en lokale muntproductie, in: E.N.A. Heirbaut & H. van Enckevort (eds), *De verdwenen villa van De Tienakker. Archeologisch onderzoek naar het Romeinse verleden van Wijchen*, Nijmegen (Archeologische Berichten Wijchen Rapport 4), 89-107.
- Reijnen, R., 2013: Munten, in: E.N.A. Heirbaut (ed.), *De zuidwestelijke hoek van Ulpia Noviomagus in kaart gebracht 2. Beschrijving van de vondsten van de Rijnstraat en Lekstraat in Nijmegen-West*, Nijmegen (Archeologische Berichten Nijmegen Rapport 42), 177-193.
- Sarfati, H., 1986a: Nijmegen, gem. Nijmegen. Opgraving stadskern, *Jaarverslag Rijksdienst voor Oudheidkundig Bodemonderzoek* 1984, 43-46.
- Sarfati, H., 1986b: Nijmegen, gem. Nijmegen. Opgraving stadskern (Waalkade), *Jaarverslag Rijksdienst voor het Oudheidkundig Bodemonderzoek* 1985, 52-56.
- Steures, D.C., 2002a: Late Roman thirst. How dark coloured drinking sets from Trier were used. *BABesch. Annual Papers on Mediterranean Archaeology* 77, 175-179.
- Steures, D.C., 2002b: Germanic pendants and a Roman medaillon. Fifth-century pendants from the Late Roman cemetery in the inner city of Nijmegen, *BABesch. Annual Papers on Mediterranean Archaeology* 77, 181-185.
- Steures, D.C., 2003: Appendix Vergiliana Copa 41. Material culture, words and sentence, *Mnemosyne* 56, 215-217.
- Steures, D.C., 2004a: Shells and scales. A female Sabazios-worshipper from Cologne in Nijmegen, *BABesch. Annual Papers on Mediterranean Archaeology* 79, 167-173.
- Steures, D.C., 2004b: Godsdiensten in laat-Romeins Nijmegen. Vereersters van Dionysos, Sabazios, Christus en een paalidool, *Westerheem* 53, 2-16.
- Steures, D.C., 2009: Aardewerk, continuïteit en oriëntatie in laat-Romeins Nijmegen, *Westerheem* 58, 194-207.
- Steures, D.C., [2013], with contributions by C.C. Bakels, H. Brunsting, H. van Enckevort, R.C.G.M. Lauwerier, G.M. Vogelsang-Eastwood & P.A.M. Zoetbrood: *The Late Roman cemeteries of Nijmegen. Stray finds and excavations 1947-1983*, Amersfoort/Nijmegen (Nederlandse Oudheden 17 / Description of the archaeological collections in Museum Het Valkhof at Nijmegen 15).
- Steures, D.C., 2019: The Nijmegen inn story, with a twist from The Hague. Vulgar Latin mottoes on pottery from Late Roman Nijmegen and a silver ring from The Hague, in: R.J. van Zoolingen (ed.), *Ab harenis incvlitis. Artikelen voor Ab Waasorp*, Den Haag, 204-209.
- Stolte, B.H., 1938: De Romeinse wegen in het Land der Bataven en de Tabula Peutingeriana, *Tijdschrift van het Koninklijk Aardrijkskundig Genootschap* 55 (Tweede Serie), 700-716.
- Teunissen, D., 2016: Palynological investigation of the late Roman single period fortification ditch at Nijmegen in: Bloemers, 203-208.
- Van Enckevort, H., 2017: Aardewerk uit de Romeinse tijd, in: A. den Braven & H. van Enckevort, with contributions by M. Brons, H. Damen & B. Kokke, *Vondsten uit de bunker in het Valkhofpark*, Nijmegen (Archeologische Berichten Nijmegen Rapport 76), 16-17.
- Van Enckevort, H., 2018, with contributions by M. Komen & A. van de Venne: *Vondsten uit de bouwput van de Stauferstèle in het Nijmeegse Valkhofpark*, Nijmegen (Archeologische Berichten Nijmegen Rapport 85).
- Van Enckevort, H., 2019, with contributions by J. van den Berg, B. Kokke, M. Komen, G. Parsons, D. Visser & A. Wagner: *Van Oppidum Batavorum naar een 19<sup>e</sup>-eeuwse schietbaan. Archeologisch onderzoek aan weerszijden van de Nijmeegse St. Canisiussingel*, Nijmegen (Archeologische Berichten Nijmegen Rapport 81).

- Van Enckevort, H., 2021, with a contribution by K. Brok: Van pradolina naar Alewijnse. Geologische en archeologische verschijnselen op het terrein van De Bastei, in: H. van Enckevort (ed.), *Archeologisch onderzoek in de bouwput van Museum de Bastei in Nijmegen. Een Romeinse poort met wegdek alsmede vestingwerken en huizen uit de late middeleeuwen en nieuwe tijd*, Nijmegen (Archeologische Berichten Nijmegen Rapport 95), 473-516.
- Van Enckevort, H. & C. Harmsen, 2018: *Archeologisch onderzoek op het terrein van het voormalige Verpleeghuis Margriet*, Nijmegen (Archeologische Berichten Nijmegen Rapport 82).
- Van Enckevort, H. & J.R.A.M. Thijssen, 2003: Nijmegen und seine Umgebung im Umbruch zwischen Römerzeit und Mittelalter', in: T. Grünwald & S. Seibel (eds), *Kontinuität und Diskontinuität. Germania inferior am Beginn und am Ende der römischen Herrschaft. Beiträge des deutsch-niederländischen Kolloquiums in der Katholieke Universiteit Nijmegen*, Berlin/New York (RGA-Erg. Band 35), 2003, 83-118.
- Van Enckevort, H. & J.R.A.M. Thijssen, 2014: Het Valkhof en omgeving tot het einde van de Romeinse tijd, in: H. Peterse, D. Verhoeven, R. Camps, R. Klein, B. Kruijsen, J. Kuys, M. Nicasie & M. Smit (eds), *Het Valkhof. 2000 jaar geschiedenis*, Nijmegen, 23-41.
- Van Hoof, A.A.M., C. Langereis, I. Joosten & J.R.A.M. Thijssen, 1997: Archaeomagnetic dating of seven archaeological fireplaces in the Netherlands, *Geologie en Mijnbouw* 76, 155-162.
- Van Schevichaven, H.D.J., 1896: *Oud-Nijmegen's straten, markten, pleinen en open ruimten en wandelplaatsen*, Nijmegen.
- Van Tent, W.J., 1973: Excavations along the limes, *Berichten van de Rijksdienst voor Oudheidkundig Bodemonderzoek* 23, 123-134.
- Van Tilburg, C., 2008: Gates, suburbs and traffic in the Roman Empire, *BaBesch. Annual Papers on Mediterranean Archaeology* 83, 133-147.
- Verhagen, J.G.M., 2013: De Gelderse limes herzien. Een nieuwe identificatie van Romeinse plaatsnamen in Gelderland, *Archeobrief* 17/3, 29-37.
- Verhagen, J.G.M., 2014: Using distances to identify Roman places in itineraria. A case study on the Lower Rhine limes, *Archäologisches Korrespondenzblatt* 44/4, 543-562.
- Verhagen, J.G.M., 2022: *Tussen de Dam van Drusus en de Zuilen van Hercules. Romeinse waterwerken in de Rijn-Maasdelta*, IJzerlo (PhD thesis Vrije Universiteit Amsterdam).
- Verhagen, J.G.M. & S. Heeren, 2016: Castra Herculis. De naam van de Romeinse militaire versterking in Nijmegen herontdekt, *Westerheem* 65/5, 239-249.
- Willems, W.J.H., 1980a: Arnhem-Meinerswijk. Een nieuw castellum aan de Rijn, *Westerheem* 29, 334-348.
- Willems, W.J.H., 1980b: Castra Herculis, een Romeins castellum bij Arnhem, *Spiegel Historiae* 15, 665-671.
- Willems, W.J.H., 1981a: Romans and Batavians. A regional study in the Dutch Eastern River Area I, *Berichten van de Rijksdienst voor het Oudheidkundig Bodemonderzoek* 31, 7-218.
- Willems, W.J.H., 1981b: Over een fossa, een castra en een tabula, *Westerheem* 30, 168-171.
- Willems, W.J.H., 1984: Romans and Batavians. A regional study in the Dutch Eastern River Area II, *Berichten van de Rijksdienst voor het Oudheidkundig Bodemonderzoek* 34, 39-331.
- Willems, W.J.H. & H. van Enckevort, 2009, with contributions by P.W. van den Broeke, M. Erdrich, F. Kemmers, A. Koster, R. Lauwerier, K. Peterse, R. Polak, P. Schut, L. Swinkels, J.R.A.M. Thijssen & K. Zee: *Vlpiā Noviomagus. Roman Nijmegen. The Batavian capital at the imperial frontier*, Portsmouth RI (Journal of Roman Archaeology Supplementary Series 73).
- Winter, F.E., 1971: *Greek fortifications*, Toronto (Phoenix Supplementary 9).



# Late Roman fortifications in Popovac, Croatia

Igor Vukmanić and Branko Mušič

## Introduction

The archaeological site, located in the vicinity of the present-day village of Popovac, Croatia (fig. 1), has been protected by the National Monument Protection Act since 1972 (Z-6043). Today, this land is owned by several private individuals and is divided among various owners or beneficiaries. The site lies on the portions of cadastral parcels nos 245-247, 254 and 1092-1097 (cad. co. Popovac) and is extensively used for agricultural purposes. Deep ploughing revealed large quantities of ancient building materials on the contemporary surface (fragments of pottery, glass, frescoes and metal), suggesting intensive destruction of the site (for the detailed description of this Roman place, with further bibliography Vukmanić 2017, 231-238).

The locality is situated on a low plateau called Pogan, just north of the river Karašica and some 17 km southwest of the Danube. The Roman magistral road between *Aquincum* (Budapest) and *Mursa* (Osijek), metalled parallel to the Danube, is presumed to be constructed nearby. Although this is disputable, the site in question may have been constructed on the administrative border between the provinces of *Pannonia Valeria* and *Pannonia Secunda*. If this is true, then this place – since it is located west of Banskó brdo and north of Karašica – was part of *Pannonia Valeria*. The site was part of a larger settlement complex used both for military and civil purposes.

The first overall research of the site was undertaken in 2016 and featured extensive archaeological fieldwalking (Sanader *et al.* 2021). Soil marks in the ground plan shaped as an irregular quadrilateral (trapezium), previously discovered on aerial and satellite imagery, pointed to the hypothesis that the large Late Roman fortification was to be identified near Popovac. This assumption was confirmed by the results of the archaeogeophysical prospection made by the authors of this paper in 2018, 2019 and 2020 (project ‘The Danube Limes in Croatia’). The methods used were magnetometry (Geometrics G-858 in gradient mode) and ground-penetrating radar (GPR) (GSSI SIR 3000, 400 MHz antenna).

## Satellite imagery

In the initial phase of the archaeological prospection, a large feature similar to a trapezium (Fortification 1) was recognised on satellite imagery in the fields near Popovac. Great quantities of various small finds on the present-day surface place the site undoubtedly in the Roman period. Additionally, the irregular quadrilateral shape of the fortification ground plan suggests a date in the Late Roman period. The remains of the fortification curtain walls spread in a wide band included, the size of this installation is estimated at a total of about 2.77 ha.

### Igor Vukmanić

Osijek Archaeological  
Museum, Trg Sv. Trojstva 2,  
31000 Osijek, Croatia, igor.  
vukmanic@amo.hr  
Branko Mušič  
GeArh Ltd., Radvanjska  
cesta 13, 2000 Maribor,  
Slovenia, brankomusic1@  
yahoo.com

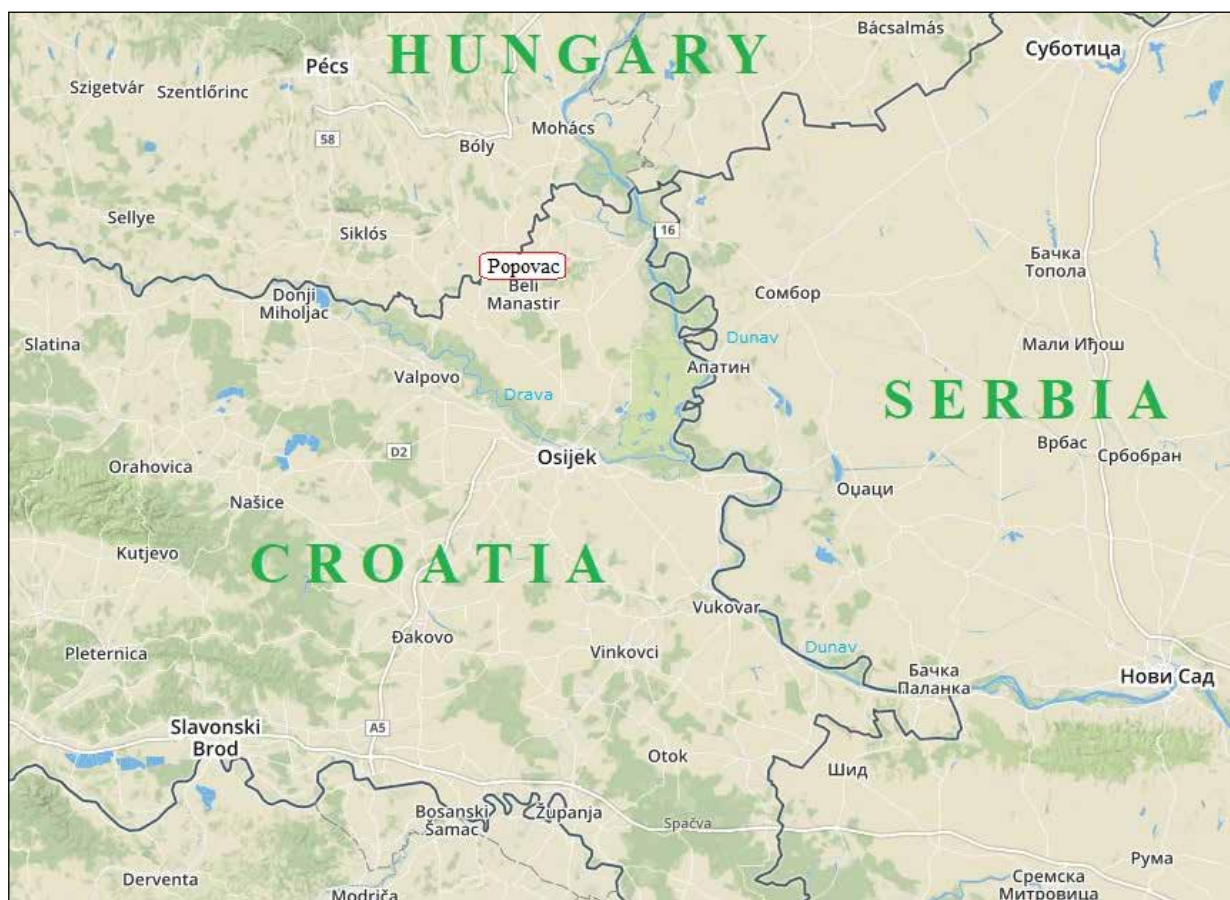


Figure 1. Croatia. Map of the Danube region.

### Objectives of the survey

The general objectives of the geophysical prospection in Popovac were to determine the layout, size, and spatial context of the discovered archaeologically relevant features in relation to the topography of the site. These results would also provide the basic information about the state of preservation of the underground archaeological features and determine the role and purpose of the site. The outcomes obtained from this analysis helped determine locations for future systematic archaeological excavations, which already started in 2021 by Igor Vukmanić.

### Systematically phased methodological approach to the surveys

The geophysical prospection began in 2018 in the northeastern section of the archaeological locality, where the general layout of the large Roman fortification in Popovac was visible on aerial imagery prior to the survey (fig. 2). It was followed in 2019 by exploration south of the drainage canal (cad. parc. no. 3258), whose construction in the second half of the 20<sup>th</sup> century destroyed the central area of this site. In its final phase in 2020, the survey

encompassed the rest of the locality (northwestern and eastern areas).

### Results of the magnetic survey

**Fortification 1** The ground plan of the large Late Roman fortification, named Fortification 1, in Popovac, explored by the magnetic survey (fig. 3), suggests that its initial phase can be dated to the period of the first or second Tetrarchy (AD 294-324) at the earliest. The foundation of the defensive walls of Fortification 1, which were built without earth and timber causeway in their rear, is about 2-3 m wide. Its debris seems to be, however, up to 5 m broad in some places, if collapsed or destroyed building rubble is included. While the curtain wall of this fortification on the north side was about 285 m long, the one on the south side apparently measures 220 m. Meanwhile, the eastern fortification wall was 165 m long and the western 70 m. The survey thus allowed to determine the size of the Fortification 1 more precisely than in Sanader *et al.* (2021, 124).

The main gates, built directly opposite each other, are located precisely in the middle of the northern and

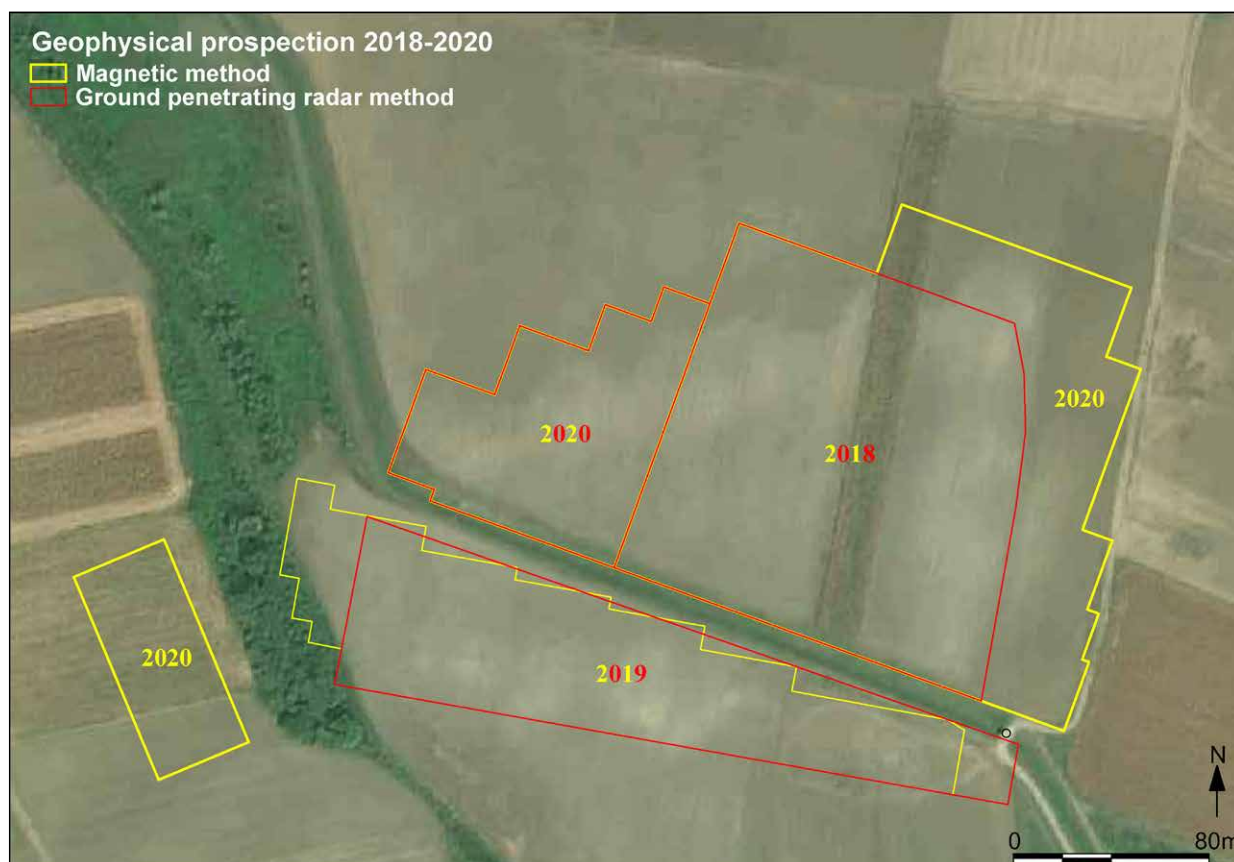


Figure 2. Popovac. The perimeter of geophysical surveys (2018-2020).

southern curtain walls. They are characterised by two monumental polygonal – probably octagonal – projecting towers. In total, the gates were about 40 m wide. The gate towers are presumed to mark the path of the main route through the fortification and also suggest the existence of an 8-10 m wide Roman road leading further (from north to south) outside the complex. In addition to the gate towers that featured 2 turrets, a total of at least 9 (11 at most) protruding towers has also been found. These towers are not visible on satellite imagery.

No less than three different tower ground plans of two varying sizes have been identified using magnetometry. It is not, however, always clear whether their foundations are of round or polygonal basis. While three intermediate towers are identified in the northern fortification curtain wall, two such towers are discovered in the southern fortification wall. The western wall indicates the existence of two intermediate towers. If they indeed existed, they were built reciprocally and more than 15 m apart. Not a single tower was found in the eastern curtain wall – based on geophysical results, another Late Roman site (Fortification 2) was built there. All the towers identified on the northern and southern sides were located at regular intervals of about 37 m from the monumental gates on the

fortification wall. Meanwhile, two corner towers were built on the western fortification wall. While larger towers on the northeast and southeast corners of Fortification 1 are facing east, i.e. in the direction of the Bansko brdo and the Danube, smaller corner towers are found on the northwest and southwest sides. The diameter of the larger towers (gate towers included) is about 15-16 m, while the smaller corner towers and possible intermediate towers are at least 9 m wide. Given the outcome of the GPR survey (see below), the long straight dark band which was detected by the magnetic survey south of the fortification wall could be interpreted as the eastern side of a warehouse or a granary (*horreum*).

In the western part of Fortification 1 there are several orthogonal, irregularly arranged buildings. Though it is difficult to draw such a conclusion before archaeological excavation in this area, they were presumably made of wood and may have been used, at a certain stage, as small houses. The results of the magnetic survey show that they were at some point set on fire.

A possible single ditch located some 20-30 m north of Fortification 1 was identified by the magnetic survey. It appears that this feature was several meters wide. Its existence is not recognised neither outside the western





Figure 3. Popovac. The magnetic survey results and their interpretation.

nor the eastern side yet. In the south, in addition or instead of the ditch, Fortification 1 might have used the river Karašica as a natural obstacle. During the Late Roman era obstacles like rivers, streams and ditches acted as a decisive component of field tactics against attack by horsemen. At this point, the size of Fortification 1 was calculated excluding the ditches.

**Fortification 2** From the ground, the area of buried remains on the easternmost part of Fortification 1 in Popovac appears to be topographically slightly elevated. At this site, the magnetic method revealed the existence of a Roman building with a square ground plan. This fortification, named Fortification 2, was in fact built on the site of the eastern part of Fortification 1, but it was positioned in a different direction (fig. 3). Preserved walls of this building occupy an area of about 0.09 ha (30 × 30 m).

This solid building was surrounded by at least one square embankment or palisade and not by a wall (it is not visible on the GPR survey results). The palisade seems to encircle an area of more than 0.36 ha (60 × 60 m). The magnetic anomalies along the palisade are interrupted in the southwestern part, which may be the result of the collapse or damage of the palisade at this place, or it may mean a former passage through the palisade. There is a

possibility that another structure was built between this palisade and the central building of Fortification 2. The nature of this phenomenon is, however, uncertain – if it existed, it could have been a palisade as well. This feature seems to delimit an area of about 0.3 ha (55 × 55 m). Afterwards, ditch was dug at the distance of around 40 m from the building in the middle of Fortification 2, *i.e.* about 20 m away from the first mentioned palisade. A ditch evident on the magnetic map with an approximately square plan surrounds the central area of Fortification 2 measuring 1.44 ha (120 × 120 m).

Similarly, another ancient structure was detected next to the northeastern corner of Fortification 1. Its outlines are measured at about 15 m long and several meters wide. Most of this structure seems to be placed outside the surveyed area. Because it was built in a different direction compared to the curtain wall of Fortification 1, its connection with this site is questionable. However, as indicated by the magnetic survey, due to it being located approximately at the same distance from the ditch as the ditch from the palisade (about 20 m), *i.e.* 60 m from the central building of Fortification 2 and generally parallel with all the known structures of that fortification, it is possible that this feature is part of the outermost ditch

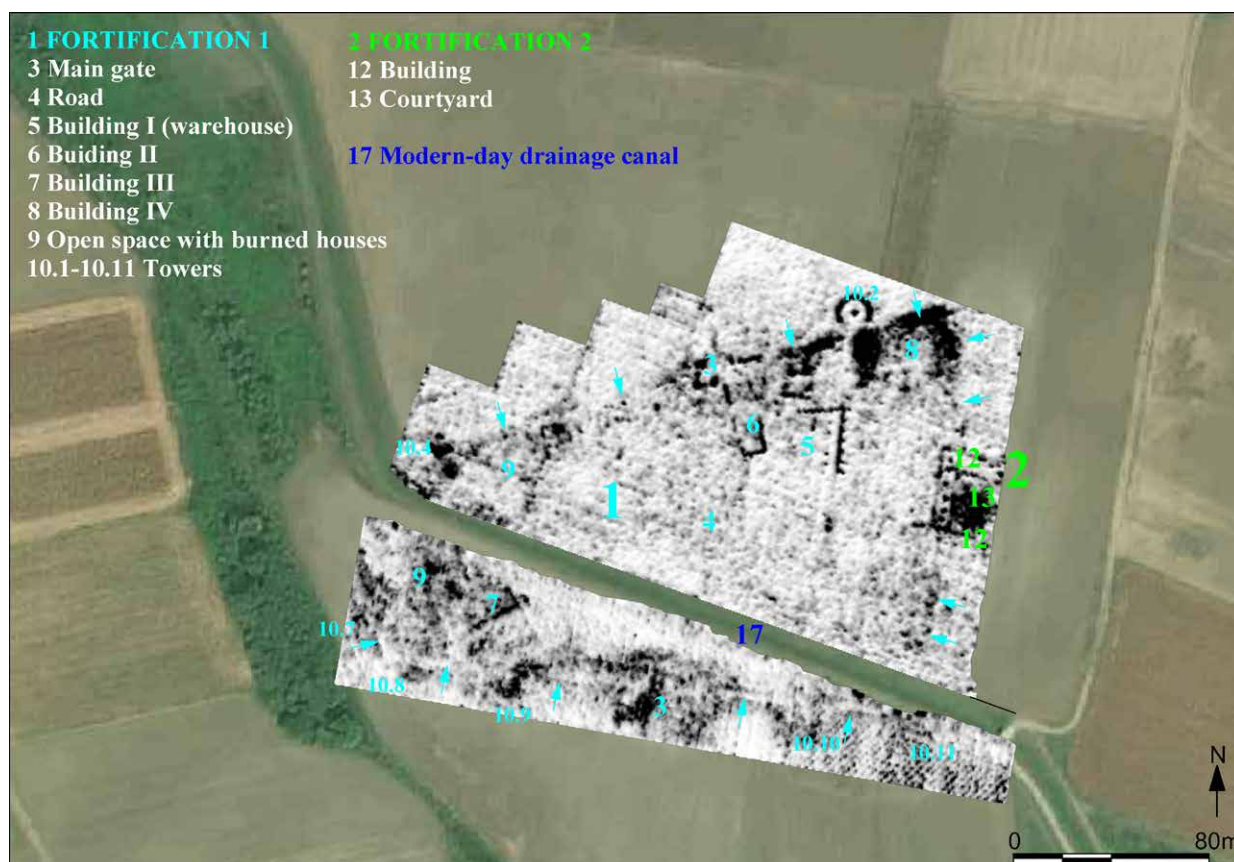


Figure 4. Popovac. The GPR survey results and their interpretation.

of Fortification 2. This structure, if square, would have enclosed an area of about 2.89 ha (170 × 170 m).

The width of all ditches was measured at about 6-7 m. While, based on this survey, the palisade(s) and the ditch(es) were placed at regular intervals, the palisade was perhaps the only structure constructed on all sides of Fortification 2. At least for now, the hypothesis reads that ditch was dug to the north, east and south of Fortification 2, while the existing remains of Fortification 1 were used to protect Fortification 2 on the west side. The other plausible explanation is that Fortification 2 was never completed.

The last major construction phase in what is today the Croatian part of the middle Danube region is of Valentinianic (I) origin (AD 364-375, Várady 1897, 101-102; Szilágyi 1933, 94-102; Barkóczy *et al.* 1976, 53-64; Visy 2003, 49, 50, 61, 82 and 107; Vukmanić 2017, 167 and 294). This is also the period that Fortification 2 can be dated to at the latest. This implies that this fortification had to be in use for a relatively short period of time. It could not chronologically exceed beyond the end of the 4<sup>th</sup> century. Based on the identified ground plan, Fortification 2 could have been a fortlet. The induced nature of the magnetisation suggests that the foundations of both Late Roman fortifications in Popovac were made

of stone material. It has also been found that, due to relatively strong thermoremanent magnetisation, at least a few inner parts or rooms of those two architectural complexes bear evidence of collapsed roof tiles.

**Enigmatic structure** To the west of Fortification 1, *i.e.* to the opposite side of the modern-day drainage canal, another Roman structure has been located (fig. 3). This structure was discovered during field trips in 2020, while geophysical prospections on the remaining sections of Fortifications 1 and 2 were being conducted. In spite of that, magnetic survey on this location, called Mala Lačka, could neither provide a cumulative result nor help determine the type, *i.e.* the function of the site. This is possibly the consequence of a high level of destruction inflicted by ploughing.

## Results of the ground-penetrating radar survey

**Fortification 1** By combining the results of two complementary geophysical methods, magnetic and GPR survey which are independent with regard to the measured physical parameters, subsequent conclusions can be drawn. In general, Fortification 1, whose ground plan was built in the shape of an irregular quadrilateral,

and the buildings inside can be better understood using the results of the GPR method (fig. 4).

The positions of the projecting towers along the curtain walls of Fortification 1 are also plainly visible on the GPR survey, even if their layout is not as obvious as on the magnetic survey. Indeed, only one large tower is clearly discerned in the northern fortification wall, while all the others are less distinct. This could be due to the various state of their preservation or the difference in the material used for their construction. On the other hand, the ditch of Fortification 1 is less clearly visible on the GPR survey than on the magnetic research result.

At least two rectangular buildings are detected to the south of the north section of Fortification 1 curtain wall. Although they were not built in a parallel manner and side by side, their longer flanks are positioned in the north-south direction. Based on the GPR survey, the more eastern of the two buildings (the stone building with buttresses) was probably a warehouse, *i.e.* a granary (Building I). Two continuous sections of two orthogonal walls of this building, one leading to the north (no more than 30 m long) and the other enclosing it at the right angle to the west (about 15 m), seem preserved. Inside, at a distance of about 4 m, at least four large pillar bases can be recognised. Since it is possible that walls of this structure are not completely preserved, the warehouse could have been considerably longer and wider. The purpose of the other rectangular building (Building II) – if it was a single building at all – erected more than 10 m west of the warehouse and about 30 × 10 m in size is not clear yet. There is also a possibility that another rectangular building (Building III), made of solid material but of uncertain purpose, was constructed close and vertically to the inner side of the western curtain wall of Fortification 1. Dimensions of this structure could have been 20 × 10 m.

Additionally, next to the inner northeastern corner of the curtain wall of Fortification 1, two stone barriers positioned southward seem to delimit at least one elongated building or a room, measuring about 40 × 20 m (Building IV). While a great amount of construction debris was found by the GPR survey, more precise data on this site could be collected only by archaeological excavation. This and other buildings at the site may have been partitioned inside by architectural elements made of wood. The amplitudes and depths of buildings made of stone and brick material varied. Most architectural remains were detected at a depth of 1.5 m below ground level, although most of them lie within a depth interval of 0.4-1.2 m.

**Fortification 2** The architectural details of Fortification 2 are more clearly visible on the GPR than on the magnetic survey result (fig. 4). It shows that Fortification 2 was a minor square fortification constructed in the style of a Mediterranean house with an open courtyard. This structure was built in the

shape of a large building formed by a series of halls and constructed throughout the eastern wall of Fortification 1. The western corridor of this architectural complex was clearly colonnaded. Furthermore, the central courtyard of Fortification 2 seems littered with building debris at a depth interval of 0.4-1.2 m. Strong GPR signals in this area indicate a surface paved with stone slabs. Although this structure was not completely surveyed by the GPR method, its size occupied the area of about 30 × 30 m, as was already revealed by the outcome of the magnetic survey. Fortification 2 was surrounded by at least one square structure and not by a wall since it is not visible on the GPR survey results.

## Identification of the sites

The name of the Roman architectural complex whose core is now identified in Popovac, as given in *Itinerarium Antonini* (243) and *Tabula Peutingeriana* (VI), was *Antiana(e)*. However, based on some surface finds (stamped tiles), it is possible that either the name or the type of Fortification 1 was *Quadriburg(ium)* [in *Antiana(e)*] (Várady 1897, 101-102). *Quadriburgia* as structure type had different functions and it is not always easy to discern whether they were used as villas, palaces or fortresses in the Late Roman era. Sometimes it is also difficult to distinguish if they were utilised for civil or military purposes. They are not found exclusively on the Roman frontiers (Zahariade 1999, 3-16; Campbell 2009, 59; Băjenaru 2010, 169-179).

There is not a single known reliable historical or archaeological source that states that the Roman complex in Popovac had the status of a city. Judging solely by its size and also the date of its construction, Fortification 1 is a possible site of a late fortress. Namely, the Late Roman fortresses and also the legions were significantly smaller than their Early Imperial forerunners. Likewise, the lack of accommodation capacities in the interior of this fortification might indicate that there were not many Roman soldiers at the site. Similar localities usually housed locals or troops immediately behind curtain walls.

However, Fortification 1 was built in a new, Late Roman style with construction features that were previously unknown in the Danube region in Croatia. It was most likely a so-called inner fortification and it is the first identified type of such a site in Croatia. Similar fortifications were part of a broader sample in the middle Danube area. They are found at modern-day locations such as Keszty-Fenekpuszta, Alsóhetény, Környe, Tác and Ságvár in Hungary (Alföldy 2015, 293-311; Heinrich-Tamáska & Szabó 2019, 209) and Gamzigrad in Serbia (Rizos 2013, 668-669).

Late Roman inner fortifications with massive perimetral defence walls fulfilled various functions and served as centres for administration, law, religious cult,



leisure, spectacle and trade. Since the size in the Roman era was a matter of impression, a form of propaganda or an implication of a specific purpose, due to their impressive walls and numerous towers, they could have acted as military supply bases. The most probable explanation for the phenomenon of construction ambitions with the appearance of large warehouses within these fortifications seems to be the connection with the new geostrategic concept of the Late Roman Empire. Some places at the time had an important role in the collection of taxes or served as centralised depots, distribution centres and controllable logistic hubs for gathering, storage and distribution of goods for the *annona militaris* (Soproni 1978, 138; Fitz 1980, 53-60; Zahariade 1999, 3-16; Mulvin 2002, 58; Campbell 2009, 59; Băjenaru 2010, 169-179; Heinrich-Tamáska & Szabó 2019, 212 and 224). This, however, raises the question of whether Fortification 1 was situated between internal borders or near the periphery of the Roman Empire. Due to its strong defensive function, *i.e.* walls with a lot of open space and only a few representative buildings in their interior, these locations were also considered as a place of refuge from external dangers, where people and livestock could find shelter.

Essentially, inner fortifications were state facilities. The fact that they were built on a large-scale *ex nihilo*, but near sites that had already been in agricultural use, indicates a major investment, perhaps made on behalf of the emperor by a local representative, to serve as a source of income, exploitation, or provincial development (Grant 1990, 51-68; Mulvin 2002, 36; Rizos 2013, 670-671 and 688).

Meanwhile, the purpose of Fortification 2 seems clear. Its appearance, as well as its proximity to the frontier of the Roman Empire, suggests its military importance. Although it is possible that it was planned to be a signal tower or a road station, the most likely interpretation of Fortification 2 is a fortlet. As such, this fortification could have housed tens of soldiers. In accordance with the ground plans of similar sites identified in the middle Danube region so far, the first construction phase of Fortification 1 in Popovac can be dated to AD 294-324 while Fortification 2 was presumably built in the period between AD 364 and 375 at the latest.

## Conclusions

Previously unknown installations from the Roman era have been identified in the Danube region in Popovac, Croatia. Different methods of archaeological research, used in a complementary way, provided new elements for a better articulation of this locality. Fieldwalking, satellite and aerial photography, magnetic and GPR surveys all provided important results within the scope of their functions, providing the most complete identification of the site in Popovac to date.

Two different Late Roman Empire frontier fortifications were identified near Popovac by geophysical prospection. Both of them were used only for a relatively short period of time and in different periods of the 4<sup>th</sup> century. While one site originates from the late 3<sup>rd</sup> or early 4<sup>th</sup> century at the earliest, the other was in use no later than the third quarter of the 4<sup>th</sup> century. Despite aggressive ploughing, the existing Roman remains in Popovac seem well preserved. The research determined the exact location, perimeters and layouts of structures immediately outside, as well as the buildings within two distinct archaeological sites in Popovac. The discovery of these two local Roman fortifications has a major impact on the amount of quality data about the military infrastructure and protection of the Late Roman frontier in the Danube region in Croatia.

## Acknowledgement

The Osijek's Archaeological Museum project 'The Danube Limes in Croatia' is funded by a grant from the Ministry of Culture and Media of the Republic of Croatia (contract nos 49-281-18; 26-200-19 & 26-200-20).

## Bibliography

- Alföldy, G., 2015: Roman Pannonia from Andrew Alföldi to the twenty-first century, in: J.H. Richardson & F. Santangelo (eds), *Andreas Alföldi in the twenty-first century*, Stuttgart, 293-311.
- Băjenaru, C., 2010: *Minor fortifications in the Balkan-Danubian area from Diocletian to Justinian*, Cluj-Napoca.
- Barkóczy, L., E. Biró, J. Fitz, F. Fülep, D. Gabler, A. Mócsy, T. Nagy, K. Póczy, R. Pusztai, S. Soproni & Zs. Visy, 1976: *Der Römische Limes in Ungarn*, Székesfehérvár.
- Campbell, D.B., 2009: *Roman auxiliary forts 27 BC-AD 378*, Oxford.
- Fitz, J., 1980: Die Innenbefestigungen der Provinz Valeria, *Alba Regia* 18, 53-60.
- Grant, M., 1990: *The fall of the Roman Empire*, New York.
- Heinrich-Tamáska, O. & M. Szabó, 2019: Late antique fortifications in Pannonia. A landscape archaeological approach, in: G.I. Farkas, R. Neményi & M. Szabó (eds), *Visy 75. Artificem commendat opus. Studia in honorem Zsolt Visy*, Pécs, 209-231.
- Mulvin, L., 2002: *Late Roman villas in the Danube-Balkan region*, Oxford (British Archaeological Reports International Series 1064).
- Rizos, E., 2013: Centres of the Late Roman military supply network in the Balkans. A survey of horrea, *Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz* 60, 659-696.
- Sanader, M., I. Miloglav, D. Tončinić, I. Vukmanić, V. Matijević, M. Vuković & M. Cvetko, 2021: Field survey of Danube Limes in Eastern Slavonia and Baranja, in: D. Tončinić & L. Zerbini (eds), *Traian and the Danubian*

- provinces. *The political, economic and religious life in the Danubian Provinces*, Zagreb, 117-134.
- Soproni, S., 1978: *Der spätrömische Limes zwischen Esztergom und Szentendre*, Budapest.
- Szilágyi, J., 1933: *Inscriptiones Tegularum Pannonicorum*, Budapest (*Dissertationes Pannonicae* 2.1).
- Várady, F., 1897: *Baranya múltja és jelenje*, Pécs.
- Visy, Zs., 2003: *The Ripa Pannonica in Hungary*, Budapest.
- Vukmanić, I., 2017: *Dunavski limes u Hrvatskoj*, Zagreb (PhD thesis Sveučilište u Zagrebu).
- Zahariade, M., 1999: The tetrarchic building activity at the Lower Danube I. Quadriburgia, in: G. von Bülow & A. Milceva (eds), *Der Limes an der unteren Donau von Diokletian bis Heraklios*, Sofia, 3-16.

PART 5

**A FRONTIER ODYSSEY**



# Roman watchtowers in Mauretania Tingitana

Maciej Czapski, Jakub Kaniszewski, Radosław  
Karasiewicz-Szczypiorski, Aomar Akerraz,  
Layla Es-Sadra, Fadwa Benjaafar, Sebastien  
Mazurek, Karol Bartczak, Natalia Lockley and  
Maciej Marciniak

**Maciej Czapski / Jakub  
Kaniszewski / Radosław  
Karasiewicz-Szczypiorski /  
Sebastien Mazurek // Karol  
Bartczak / Natalia Lockley /  
Maciej Marciniak**

Polish Center of  
Mediterranean Archaeology,  
University of Warsaw,  
mt.czapski@uw.edu.pl  
/ jkaniszewski@tlen.pl /  
r.karasiewi@uw.edu.pl /  
s.mazurek5@uw.edu.pl /  
oberix@op.pl / n.lockley@  
uw.edu.pl / maciej.marciniak.  
macmarc@gmail.com

**Aomar Akerraz / Fadwa  
Benjaafar**

Institut National des Sciences  
de l'Archéologie et du  
Patrimoine in Rabat (INSAP),  
Rabat, Maroc, aakerraz@  
gmail.com / fadwabenjaafar@  
gmail.com

**Layla Es-Sadra**

Université Mohamed V-  
Rabat, Maroc,  
lessadra@yahoo.fr

This paper contains the preliminary results of the research by the Polish Moroccan mission Tingitana Frontier Project (TFP), which has been working in the Kingdom of Morocco since 2018. The mission is to examine the border defense systems of *Mauretania Tingitana* and in particular the Roman observation towers. The cooperation is conducted under an agreement signed between the University of Warsaw and the Institut National des Sciences de l'Archéologie et du Patrimoine in Rabat. In 2021, the Polish Moroccan team began the first season of excavations under the leadership of Aomar Akerraz, Radosław Karasiewicz-Szczypiorski and Maciej Czapski. The work was carried out at Bled el Mellali (site QC2), north of the city of Meknes (fig. 1).

The TFP team aims to analyse the defence systems of the border cities of the Roman Empire province, on the example of the North African *Volubilis* region. In frontier zones defined as *limes* or *finis* (Isaac 1988), control of the movement of people and goods was essential. In order to ensure the safety for the inhabitants of the city and users of trade routes the defence systems had been established. It consisted of forts, watchtowers and often also defensive walls, ramparts or ditches. In *Mauretania Tingitana*, we are dealing with a system of forts complemented by watchtowers constructed in the *Volubilis* area. They were constructed to increase the possibilities of observation of the territory and enemy movements. The city *Volubilis* situated between the mountain ranges of Zerhoun, Kafs, Ari, Bou Kennfoud and Bou Draa played a key role in the functioning of the province, both in economic, political and administrative terms. *Volubilis* was earlier an important city of the North African kingdom of *Mauretania* and after its incorporation to the Roman Empire it was still a clue frontier city because of its location (Le Bohec 2005). The progressive process of romanization, visible mainly through urbanization, has led to the enrichment of the city's inhabitants, which became a particularly a tasty bite for the nomadic tribes living in mountains and going down seasonally into fertile valleys (Rachet 1970). During the period between the 1<sup>st</sup> century AD and the second half of the 3<sup>rd</sup> century AD, in order to secure the city's territory, surrounding farms, roads and trade routes, the Romans have constructed the system of defense of the frontier zone, as they were usually do in other regions of the Empire (Euzennat 1989). It should be noted that the chronology of the establishment and extension of the defense system of

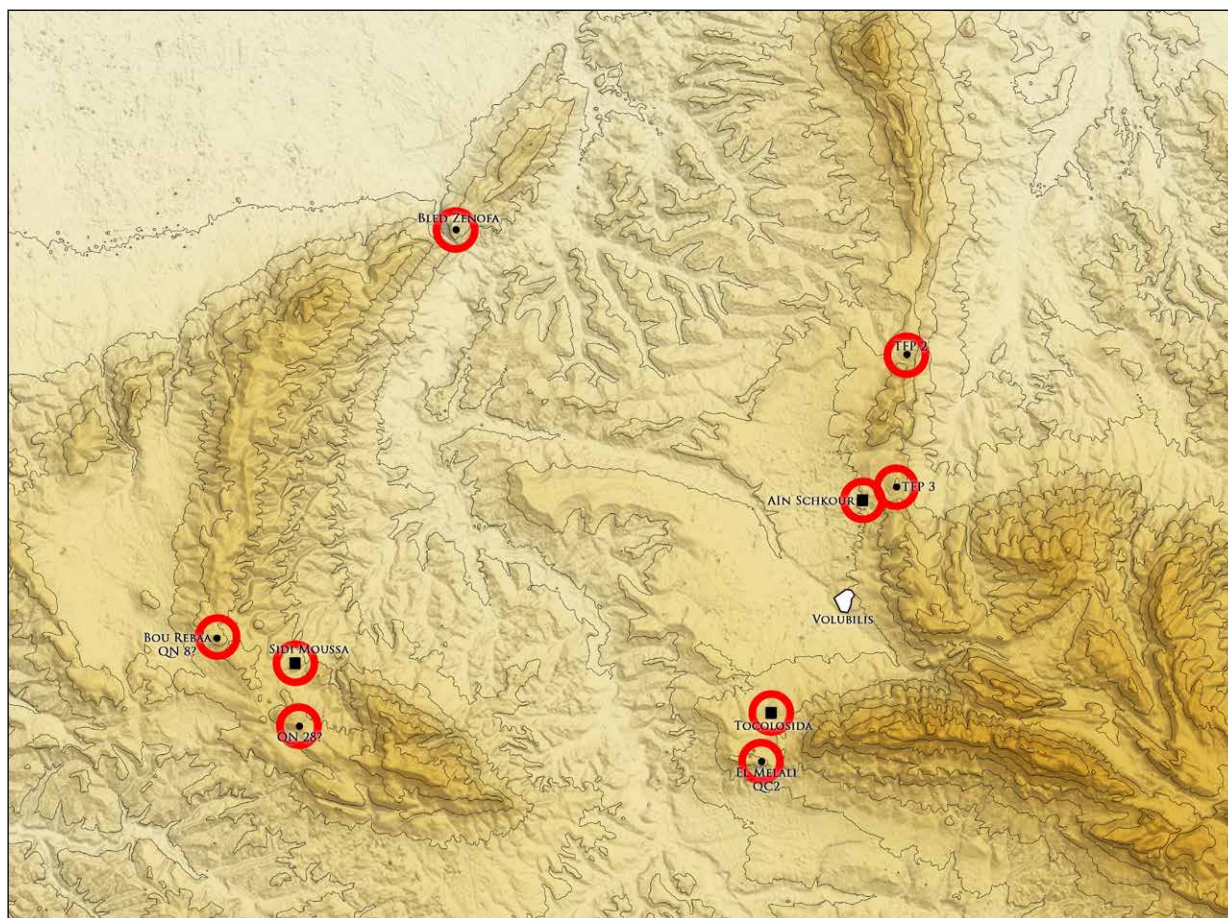


Figure 1. Map of the investigated region with the sites mentioned in the text marked.

this part of Roman territory has not been recognized so far. The vicinity of *Volubilis* was protected by auxiliary units located in three forts located not far from the city (Roxan 1973; Spaul 1994; 2000). However, none of the forts could control the nearby *barbaricum*. The very varied relief of the terrain, full of deeply depressed valleys and hills, required the system to be supplemented with observation posts. They should be arranged in such a way as to be able to control the zones not visible from the forts. Similar systems have been the subject of studies in the region of *Dacia Porolissensis* (Gudea 1985), Britain (Robertson 1974; Breeze 2011) and also in Crimea (Karasiewicz-Szczypiorski 2015b). They have been recognized in degree which allowed to make an attempt of reconstruction the model of their functioning. However, similar research has not yet been undertaken in the *Mauretania Tingitana* territory. We do not know the plan of any watchtower, not only from the border area between *Volubilis* and *Colonia Sala*, but even from the whole province. Questions about chronology, methods of construction, functioning of local defense systems remain unanswered.

The Romans do not seem to leave the *Volubilis* region without effective protection, especially since, in the light of the epigraphic sources, the region was certainly not peaceful. The so-called ‘peace altars’ found in the forum attest to the conclusion of numerous peace treaties with the local population, especially the *Baqvates* (IAM 2, 339, 350, 357, 359-361, 384 and 402). A strong military presence around the city also demonstrated the need to safeguard these areas. Numerous inscriptions from the province certify Roman military activity during conflicts with the *Autololes*, *Baqvates*, *Macenties* (AÉ 1941 and 19889, CIL III.5211-5213; Sigman 1977; Frezouls 1980).

### History and state of research

The history of research into the Roman military presence in *Mauretania Tingitana* dates back to the end of the 19<sup>th</sup> century, when the first research of the *Volubilis* and *Sala* defensive walls began (Tissot 1878; Chatelain 1916; 1944; Carcopino 1943). However, the focus was not on the very subject of Roman army or fortifications, but on the construction and planning of the city, which were of particular interest to the researchers of the time. In



French publications, the Académie des Inscriptions et Belles-Lettres appeared at the end of the 19<sup>th</sup> century, first references to architectural remains still visible at the time at sites Ain Schkour and *Tocolosida* (Tissot 1878), which were later recognized as forts of auxiliary units. In 1952, the British archaeological expedition from the University of Durham arrived to Morocco, which resulted in the publication of a report containing the first catalog of the sites connected with the Roman army presence. There were, among other things, sites designated as possible remains of watchtowers (Smith 1956). J. Baradez, the colonel of the French Army, who has made a series of flights during which he has taken photographs, identified several military forts as well as so-called *fossatum* near Rabat (Baradez 1955). The period of French protectorate in Morocco until 1956 is the time of the domination of French researchers, who had made many archaeological works at several sites, catalogued finds, read and interpret the epigraphic material, leaving the results of their works fairly published. However, the investigation of the frontier provincial lands bordering *barbaricum* in the context of the military activities was undertaken to a limited extent. When in 1954 M. Euzennat was the head of the Antiquity Service in Morocco (Hallier 2006), beginning studies linked to the traces of military activity and the remains of fortifications during. The multi-annual surveys are summarized in the monograph '*Le Limes de Tingitane. La frontière Méridionale*' published in 1989 by the CNRS (Centre national de la recherche scientifique; Euzennat 1989). The chapter on watchtowers located there was based on the author's research, however, it should be noted that because of the local inhabitants disapproval, Euzennat had very limited time to work here. Euzennat himself mentions an extremely short season of first research of the Ain Schkour fort in the 1950's, which after two weeks had to be interrupted due to the hostile reaction of the local population (Euzennat 1989). Many studies have not been completed during the transition period and have been handed over to the Moroccan authorities. The description of the tower system, their relations and identification should be considered theoretical, because no excavations have been carried out to confirm the identification of sites. The excavation verification is then needed. Significant studies related to the issue of military control over the border of the province were undertaken by Aomar Akerraz, Hassan Limane and René Rebuffat, in a frame of the Moroccan-French '*Sebou mission*'. R. Rebuffat as the co-director of the project has focused on military presence in general and contacts with the local population. The Moroccan-French team has conducted a comprehensive survey of Morocco's territory with a intention to identifying archaeological sites that are published as part of the VESAM series issued by INSAP. In 1961 he also led excavations in the largest Roman fort of

the province called *Thamusida* (Rebuffat 1968-1972). The contribution of work during many field seasons as well as the great merits of Moroccan-French team with Akerraz, Limane and Rebuffat in the field of Moroccan archeology development gave first interesting results (Brouquier & Reddé 2020). In his articles when the results of the Sebou Mission had been analyzed, he published various maps, visibility diagrams and a list of material from surface studies. However, Rebuffat was unable to carry out research aimed at identifying the system of watchtowers maintenance. He published several information on identified towers without a methodical diagnosis preceded by a verification of the excavation (Rebuffat 1986; Rebuffat *et al.* 2011). The results of the Rebuffat's study in the vicinity of *Volubilis* were just partially published but a full synthesis of the work is still in preparation. The works were conducted in this area with Moroccan researchers A. Akerraz and H. Limane (Limane *et al.* 1990; Akerraz 2002; Akerraz *et al.* 2000), of which the latter continued later to examine Roman fortifications in the central part of the province as well as in the Rabat area (Akerraz 2002).

Research undertaken so far by French, British and Moroccan researchers has focused mainly on cities and selected Roman forts. If there were hypotheses in the publications that dealt with the watchtower system, they were not convincingly justified (Limane *et al.* 1990). Any identification of the sites were not supported by excavations and needs to be completed. As regards to other parts of the Roman Empire, where the presence of well-functioning watchtower systems have been confirmed (Breeze 1982; Whittaker 1994; Elton 1996; Wooliscroft 1996; 2001; Mattingly 2013; Karasiewicz-Szczypiorski 2014; 2016), the understanding of this system in *Mauretania Tingitana* still requires further investigations. There is no known plan for any one of the towers, although the literature has the names of several dozen sites (Smith 1956; Euzennat 1989, Akerraz 2002), including 18 from the *Volubilis* region, and the identification of some of them is questionable. The reliable analysis of system functioning and chronology are a field to complete for the further missions. To understand how the watchtowers' system was operating, the deeper investigation should be carried out including GIS analysis, excavations and consultation of the results with the members of the others missions sharing the experience. In the current state of research in subjects of the watchtower system, the province of *Mauritania Tingitana* is the least recognized section of the land borders of the Roman Empire (Christ 2016).

### Intervisibility models

One of the elements of the project is to simulate the intervisibility of objects forming part of the Roman border defense system around the ancient city of *Volubilis*. The starting point will be the known forts of auxiliary units

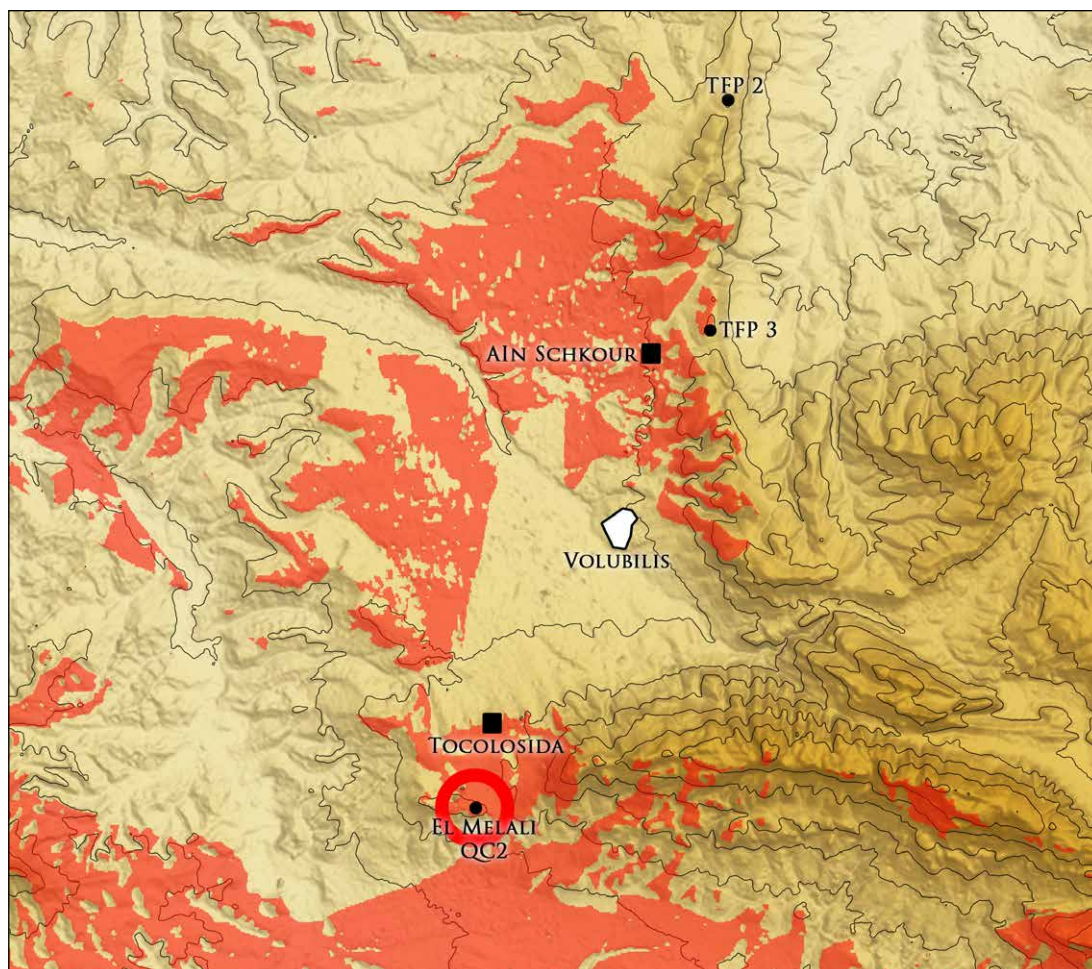


Figure 2. Visibility model from site QC2.

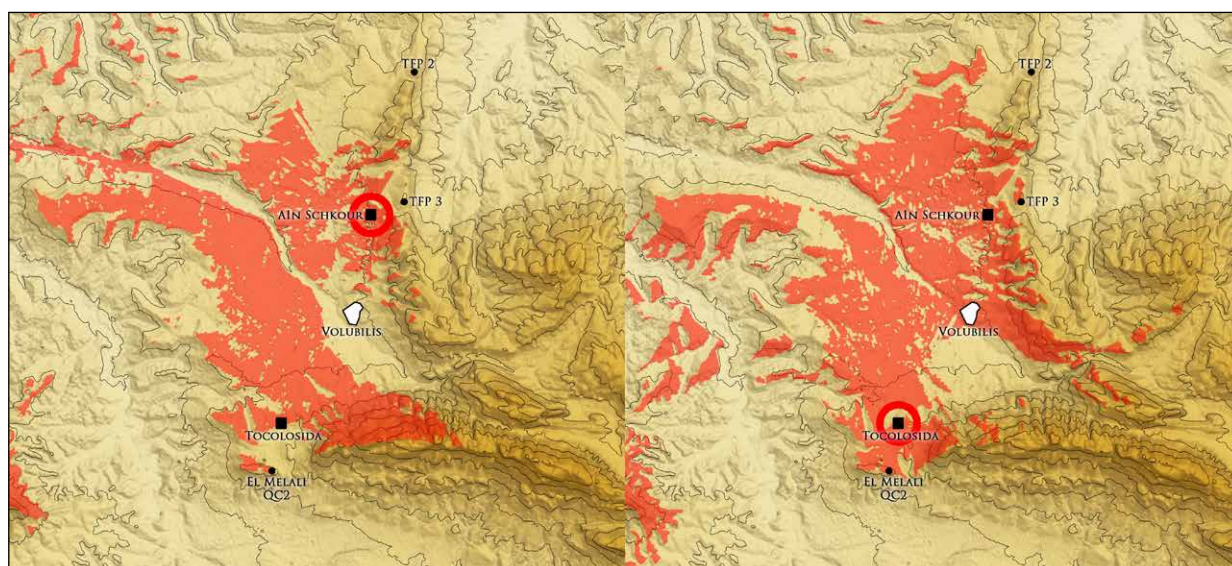


Figure 3. Visibility range from the forts Tocolosida and Ain Schkour.

(*Tocolosida*, Ain Schkour and Sidi Moussa Boufri) as well as the locations of potential watchtowers (fig. 3).

In the case of guard towers, the most important factor determining their location was to provide the best possible visibility of the area from which the enemy could come and to maintain eye contact with the forts of auxiliary units. In order to perform the simulation, a visibility model of the sites was created on which the most promising (according to the quantity and quality of information which we could find in existing publications) objects known to us in the defense system will be imposed. The terrain model was based on 30 m (SRTM, Shuttle Radar Topography Mission) satellite measurements (the measurement grid was compressed to 15 m). The model included an area of 25 per 30 km. A visual simulation was carried out for each auxiliary unit fort specifying the area in which the observation towers accompanying them could be located. The results of all simulations was superimposed on each other to identify possible locations of watchtowers with a range of visibility covering several forts at the same time. The analysis was conducted in Global Mapper application and included factors such as: the curvature of the earth, phenomena of optical distortion occurring in the earth's atmosphere, as well as the reconstructed height of the observation towers (not less than 8 m high). The results of the project are intended to help better understand how *Volubilis'* defense system works, verify current research hypotheses and identify the sites with the greatest potential for future surface studies.

The main problem in the search for watchtowers is that they occupy a very small area and are spread over a vast area, which makes them difficult to find. The second problem is that it is difficult to determine without excavations whether the residue data was a military or civil installation. The basis for the functioning of watchtowers was that they could maintain visual contact with other towers and forts. Our intervisibility study makes it easier to solve two problems:

1. Identifying small areas where the remains of towers should be sought first.
2. After finding the remains of a possible tower, an examination of whether this place gives a good insight into the area from which a potential threat could come.

If the insight is good, it is probably that we are dealing with a military installation and not a civil one. This, of course, required excavation verification, because the towers were also erected in a civil context, e.g. at farms. But even in the civil context we know the examples of using the towers for the military purposes, like in Jordan (e.g. Driessen & Abudanah 2019).

## Field works and results

After analysis of the visibility model, few sites had been chosen for field walking surveys. Two seasons in 2018 and 2019 (Czapski *et al.* 2020) of the field walking allowed us to verify the accuracy of visibility models and record new data for future investigations. The essence of the defense system is the mutual visibility of towers and forts. We have made three simulations of visibility from the forts *Tocolosida*, Ain Schkour and a site marked as TFP 2 (fig. 2-3). We put these ranges on each other and selected a few small areas in which the ranges were overlapping. This means that these are the places from which we could see the *Tocolosida*, Ain Schkour and QC2 at the same time. These sites were first covered by field walking surveys studies. In two of these locations, remains were found which could be the watchtowers (TFP2 and QC2). The range of visibility shows that the towers located here had both visual contact with other military installations and a good insight into the east (TFP2) or south (QC2) to potential threat.

After analyzing the models of visibility and viewshed, field walking surveys and analyzing the publication, it became clear that we have the bigger number of information about site of Bled el Mellali (QC2) (Chatelain, Caropino, Euzennat, Rabuffat, Akerraz, Smith). This gave us a chance to start with excavation verification. The model used indicated a specific place, but we were not sure of the effectiveness of this method. In 2021, we started the first season of excavations at QC2 to verify previous assumptions. Three sondages have been open to capture the remains of architecture. Sondages 1 and 2 gave an unexpected result in beautifully elaborated stones, but we do not know what it is. This will remain in the realm of guesses until the complete examination of the hill of el Mellali.

Excavations in sondage 3 allowed us to discover the remains of the building, which is identified as the observation tower (fig. 4-5). The ceramic material found during works is dated for the period 2<sup>nd</sup>-3<sup>rd</sup> century, however, further work and new discoveries of small finds are necessary, because the number of objects is insufficient datation of the structure. In the 2022 season, the works on the site will continue in which we hope to reveal the full structure plan and confirm that we are dealing with a watchtower. Architecture has no analogy in *Mauretania Tingitana*, but in other provinces like *Numidia*, *Dacia* and *Arabia* we can find some watchtowers with similar plans. Accurate dating without revealing the whole plan is difficult at the moment, but given the expansion of military installations in this part of the limes, it is possible to date the creation of the tower both for the times of Antoninus Pius, and for the times of Septimius Sewer and later. Season 2022 will hopefully answer the question about the plan and perhaps the function of the entire building. We hope that the new finds will confirm the presence of Roman troops.





Figure 4. Plan of the site QC2.



Figure 5. Photo of the discovered watchtower from 2021 field season.

## Abbreviations

AÉ: *L'Année Épigraphique*

CIL: *Corpus Inscriptionum Latinarum*

IAM: *Inscriptions Antiques du Maroc*

VESAM: *Villes et sites archéologiques du Maroc*

## Bibliography

- Akerraz A., 2002: Exploratio ad Mercurios, *Bulletin d'Archéologie Marocaine* XX, 191-218.
- Akerraz A. & A. El Khayari, 2000: Prospections archéologiques dans la région de Lixus. Résultats préliminaires, *Africa Romana* XIII, 1645-1668.
- Baradez J., 1955: Deux missions de recherche sur le limes de Tingitane, *Comptes rendus des séances de l'Académie des Inscriptions et Belles-Lettres* 99/2, 288-298.
- Breeze D.J., 1982: *The northern frontiers of Roman Britain*, London.
- Breeze D.J., 2011: *Roman frontier in their landscape settings*, Newcastle upon Tyne.
- Brouquier-Reddé, V., 2020: In memoriam René Rebuffat (1930-2019), *Antiquités Africaines* 56, 23-35.
- Carcopino, J., 1943: *Le Maroc Antique*, Paris.
- Chatelain, L., 1916: Les fouilles de Volubilis (Ksar-Faraoun, Maroc), *Bulletin Archeologique du Comité des Travaux Historiques*, 70-92.
- Chatelain, L., 1944: *Le Maroc des Romains. Étude sur les centres antiques de La Maurétanie Occidentale*, Paris.
- Christ, K., 2001, *Die römische Kaiserzeit. Von Augustus bis Diokletian*, München.
- Czapski, M. & M. Atki, 2020: Tingitana Frontier Project. Recherches de la mission polono-marocaine dans la région de Volubilis au Maroc pendant la saison 2018, *Polish Archaeology in the Mediterranean* 29/2, 431-446.
- Driessen, M.J. & F. Abudanah, 2019: The Udhrūḥ intervisibility. Antique communication networks in the hinterland of Petra, *Studies in the History and Archaeology of Jordan*, 13, 453-474.
- Elton, H., 1996: *Frontiers of the Roman Empire*, London.
- Euzennat, M., 1989: *Le Limes de Tingitane. La frontière Méridionale*, Paris.
- Frezouls, E., 1980: Rome et la Mauretanie Tingitane. Un constant d'échec?, *Antiquités Africaines* 16, 65-93.
- Gudea, N., 1985: Contribuții la istoria militară a Daciei Porolissensis I. Linia înaintată de turnuri și fortificații mici de pe sectorul de nord-vest al limesului provinciei între castele de la Bologa și Tihău, *Acta Musei Porolissensis* XI, 143-218.
- Hallier, G., 2006: Maurice Euzennat et le Maroc antique, *Antiquités Africaines* 42, 45-47.
- Isaac, B., 1988: The meaning of the terms Limes and Limitanei, *The Journal of Roman Studies* 78, 125-147.
- Karasiewicz-Szczypiorski, R., 2015a: The Roman fort in Balaklava and its surroundings, *Światowit. Annual of the Institute of the University of Warsaw* XII (LIII), Fascicle A, 53-79.
- Karasiewicz-Szczypiorski, R., 2015b: *Forty i posterunki w Scythii i Taurydzie*, Warsaw (Światowit. Supplement Series A, Antiquity XV).
- Karasiewicz-Szczypiorski, R. & E. Kakhidze, 2015: The Roman fort "Apsaros" in Gonio. Early phase. New discoveries and perspectives for investigations, *Pro Georgia. Journal of Kartvelological Studies* 25, 179-198.
- Le Bohec, Y., 2005: *Histoire de L'Afrique Romaine*, Paris.
- Limane, H. & R. Rebuffat, 1992: Les confins sud de la présence Romaine en Tingitane dans la région de Volubilis. Histoire et archéologie de l'Afrique du Nord. Spectacles, vie portuaire, religions, in: *Actes du V<sup>e</sup> Colloque international réuni dans le cadre du 115<sup>e</sup> Congrès national des Sociétés savantes. Avignon, 9-13 avril 1990*, Paris, 459-480.
- Mattingly, D., A. Rushworth, M. Sterry & V. Leitch, 2013: *Frontiers of the Roman Empire. The African Frontiers*, Edinburgh.
- Rachet, M., 1970: *Rome et les Berbères. Un problème militaire d'Auguste à Diocletien*, Bruxelles.
- Rebuffat, R., 1968-1972: Les fouilles de Thamusida et leur contribution à l'histoire du Maroc, *Bulletin d'Archéologie Marocaine* VIII, 51-65.
- Rebuffat, R., 1987: L'implantation militaire romaine en Maurétanie Tingitane, *L'Africa Romana* 4, 31-78.
- Rebuffat, R. & H. Limane, 2011: *Au Sud du Loukkos. Cartes Arbaoua, Lalla Mimouna, Moulay Bou Selham*, Rabat.
- Robertson, A.S., 1974: Roman 'Signal Stations' on the Gask Ridge, *Transactions of the Perthshire Society of Natural Science (Archaeological and Historical Section)*, 14-29.
- Roxan, M., 1973: The auxilia of Mauretania Tingitana, *Latomus* 32, 838-858.
- Sigman, M.C., 1977: The Romans and the indigenous tribes of Mauretania Tingitana, *Historia. Zeitschrift für Alte Geschichte* 26/4, 415-439.
- Smith, D.J., 1956: *Archaeological report. Extract from the report of the Durham University Exploration Society's Expedition to French Morocco*, Durham.
- Spaul, J., 1994: *Ala. The auxiliary cavalry units of prediocletianic imperial Roman army*, Avrover.
- Spaul, J., 2000: *Cohors. The evidence for and a short history of the auxiliary infantry units of the imperial Roman army*, Oxford (British Archaeological Reports International Series 841).

- Tissot, Ch., 1878: Maurétanie tingitane. Recherches sur la Géographie comparée de la Maurétanie tingitane, in: *Mémoires présentés par divers savants à l'Académie des Inscriptions et Belles-Lettres. Première série* 9, Paris, 139-321.
- Whittaker, C.R., 1994: *Frontiers of the Roman Empire. A social and economic study*, London.
- Woolliscroft, D.J., 1996: Signalling and the design of the Antonine Wall, *Britannia* 21, 153-177.
- Woolliscroft, D.J., 2001: *Roman military signalling*, Stroud/Charleston.



# Rediscovery of the Augustan findspot in Augsburg-Oberhausen (Bavaria, Germany)

Sebastian Gairhos

## History of research

As early as 1911, workers and soon also private collectors discovered large quantities of Roman metal finds during gravel extraction in the former riverbed of the river Wertach between Oberhausen and the city of Augsburg (Roger 1913, 260-261; Hübener 1973, 17). These finds included weapons, tools, and numerous coins. Friedrich Drexel, Emil Ritterling, and Paul Reinecke quickly recognised the Augustan dating and thus the significance of the site for an understanding of the Roman occupation of the region between the Alps and the Danube (Roger 1913, 261-262; Hübener 1973, 18-19). As a result, the Generalkonservatorium carried out a ten-day excavation in August 1913 (fig. 1), which not only significantly increased the find material, but which also allowed for observations regarding the find context (Roger 1913, 262-270; Reinecke 1918/1919; Hübener 1973, 19).

A resumption scheduled for the following year could not be realised owing to the outbreak of the First World War. After the war had ended, the gravel pit was backfilled and built up with factories. The excavation records show numerous gaps and contradictions, so that it was not even possible to locate the exact site later on (Hübener 1973, 19-22; Von Schnurbein 1985, 16-18, figs 1-3). What is more, the entire find material from collections, acquisitions, and the excavation was brought together without labelling (Hübener 1973, 22-25; Von Schnurbein 1985, 19-24). It also includes several objects that can be identified as dating from more recent times. These include eight coins ranging from the later 1<sup>st</sup> century to the 4<sup>th</sup> century (Kraft 1962a, 89-90, nos 371-378), but also medieval finds such as a clay figurine, horseshoes and stirrups (Ulbert 1960, plate 19.14; Hübener 1973, plate 17.19 and 21.1-4). Therefore, strictly speaking, it cannot be described as a closed find. It was not until the 1960's and 1970's that the find material was edited: the pottery by Günter Ulbert (1960), the coins by Konrad Kraft (1962a-b), and the metal finds by Wolfgang Hübener (1973; Platz-Horster 2012, 10-11 and 26-33; Deschler-Erb 2013; Scholz 2015). Eckhard Deschler-Erb (2022a) recently conducted a new inventory of the metal finds, financed by the German Research Foundation (DFG), with his catalogue published in August 2022, just in time for the 25<sup>th</sup> Limes Congress.

Due to the considerable size of the complex and the short date range from which it originates, but also due to the rarity of Augustan finds and sites north of the Alps,

## Sebastian Gairhos

Stadt Augsburg,  
Stadtarchäologie, Zur  
Kammgarnspinnerei 9,  
D-86153 Augsburg, sebastian.  
gairhos@augsbuurg.de



Figure 1. Excavation site in August 1913 (Stadtarchäologie Augsburg).

the find material from Augsburg-Oberhausen is now considered a reference spectrum. The listed publications are among the standard works of research on the Roman provinces. Various interpretations for the origin of the find complex were proposed in numerous contributions to the discussion (*i.e.* Kraft 1962b; Wells 1970; 1972, 87-89). Due to its large quantity and a distinctly military component, the site is usually interpreted as a central base in the newly conquered region between the Alps and the Danube, which was responsible not only for the provision of military security and supplies to other units, but also for the establishment of infrastructure (Bakker 1999; 2002; Deschler-Erb 2014; 2022b).

### New excavations

The deconstruction of the factories on the site in Augsburg-Oberhausen commenced in 2017. The residential redevelopment of an area of more than 4 ha in total in the vicinity of the 1913 site requires extensive preparatory earthworks for the site improvement, which have been closely monitored by archaeologists from the very

beginning. The completion of the earthworks and thereby also of the archaeological fieldwork is not expected for several years. Notwithstanding, I would like to provide an overview of the current status of the research and of the preliminary results.

The gravel pit where the finds had been recovered prior to the First World War, and which had been backfilled with refuse from the early 20<sup>th</sup> century, was clearly visible at the outset of the intervention (*fig. 2*). Beyond this intervention, the soil horizon is structured as follows: The uppermost 2 m consist of recent fills, but in places these extend to a depth of 4 m. The fills overlie fluvial gravel and sand deposits, in which Roman finds occur from a depth of c. 2.50 m. In some sectors, individual flume sections can be identified on the basis of the varying grain sizes of the bedload. However, despite numerous attempts, it proved impossible to track them over longer distances or to correlate them with each other, or even to define valid large-scale sequences. At the confluence of the untamed Alpine wild rivers Wertach and Lech, thousands of years of erosive activity have shifted the flumes and



Figure 2. Excavation site in 2021 (Stadtarchäologie Augsburg).

sediments too many times. The study area can nonetheless be divided into two distinct zones. In the east, below a depth of around 3 m, finds consist only of early Roman material, while the gravel in the western half, down to the investigated depth of around 4 m, is mixed throughout with finds from the modern period.

In this area, individual objects from the Middle and Late Imperial periods are found in association with a scattered hoard from the Early Severan period consisting of more than 5,500 *denarii* (Gairhos & Brey 2022). From the 15<sup>th</sup> century until around 1850, when the river was straightened, this was the main riverbed of the Wertach (fig. 3). Even if there had been deposits from the Roman period here initially, the river Wertach would have transported and mixed them by now. In the apparently undisturbed eastern zone of the study area, the new excavations have fundamentally confirmed the find circumstances observed in 1913. The metal finds are embedded in the gravel, sometimes in close proximity to each other and in high concentrations. However, a literal ‘iron layer’, as described in the earlier excavation, has not

been detected so far. Non-metallic objects are found only very sporadically in the gravel.

In some locations – as also observed in 1913 – concentrations of humic and organic material are evident, covering areas of up to 50 m<sup>2</sup> and varying in depth. They contain clusters of early Roman pottery fragments, animal bones and also, to a lesser extent, metal objects. Compared to contemporaneous finds from settlement layers, they do not present with any stronger attrition damage or rolling abrasions, so that a transport in the river bedload over larger distances can be ruled out. <sup>14</sup>C analyses of organic material from the humic concentrations dated their sedimentation to the decades around the birth of Christ (CEZA Mannheim June 2021, sample 51078). The organic material and the finds are therefore likely to have entered the ground around the same time, possibly as waste landfill.

As was the case in 1913, several oak posts were identified in the recent excavations. From a row of four posts extending from north to south on site, Franz Herzig (Bayerisches Landesamt für Denkmalpflege) was able to



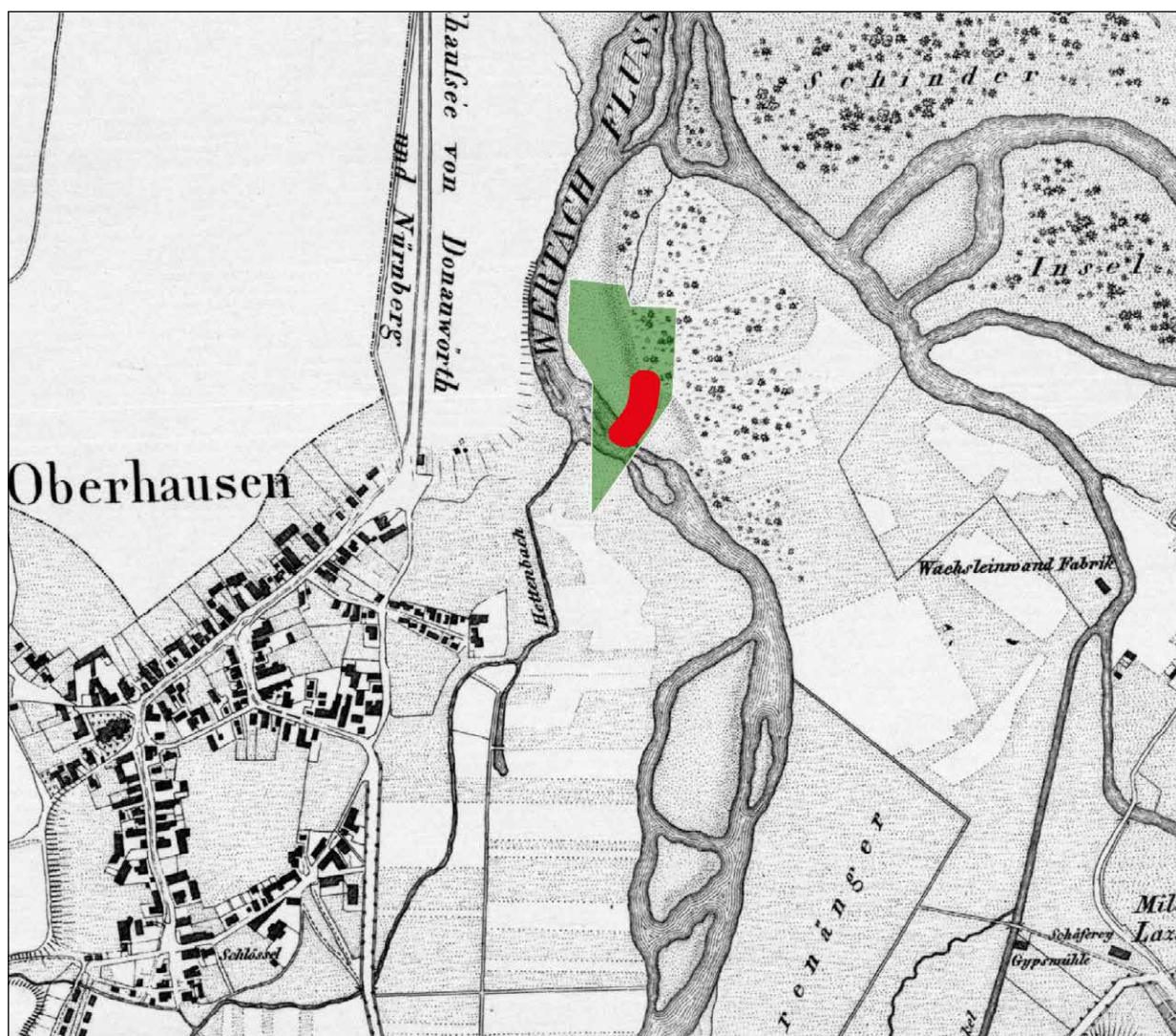


Figure 3. Oberhausen and the river Wertach in 1839 AD with recently examined area (green) and clusters of Augustan finds (red).

match the heartwood series to the year 31 BC with a very good agreement with various oak chronologies. "There are at least somewhere between 11 and 23 growth rings missing up to the waney edge, that's for sure. As this is the upper section, it is likely that even heartwood growth rings have been axed off, so that the oak can hardly have been cut down before the year zero. However, the felling date should not be much younger than that either. Two of the three other posts can be synchronised with the dated post, even though the values are poor." (Franz Herzig, personal correspondance) Thus, there is now evidence of construction work in the years around the beginning of the Common Era within a direct spatial context to the Augustan find concentrations. Due to the proximity to the present-day groundwater, these will likely have been structures at the water's edge, possibly a jetty or a bank reinforcement in connection with a berth. The earlier

interpretation as a fortification of a camp, on the other hand, can be ruled out.

## The find material

Since the fieldwork will be continued in the coming years, this is only a preliminary report on the current status, in order to illustrate the significant increase in comparison to the old finds, and to once again emphasise the significance of the site. Some of the metal finds are heavily corroded and encrusted beyond recognition. All iron objects are initially desalinated for conservation, their total weight so far amounts to c. 1,000 kg (!). However, the comprehensive documentation with X-ray images allows for first insights into the spectrum.

The systematic use of metal detectors has, compared to the old finds, significantly increased the proportion of small finds, such as *quinarii* or hobnails. The overall





Figure 4. Iron parts of a cartwheel (Archäologie Heimerl).

quantity of large-scale metal objects, such as complete weapons or larger tools, currently appears to be rather smaller than in 1913. An exception are the iron parts of a cartwheel found *in situ*, such as the entirely preserved iron hoop and the hub fittings (fig. 4). Entire vessels or helmets, as seen in other river finds, *e.g.* Xanten-Wardt (Schalles & Schreiter 1993), are still missing.

Among the functional groups, building material seems to predominate significantly, especially nails are very common. Components of horse harnesses including amulets and bells, elements of bronze vessels and tools occur in large numbers. By comparison, the proportion of personal military equipment and armament, *i.e.* parts of armour, helmet, belt, shield, sword or dagger, is rather small. An exception are the hobnails, their number is in the several thousands. Not only the quantity of finds but most notably also the high quality of many items is characteristic, as for example an entirely preserved oil lamp made of bronze with a crescent moon crowned by a bust of Sol serving as the handle (fig. 5), or a completely preserved silver *fibula* with figures of cicadas attached.

By 1913, 370 Augustan and Republican coins had been recovered in Oberhausen (Kraft 1962a; Ziegeus 2004, 55-56). The majority of the newly discovered coins is heavily encrusted and their identification will only be possible

after they have been cleaned. Almost one thousand pieces, including numerous halved bronze issues, can probably be dated to the late Republican and Augustan periods. To randomly select one of the legible pieces, a well-preserved silver coin of the Numidian King Iuba I, which was minted between 48 and 46 BC in *Utica* in present-day Tunisia, may be mentioned (Kraft 1962a, 81, no. 26; Pfahl 2017, 505-506).

The spectrum of old finds was dominated by metal objects to such an extent that it was later assumed that large quantities of pottery had been separated during the excavation and had not been preserved. The proportions of the material from the recent excavations are, however, quite comparable: For every 1,000 kg of metal objects, there are only about 50 kg of pottery and bone finds. Abundant among the pottery is the tableware of Italic *terra sigillata*, at times with manufacturer's stamps or relief decoration, and a wide range of amphorae from the main olive oil, wine, and fish sauce production areas at the beginning of the Common Era.

The considerable quantities of animal bones deserve a special mention. In fact, no faunal remains were preserved from the 1913 excavation, even though their discovery is certainly recorded in the excavation reports. With the new finds, it will now be possible to form conclusions regarding the provision of meat to the base, for example,



Figure 5. Bronze oil lamp. Foto: Archäologie Heimerl.

whether the demand was met locally or whether meat or livestock for slaughter was imported. The evidence of oyster shells clearly shows that the supply of exquisite foods, which could only be transported with considerable effort, was already possible in the early period of the Roman occupation.

### Outlook

The scientific evaluation of the new finds is envisaged in form of a joint project with several institutions. The universities of Cologne, Munich, and Frankfurt, as well as

the LEIZA (Leibniz-Zentrum für Archäologie) in Mainz are involved. In the process, we can not only expect numerous new conclusions regarding the function of the site, on the origin and composition of the troops and civilians, on the connection to trade flows or on supply logistics, but above all on its dating and thus possibly on the geopolitical events that led to the establishment of the base and to its demise.

Judging by the available data, the base in Augsburg-Oberhausen was established within a few years before or around the birth of Christ. The numerous new finds – chronologically significant are mainly coins and imported pottery – seem to confirm the dating after a first review. In the years surrounding the death of Emperor Augustus, the site was abandoned again. The establishment of a military camp for about 3,000 soldiers in Augsburg's old town around the Stephansgarten possibly dates from the same time (Bakker 1999, 455-462; Schaub 1999). The rapidly growing civilian settlement outside this camp developed into the city, which still bore the name of the emperor within its name, under whom the first base was established in Oberhausen: *Augusta Vindelicum*.

### Acknowledgements

My special thanks go to E. Deschler-Erb, F. Kemmers, S. Ortisi, F. Schimmer, S. Schmid, S. von Schnurbein, and W. Zanier for their cooperation, to A. Heimerl for the fieldwork, and to Birgit Kuehn, Frankfurt am Main (<http://www.textthabitat.de/>) for the translation of this text.

### Bibliography

- Bakker, L., 1999: Der Militärplatz von Oberhausen und die weitere militärische Präsenz im römischen Augsburg, in: W. Schlüter & R. Wiegels (eds), *Rom, Germanien und die Ausgrabungen von Kalkriese*, Osnabrück, 451-465.
- Bakker, L., 2002: Oberhausen, in: J. Hoops (ed.), *Reallexikon der Germanischen Altertumskunde* 21, Berlin/New York, 479-482 (2<sup>nd</sup> edition).
- Deschler-Erb, E., 2013: Fibeln aus Augsburg-Oberhausen, in: G. Grabherr, B. Kainrath & T. Schierl (eds), *Verwandte in der Fremde. Fibeln und Bestandteile der Bekleidung als Mittel zur Rekonstruktion von interregionalem Austausch und zur Abgrenzung von Gruppen vom Ausgreifen Roms während des 1. Punischen Krieges bis zum Ende des Weströmischen Reiches*, Innsbruck (IKARUS 8), 127-152.
- Deschler-Erb, E., 2014: Augsburg-Oberhausen und der "erste römische Landesausbau" in Bayern, in: P. Henrich (ed.), *Der Limes in Raetien, Ober- und Niedergermanien vom 1. bis 4. Jahrhundert*, Darmstadt (Beiträge zum Welterbe Limes 8), 8-19.
- Deschler-Erb, E., 2022a: *Die Metallfunde aus den Altgrabungen in Augsburg-Oberhausen. Katalog*



- und Tafeln, Augsburg (Augsburger Beiträge zur Archäologie 9).
- Deschler-Erb, E., 2022b: Der erste Versuch. Augsburg-Oberhausen, in: S. Gairhos, A. Hartmann, S. Ortisi & G. Weber (eds), *Das römische Augsburg. Militärplatz, Provinzhauptstadt, Handelsmetropole*, Darmstadt, 45-48.
- Gairhos, S. & L. Brey, 2022: Reichlich Kies. Der severische Denarhort von Augsburg-Oberhausen, *Das archäologische Jahr in Bayern* 2021, 98-99.
- Hübener, W., 1973: *Die römischen Metallfunde von Augsburg-Oberhausen. Ein Katalog*, Kallmünz/Opf. (Materialhefte zur bayerischen Vorgeschichte 28).
- Kraft, K., 1962a: Augsburg-Oberhausen, Legionslager, in: *Die Fundmünzen der römischen Zeit in Deutschland, Abteilung I Bayern, Band 7, Schwaben*, Berlin, 76-90.
- Kraft, K., 1962b: Zum Legionslager Augsburg-Oberhausen, in: J. Werner (ed.), *Aus Bayerns Frühzeit. Friedrich Wagner zum 75. Geburtstag*, München, 139-156.
- Pfahl, S.F., 2017: Ein neo-punischer Graffito und eine numidische Münze aus Oberhausen bei Augsburg, *Archäologisches Korrespondenzblatt* 47, 501-511.
- Platz-Horster, G., 2012: *Kleine Bilder, große Mythen. Antike Gemmen aus Augsburg*, Friedberg.
- Reinecke, P., 1918/1919: Das augusteische Legionslager von Oberhausen-Augsburg, *Zeitschrift des Historischen Vereins für Schwaben und Neuburg* 44, 19-29.
- Roger, O., 1913: Römische Funde in Augsburg, *Zeitschrift des Historischen Vereins für Schwaben und Neuburg* 39, 258-270.
- Schalles, H.-J. & C. Schreiter (eds), 1993: *Geschichte aus dem Kies. Neue Funde aus dem Alten Rhein bei Xanten*, Köln (Xantener Berichte 3).
- Schaub, A., 1999: Das frühromische Militärlager im Stadtgebiet von Augsburg. Neue Überlegungen zur Militärgeschichte Raetiens im 1. Jahrhundert nach Christus, in: N. Gudea (ed.), *Roman Frontier Studies. Proceedings of the XVII<sup>th</sup> International Congress of Roman Frontier Studies Zalău 1-10 September 1997*, Zalău, 365-374.
- Scholz, M., 2015: Die legio II (Augusta) in Rätien? Die Botschaft eines goldenen Fingerrings aus Augsburg-Oberhausen (Bayern/D), in: P. Henrich, C. Miks, J. Obmann & M. Wieland (eds), *NON SOLUM ... SED ETIAM. Festschrift für Thomas Fischer zum 65. Geburtstag*, Rahden, 399-406.
- Ulbert, G., 1960: *Die römische Keramik aus dem Legionslager Augsburg-Oberhausen*, München (Materialhefte zur bayerischen Vorgeschichte 14).
- Von Schnurbein, S., 1985: Die Funde von Augsburg-Oberhausen und die Besetzung des Alpenvorlandes durch die Römer, in: J. Bellot, W. Czyst & G. Krahe (eds), *Forschungen zur provinzialrömischen Archäologie in Bayerisch Schwaben*, Augsburg, 15-43.
- Wells, C.M., 1970: The supposed Augustan base at Augsburg-Oberhausen. A new look at the evidence, *Saalburg Jahrbuch* 27, 62-73.
- Wells, C.M., 1972: *The German policy of Augustus. An examination of the archaeological evidence*, Oxford.
- Ziegau, B., 2004: Römische Fundmünzen von ausgewählten Plätzen des Alpenvorlandes aus der Zeit des 1. Jahrhunderts v. Chr. bis in die Regierungsjahre des Tiberius. Ein Überblick, in: C.-M. Hülsen, W. Irlinger & W. Zanier (eds), *Spätlatènezeit und frühe römische Kaiserzeit zwischen Alpenrand und Donau*, Bonn, 53-66.



# Fearing the Parthian threat?

## Pontic-Cappadocian frontier area and Flavian military policy in the East

Victor Humennyi

The administrative and military transformations in the East carried by the rulers of the Flavian dynasty were one of the main key points in the transformation of the Roman frontier in the East. The reasons for the administrative transformations that Vespasian and his successors carried out in the East of the Roman Empire still cause significant interest (Syme 1936; Dąbrowa 1980, 10-17; 1997; 2021). In addition to the conflict with *Parthia* we can see that the idea that the nomadic threat might be one of the main reasons for the transformations in the Pontic-Cappadocian area seems to be quite popular (see the overview of the studies in Kozłowski 2010, 199-223; 2012). Another event that influenced the transformations of the deployment of Roman forces in the region was the Judean War. At the same time, the organization of the system of Roman provinces in the Upper Euphrates region and in the East of *Asia Minor* is most clearly traced in various source materials which, nevertheless are often difficult to analyze. Our priority is to try to reconstruct the causes and nature of the transformations of the frontier based on the data of ancient sources in the comparative geographical and chronological perspective.

### Transforming the kingdoms and provinces

Until the time of Vespasian, the minor kingdoms, in addition to controlling the border territories, played a role as buffer zone in the relations between Rome and *Parthia*. At the same time, the reasons for the change in Roman policy regarding *Commagene*, *Armenia Minor* and other eastern territories, their transformation into Roman provinces and the placement of new Roman garrisons there remain debatable (Kozłowski 2010, 198). To understand it, we must consider the transformation of Roman provincial policy in the East before the Flavian age.

During the reign of the Julio-Claudian dynasty, the role of the provincial administration and the activities of the governors of the provinces were often decisive in the context of the implementation of the foreign policy of the Empire. We cannot say that Augustus completely removed the governors from the decision-making process. In 10 BC Phraates sent his children to Rome, and he handed them over to the governor of *Syria* Marcus Titius (Tacitus *Annales* 2.1; Augustus *Res gestae divi Augusti* 32; Suetonius *De vita Caesarum*, Augustus 21.3; Velleius Paterculus *Historia Romana* 2.94; Flavius Josephus *Antiquitates Judaicae* 16.8.4). In 6 BC, Augustus nominated Artavazd as a contender for the throne

### Victor Humennyi

Lecturer in Ancient History,  
Ivan Franko National  
University of Lviv, Faculty  
of History, Department of  
Archaeology and History  
of Ancient Civilizations,  
79000, Ukraine, Lviv,  
1 Universytetska Street,  
victor.humennyi@lnu.edu.ua  
/ hvlterant@gmail.com

of *Media*: however, due to the difficulties that arose, Augustus decided to entrust the case to Tiberius (Cassius Dio *Historia Romana* 55.9.4-5). In the end, the grandson of the emperor – Gaius Caesar was sent to *Armenia* (Cassius Dio *Historia Romana* 55.10.18; Velleius Paterculus *Historia Romana* 2.99; Tacitus *Annales* 2.4). Later, Augustus refrained from any active actions in the East (Dabrowa 1996, 277-297). An interesting episode of the activity of the provincial administration in the time of Augustus was the situation surrounding the internal political struggle in *Parthia* in 10-11 AD (Flavius Josephus *Antiquitates Judaicae* 18.2.4 (48-49, 50-52); Tacitus *Annales* 2.1.3-4).

A special case was the mission of Germanicus to the East. Despite the threatening precedent in the confrontation between the governor of *Syria* and his relative, Tiberius, he continued to strengthen the position of the provincial administration. Tacitus accused Tiberius of the fact that the lack of changes in the leadership of the provinces led to the failures of the Romans, but on the other hand, Josephus believed that the long stay of capable persons in their positions allowed them to reduce corruption in the provinces (Mattern 1999, 27-41).

The eastern policy of Tiberius, given the specifics of the ideas about the 'good' and 'bad' emperor, received a rather critical evaluation in the Roman historical tradition. However, the governor of *Syria*, Lucius Vitellius coordinated Roman interactions into Parthian political life (Tacitus *Annales* 6.32). Claudius in 47 AD attempted a similar attempt to confirm the grandson of Phraates – Meherdates as the ruler of *Parthia* (Olbrycht 2013, 171-188). Gaius Cassius, the governor of *Syria*, was appointed responsible for the movement of Meherdates to the Euphrates (Tacitus *Annales* 12.11). The Legate of *Syria* Vibius Marsus had previously secured the loyalty of the local dynasties to the Romans. At the end of the rule of Claudius/beginning of the reign of Nero, the war between the Armenians and the Iberians, in which the intervention of the Roman administration in the Caucasus region played a significant role, caused extreme tension in the region and the following conflict with the Arsakid Kingdom (Barrett 1979, 465-469; Tacitus *Annales* 12.44-47). As a result, *Armenia* left the sphere of Roman influence (Tacitus *Annales* 12.50).

A few words have to be said about Tacitus' account to the events in the East. He mostly avoids any comparisons or evaluations of periods outside those events of the 1<sup>st</sup> century AD which are the basis of his works. Only in some exceptional cases does he mention the events of the Republic era. Such a choice of subjects by Tacitus can be both a consequence of the desire to follow to the chosen chronological structure, and be determined by other reasons and depend on the internal Roman realities caused by the rule of the Flavian and early Antonine periods. It seems that the image of *Parthia* and its relations

with Rome left by Tacitus reflects the transformations of the stereotypical image of the 'other world', which was already familiar to the Romans at that time with the parallels between the Parthian and Roman history through which the reader was presented with the actual Roman past of the Julio-Claudian era, taking into account the conjuncture of the beginning of the 2<sup>nd</sup> century AD. In this context, two central problems arise and still remain: the search for the origins of those models that Tacitus used as the basis for his description of the situation in *Armenia* in the middle of the 1<sup>st</sup> century AD and on the other hand – the actual problems of using the evidence of Tacitus for the reconstruction of the events of Julio-Claudian and Flavian Age (Keitel 1978, 470).

The other kingdoms in the region, including the ones which later became of interest to the Flavian dynasty were also influenced by imperial frontier policy. Emperor Tiberius hated king Archelaus, which became decisive in the fate of *Cappadocia* (Tacitus *Annales* 2.42) which was turned into a province. At the same time, Antiochus, the king of *Commagene*, and Philopator, the king of *Cilicia* died, which caused excitement among the population, and in the light of the Latin-speaking Roman tradition, part of the population advocated the independence of the kingdoms and wanted to be ruled by their own kings, while others wanted to surrender themselves in the power of the Romans (Tacitus *Annales* 2.42). The general picture of the situation in the East was completed by the fact that the provinces of *Syria* and *Judea* asked for a reduction in taxes (Tacitus *Annales* 2.42). Josephus reports how ephemeral the control of one or another party over the territories in the East could be, writing about the realm of Anileus and Azineus in Upper Mesopotamia (Flavius Josephus *Antiquitates Judaicae* 18.310-379).

Contacts between the kingdoms were of a rather diverse nature, and the Romans rarely positively perceived attempts to conduct affairs behind their backs or without their permission. For example, in the year 43 AD, Herod Agrippa tried to gather in Tiberias his brother Herod of *Chalkides*, Antiochus of *Commagene*, the king of *Armenia Minor* – Kotis, and Polemon, the king of *Pontus*. The governor of *Syria* Vibius Marsus took it very ambiguously and upon arriving at the meeting place forced the dynasts to leave (Flavius Josephus *Antiquitates Judaicae* 19.8.1). In fact, the combination of all these factors together with the internal political struggle in the Arsakid Kingdom led to a situation where the Parthian kings were no longer able to adequately control the emerging situation. Artabanus III was forced to recognize the independence of large areas of his country. After the Rhandaia Agreement, the Arsakids established themselves on the Armenian throne.

The reason for the escalation of the conflict with the Parthians during the Flavian era was the liquidation of *Commagene* and its annexation to *Cappadocia* (Flavius

Josephus *De Bello Iudaico* 7.7.1). At first, the kingdom of *Cilicia* was turned into a province. Antiochus of *Commagene* and his son Epiphanes perhaps began to seek an alliance with *Parthia*, which must have caused clear dissatisfaction in Rome. This, in fact, decided the fate of the kingdom, since it was a strategically important entity for the East. Using its territory, it was possible to maintain control over crossings across the Euphrates, so the possible intervention of the Parthians in this area was dangerous (Flavius Josephus *De Bello Iudaico* 7.7.1). Cesenius Petus, the governor of *Syria* at the time, was sanctioned to act decisively. Together with Aristobulus of *Chalcis*, Sohaemus of *Emesa* and reinforced by the forces of the VI Legion, he unexpectedly entered the kingdom.

Antioch fled from *Samosata*. The Romans tried to storm the capital of the kingdom, but despite this, the sons of Antioch – Epiphanes and Callinicus desperately fought the Romans (Flavius Josephus *De Bello Iudaico* 7.7.2). The battle ended favorably for the Commagenians, but Antioch left his army and with his wife in the evening went to *Cilicia*. Epiphanes crossed the Euphrates with a dozen people. Vologezes, in his turn, accepted the fugitive (Flavius Josephus *De Bello Iudaico* 7.7.2). Vespasian sent Antiochus, arrested in *Tarsus*, to *Lacedaemon*, where he lived until the end of his days. The late dynasts later moved to Rome, where they stayed at the imperial court (Flavius Josephus *De Bello Iudaico* 7.7.3).

Therefore, the small kingdoms that were located on the Roman-Parthian border began to play one of the important roles in the future confrontation since the time of the Flavians. The transformation of *Commagene* into a province due to the suspicion of the pro-Parthian sentiments of its ruler, and due to the desire to control one of the main crossings across the Euphrates, became one of the harbingers of the changes that were coming. Trajan, turning *Armenia* into a province, nevertheless behaved carefully in relation to other kingdoms in the region, generally demanding only help from them. Another interesting example was *Charakene*, where Atambel remained an ally of the Romans until the end and provided them with financial assistance.

A significant number of events in the border kingdoms were related to the complex mosaic of Roman-Parthian relations. For *Sophene*, such events became Roman-Parthian confrontation in the age of Nero (Marciak 2017, 134). Transformations, which the new emperor began in 54 AD, in connection with the difficult situation in the East, also impacted *Armenia Minor* and *Sophene*, which received new rulers – Aristobulus and Sochemos (Marciak 2017, 134). Nevertheless, it is difficult to say who became the new ruler of *Sophene*. M. Marciak considers that until 114 AD *Sophene* was not under Roman political influence (Marciak 2017, 134-137). The situation with *Osroene* was quite similar. During Trajan's campaign

in the East, the reluctance of the local dynasts to intervene directly in the Roman-Parthian conflict caused a specific reaction by the emperor (Isaak 1998, 57).

Another area that rarely falls into the field of view of researchers was *Gorduene*, which at a certain stage found itself under the rule of the authorities of *Adiabene* (Marciak 2017, 245). The references in Festus (*Breviarium rerum gestarum populi Romani*) and Eusebius (*Chronicon*) are fragmentary. A special territory in the context of Roman policies in the East was *Adiabene*. Augustus mentions Artaxerxes of *Adiabene* (*Res gestae divi Augusti* 17.32), along with the Parthian kings Tiridates and Phraates and Artavazdes of *Media*. Others key rulers of *Adiabene* were Izates I and Monobazes I. Mention of the first is rather fragmentary; Josephus records him only as a father of Helen (Flavius Josephus *De Bello Iudaico* 5.147). He also describes their conversion to Judaism, so it is difficult to say how reliable the information provided by him is. Describing the rule of Izates II, Josephus emphasizes his help to Artabanus and the conflict of Izates with Vardan (Flavius Josephus *De Bello Iudaico* 20.69-73; Tacitus *Annales* 11.10).

Josephus informs us that internal opposition led to the invasion of the Arab tribal leader Abias, and later Vologezes I (Flavius Josephus *Antiquitates Judaicae* 20.75-91). Marciak (2017, 245) believes that the campaign of Vologezes on *Adiabene* can be dated back to 53 AD, the period of the Parthian invasion of *Armenia* (by other chronological indicators in his opinion, it is possible to date the events by the Uprising of 55 AD and the rebellion in *Hyrkania* in 57 AD).

During the campaigns of Corbulo *Adiabene* stayed under the authority of Monobazes II, as appears in Tacitus during the description of the campaign of Tigranes VI to *Adiabene*, the siege of *Tigranokerta* and during the negotiations about the coronation of Tiridates in Rome. During the events of 61 AD, Monobazes is described by Tacitus as an ally of Vologezes (Tacitus *Annales* 15.1-2; Vervaeke 1999, 293). It is noticeable that during the battles for *Tigranokerta* in 62 AD, infantry from *Adiabene* was mentioned as a part of the army of Vologezes. Cassius Dio (*Historia Romana* 62.32.4) informs us that Monobazes sent hostages to Rome together with Vologezes, which is mentioned again during the description of Tiridates' arrival to Rome in 66 AD, with the king of *Media Atropatene* (Cassius Dio *Historia Romana* 63.1.2).

However, the idea expressed for the first time by T. Mommsen (1885) that *Osroene* was all the same turned into a province in 116 AD, and which found support from R. Longden (1931), M. Angeli Bertinelli (1976), M.-L. Chaumont (1976) still remains quite popular in the scholarship. In general, it is based on reports in Flavius Eutropius (*Breviarium Historiae Romanae* 8.3.2 and 8.6.2) and Rufius Festus (*Breviarium rerum gestarum populi Romani* 14.3 and 20.3).

The events of the middle of the 1<sup>st</sup> century AD led to the incorporation of *Armenia Minor*, *Commagene*, and *Emesa*

into the Roman Empire and the transformation of the provincial organization of *Cappadocia* (Suetonius *De vita Caesarum, Vespasianus* 8.4). After the Treaty of *Rhandeia* the strengthening of the Roman positions in the East seemed extremely necessary and urgent (Kozłowski 2012, 202). In addition to the formation of the large province of *Galatia/Cappadocia* another rather revealing Roman step in the region was the formation of the province of *Cilicia*. The territory of *Cilicia* before all was under the control of Antiochus IV and *Cilicia Pedias* was previously part of the province of *Syria* (Syme 1936, 139; Kozłowski 2010, 205; 2012, 202-203). These changes, together with the annexation of the kingdom of *Pontus*, which took place as early as 64 AD provided the Romans with virtually complete control not only over the Upper Euphrates, but also over a few key crossings through this waterway, which was traditionally considered the Roman-Parthian boundary (Wheeler 1991, 502; Comfort *et al.* 2000). A military base was established in *Trapezum* (Trebizond) for the Roman fleet to control the territory of Eastern *Pontus*. *Sophene* came under Roman influence, most likely before 70 AD, and *Emesa* between 72 and 78 AD.

At the time of the incorporation of *Commagene* in 72 AD, *Armenia Minor* was under the direct jurisdiction of the legate of *Cappadocia*. A certain version of the reasons for the reorganization of *Cappadocia* is given by Suetonius (*De vita Caesarum, Vespasianus* 8.4.), primarily pointing to the ‘incessant raids of the barbarians’ (*adsiduos barbarorum incursus*). Scholars (such as R. Syme (1936), D. Magie (1950), E. Dąbrowa (2021), J. Kozłowski (2012)) tried to connect these words of Suetonius either with the local population of the region or with Sarmatian tribes, in particular, with the Alans. But was the Roman perception of the nomadic threat the main reason for the full-scale transformations in the area? The evidence both from the Pontic-Cappadocian area and the surrounding regions of the East indicates that during the 1<sup>st</sup> century AD the Parthians in fact were the main factor in the political, administrative and military transformations and activities that the Romans carried out in the region. And despite all the critical interpretations the evidence which can be reconstructed from the written sources still needs to be analyzed in connection with the archaeological and epigraphical data.

### Garrisons, legions and the search of the enemy

The traditional system of strengthening the Roman border during the early Empire, in the East, primarily depended on two key components – the provision of stable and reliable communication routes in the provinces and the creation of a system of garrisons that had to perform both defensive and offensive functions. A remarkable study of the garrison system in the east of *Asia Minor* by T. Mitford (2018) corresponds quite well with the analysis

of the narrative tradition. *Legio XII Fulminata* was moved from *Syria* to *Melitena* by Titus (Flavius Josephus *De Bello Iudaico* 7.18), at the end of 70 AD. In 70/71 AD *Legio XVI Flavia Firma* was located near *Satala*. The existing chronology of the redeployment of the legions indicates its connection with the events of the Jewish War. A unit of *Legio VI Ferrata* or *Legio III Gallica* was also, most likely, located near *Samosata*, in *Aina*, at this time. Legion bases in *Melitena*, *Satala*, *Samosata*, and *Zeugma* were not only intended to ensure Roman control over the Euphrates, but they were also the nucleus of a powerful Roman military group in the region, which could perform offensive functions as well.

*Legio XVI Flavia Firma* was actually in *Satala* until 114 AD, when it was replaced by *Legio XV Apollinaris*, transferred from *Pannonia*. The territory of the legions was so important that even at the beginning of the 5<sup>th</sup> century AD, to the north of the Taurus mountains there were Roman forces numbering three legions (Mitford 2018, 426). The surviving epigraphic material allows, at least to some degree, the reconstruction of the career paths of the legates, tribunes and centurions of *Legio XII Fulminata* and, to a lesser extent, *XVI Flavia Firma*. The local aristocracy from *Galatia* and the southern and western regions of *Asia Minor*, often served as military tribunes of the frontier Roman legions in the East. However, it is still difficult to say how widely the masses of people from *Cappadocia* were involved in the service in the Roman legions. *Galatia* and *Cilicia* give us a total of ten known auxiliary units of the Roman army (Mitford 2018, 427).

Epigraphic material from Roman *Ankyra* (Ankara) is of particular interest. The town was an intermediate point for military units moving towards or serving on the Euphrates and in *Syria*. In addition to the soldiers of the already mentioned legions *XII Fulminata*, *XVI Flavia Firma*, *XV Apollinaris*, texts record a significant number of descendants from *Legio IV Scythica*, whose base was situated at *Zeugma*. The legions that were involved in Corbulo's actions before the campaigns against *Parthia* later performed their functions during the Judean War. Titus moved *Legio XII Fulminata* to *Melitena*, perhaps in the spring of 71 AD for it to serve as the basis of Roman forces in *Cappadocia*. At the same time *Legio XVI Flavia Firma* was probably moved to *Satala* (Cassius Dio *Historia Romana* 55.23.5; Flavius Josephus *De Bello Iudaico* 7.1.3 (18); Tacitus *Annales* 2.42). In *Melitena*, the legion found its permanent location until the 5<sup>th</sup> century AD. *Legio XII Fulminata* was involved in the construction of a military road from *Melitena*, in the time of Vespasian and Domitian along with the forces of *Legio XVI Flavia Firma* which built a military road to *Satala*. It is significant that the mentioned forts played an important role in the eastern campaigns of the Antonine period.



The situation with the *auxilia*, which were located in the newly formed provinces, looks much more complicated. Alae and cohorts from *Galatia* and *Cappadocia* are known to us from the military diplomas which date to the periods of Domitian and early Trajan. Some of the units that appeared in the East during the Flavian era later took part in Trajan's Parthian campaign. In general, if we talk about *Cappadocia*, the system of location of Roman military units there turned out to be incredibly stable, and a significant number of garrisons, which were located there already under the Flavians, is later recorded not only by Arrian in the first half of the 2<sup>nd</sup> century AD, but much later. The size and composition of the garrisons was apparently finally formed during the reign of Domitian and remained stable at least until the time of early Trajan. The movement of regular garrisons in 71 AD was undoubtedly accompanied by the movement of significant auxiliary forces. Military diplomas record at least 16 auxiliary units by 94 AD, most of them were moved by the Flavians to the territory of the newly created provinces (Mitford 2018).

### Conclusions or rather more questions

What was the main purpose and function of the reorganization of the Roman system of garrisons and roads in the upper reaches of the Euphrates? It seems, that the exclusive connection of these transformations to the protection of Roman territories from the raids of the Alans was not the only function of the newly created system of military garrisons and communications. The Sarmatian raids, may have stimulated existing transformations, but their global goal was to secure control over the Euphrates, where Rome's key rival still remained the Arsakids (both in *Parthia* and in *Armenia*, formally under control of Rome, but *de facto* controlled by the Parthians).

The questions that still require a special study include how the Romans tried to connect their perception of the region which is depicted in the written sources with their military and political actions in the area. The need for the reevaluation of the ancient sources evidence for our study of Pontic-Cappadocian area in Flavian period still remains to be an important task which is a key to the understanding of the situation in the region. Can we conclude, what the real 'threat' was that bothered the Romans? And can archaeology solve the problem (or perhaps a small part of it considering the Sarmatian presence in the area)?

The evidence of the narrative Roman tradition leads to the clear conclusion that during the 1<sup>st</sup> century AD the Parthians in fact were the main factor in administrative and military transformations in the region. The existing epigraphical and archeological evidence, as it seems, currently supports the Parthian issue as the main reason for creation of the garrison system of the Pontic-Cappadocian frontier area. The importance of the Parthian factor, despite the existing attempts to

demonstrate its secondary nature, is also indicated by the episode with Marcus Ulpius Traianus the Elder, who received the *ornamenta triumphalia* for his actions in the East (Dąbrowa 1994, 19-28; Gregoratti 2015, 681-688). The system of garrisons was later successfully used by his son during his campaign against *Parthia*, which would begin in 114 AD, while certain elements of the military organization created by the Flavians in the region would last until the 5<sup>th</sup> century AD.

### Bibliography

- Angeli Bertinelli, M.G., 1976: I Romani oltre l'Eufrate nel II secolo d. C. (le province di Assiria, di Meopotamia e di Osroene), in: H. Temporini (ed.), *Aufstieg und Niedergang der römischen Welt. Geschichte und Kultur Roms im Spiegel der neueren Forschung. Principat. Politische Geschichte* II.9.1, Berlin/New York, 3-45.
- Barrett, A.A., 1979: Annals 14.26 and the Armenian Settlement of AD 60, *The Classical Quarterly* 29/2, 465-469.
- Chaumont, M.-L., 1976: L'Arménie entre Rome et l'Iran I. De l'avènement d'Auguste à l'avènement de Dioclétien, in: H. Temporini (ed.), *Aufstieg und Niedergang der römischen Welt. Geschichte und Kultur Roms im Spiegel der neueren Forschung. Principat. Politische Geschichte* II.9.1, Berlin/New York, 71-194.
- Comfort, A., C. Abadie-Reynal & R. Ergeç, 2000: Crossing the Euphrates in antiquity. Zeugma seen from space, *Anatolian Studies* 50, 99-126.
- Dąbrowa, E., 1980: *L'Asie Mineure sous forest Flaviens. Recherches sur la politics provincial*, Wrocław.
- Dąbrowa, E., 1994: The Bellum Commagenicum and the ornamenta triumphalia of M. Ulpius Traianus, in: E. Dąbrowa (ed.), *The Roman and Byzantine army in the East. Proceedings of a colloquium held at the Jagiellonian University, Kraków in September 1992*, Kraków, 19-27.
- Dąbrowa, E., 1996: The commanders of Syrian legions (1<sup>st</sup> to 3<sup>rd</sup> c. AD), in: D. Kennedy (ed.), *The Roman army in the East*, Portsmouth RI (Journal of Roman Archaeology Supplementary Series 18), 277-297.
- Dąbrowa, E., 1997: The rivers in the defensive system of Roman Syria (from Augustus to Septimius Severus), in: W. Groenman-van Waateringe, B.L. van Beek, W.J.H. Willems & S.L. Wynia (eds), *Roman Frontier Studies 1995. Proceedings of the XVI<sup>th</sup> International Congress of Roman Frontier Studies*, Oxford (Oxbow Monographs 91), 109-111.
- Dąbrowa, E., 2021: Parthian-Armenian relations from the 2<sup>nd</sup> century BCE to the second half of the 1<sup>st</sup> century CE, *Electrum* 28, 41-57.
- Gregoratti, L., 2015: Marcus Ulpius Trajanus father in the East, in: J. de la Villa Polo, P. Cañizares Ferriz, E. Falque Rey, J.F. González Castro & J. Siles Ruiz (eds),

- Ianua classicorum. Themes and forms del mundo clásico. Actas del XIII Congreso Español de Estudios Clásicos*, Madrid, 681-688.
- Isaac, B., 1998: *The Near East under Roman rule. Selected papers*, Leiden.
- Keitel, E., 1978: The role of Parthia and Armenia in Tacitus Annals 11 and 12, *The American Journal of Philology* 99/4, 462-473.
- Kozłowski, J., 2010: Inkorporacja państw wasalnych (71/72 n.e.) a stosunki z królestwem Arsacydów, *Studia Flaviania* 2011, 199-223.
- Kozłowski, J., 2012: *Wschód rzymski pod panowaniem Flawiuszy (70-96 po Chr.). Reformy administracyjne i polityka zewnętrzna*, Poznań.
- Longden, R. P., 1931, Notes on the Parthian campaigns of Trajan, *The Journal of Roman Studies*, 21, 1-35.
- Magie, D., 1950: *Roman rule in Asia Minor to the end of the third century after Christ I*, Princeton.
- Marciak, M., 2017: *Sophene, Gordyene, and Adiabene. Three Regna Minora of Northern Mesopotamia between East and West*, Leiden.
- Mattern, S., 1999: *Rome and the enemy. Imperial strategy in the Principate*, Berkeley.
- Mitford, T.B., 2018: *East of Asia Minor. Rome's hidden frontier*, Oxford.
- Mommsen T., 1885: *Römische Geschichte. Fünfter Band. Die Provinzen von Caesar bis Diocletian*, Berlin.
- Olbrycht, M.J., 2013: *Imperium Parthicum. Kryzys i odbudowa państwa Arsakidów w pierwszej połowie I wieku po Chr. / Imperium Parthicum. A crisis and revival of the Arsacid state in the first half of the first century AD*, Kraków.
- Syme, R., 1936: Flavian wars and frontiers, in: S.A. Cook (ed.), *Cambridge Ancient History XI*, Cambridge, 131-188.
- Vervaet, F.J., 1999: Tacitus, Domitius Corbulo and Traianus' Bellum Parthicum, *L'Antiquité Classique* 68, 289-297.
- Wheeler, E., 1991: Rethinking the upper Euphrates frontier. Where was the western border of Armenia? in: V.A. Maxfield & M.J. Dobson (eds), *Roman Frontier Studies 1989. Proceedings of the XVth International Congress of Roman Frontier Studies*, Exeter, 505-511

# Cohorts of *Legio V Macedonica* in *Apsaros* (Georgia) and their building activity

Radosław Karasiewicz-Szczypiorski, Natalia Lockley  
and Shota Mamuladze

## Garrisons of *legio V Macedonica* in *Moesia inferior* and *Dacia*

The first epigraphic testimonies mentioning the participation of units of *Legio V Macedonica* in construction projects appear only in the early 1<sup>st</sup> century AD. We know that the unit at this time conducted extensive building activities as well as military operations in the Danubian and eastern provinces. Unfortunately, from this period we have no inscribed building material to indicate the participation of this unit in construction work and the production of building material at specific sites.

The first known fortress of *Legio V Macedonica* was *Oescus* (Gigen). The earliest inscriptions relating to the legion date to the first half of the 1<sup>st</sup> century AD. A tombstone found on a site is dated to between AD 1-30 (AÉ 1927, 51; AÉ 1951, 240; Zuckermann 1988, 79-287; Matei-Popescu 2010, 35-40). This unit was stationed at *Oescus* even before the reign of Claudius. It is also likely that the legion took part in the battles against the Dacians during the reign of emperor Domitian in the 60's of the 1<sup>st</sup> century AD. During the reign of Nero, the legion was sent to Armenia (AD 61), and then went with two other legions to *Judea*. These troops took part in a number of activities during the Jewish Revolt. In AD 68 the legion was then stationed in *Emmaus* (Janes Hall 2004, 46-47).

The second camp of *Legio V Macedonica* was *Troesmis* (Turcoaia). The fortress occupied a strategic point on the high bank of the river Danube. The site has been known since 1864 due to the discovery of numerous inscriptions, inscribed building materials and architectural reliefs. The *Tabula Peutingeriana* (Seg. VII) was also helpful in identifying the site (Alexandrescu & Gugl 2012, 251). During the period of the Parthian Wars, unrest in the east and the Balkans (Marcomannic Wars), the legion was relocated to *Potaissa* (Turda) in *Dacia* (Alexandrescu & Gugl 2012, 251-252).

The deployment of *Legio V Macedonica* in *Potaissa* in AD 166/167 resulted in the military weakening of Lower Moesia, with two legions remaining: *Legio I Italica* in *Novae* (Svishtov) and *Legio XI Claudia* in *Durostorum* (Silistra). In addition, Lower Moesia's units were involved in the defense of Greek cities on the northwestern coast of the Black Sea. The objects attesting to the presence of the legion or the *vexillationes* of all three Danubian legions in the northern areas of the Black Sea date from before the dispatch of *Legio V*

**Radosław Karasiewicz-Szczypiorski / Natalia Lockley**

Polish Centre of  
Mediterranean Archaeology,  
University of Warsaw,  
r.karasiewi@uw.edu.pl /  
n.lockley@uw.edu.pl

**Shota Mamuladze**

Gonio-Apsarus Archaeological  
and Architectural Site,  
nenia1952@yahoo.com

*Macedonica* to *Dacia*. Stamps of this legion (in several variants) are known from Tauric Chersonesos and *Tyras* (Bilhorod-Dnistrovskiy, Karasiewicz-Szczypiorski 2015, 175), from the island of *Leuke* (Ostrov Zmejnyj, Ohotnikov & Ostroverhov 2013) and the site of Orlivka north of the Danube Delta (Nosova 2014). The stamps listing all three of the Lower Moesian legions have been found in *Tyras* (AÉ 1925, 78; Karasiewicz-Szczypiorski 2015, 175).

### Locations of legionary detachments of *Legio V Macedonica*

At the beginning of the 2<sup>nd</sup> century AD, a *vexillatio* of the legion appears in the area of Chersonesos. During archaeological excavations conducted at the citadel, tegular material (from secondary contexts) was discovered. A tombstone of a soldier of the mentioned unit have also been found in Chersonesos (IOSPE IV–B.121; Solomonik 1983, no. 21). Most likely, the detachments of the legion also constituted the first Roman garrison in *Tyras*. They arrived in the area at the beginning of the 2<sup>nd</sup> century AD. The findings so far allow us to assume that *Legio V Macedonica* was responsible for the security of *Tyras* during the period it was stationed in *Troesmis*. The presence of detachments of *Legio V Macedonica* in *Tyras* is also attested by several Latin inscriptions (for a summary Karasiewicz-Szczypiorski 2015a, 182–183). It is possible that at the beginning of the 2<sup>nd</sup> century AD units that included soldiers and officers of the legion were also located at other sites in the area such the cape Ay-Todor (Karasiewicz-Szczypiorski 2019, 171 and 175) and Balaklava (Karasiewicz-Szczypiorski 2015b, 56–57).

The presence of the Lower Danube's legionary detachments is confirmed at sites near *Tropaeum Traiani* (Adamclisi). The tegular material of *Legio V Macedonica* known from Capidava is dated to the first half of the 2<sup>nd</sup> century AD, and an inscription mentioning a soldier of this unit comes from *Sacidava*. It is possible that a detachment composed of contingents of *Legio I Italica* and *Legio V Macedonica* was stationed in the vicinity of *Tropaeum Traiani*, already after the legion was deployed in *Potaissa* (Suceveanu & Barnea 1991, 59). Another place where a garrison separated from *Legio V Macedonica* is believed to have been stationed is Capidava. The site is located about 70 km northeast of *Tropaeum Traiani*. Early Roman fortifications, dating to the reign of Trajan and later rebuilt and repaired in the Late Antique period, have been identified there. Among other things inscribed building material such as the stamps of *Legio XI Claudia* and *Legio V Macedonica*, as well as *Legio I Italica* have been found on the site (Matei-Popescu 2010, 45–53). Analyzing the building stamps discovered at *Drajna de Sus*, (Zahariade, 2008, 127) concluded that it may have been another place where troops of *Legio V Macedonica* were stationed. The presence of this garrison has been linked to Trajan's first Dacian War, i.e. AD 101–102 (Piso 2000, 213; 2015, 18).

### Building activity of legionary detachments in *Apsaros*

Until recently, there has been no reason to assume that one of the legions stationed in Lower Moesia and *Dacia* (fig. 1) had any connection with the fort at *Apsaros* (Gonio, Georgia, e.g. Speidel 2009; Mitford 2018). Previous examples of stamps on building ceramics, known from Roman forts and posts on the Colchis coast, confirmed the building activity of auxiliary units and detachments of undeterminable composition. Legionary stamps, on the other hand, were known only from *Pityus* (Pitsunda, Kiguradze *et al.* 1987; Karasiewicz-Szczypiorski *et al.* 2019).

This picture has changed significantly with the latest discoveries of the Polish-Georgian expedition, which has been excavating at *Apsaros* since 2014. The stamps recently discovered, and those that have been re-read, have recently been published (Karasiewicz-Szczypiorski *et al.* 2021). The analysis of this building material, stamped by *Legio XV Apollinaris*, has shown that these *tegulae* were not only used but also produced at *Apsaros*, although contextual information is unavailable. There is no doubt, however, that a completely different stamp was used at *Apsaros* than the one whose imprints we know from *Pityus*. The carrying out of construction work in a fort under the authority of the governor of *Cappadocia* (Arrian, *Periplus Ponti Euxini* 17; Liddle 2003) by one of the legions stationed in that province, however, is not surprising.

On the other hand, impressions of a stamp that confirms the presence in *Apsaros* of a detachment of *Legio V Macedonica* should be considered an exceptional find. Several tile fragments with such a stamp come from a backfill containing the remains of the roof in the garrison commander's house (*praetorium*) (fig. 2). The remains of this building were dated to Phase 3 at the site in question (Karasiewicz-Szczypiorski & Mamuladze 2019, 67). Physicochemical analysis confirmed that the roof tiles were produced on site (analyses of the building material and raw clays were carried out by the ARCHEA laboratory by M. Daszkiewicz in Warsaw). On the basis of the entire stratigraphic sequence, the dating of individual layers and various finds, we can conclude that the building was built in the first decades of the 2<sup>nd</sup> century AD. It was in use for a very short period of time and was destroyed in an earthquake. The aforementioned stamps, as well as finds of cistophoric tetradrachms minted during Hadrian's reign (Jaworski 2021, 131, plate 3.6.A–D; Jaworski *et al.* 2021, 296, fig. 6), allow us to link the creation of the house to Flavius Arrian's visitation of the fort in AD 131 or 132. Arrian noted that he found five cohorts in *Apsaros* (Flavius Arrianus *Periplus Ponti Euxini* 6; Liddle 2003). However, he did not add in his account what kind of troops these were. This issue has long been debated in the literature (Speidel 1986, 657–658; Mamuladze *et al.*

2002). Based on the discovery of the stamp, which reads COH(ortum) L(egionis) V MAC(edonicae) IIII (quattuor) (four cohorts of the Fifth Macedonian Legion), we conclude that these troops mentioned by Arrian were legionary cohorts (Karasiewicz-Szczypiorski *et al.* 2021, 272). A further attempt to reconstruct the composition of the garrison from the Arrian-era allow us to suggest that the Fifth Cohort was *Cohors IIII (Syrorum) Sagittariorum* (Speidel 2009, 606 and 619-620; Karasiewicz-Szczypiorski *et al.* 2021, 277).

## Discussion

The reasons for bringing the legionary army all the way from Lower Moesia, when *Legio XV Apollinaris* was stationed in not too distant *Satala*, are unclear for the time being and require additional research. However, it is worth mentioning that the transport of the army from the Lower Danube via Taurica to Cappadocia and on to Syria is confirmed, among other things, by the so-called map painted on the shield from *Dura Europos* and the place where this monument was found (for a summary and a new look at this particular monument Gawroński 2011).

The presence of legionary cohorts in *Apsaros* in the early 30's of the 2<sup>nd</sup> century AD can be explained by construction investments initiated by the governor of the province (see also a fragment of a Latin inscription from *Sebastopolis*: AÉ 1905, 175; Mitford 2018, no 99). This fragment mentions the name of one of the legions and the names Hadrian and Arrian. On this basis, the find is sometimes categorised as a building inscription (Braund 1994, 194-195). The personal arrival of this high official may have been related to the start of construction work or its inspection. Referring to the stratigraphic context mentioned earlier and the accompanying finds, it can be assumed that the cohorts of the legion built the new *praetorium*. However, the not yet published results of recent research allow us to assume that the construction work carried out at the time was much broader in scale. It is most likely that at that time the defensive walls were also improved, new garrison bathhouse were built and the *principia* was renovated.

Difficult relations between Rome and the client kingdom of *Iberia* were cited as another reason for maintaining such a large garrison at *Apsaros*. However, a short-lived deterioration in mutual relations occurred as early as AD 129 (around two or three years before Arrian's journey). At that time, King Pharasmanes II did not come to a scheduled meeting with Hadrian (Braund 1994, 232). The invasion of the Alans, who remained in alliance with *Iberia*, into the Southern Caucasus, on the other hand, did not take place until around AD 135. Moreover, in the composition of the army gathered by Arrian at that time, we find no mention

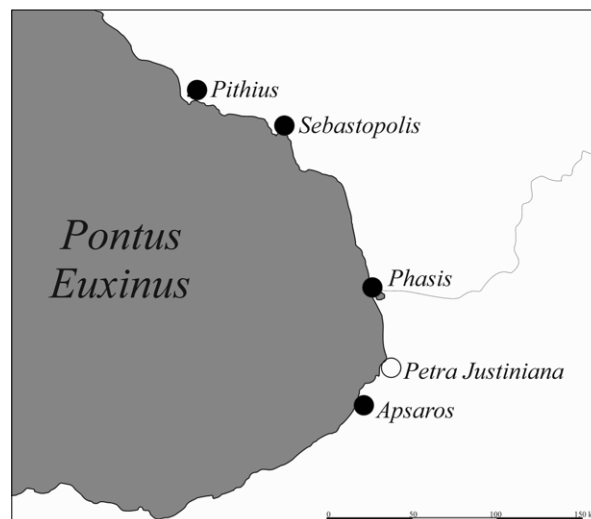


Figure 1. The Roman forts in Colchis in the Principate period. In black confirmed location, in white presumed location (O. Kubrak).

of *Legio V Macedonica* (Flavius Arrianus *Ectaxis contra Alanos*; Campbell 2004, 128-131; Speidel 2009, 602-603).

It can therefore be assumed that the cohorts of interest arrived at *Apsaros* in the early 30's of the 2<sup>nd</sup> century AD and were withdrawn before AD 135. The probable preparation of this army for an entirely different military operation is indicated by Arrian himself. The governor wrote to Hadrian that during his journey he was gathering information in case there was a need to organize an expedition to Bosphorus. The possible Roman intervention was to be linked to the death of Kotys II, who ruled there (Flavius Arrianus *Periplus Ponti Euxini* 17; Liddle 2003). Thus, at the time of the inspection, Arrian was concerned about dynastic problems on Bosphorus and not in kingdom *Iberia*.

Although the reading of the stamps, the dating and local production of the *praetorium* tiles at *Apsaros* are not in doubt, it has so far been the only evidence confirming the presence of a detachment of *Legio V Macedonica* at this fort. In the 2022 season, another discovery related to the issue discussed here was made north of the *praetorium*, in an area where a *principia* was almost certainly located. During the removal of backfill dating to the Ottoman period, a large fragment of brick (h 30 cm) was encountered on which was a hitherto unknown stamp preserved in its entirety (fig. 3).

In its field there is only one graphic mark about 11 cm high. It is a 'V' mark imprinted deeply in the clay. Such an abbreviated form of the stamp is not isolated to finds from *Apsaros*. A number of examples are known to be imprinted in the ceramic mass only the mark previously referred to in the literature as 'X'. Such stamps were considered to be signatures left by *Legio X*

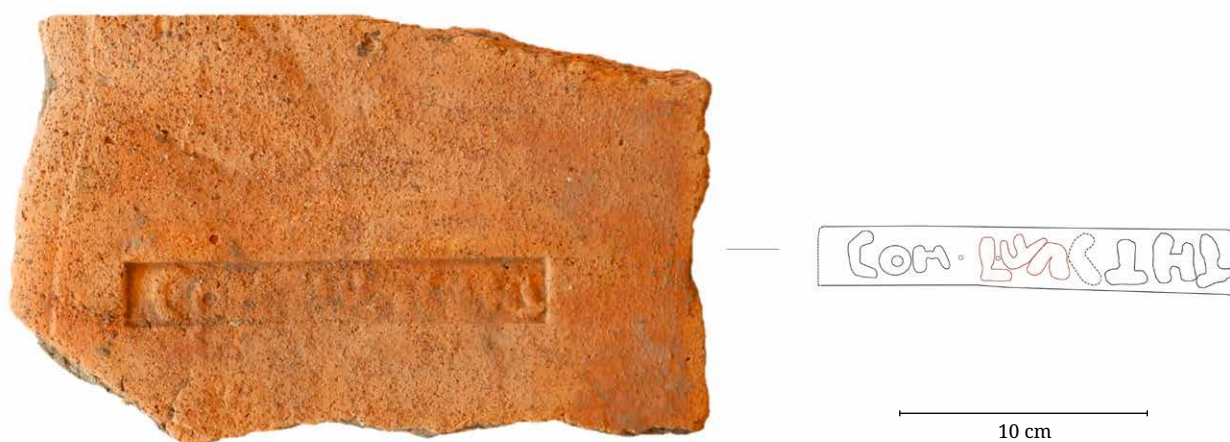


Figure 2. Stamp discovered in the *praetorium*: COH(ortium) L(egionis) v MAC(edonicae) IIII (quattuor) (N. Lockley).



Figure 3. Stamp discovered in the *principia*: 'V' (O. Kubrak, process by N. Lockley).

*Fretensis* (Mamuladze *et al.* 2002, 38). A comparative re-analysis has shown that this is most likely the signature left by the auxiliary units of the *Cohors Milliaria Equitata Civium Romanorum* (Speidel 2009, 617). It would thus be a schematic representation of the symbol ∞ (*milliarium*) (Karasiewicz-Szczypiorski *et al.* 2019, 504). In the case of the newly discovered stamp, there is rather little doubt that the mark can be read as the Roman numeral 'V'. In view

of the previously described discovery of tegular material by four cohorts of *Legio V Macedonica*, it is almost certain that the 'V' mark belongs to the brickyard workers from this legion. Both stamps, therefore, confirm the presence and building activity of the cohorts of *Legio V Macedonica* at *Apsaros*. Hopefully, future research will also clarify the reasons for bringing the army from Lower Moesia to Cappadocia and the subsequent fate of this detachment.



## Acknowledgement

The research on which this article is based was made possible through financial support from The National Science Centre in Poland UMO-2017/26/M/HS3/00758.

## Abbreviation

AÉ: *L'Année épigraphique*

IOSPE IV – B: *Inscriptiones antiquae orae septentrionalis Ponti Euxini Graecae et Latinae* (Latyshev 1965)

## Bibliography

- Alexandrescu, C. & C. Gugl, 2012: The Troesmis-Project 2011-2015. Research questions and methodology, in: C. Alexandrescu (ed.), *Troesmis. A changing landscape. Romans and the others in the Lower Danube region in the first century BC-third century AD*, Tulcea, 9-22.
- Braund, D., 1994: *Georgia in Antiquity. A history of Colchis and Transcaucasian Iberia 550 BC-AD 562*, Oxford.
- Campbell, B. (transl. and ed.), 2004: *Greek and Roman military writers. Selected readings*, London/New York.
- Gawroński, R.A., 2011: Dura Europos 'Shield Map' and expedition of Gordian III, *The Journal of Juristic Papyrology* XLI, 59-66.
- Janes Hall, L., 2004: *Roman Berytus. Beirut in Late Antiquity*, London/New York.
- Jaworski, P., 2021: Reading the history of Roman fort in Apsaros (Autonomous Republic of Ajara, Georgia) from a Numismatic Perspective, *Notae Numismaticae – Zapiski Numizmatyczne* 16, 125-142.
- Jaworski, P., R. Karasiewicz-Szczypiorski & S. Mamuladze, 2021: The rise and fall of the Roman fort in Apsaros. Recent numismatic evidence, *Polish Archaeology in the Mediterranean* XXX/2, 289-306.
- Karasiewicz-Szczypiorski, R., 2015a: *Forty i posterunki rzymskie w Scytii i Taurydzie w okresie pryncypatu*, Warszawa (Światowit Supplement, Series A. Antiquity 15).
- Karasiewicz-Szczypiorski, R., 2015b: The Roman fort in Balaklava and its surroundings, *Światowit* XII (LIII)/A, 53-79.
- Karasiewicz-Szczypiorski, R., 2019: The Roman fort at Cape Aj-Todor (Charax) and its surroundings. A new look at old discoveries, *Światowit* LVII, 153-184.
- Karasiewicz-Szczypiorski, R. & S. Mamuladze, 2019: Early fortifications at Apsaros fort (Gonio, Georgia). New Discoveries, *Pro Georgia. Journal of Kartvelological Studies* 29, 63-76.
- Karasiewicz-Szczypiorski, R., S. Mamuladze, L. Aslanishvili & M. Daszkiewicz, 2019: Ceramic building material from the Roman forts on the Colchis coast. Archaeology and archaeoceramological analysis, *Polish Archaeology in the Mediterranean* XXVII/1, 485-526.
- Karasiewicz-Szczypiorski, R., S. Mamuladze & M.A. Speidel, 2021: New and revised tile stamps from the Roman fort of Apsaros (Gonio, Georgia), *Zeitschrift für Papyrologie und Epigraphik* 219, 269-280.
- Kiguradze, N.Š., O.D. Lordkipanidze & T.T. Todua, 1987: Klejma XV legiona iz Picundskogo gorodiša / A seal of the XV Legion from the Pitsunda fortress, *Vestnik drevnei istorii* 2, 88-92.
- Mamuladze, Š.H., M.S. Halvaši & L.G. Aslanishvili, 2002: Rimske garnizony Apsara / Roman Garrisons in Apsaros, *Vestnik drevnei istorii* 240, 33-39.
- Latyshev, B., 1965: *Inscriptiones antiquae Orae Septentrionalis Ponti Euxini. Graecae et Latinae per annos 1885-1900 repertae*, Hildesheim.
- Liddle, A. (ed.), 2003: *Arrian, Periplus Ponti Euxini*, London.
- Matei-Popescu, F., 2010: *The Roman army in Moesia inferior*, Bucharest.
- Mitford, T.B., 2018: *East of Asia Minor. Rome's hidden frontier*, Oxford.
- Nosova, L.B., 2014: Tira serediny I v. n.e. Političeskaâ istoiâ po dannym numizmatiki, *Stratum plus* 6, 315-326.
- Ohotnikov, A.S. & A.S. Ostroverhov, 2013: Ostrov Leuke, in: I.V. Bruâko & T.L. Samojlova (eds), *Drevnie kul'tury Severo-Zapadnogo Pričernomor'â*, Odessa, 538-539.
- Piso, I., 2000: Les légions dans la province de Dacie, in: Y. le Bohec & C. Wolf (eds), *Les légions de Rome sous le Haut-Empire, Actes du Congrès de Lyon (17-19 septembre 1998)*, Lyon, 205-225.
- Piso, I., 2015: Les listes de centurions de Potaissa et la participation des legions dacique a la guerre parthique de Caracalla, in: A. Tomas (ed.), *Ad fines Imperii Romani. Studia Thaddaeo Sarnowski septuagenario ab amicis, collegis discipulisque dedicata*, Warsaw, 81-91.
- Solomonik, È.I., 1983: *Latinskie nadpisi Hersonesa Tavričeskogo*, Moskva.
- Speidel, M.A., 2009: The development of the Roman forces in northeastern Anatolia, in: M.A. Speidel (ed.), *Heer und Herrschaft im römischen Reich der hohen Kaiserzeit*, Stuttgart, 595-631.
- Speidel, M.P., 1986: The Caucasus frontier. Second century garrisons at Apsarus, Petra and Phasis, in: C. Unz (Hrsg.), *Studien zu den Militärgrenzen Roms III. 13 Internationaler Limeskongress Aalen*, Stuttgart, 657-660.
- Sucevaenu A. & A. Barnea, 1991: *La Dobroudja Romaine*, Bucarest.
- Zahariade, M., 2008: Scythia Minor. A history of a later Roman Province (284-681), *L'Antiquité Classique* 77, 739-740.
- Zuckermann, C., 1988: Legio V Macedonia in Egypt, *Tyche* 3, 279-287.



# A battlefield of the Dacian Wars

Felix Marcu

In close relation to the topic of conflict archaeology is continuously improved methodology of another sub-discipline, the landscape archaeology, with great results in the last couple of years. The discovery of many new temporary camps in Germany (e.g. Uedem in Hochwald, Bödecker 2013; 2020) and northwest of the Iberian Peninsula (Costa-Garcia 2018; Costa-Garcia *et al.* 2019) is relevant here. The latter ones are similar in shape and positioning to the Roman fortifications in Șureanu Mountains, Romania, which we are also dealing with in this paper, though each has their own uniqueness.

Lately one of the grand battlefields of the Roman times has been found at Harzhorn, in Germany (Geschwinde *et al.* 2009). There are some other important, although not many, ancient sites contributing to the subject: *Numantia*, sites of Tollense Valley, *Baecula*, Orange, Kessel, *Alesia*, Kalkriese, *etc.* *Dacia's* conquest was considered the most important Roman military operation since the civil wars and both Ancient and Modern historiographies explained the fact (fig. 1). Its significance in Roman history is evidenced by substantial debate about the conflict in ancient written sources. The Dacians are mentioned as most important Roman foes from the beginning of the Empire, while c. 150.000 soldiers were called into play to defeat them.

The glory and dramatics of Trajan's campaigns are no less relevant for the ancient history and especially for the history of Romania. The military effort was formidable, its dramatics being proven by several scenes where Trajan tears his clothes to bandage soldiers or those featuring injured soldiers, both Roman and Dacian or the Dacians destroying their own fortifications. We know from Cassius Dio (*Historia Romana* 48.8) that Trajan '...climbed even mountain tops, conquering mountain after mountain with much danger...' or that the mountains have been levelled to form camping places. Thus, the most impressive examples of warfare in ancient Romania must have been the two Dacian wars, especially the area of Șureanu Mountains and the main routes the Romans marched, including the zone of the first *colonia* of *Dacia*, *Ulpia Traiana Sarmizegetusa* (fig. 2).

*Colonia Ulpia Traiana Sarmizegetusa* was founded as the only *colonia deducta* of *Dacia*, after the Dacian wars. The start date of the Roman settlement is still debated. Several scholars have argued in favour of a fortress here, built after the first Dacian war, the main argument being an extract from Cassius Dio (*Historia Romana* 48.9.7) where the building of a fort, or a *stratopedon*, at *Sarmizegetusa* is mentioned (Marcu & Cupcea 2011). We know now that probably *legiones II Adiutrix* and *VI Ferrata* built the defensive wall in the Dacian capital after the first Dacian War, which was subsequently rebuilt and enlarged after the second Dacian War by *legiones IIII Flavia Felix* and *I Adiutrix* (Stefan 2005, fig. 178). This was what Cassius Dio was referring to when speaking about a *stratopedon*

**Felix Marcu**

The National History Museum  
of Transylvania, felix.marcu@  
mnit.ro

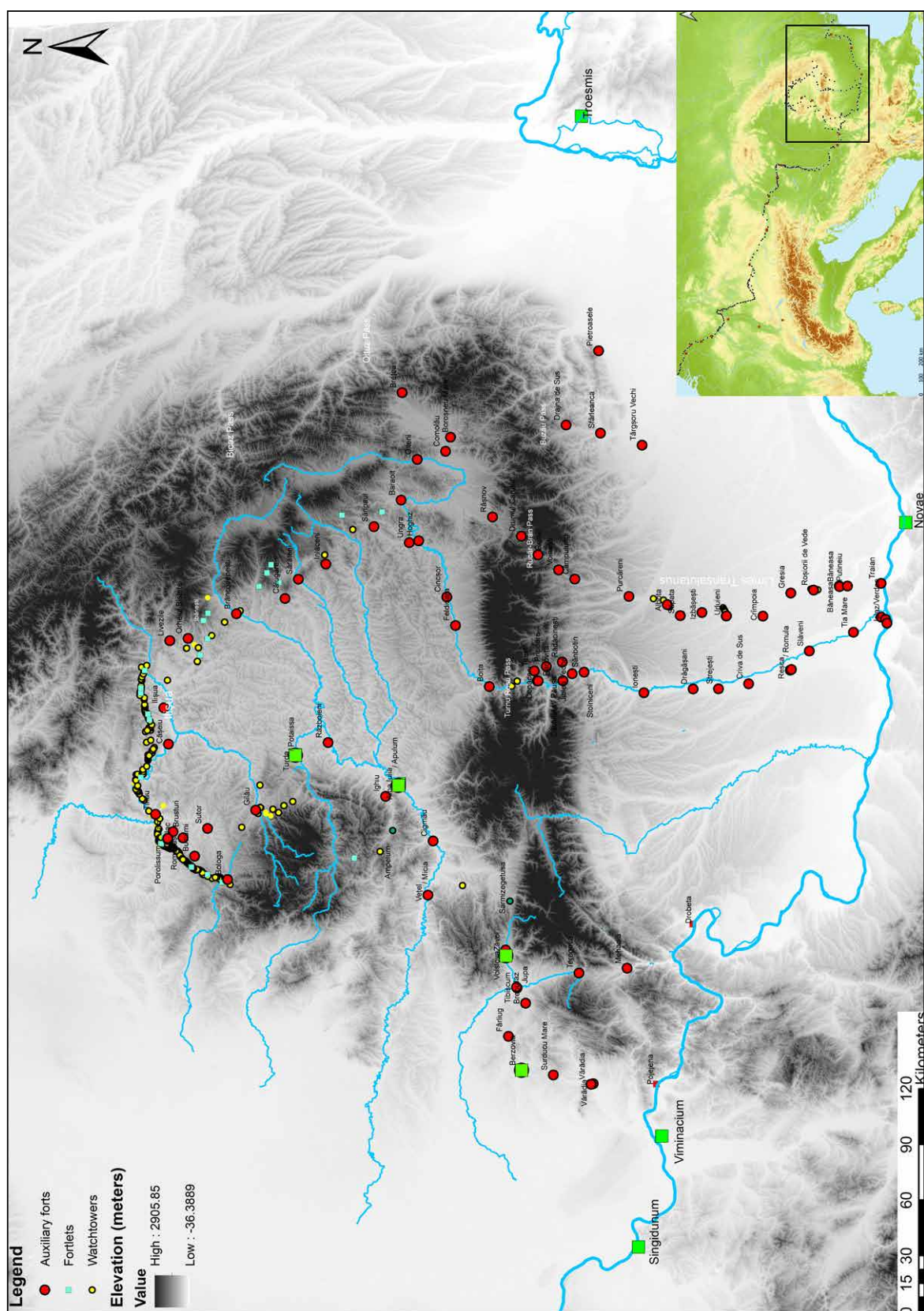


Figure 1. Map of the sites on the limes of the province of *Dacia* (© Felix Marcu).



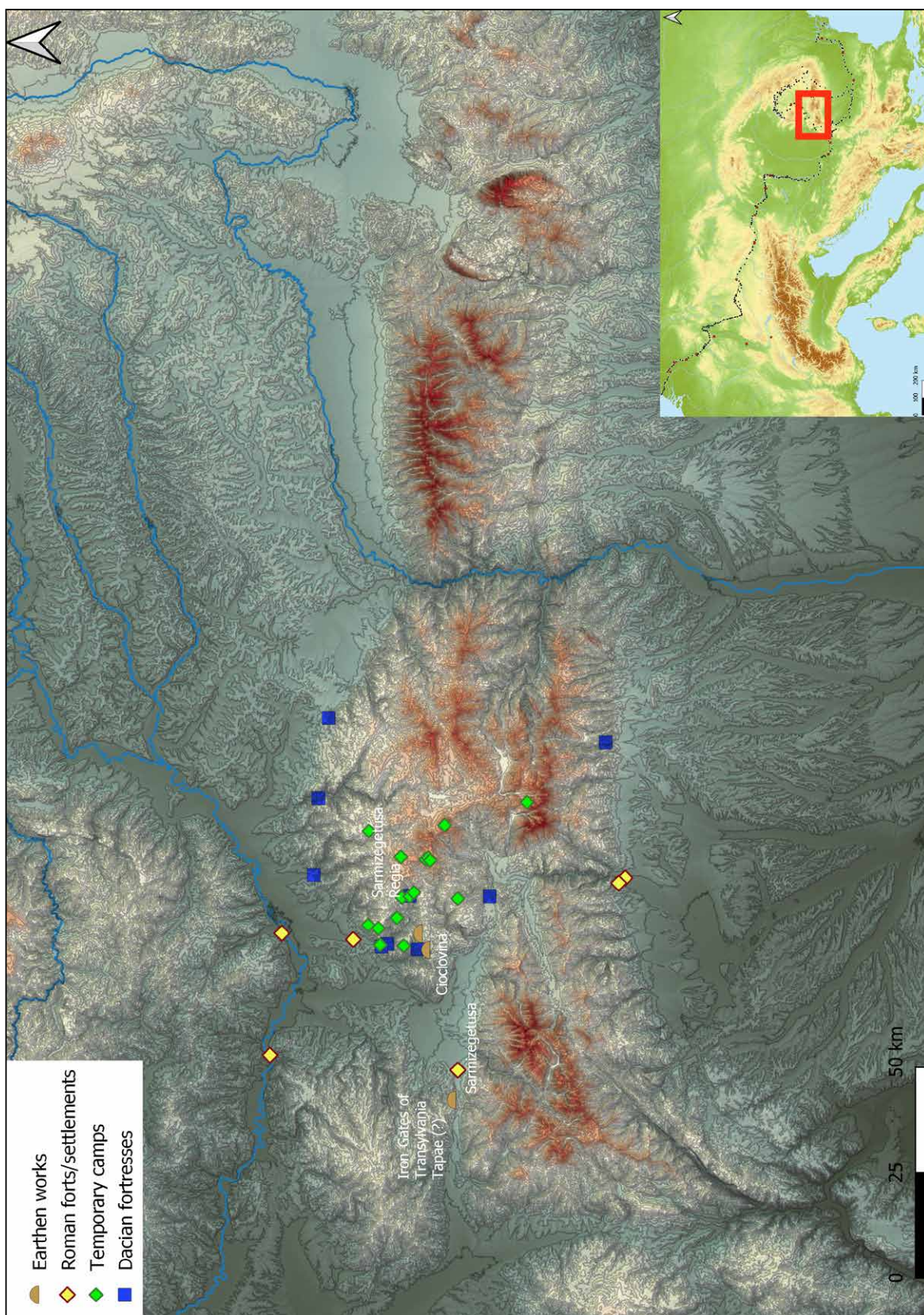


Figure 2. The main Dacian and Roman sites in the area of Șureanu Mountains (© Felix Marcu).



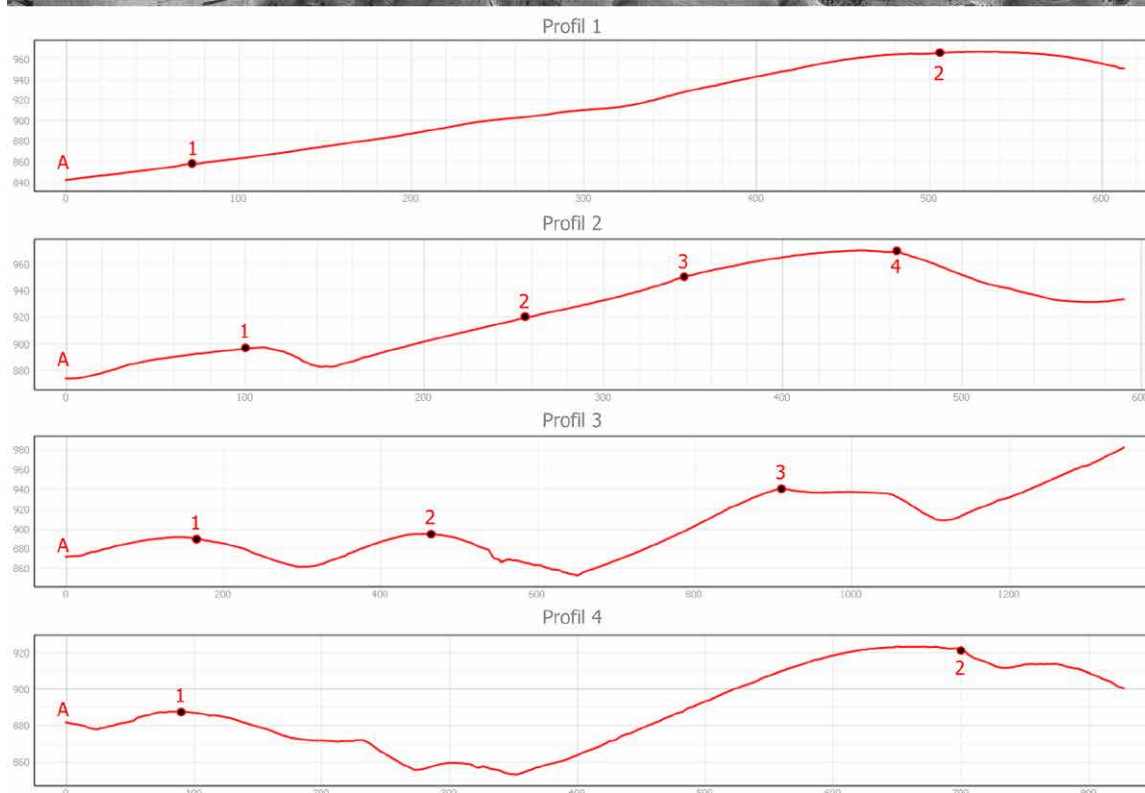
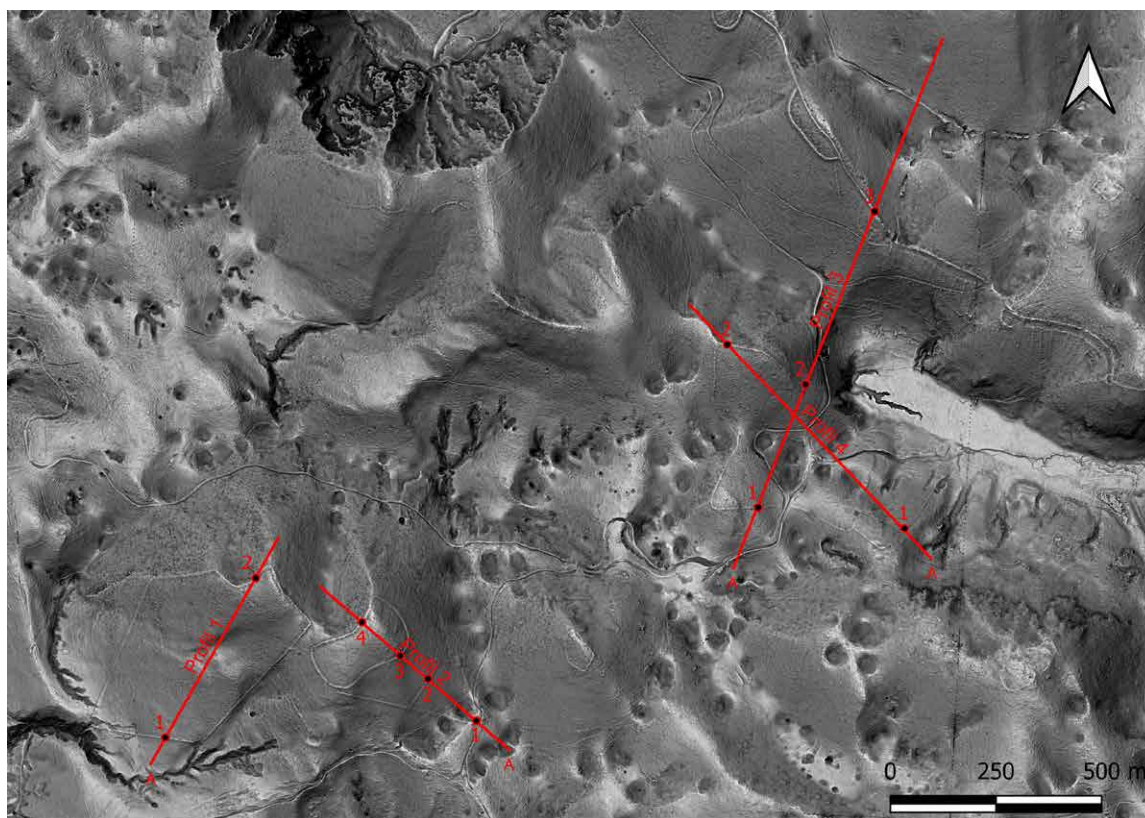


Figure 3. The LiDAR measurements with the visible earthen ramparts at Cioclovina-Ponorici, the Roman camps and path profiles (© Agenția Națională de Cadastru și Publicitate Imobiliară and Felix Marcu).



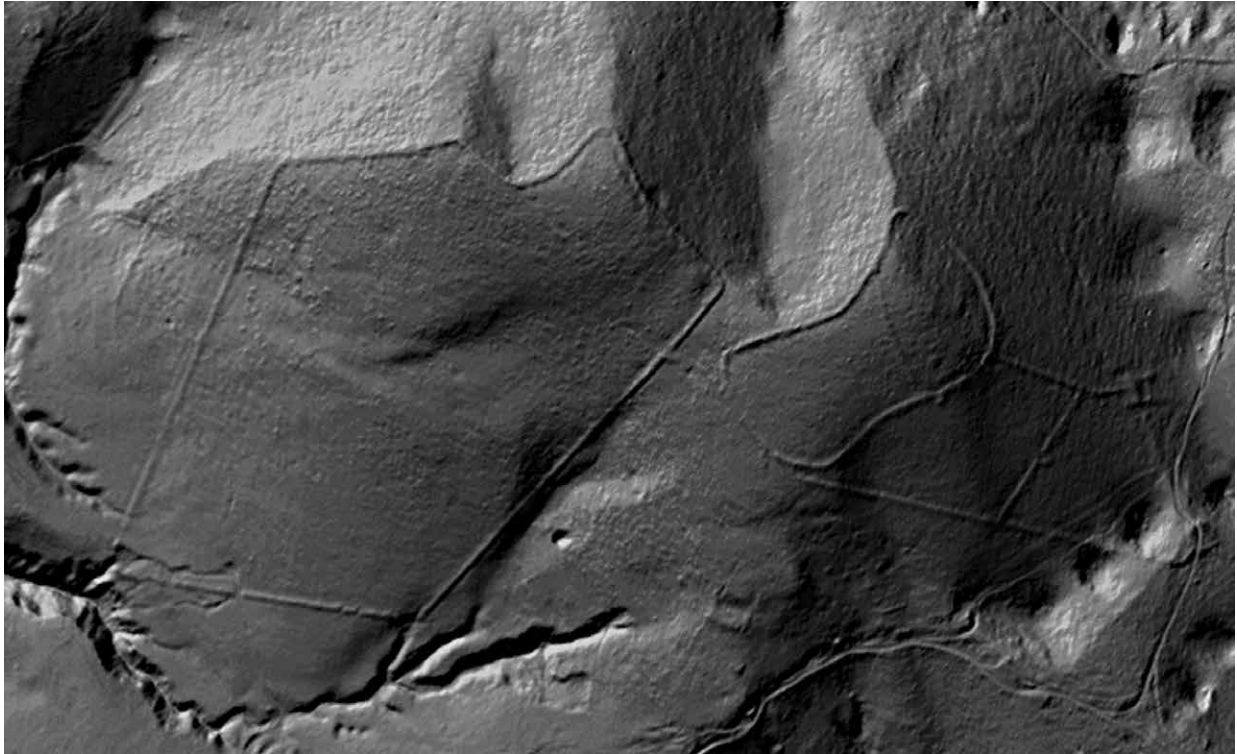


Figure 4. The temporary camps at Cioclovina-Ponorici on LiDAR (© Felix Marcu).

in the Dacian's capital (Opreanu 2000). The latest LiDAR analysis and recent archaeological excavations further support the garrisoning of legionary forces in the Dacian *Sarmizegetusa* (Oltean & Hanson 2017).

We know little about Dacian and Roman fortifications in general and even less about the events of AD 101-102, when the Romans spread in *Tara Hategului*, after the victory of *Tapae* (Stefan 2005, 407-413). The scenes depicting Romans cutting trees and erecting fortifications are numerous, however none of such battlefields or fortifications have been located. Only in one case location seems certain: a very complex system of earthworks has been recorded at Cioclovina-Ponorici (Teodor *et al.* 2013).

The survey of archaeological remains that can be related to Trajan's campaigns has a main objective to identify the routes which the Roman army followed to penetrate *Dacia* (Marcu & Szabó 2020). The research has identified several temporary fortifications close to Grădiștea Muncelului (*Sarmizegetusa Regia*), in the Șureanu Mountains, on a high plateau. In general, the forts' layout is rectangular. Camp sizes in the area are similar, laying over a surface of 6-8 ha. Their identification in the field might lead to the accurate establishment of the Roman army routes during the two wars. Although we know the location of some of the marching camps, the nearby battlefields are, by their nature, very difficult to trace, and none was discovered so far.

Despite many years of research some important issues are still unanswered. The conquering army was very big, but only few marching camps have been identified, although in recent research more potential camps have been brought to light. Another issue is connected with the assaults on Dacian fortresses. One single siege camp has been identified close to Costești Dacian fortress (Crișan 1973), supported by a recent LiDAR survey. Here one of the few, but the best preserved, *dolabra*, has been found, which might have been used as a tool (pickaxe) and as a weapon. Inside the Dacian fortress one of the few pieces of Roman artillery, a washer (*modiolus*) of a catapult (Gheorghiu 2005), has been discovered. It was probably used by the Dacians in defending the fortress, as it is drawn on some scenes on Trajan's column (scene LXVI, 52-54, known as the 'Dacian's counteroffensive').

The plan of the fortress at Grădiștea Muncelului is unusual for both the Dacians and the Romans. The first Roman fortress at Grădiștea Muncelului and maybe in some other places as well were built in the aftermath of the first Dacian war as Cassius Dio (*Historia Romana* 48. 9.7) reveals and the Hunt *pridianum* confirm. Clearly, the first Roman fortress at Grădiștea Muncelului has been built in the aftermath of the first Dacian War. So, other forts on the way to Grădiște must have existed, though we have not much evidence, except for the marching camps, some of them with more than one occupation phase. In only one



Figure 5. The stone enclosure at *Sarmizegetusa Regia* (© The National Museum of Transylvania's History, Cluj-Napoca).

other fortress, at Fețele Albe, a fragment of a slabstone have been discovered with a visible 'goat feet' and a knot. It is similar to other three stones found at *Sarmizegetusa Regia* depicting two Capricorns facing each other (Stefan 2005, fig. 178; Opreanu 2017, 371-373, fig. 6). This and the fact that Hunt papyri is that *Cohors I Hispanorum Veterana* is *Buridavae in vexillatione* (P.London 2851; ChLA III 219; CPL 112; RMR 63) indicate that another Dacian fortress

have been occupied by the Roman troops before the second Dacian war.

The south-westernmost line of the future *Dacia* and the forts in northwest Wallachia are dated under Trajan, but they all were probably abandoned under Hadrian or in the late Trajanic period. Exception is Vărădia, where two forts have been built. There are some other forts and fortresses which might indicate that they

have been occupied in between the two wars: Drobeta-Schela Cladovei, Bumbești-Pleșa, Berzovia, Tibiscum, Zăvoi, *Sarmizegetusa Regia* or Drajna de Sus (Marcu & Szabó 2020, 66).

We know from Cassius Dio (*Historia Romana* 68.9.7) that Trajan left a garrison at *Sarmizegetusa Regia* and in some other un-named places. We also know from Hunt *pridianum* that Buridava and even Piroboridava were *intra provinciam* in AD 105 (Fink 1971, no. 63, col. II, 27-29). This means that the troops have been in garrison between the Dacian wars, and the forts were not abandoned shortly after the first Dacian war, as it was supposed in relation to *Sarmizegetusa Regia* (Opreanu 2000; Stefan 2005; Oltean & Hanson 2017). These forts were in connection with the mentioned forts in south west, therefore we also believe that the southern half of the future *Dacia* have been a province, under the authority of *Moesia inferior* and *Moesia superior* governors. *Sarmizegetusa Regia* appears also on Ptolemaeus' map, the earliest account of the sites in *Dacia*, which can be considered as another indication of a Roman occupation here. Although its appearance might be brought in relation with a sanctuary or a temple at Sub Cununi, close to the former Dacian capital, which continue to exists after mid-2<sup>nd</sup> century AD.

There are about 12 marching camps known in Șureanu and Parâng mountains. Another two or three have been located a couple of years ago thanks to aerial photography used in documenting the Roman fortifications for the future UNESCO nomination of *Dacia* (Marcu & Szabó 2020). In the last year as part of LIMES program, we have conducted a lot of LiDAR measurements along the Roman limes of *Dacia*. In the spring of 2022 we have also received an access to a large amount of LiDAR data made for other purposes by the Romanian Agency dealing with the Romania's cadaster, unfortunately only for the western part of Romania (Agenția Națională de Cadastru și Publicitate Imobiliară – ANCPPI). The analysis of data in the area of Șureanu mountains revealed at least twice the number of temporary camps already known and there is still a lot of unprocessed data. By far the most interesting are those at *Tapae* and Cioclovina-Ponorici area (fig. 3).

It was always supposed that the battles at *Tapae* mentioned in the written sources in AD 87/88 and AD 101 had been fought at the Iron Gates of Transylvania Pass, with very few exceptions (Stefan 2005, 407-415). In AD 89 the Romans have gained the victory at *Tapae*, north of the Danube, and peace was settled favourably for the Dacians, which would become clients and benefit from a series of favours, such as subsidies.

It has always been assumed that the Romans in their advance towards the Dacian fortresses in Șureanu Mountains used the mountain crests and passes.

However, a fragment of Marcus Ulpius Nerva Traianus Augustus *Commentarii de bellis Dacicis* (6.13) reveal that, at the beginning of the war in the spring of AD 101, the two main columns were marching from Lederata to Berzovia and Aizis, in open field, probably from *Viminacium*. The second column must have been marching from *Dierna* (Orșova) to *Tibiscum* on Cerna and Timiș Valley. A hard battle took place at *Tapae*, very close to *Colonia Ulpia Traiana Sarmizegetusa*. It was here, in around AD 86, where the Romans lost one of the most important battles of the Dacian wars. The commander, a praetorian prefect, was killed in that battle, the standards were lost, only to have been recovered 20 years later by Trajan. This important victory of the Dacians remained almost unknown because of Domitian's *damnatio memoriae*.

There is not too much new input brought by the LiDAR survey of the Iron Gates of Transylvania, no more than we already know, displaying some features dating to the 16<sup>th</sup>-18<sup>th</sup> centuries rather than of Roman date. After the battle at *Tapae* the Romans spread in Țara Hațegului. From here they have advanced towards the Dacian fortresses and another battle might have taken place, in the vicinity of Cioclovina-Ponorici. Impressive traces of earthen ramparts have been discovered here called by Marțian (1921) 'remains of cyclop walls'. Traces of defensive ramparts rows are also been noted, probably dating to the period of the Dacian wars. The locals suggestively named the place *Troianul*. The ramparts are few kilometres long and have probably been constructed during the Roman siege. Traces of platforms for war machinery are visible as perpendicular walls on the main enclosure.

Smaller fortifications (c. 40 × 32 m), possibly of Roman date, have also been located, which might have been provided with stone enclosures in the period between the wars. Some other features are, however, more visible. Few of such features have already been observed in the early 80's of the 20<sup>th</sup> century (Tatu & Moraru 1983, 153-156, plate 1), with Oltean (2012, 566-569) mapped additional two from south-east in 2012 when they were visible on Google Earth. The earthen rampart of the one closest to the so-called Dacian rampart is more visible, though to a limited degree. It has an almost rectangular shape of about 14 ha. The second and third features appear rather flattened, with almost nothing visible in the field. Even so, some could observe in different parts something similar to *tituli* and *claviculae* and some other interesting elements such as a road or a delimitation and a platform in the northeast corner (fig. 4). They seem to be of Roman date, built right in front of the solid rampart blocking the way to the Dacian capital. The most striking is the shape of the fortification, which mirrors the main fortification in Decebalus' capital, being of approximately the same size, 2,9 ha compared with 3,0 ha (fig. 5).

The irregular fortification on Dealul Măgulici, close to Cioclovina-Ponorici, adjacent to the bigger almost rectangular one of about 13 ha, built on a very steep slope, also has an annexe of about 3 ha, which seems to be divided into two parts and with some kind of platforms or towers on the external walls. At points there seems to be *tituli* or external *claviculae*. The traces are barely visible on the ground, therefore geophysics and archaeological researches may confirm the nature of the features in the future. The irregularities of the rectangular camps are due to the terrain, but not of the oval one. If these are indeed Roman-period structures the legionaries shortly garrisoned here might have been the ones who have built the Roman fortification at *Sarmizegetusa Regia*.

Undoubtedly, there are many other Dacian fortresses and Roman fortifications from this period that have not yet been identified, like those from the first Dacian war when the Romans enter Țara Hategului by the end of AD 101, but also those around *Sarmizegetusa Regia* which was reached in the spring of AD 102. Clearly, the features identified at Cioclovina-Ponorici belong to one of the most important battlefields during the Dacian wars, where the bulk of the Roman army was temporarily garrisoned. We have estimated that, if the three marching camps at Comărnicele were the convergence point of the troops marching on the mountain crests, about 10.000 soldiers have been garrisoned at about 15 ha of available space (Marcu & Szabó 2020, 84). The total extent of the three camps in front of the Dacian earthen rampart is of a little more than 30 ha meaning that the double number of soldiers would fit inside them, if the entire interior space has been occupied. This is hardly probable at least for the camp on the south-west considering the steep slope.

## Abbreviations

ChLA: *Chartae Latinae Antiquiores*

CPL: *Corpus Poetarum Latinorum*

P.London: *Greek Papyri in the British Museum*

RMR: *Roman Military Records on Papyrus*

## Bibliography

- Bödecker, St., 2013: Ein Übungslagerareal im Hochwald bei Uedem, *Der Limes. Nachrichtenblatt der Deutschen Limeskommission* 7/2, 10-13.
- Bödecker, St., 2020: Marschlager an der Lippemündung bei Wesel-Flüren, *Der Limes. Nachrichtenblatt der Deutschen Limeskommission* 14/2, 5-7.
- Costa-Garcia, J.M., 2018: Roman camp and fort design in Hispania. An approach to the distribution, morphology and settlement pattern of Roman military sites during the Early Empire, in: C.S. Sommer & S. Matešić (eds), *Limes XXIII. Proceedings of the 23<sup>rd</sup> International Congress of Roman Frontier Studies Ingolstadt 2015 / Akten des 23. Internationalen Limeskongresses in*

*Ingolstadt 2015*, Mainz (Beiträge zum Welterbe Limes Sonderband 4), 986-993.

- Costa-Garcia, J.M., M. Gago & J. Fonte, 2019: The reassessment of the Roman military presence in Galicia and northern Portugal through digital tools. Archaeological diversity and historical problems, *Mediterranean Archaeology and Archaeometry* 19/3, 17-49.
- Crișan, I.H., 1973: Castrul roman de la Costești, *Materiale și cercetări arheologice* 10, 74-75.
- Fink, R., 1971: *Roman military records on papyrus*, Cleveland (The American Classical Association Monograph 26).
- Geschwinde, M., H. Haßmann, P. Lönne, M. Meyer & G. Moosbauer, 2009: Roms vergessener Feldzug. Die Entdeckung eines römischen Schlachtfeldes des 3. Jahrhunderts am Harzhorn bei Kalefeld, Ldkr. Northeim, *Berichte zur Denkmalpflege in Niedersachsen* 1, 12-15.
- Gheorghiu, G., 2005: Un modiolus descoperit în cetatea dacică de la Costești-Cetățuie (jud. Hunedoara), *Angustia* 9, 165-174.
- Marcu, F. & G. Cupcea, 2011: The topography of Colonia Ulpia Traiana Augusta Dacica Sarmizegetusa and the first centuriation in Dacia, *Archäologisches Korrespondenzblatt* 41/4, 543-560.
- Marcu, F. & M. Szabó, 2020: New data on the Roman temporary camps in Șureanu Mountains, *Acta Musei Napocensis* 57/1, 63-88.
- Martian, I., 1921: *Urme din războaiele romanilor cu dacii*, Cluj.
- Oltean, D., 2012: *Regii dacilor și războaiele cu romanii*, Deva.
- Oltean, I. & W.S. Hanson, 2017: Conquest strategy and political discourse. New evidence for the conquest of Dacia from LiDAR analysis at Sarmizegetusa Regia, *Journal of Roman Archaeology* 30, 429-446.
- Opreanu, C., 2000: Castrul roman de la Grădiștea Muncelului. Cronologia și semnificația sa istorică, *Ephemeris Napocensis* 9-10, 151-168.
- Opreanu, C., 2017: Roman victory symbolism at Sarmizegetusa Regia, in: F. Mitthof & G. Schörner (eds), *Columna Traiani – Traianssäule Siegesmonument und Kriegsbericht in Bildern. Beiträge der Tagung in Wien anlässlich des 1900. Jahrestages der Einweihung, 9.-12. Mai 2013*, Wien (Tyche Sonderband 9).
- Stefan, A.S., 2005: *Les guerres Daciques de Domitien et de Trajan. Architectura militaire, topographie, images et histoire*, Rome.
- Tatu, H. & V. Moraru, 1983: Dispozitivul defensiv dacic de la Ponoriciu (jud. Hunedoara), *Sargetia* 16-17, 151-164.
- Teodor, E.S., A. Pețan & A. Berzovan, 2013: *Cercetări periegetice pe Platforma Luncani II. Ponorici și Chiciura* (unpublished text, <http://www.esteo.ro/frUnprinted.html>).

# **The *Limes Moesiae/Mysiae/Mysiacus* and the *Limes Scythiae/Scythicus* according to the written sources. An overview**

Dominic Moreau

For practical reasons, there is a tendency of national communities of researchers on the Roman frontiers to identify sectors of the limes as corresponding more or less to modern national territories. Some of the expressions used have however no attestations in the ancient sources and instead represent a conventional and practical terminology to name something that is not so named by the Romans, *e.g.* *Limes Dacicus* for *Dacia* or *Limes Britannicus* for the Britain. While the first expression doesn't seem to be attested before the second half of the 19<sup>th</sup> century (a quick search takes us back to the archaeological works of Torma Károly (1829-1887) in Transylvania (*e.g.* Antal 1863, 122), the second one seems to have appeared for the first time in the Carolingian literature (*e.g.* Adrevaldus of Fleury *Miracula Benedicti* 33.843; Holder-Egger 1887, 493). The habit of aligning the notion of 'limes' with modern state boundaries, sometimes relying on mediaeval texts – it is to be noted that 'limes' doesn't have the same meaning in the Carolingian era as in Roman times – seems to date back to the period of the definition of the national borders of France in the 17<sup>th</sup> and 18<sup>th</sup> centuries, during which justification was sought in the ancient history of Gaul: *e.g.* *Limes Hispanicus* for the southern frontier with Spain (De Marca 1688), *Limes Gallicus* or *Rheni Limes* for the Rhine border with Germany (Daniel 1713), and *Limes Saxonicus* for the frontier with *Frisia* (Châtelain & de Limiers 1720, 15, on the problems of authorship of the 'Atlas historique'; Van Waning 2010). Obviously, such a use of the notion of 'limes' to justify national borders is part of a longer process, which goes back to the identification of historical cultural borders in Europe, as early as the first decades of the 16<sup>th</sup> century (one of the first examples is Friedlieb 1518, for the German-speaking area of the continent). However, it was the invention of the nation-state that would change everything.

Following the path of their predecessors, modern scholars generally favour the adjectives with the suffix '-cus' to qualify the regional identity of the different *limites* (*Limes Germanicus*, *Limes Pannonicus*, etc.) (that is, of course, when such adjectives exist), thus creating the impression that these were the official names of those sectors of the Roman frontiers. In truth, the Ancients were far less formal for the names of these

## **Dominic Moreau**

Université de Lille /  
UMR 8164-HALMA (Univ.  
Lille, CNRS, MC), Faculté des  
Humanités, Département  
d'Histoire, Campus  
universitaire du Pont-de-Bois,  
Rue du Barreau, BP. 60149,  
F-59653 Villeneuve d'Ascq  
CEDEX, France, dominic.  
moreau@univ-lille.fr



sectors. The term ‘limes’, which ends up designating a military district in its own right in Late Antiquity (on the evolution of the word, *inter alia* Moreau 2022), is just as often associated with a geographical location through a genitive (e.g. *Limes Germaniae* or *Limes Pannoniae*), as it is associated with an adjective in ‘-cus’ in the literature (one of the notable exceptions being the *Limes Arabicus*, which is very little attested in the form *Limes Arabiae* (*Codex Iustinianus* 12.59.10.5; Krüger 1954, 485). All of this may seem futile at first sight, but the identification of quasi-official names, or at least conventional ones, for the various *limites* partakes of the false idea of a grand imperial strategy, perfectly calculated from the centre of power, as defended by Edward Luttwak (2016).

The flexibility of the Romans regarding the qualification of the *limites* is particularly observable with the *Limes Moesiae*, sometimes written *Mysiae*, and *Limes Scythiae*, which are also known in the sources as the *Limes Mysiacus* (*Limes Moesiacus* is not attested) and the *Limes Scythicus*. Their few known mentions are all from Late Antiquity. The *Limes Moesiae/Mysiae/Mysiacus* and, more often, the *Limes Scythiae/Scythicus* are mentioned directly and concretely only on seven occasions in Latin literary texts and never in Greek literary texts. As for the attestations in inscriptions, we know no more than four of them, all in Latin. Indirect and implied mentions are not considered here. Moreover, this paper concentrates exclusively on *Moesia* and *Scythia*, as it serves as an introduction to the session ‘The *Limes Moesiae-Scythiae*, Dynamic Landscapes and Places’ of the Limes Congress XXV in Nijmegen. To be really exhaustive, however, it would be necessary to also consider *Dacia Ripensis*, because it was a part of *Moesia superior* before Diocletian.

For this reason, there is obviously no great synthesis that can emanate from such a small corpus. However, it is interesting to look at what these sources tell us, starting with the mentions of the *Limes Moesiae/Mysiae/Mysiacus*, given that it should have been theoretically established before the *Limes Scythiae/Scythicus*, as the *provincia Scythia* appeared only with Diocletian’s provincial reform.

### ***Limes Moesiae/Mysiae/Mysiacus***

There are only five known attestations of the expression *Limes Moesiae/Mysiae/Mysiacus* in all the Latin texts before the 7<sup>th</sup> century (the mediaeval and Renaissance literature have not been considered here, as it is the Roman reality that we seek to identify). The oldest of the five attestations is found in Rufius Festus’ *Breviarium rerum gestarum populi Romani*, which was written in 370. In chapter 8, in which he gives a historical description of the Roman provinces, we can read, in the part on *Illyricum*, that:

“*Marcomanni et Quadi de locis Valeriae, quae sunt inter Danuvium et Drauum, pulsati sunt et limes inter Romanos ac barbaros ab Augusta Vindelicum per Noricum, Pannonias ac Moesiam est constitutus*” (8.1; Nickbakht & Scardino 2022, 266).

“The Marcomanni and Quadi were driven from the environs of *Valeria*, which are between the Danube and Drave, and a ‘limes’ between Romans and barbarians was established from *Augusta Vindelicum* through *Noricum*, *Pannonia*, and *Moesia*.” (Banchich & Meka 2001 – modified).

If Festus is right, this takes us up to the very end of Marcus Aurelius’ reign, even if all other mentions of the *Limes Moesiae/Mysiae/Mysiacus* are about the Later Roman Empire. Thus, Ambrosius of Milan, in his *De Fide Ad Gratianum Augustum Libri Quinque*, written in 380, praises emperor Gratian’s Nicene Christianity, by asking the following question about Arian troops and barbarians on the frontier:

“*Nonne de Thraciae partibus per ripensem Daciam et Mysiam omnemque Valeriam Pannoniorum totum illum litem sacrilegis pariter uocibus et barbaricis motibus audiuiumus inhorrentem? Quid poterat nobis uicinia tam feralis inuehere, aut quemadmodum res Romana tali tuta poterat esse custodia?*” (2.16.140.29-34; Faller 1962, 106).

“Have we not heard, from all along the ‘limes’, from Thrace, and through *Dacia* by the river, *Moesia*, and all *Valeria* of the Pannonians, a mingled tumult of blasphemers preaching and barbarians invading? What profit could neighbours so bloodthirsty bring us, or how could the Roman State be safe with such defenders?” (De Romestin *et al.* 1896, 241 – modified).

Around the same time or soon after, the Anonymus Valesianus refers in *Origo Constantini Imperatoris* to the Goth invasion of 323 in these terms:

“*Item cum Constantinus Thessalonica<e> esset, Gothi per neglectos limites eruperunt et uastata Thracia et Moesia praedas agere coeperunt*” (5.21; König 1987, 44).

“Also, when Constantine was at Thessaloniki, the Goths broke through the neglected *limites*, devastated *Thracia* and *Moesia*, and began to drive off booty” (Rolfe 1939, 521 – modified).

So far, the sources quoted are rather vague, the *Limes Moesiae/Mysiae/Mysiacus* being presented as an unclearly defined border area on the central and eastern Danube.



### **Limes Moesiae/Mysiae/Mysiachus together with Limes Scythiae/Scythicus**

Indeed, the only two mentions of the *Limes Moesiae/Mysiae/Mysiachus* which can be considered at all explicit, at least from the administrative point of view, date from 412 and 471-472, and mention, at the same time, the *Limes Scythiae/Scythicus*. Both are from imperial constitutions, the first one being about the river patrol craft on the Danube, the second one on issuance of certificates of appointments for official staff and their subordinates. In the text from 412, found in the *Codex Theodosianus*, emperors Honorius and Theodosius II thus order the *magister militum* of Thrace:

*“Nonaginta recenti fabricatione contextas, decem his adiectas ex ueterum reparatione lusorias limiti Mysiaco, centum uero decem nouas additis antiquarum instauratione quindecim Scythico, qui in latius diffusius que porrigitur, sub hac deputari condicione sancimus, ut per singulos annos ueterum renouatione curanda quattuor iudiciariae in Mysiaco limite et decem agrarienses, in Scythico uero quinque iudiciariae et duodecim agrarienses nouae de integro constructae instrumentis que suis uniuersis armatae ducis instantia apparitionis que eius periculo contexantur, ut hoc supplemento per septennium integri numeri constituti reparatio maturetur, sublimitate tua pro sua industria disponente, unde earum contextio uel constructio debeat procurari”* (7.17.1-10; Mommsen & Krüger 1905, 343).

“We decree that there shall be assigned to the Moesian limes ninety river patrol craft of recent construction and that ten more shall be added to these by the repair of old craft; and on the Scythian one, which is rather widespread and extensive, there shall be assigned one hundred ten such new craft, with fifteen added by the restoration of the antiquated ones. The stipulation shall be observed that each year hereafter by the renovation of old craft, four reconnaissance patrol craft and ten inshore patrol craft shall be constructed on the Moesian limes, but on the Scythian one five reconnaissance patrol craft and twelve inshore patrol craft shall be constructed entirely new. These shall be equipped with all their weapons and supplies at the instance of the *dux* and shall be constructed on the responsibility of his office staff. With this supplement of reconstructed craft, the restoration of the entire number of craft decreed shall be speedily completed within seven years, and Your Sublimity, by your industry, shall arrange from what sources the assembly and construction of these craft must be procured” (Pharr *et al.* 1952, 175 – modified).

The rest of the text deals with the fines that will affect the *dux* and his staff if the order is not respected. As for the text of 471-472, copied in the *Codex Iustinianus*, in it emperor Leo decreed to the praetorian prefect of the East Erythrius that:

*“Item scrinii sacrorum libellorum: officii uirorum illustrium magistrorum militum utriusque militiae in praesenti, Orientis et Illyrici, inuitatorum, admissionalium, memorialium omnium que paedagogorum, cellariorum, mensorum, lampadariorum eorum, qui sacris scriniis deputati sunt, decanorum partis Augustae, cursorum partis Augustae, officii uirorum spectabilium ducum Palaestinae, Mesopotamiae, noui limitis Phoenices, Osrhoenae, Syriae et Augustae Euphratensis, Arabiae et Thebaidis, Libyae, Pentapoleos, utriusque Armeniae, utriusque Ponti, Scythiae, Mysiae primae, secundae, Daciae, Pannoniae, officii uirorum spectabilium comitum Aegypti, Pamphyliae, Isauriae, Lycaoniae et Pisidiae”* (12.59.10.5; Krüger 1954, 485).

“Likewise the *scrinium sacrorum libellorum* (issues the certificates of appointments) for the official staffs of the *magistri militum utriusque militiae in praesenti*, of the East and of Illyricum, each of illustrious rank; of the *inuitatores*, the *admissionales*, of the *memoriales* and all of the *paedagogi*, of the [can]cellarii, of the *mensores*, of the *lamparii* that are assigned to the *scrinium sacrorum*, of the *decanii* of the *Augusta*, and of the *cursores* of the *Augusta*; for the official staffs of the *duces* of Palestine, of *Mesopotamia*, of the new limes of *Phoenicia*, of *Osrhoene*, of *Syria* and *Augusta Euphratensis*, of *Arabia* and the *Thebaid*, of *Libya*, of *Pentapolis*, of both *Armenias*, of both *Pontus*, of *Scythia*, of *Moesia Prima*, of *Moesia Secunda*, of *Dacia*, and of *Pannonia*, each of *spectabilis* rank; and for the official staffs of the *comites* of Egypt, of *Pamphylia*, of *Isauria*, of *Lycaonia* and of *Pisidia*, each of *spectabilis* rank” (Blume 2016, 3035 – modified).

Mentioning the *Limes Moesiae/Mysiae/Mysiachus* and the *Limes Scythiae/Scythicus* as two distinct realities, these so-called explicit mentions are more about the office of *dux* than the limes itself, and it is precisely through the evocation of this function that the *Limes Scythiae/Scythicus* appears for the first time.

### **Limes Scythiae/Scythicus**

While the oldest mention of the *Limes Moesiae/Mysiae/Mysiachus* dates back to 370, as we have seen, those on the *Limes Scythiae/Scythicus* are inscriptions from the early 4<sup>th</sup> century or perhaps even from the very end of

the 3<sup>rd</sup> century. The earliest is a dedication to Cybele in honour of the *Augusti* and *Caesares*, most probably the first Tetrachs, consecrated by the *dux limitis provinciae Scythiae* Aurelius Firminianus, which was found in Tomi:

“*Matri deum / Magnae / pro salute adq(ue) / incolumitate*  
[<sup>5</sup>] dd(ominorum) nn(ostrorum) Augg(ustorum)  
et Caess(arum) / Aur(elius) Firminianus / u(ir)  
p(erfectissimus) dux / limit(is) prou(inciae) Scyt(hiae) /  
bonis auspiciis / consecrauit” (I.Tomis Suppl. 144).

“To the Great Mother of the gods, for the welfare and security of our lords *Augusti* and *Caesares*, Aurelius Firminianus, *uir perfectissimus*, *dux* of the limes of the province of Scythia, dedicated [this] with good auspices” (Campbell 1994, 239, no. 389 – modified; cf. Wiewiorowski 2008, 27-31).

The other epigraphic document that can be dated, which is a well-known text from *Troesmis*, is from the time when the three sons of Constantine were ruling together (337-341). From it, we learn that the *dux limitis Scythiae* Sappo had built, in his military district, a defensive work against some Goths:

“*Imp[pp(eratores) Caes(ares)] Fl(auius) Cl(audius)*  
*Constantinus Al(amannicus) max(imus) Germ(anicus)*  
*max(imus) et] / Fl(auius) Iul(ius) Constantius*  
*Sarm(aticus) [Per]si[cu]s [max(imus) et] / [Fl(auius)]*  
*Iul(ius) Constans Sarm(aticus) pii felices Aug<g>(usti)*  
[<sup>5</sup>] *locum in parte limitis positum gentilium / Gotho[ru]*  
*m temeritati semper aptis / simum ad [co]nfirmendam*  
*prouincialium / [s]uorum [ae]ternam securitatem*  
*erecta is / tius fabr[ic]ae munitione clausur[us] t*  
*latru[nc]ulorumque impetum peren / nis mun[im]inis*  
*dispositione tenuerun[t] / adcurante Sappone u(iro)*  
*p(erfectissimo) duce limitis / Scythiae”* (CIL III.12483; ILS 724).

“The *Imperatores Caesares* Flavius Claudius Constantinus, *Alamannicus maximus* and *Germanicus maximus*, Flavius Julius Constantius, *Sarmaticus* and *Persicus maximus*, and Flavius Julius Constans, *Sarmaticus*, pious and happy *Augusti*, closed the access to this place located on a portion of the limes, because it had always been too exposed to the impetuosity of the nation of the Goths, by erecting the rampart of this fortification; they did this to eternally strengthen the safety of their provincials. They have, in addition, put an end to the onslaught of brigands by installing this eternal rampart. The responsibility [for this work] has been entrusted to the *uir perfectissimus* Sappo, *dux* of the limes of Scythia” (translation author, relying on Le Bohec 1991, 325; cf. Wiewiorowski 2008, 36-37).

The third inscription that could mention such a *dux*, which is an early 4<sup>th</sup> century text from *Axiopolis*, is too fragmentary to tell us anything:

“[---]ius u(ir) p(erfectissimus) du[x] limitis prouinciae Scythiae ---]” (I.Chr. România 192).

“-ius, *uir perfectissimus*, *dux* of the limes of the province of Scythia” (translation author; cf. Wiewiorowski 2008, 32).

To this little corpus we can add a fourth inscription, not mentioning a *dux*, but the limes itself. It is dedicatory plaque from the city gate of *Tropaeum Traiani*, mentioning the construction of a new fortification *a fundamentis*, under the auspices of the praetorian prefects of Constantine and Licinius, in order to strengthen the watching of the limes:

“*Romanae securitatis libertatisq(ue) uindicibus /*  
*dd(ominis) nn(ostris) Fl(auius) Val(erio) Constantino*  
*et [[Liciniano]] / [[Licinio]] piis felicibus aeternis*  
*Augg(ustis) / quorum uirtute et prouidentia edomitis /*  
*ubique barbararum gentium populis / ad confirmandam*  
*limitis tutelam etiam / Tropaeensium ciuitas auspicato*  
*a fundamentis / feliciter opere constructa est. /*  
*Petr(onius) Annianus u(ir) c(larissimus) et Iul(ius)*  
*Iulianus u(ir) em(inentissimus) praefecti praet(orio)*  
*numini eorum semper dicatissimi”* (I.Tropaeum 16).

“[Being] defenders of the Roman security and freedom, our lords Flavius Valerius Constantinus and Licinianus Licinius, pious, happy and eternal *Augusti*, by whose virtue and wisdom the people of the barbarian nations were tamed everywhere, in order to ensure the durability of the limes, [there] was successfully built, from the foundations, the city of the *Tropaeenses*. The praetorian prefects Petronius Annianus, *uir clarissimus*, and Julius Julianus, *uir eminentissimus*, fully devoted, forever, to their divine will [dedicated this]” (translation author, relying on I.Tropaeum 16).

Obviously, there are other attestations of the *duces* of Scythia, of both *Moesiae*, or, to be even more exhaustive, of *Dacia Ripensis*, for example in the *Notitia Dignitatum* (*Notitia dignitatum*, *Oriens* 1.52-53 and 55-56, 39.1, 11 and 43, 40.1, 10 and 50, 41.1, 11 and 47, and 42.1, 12 and 51; Neira Faleiro 2006, 151, 285, 287-289, 291-293, 295-297 and 299-300). However, this little overview is not about the office of *dux*, but about the *limites* themselves.

There are two last mentions of the *Limes Scythiae*/ *Scythicus* in literary sources, which are found in a very complex work for the historian to use, as a significant part of its content is imaginary, that is to say the *Historia*

*Augusta*, which was composed at the time of Theodosius I according to the latest studies (without claiming that this study has the solution (Kulikowski 2021) which presents all the positions and the bibliography associated with them). In it, the life of Claudius II Gothicus claims that he made Goths *coloni* on the limes after their defeat in 270:

*“Pugnatum est enim apud Moesos et multa proelia fuerunt apud Marcianopolim. Multi naufragio perierunt, plerique capti reges, captae diuersarum gentium nobiles feminae, inpletae barbaris seruis Scythicisque cultoribus Romanae prouinciae. Factus limitis barbari colonus e Gotho. Nec ulla fuit regio quae Gothum seruum triumphali quodam seruitio non haberet”* (Diuus Claudius 9.4-5; Paschoud 2011, 229-230).

“For there was fighting in *Moesia* and there were many battles near *Marcianopolis*. Many perished by shipwreck, many kings were captured, noble women of divers tribes taken prisoners, and the Roman provinces filled with barbarian slaves and Scythian husbandmen. The Goth was made the tiller of the barbarian limes. Nor was there a single district which did not have Gothic slaves in triumphant servitude” (Magie 1982, 169 – modified).

As for the life of Aurelian, it tells us that the *dux limitis Scythici* Avulnius Saturninus was on the left of the emperor Valerian when this latter gave a speech in the baths of Byzantium, to honour the ‘young’ military commander Aurelian, for his service to Empire, on the Eastern Danubian frontier, at an unknown moment in the 250’s:

*“Cum consedisset Valerianus Augustus in thermis apud Byzantium, praesente exercitu, praesente etiam officio Palatino, adsidentibus Nemmio Fusco consule ordinario, Baebio Macro praefecto praetorii, Quinto Ancario praeside orientis, adsidentibus etiam a parte laeua Auulnio Saturnino Scythici limitis duce et Murrentio Mauricio ad Aegyptum destinato et Iulio Tryphone Orientalis limitis duce et Maecio Brundisino praefecto annonae Orientis et Vlpio Crinito duce Illyriciani limitis et Thracici et Fulvio Boio duce Raetici limitis Valerianus Augustus dixit: Gratias tibi agit, Aureliane, res publica quod eam a Gothorum potestate liberasti; abundamus per te praeda, abundamus gloria et his omnibus, quibus Romana felicitas crescit. [...]”* (Diuus Aurelianus 13.1-2; Paschoud 1996, 25-26).

“When Valerian *Augustus* had taken his seat in the public baths of Byzantium, in the presence of the army and in the presence of the officials of the Palace, there being seated with him Nemmius

Fuscus, the consul *ordinarius*, Baebius Macer, praetorian prefect, and Quintus Ancharius, governor of the East, and seated on his left hand, Avulnius Saturninus, *dux limitis Scythici*, Murrentius Mauricius, just appointed to Egypt, Julius Trypho, *dux limitis Orientalis*, Maecius Brundisius, prefect of the *Annona* for the East, Ulpius Crinitus, *dux limitis Illyriciani et Thracici*, and Fulvius Boius, *dux limitis Raetici*, Valerian *Augustus* spoke as follows: The *Res publica* thanks you, Aurelian, for having set it free from the power of the Goths; through your efforts we are rich in booty, we are rich in glory and in all that causes the felicity of Rome to increase. [...]” (Magie 1982, 219 – modified).

While the first piece of information is probable, the second story is more than doubtful, since many details – especially the existence of the office of *dux limitis* and of the province of Scythia – seem totally anachronistic (the commentary in Paschoud 1996, 94-96).

## Conclusion

It is clear that it is impossible to draw a satisfactory synthesis from the eleven quotations which have just been made. To study this topic adequately, it would be necessary to go further, by integrating all the indirect and implied mentions, such as in chapter 41.2-3 of Tacitus’ *Agricola* (Delz 2010, 33-34), the Novel 41 of Justinianus (Schöll & Kroll 1954, 262-263), many passages of Ammianus Marcellinus or the *Notitia Dignitatum*, as well as by fully considering archaeological evidence. In the same way, we should fully consider the documentation about *Dacia Ripensis*, in particular the sources on the *duces* of this province, such as chapter 5.17 in *Origo Constantini Imperatoris* of Anonymus Valesianus (König 1987, 42-43) or the constitution 1.13 of book 15 of the *Codex Theodosianus* (Mommesen & Krüger 1905, 804). Moreover, we should dig deeper into the Greek texts. It is nevertheless interesting to note that the expressions *Limes Moesiae/Mysiae/Mysiicus* and *Limes Scythiae/Scythicus*, as well as their derivatives, are fully attested, which is not the case for all the *limites* identified by modern archaeologists and historians, and that the first expression continued to be used, without more precision (viz. *Prima* and *Secunda*) even after the division of *Moesia* by Diocletian.

A few other small elements can be deduced from the sources quoted. For example, we can propose the following uncertain historical reconstruction for the earliest period of both *limites*. If we rely on Festus, the *Limes Moesiae/Mysiae/Mysiicus* would have been formally created at the time of Marcus Aurelius, while the *Historia Augusta* claims that a *dux* of the *Limes Scythiae/Scythicus* was already in office under Valerian,

although this is most probably fictional. Nevertheless, its *duces*, as well as those of *Moesia Prima* and *Secunda*, and *Dacia Ripensis*, are fully attested from the very end of the 3<sup>rd</sup> and the early 4<sup>th</sup> centuries, as they are mentioned in the inscriptions, even participating in the construction and reconstruction of fortifications and craft on the Danube. Furthermore, but nothing is new here, most of the sources mentioned inform us that neither the *Limes Moesiae/Mysiae/Mysiaca* nor the *Limes Scythiae/Scythicus* were simple linear boundaries, but real military districts deep enough to settle colonists on.

Finally, the comparison between the testimonies of *Limes Moesiae/Mysiae/Mysiaca* and *Limes Scythiae/Scythicus* seems to show that these expressions could not have referred to the same phenomenon in the texts: the first one being a generic expression for the border region covered by historical Moesia, which corresponds to *Moesia superior* and the eastern part of *Moesia inferior*, while the second one was the name of the Late Antique administrative military district linked to the province of *Scythia*. In the same way there was a *Limes Moesiae Primae*, à *Limes Moesiae Secundae* and a *Limes Daciae Ripensis*, as the mentions of their respective *duces* tell us. From the two simple examples briefly studied here, we can see once again that the *limes* did not refer to a uniform reality in Late Antiquity, but that it was then a polysemic term, whose subtleties still largely elude the researchers who use it (Moreau in press).

## Acknowledgement and note

The author gives a special thanks to the École française de Rome, where he was a visiting scholar for a period of 10 months (09/01/2022-06/30/2023) when these lines were written. A longer version of this paper, entitled 'Le *limes* bas-danubien d'après les sources historiques' was initially prepared for the international conference *Граници, култури, идентичност – Frontières, cultures, identité*, organised by the Centre for Slavo-Byzantine Studies 'Prof. Ivan Dujčev' of Sofia University 'Sv. Kliment Ohridski', on the 26<sup>th</sup> and 27<sup>th</sup> of October 2018. Unfortunately, a personal contingency prevented the author from participating both in the symposium and the publication.

## Abbreviations

CIL: *Corpus Inscriptionum Latinarum*  
 I.Chr. România: Popescu 1976  
 I.Tomis Suppl.: Avram *et al.* 2018  
 I.Tropaeum: Popescu 2015  
 ILS: *Inscriptiones Latinae Selectae*

## Bibliography

- Antal, C., 1863: Magyar Tudom Akadémia. Junius – Julius, *Budapesti Szemle* 18, 117-144.
- Avram, A., M. Bărbulescu & L. Buzoianu 2018: *Inscriptiones Scythiae minoris Graecae et Latinae VI. Supplementa 2. Tomis et territorium*, București.
- Banchich, T.M. & J.A. Meka, 2001: Breviarium of the accomplishments of the Roman People, in: *De Imperatoribus Romanis. An online encyclopedia of Roman rulers and their families*, Buffalo (Canisius College Translated Texts 2, <https://web.archive.org/web/20220304140028/http://www.roman-emperors.org/festus.htm>).
- Blume, F.H., 2016: *The Codex of Justinian*. A new annotated translation, with parallel Latin and Greek text based on a translation by Justice Fred H. Blume, with the collaboration of S. Connolly, S. Corcoran, M. Crawford, J.N. Dillon, D.P. Kehoe, N. Lenksi, T.A.J. McGinn, C.F. Pazdernik & B. Salway, Cambridge.
- Campbell, B., 1994: *The Roman army, 31 BC-AD 337. A sourcebook*, London.
- Châtelain, H.A. (or Z.) & H.-Ph. de Limiers, 1720: *Supplément à l'Atlas historique, contenant diverses pièces de chronologie, de genealogie, d'histoire, & d'autres sciences qui avoient été omises dans les précédens volumes*. [...], Amsterdam.
- Daniel, G., 1713: *Histoire de France, depuis l'établissement de la monarchie françoise dans les Gaules* 1, Paris.
- Delz, J. (ed.), 2010: *P. Cornelius Tacitus libri qui supersunt 2/3. Agricola*, Berlin/New York (2<sup>nd</sup> edition, Bibliotheca scriptorum Graecorum et Romanorum Teubneriana 1839).
- De Marca, P., 1688: *Marca Hispanica sive Limes Hispanus. Hoc est Geographica & historica descriptio Cataloniae, Ruscinonis, & circumjacentium populorum*, Paris.
- De Romestin, H., E. de Romestin & H.T.F. Duckworth, 1896: *St. Ambrose. Select works and letters*, Oxford/New York (Nicene and Post-Nicene Fathers of the Christian Church. Second Series 10).
- Faller, O. (ed.), 1962: *Sancti Ambrosii opera VIII. De fide [ad Gratianum Augustum]*, Vienna (Corpus Scriptorum Ecclesiasticorum Latinorum 78).
- Friedlieb, F., 1518: *Germaniae exegeseos uolumina duodecim*, Hagenau.
- Holder-Egger, O. (ed.), 1887: *Ex Adrevaldi Floriacensis Miraculis S. Benedicti*, in: *Monumenta Germaniae historica. Scriptores* 15/1, 474-501.
- König, I. (ed.), 1987: *Origo Constantini. Anonymus Valesianus 1. Text und Kommentar*, Trier (Trierer historische Forschungen 11).

- Krüger, P. (ed.), 1954: *Corpus iuris civilis* 2. *Codex Iustinianus*, Berlin (11<sup>th</sup> ed.).
- Kulikowski, M., 2021: The Historia Augusta. Minimalism and the adequacy of evidence, in: W.V. Harris & A.H. Chen (eds), *Late Antique studies in memory of Alan Cameron*, Leiden/Boston (Columbia Studies in the Classical Tradition 46), 23-40.
- Le Bohec, Y., 1991: La genèse du limes dans les provinces de l'Empire romain, *Revue historique de droit français et étranger* 69, 307-330.
- Luttwak, E.N., 2016: *The Grand Strategy of the Roman Empire. From the first century CE to the third*, Baltimore.
- Magie, D., 1982: *The Scriptores Historiae Augustae* 3, Cambridge, MA/London (The Loeb Classical Library 263).
- Mommsen, T. & Krüger (eds), 1905: *Theodosiani Libri XVI cum Constitutionibus Sirmondianis et leges Novellae ad Theodosianum pertinentes* 1/2. *Theodosiani Libri XVI cum Constitutionibus Sirmondianis*, Berlin.
- Moreau, D., 2022: Gouverner et défendre les provinces frontalières entre 98 et 410, in: S. Destephen (ed.), *Gouverner l'Empire romain de Trajan à 410 après J.-C.*, Paris, 251-257.
- Moreau, D., in press: The concept of 'limes' in the textual sources. A short preliminary study, in: *Limes Congress XXIV. 24<sup>th</sup> International Limes Congress*, Belgrade.
- Neira Faleiro, C. (ed.), 2006: *La Notitia dignitatum. Nueva edición crítica y comentario histórico*, Madrid.
- Nickbakht, M.A. & C. Scardino (eds), 2022: *Rufius Festus, Breviarium*, in: B. Bleckmann, M.A. Nickbakht & C. Scardino (eds), *Enmannsche Kaisergeschichte. Rufius Festus, Breviarium*, Paderborn (Kleine und fragmentarische Historiker der Spätantike B1 & B4), 219-386.
- Paschoud, F. (ed.), 1996: *Histoire auguste* 5/1. *Vie d'Aurélien, Tacite*, Paris (Collection des universités de France. Série latine 335).
- Paschoud, F. (ed.), 2011: *Histoire auguste* 4/3. *Vie des trente tyrans et de Claude*, Paris (Collection des universités de France. Série latine 400).
- Pharr, C., with T.S. Davidson & M.B. Pharr, 1952: *The Theodosian Code and Novels and the Sirmondian Constitutions* (The Corpus of Roman Law 1), Princeton.
- Popescu, E., 1976: *Inscriptiile grecești și latine din secolele IV-XIII descoperite în România*, București.
- Popescu, E., 2015: *Inscriptiones Scythiae minoris Graecae et Latinae* IV. *Supplementa* 2. *Tropaeum, Durostorum, Axiopolis*, București.
- Rolfe, J.C., 1939: *Ammianus Marcellinus* 3, Cambridge, MA/London (The Loeb Classical Library 331).
- Schöll, R. & W. Kroll (eds), 1954: *Corpus iuris civilis* 2. *Novellae*, Berlin (6<sup>th</sup> edition).
- Van Waning, J.W., 2010: Châtelain's Atlas Historique. New evidence of its authorship, *Journal of the International Map Collector's Society* 120, 7-15.
- Wiewiorowski, J., 2008: *Duces of Scythia Minor. A prosopographical Study* (Xenia Posnaniensia Monografie 8), Poznań.





# Die Ausdehnung und Grenzen der Provinz *Dacia*

Zsolt Visy

Das dakische Königtum bedeutete eine ernste Bedrohung für das *Imperium Romanum* in den letzten Jahrzehnten des 1. Jh. n. Chr. Domitian leitete zwei schwere Kriege gegen sie (85-88 n. Chr.), in denen sogar zwei römische Armeen vernichtet wurden. Eine endgültige Lösung folgte erst in den Jahren 101-106 n. Chr., als Traian in zwei blutigen Kampagnen den Sieg errungen hat. Es ist von Bedeutung, dass sich in der zweiten Kampagne schon etwa ein Drittel der ganzen römischen Armee beteiligte. Den harten Widerstand folgte starke Vergeltung. Laut Eutropius (*Breviarium Historiae Romanae* 8.2.6) verminderte sich die Anzahl der Urbevölkerung so stark, dass die Provinz mit aus dem ganzen Reich umgesiedelten Gruppen musste wieder aufgefüllt werden, „...*Traianus Dacia victa ex toto orbe Romano infinitas eo copias hominum transtulerat ad agros et urbes colendas. Dacia enim diuturno bello Decibali viris fuerat exhausta*“. Die archäologische und epigraphische Angaben bestätigen die großangelegte Ansiedlung.

Die zwischen den beiden Kampagnen eroberten Gebiete in der Umgebung des Eisernen Tores und in der rumänischen Tiefebene wurden zuerst Ober- und Untermoesien angeschlossen, und Traian berücksichtigte diese Gebiete während der Bestimmung der Grenzen der neuen Provinz. Hadrianus hat aber für die Aufgabe mehrerer von seinem Vorgänger eroberten Gebiete entschieden, und orderte die römischen Truppen zurück. Diese Maßnahme bedeutete vornehmlich die Entleerung der Gebiete östlich des Euphrats. Nur zwei traianische Provinzen wurden von ihm verschont, *Arabia* und *Dacia*. *Arabia* war wichtig für Rom wegen ihrer Position als Bindeglied zwischen *Syria* und *Aegyptus*, und *Dacia* wegen ihrem Reichtum an Gold und Salz. Infolge der wirtschaftlichen und politischen Interessen verringerte er aber das Gebiet dieser Provinz, und entleerte Muntenien und die Banater Region westlich der Linie *Dierna-Tibiscum*. *Dacia* existierte in dieser Form etwa 150 Jahre lang, als Aurelian die nur schon fast vollständig truppenlose und von den Germanen eroberte Provinz in 271 aufgab. Er gründete aber eine andere *Dacia* zwischen *Moesia superior* und *Moesia inferior*, *Dacia nova* mit dem Hauptstadt *Serdica* (Sofia), und lies die Restbevölkerung von Dazien übersiedeln: „*cum vastatum Illyricum et Moesiam videret, provinciam Transdanuvinam Daciam a Traiano constitutam sublato exercitu ac provincialibus reliquit, desperans eam posse retineri, abductosque ex ea populos in Moesia conlocavit appellavitque suam Daciam, quae nunc duas Moesias dividit*“ (Scriptores Historiae Augustae, *Vita Aureliani* 39.3).

Die bisherigen archäologischen und historischen Forschungen haben viele Erkenntnisse und gründlich fundierte Ergebnisse gebracht, demzufolge ist die Ausdehnung und die Grenzlinie der Provinz weitgehend bekannt. Sie sind aber manchmal von der Zusammenmischung der traianischen und hadrianischen Grenzlinien falsch interpretiert.

**Zsolt Visy**

University of Pécs, Hungary,  
zs.visy@gmail.com



Abbildung 1. Die frühere Karte von Dakien, 106-271 n. Chr. ([https://commons.wikimedia.org/w/index.php?title=File:Roman\\_province\\_of\\_Dacia\\_\(106\\_-\\_271\\_AD\).svg&oldid=339744894,12-1-2020](https://commons.wikimedia.org/w/index.php?title=File:Roman_province_of_Dacia_(106_-_271_AD).svg&oldid=339744894,12-1-2020)).

Obwohl die alten Vorstellungen über die Ausdehnung von Dakien – in dem 19. Jh. das ganze Gebiet südlich von dem Donauknie bei Visegrád bis zum Schwarzen Meer – von der ungarischen und rumänischen Forschung rechtfertigt wurden, tauchte der Vorschlag in der rumänischen Literatur mehrfach auf, dass Banat entlang der Mureș/Maros, Tisa/Tisza und Donau dakisches Provinzgebiet war (Abb. 1). Ein wissenschaftsgeschichtliches Beispiel dieser Kontrovers ist die *Tabula Imperii Romani* L 34 (Abb. 2), wo die Grenzlinie im jugoslawischen und ungarischen Gebiet richtig, aber im rumänischen Gebiet falsch angegeben wurde (Soproni 1968).

Diese Debatte wurde in den neunziger Jahren wieder in Diskussion gestellt (Visy 2009a), und von E. Nemeth endgültig abgeschlossen (Nemeth 2005; Visy 2009b). Er konnte erweisen, dass die westliche Festungslinie

zwischen *Viminacium* (Kostolac) und *Tibiscum* (Jupa) nur unter Traian existierte, ab Hadrian wurde die Grenze auf die Linie *Dierna* (Orșova) – *Tibiscum* (Jupa) umgesetzt.

Die andere, in Frage gestellte Grenze befindet sich in Muntenien. Hier gibt es zwei Linien, eine dem Olt entlang, die andere östlich von ihm. Die römischen Truppen wurden in den Kastellen der westlichen Linie stationiert, während die östliche Linie besteht entlang einem kurzlebigen Erdwall aus Wachtürmen und Kleinfestungen. Der Erdwall wurde nur in dem südlichen Bereich in einigen Strecken aufgehäuft. Abgesehen von einigen traianischen Kastellen gibt es hier nur einige Kleinkastelle und Türme. Die in der modernen Fachliteratur als '*Limes Transalutanus*' genannte Linie – Straße, Wall, Türme und Kleinkastelle – beginnt kaum 10 km östlich der Mündung des Flusses Olt in die Donau, biegt sich aber bald nach Osten





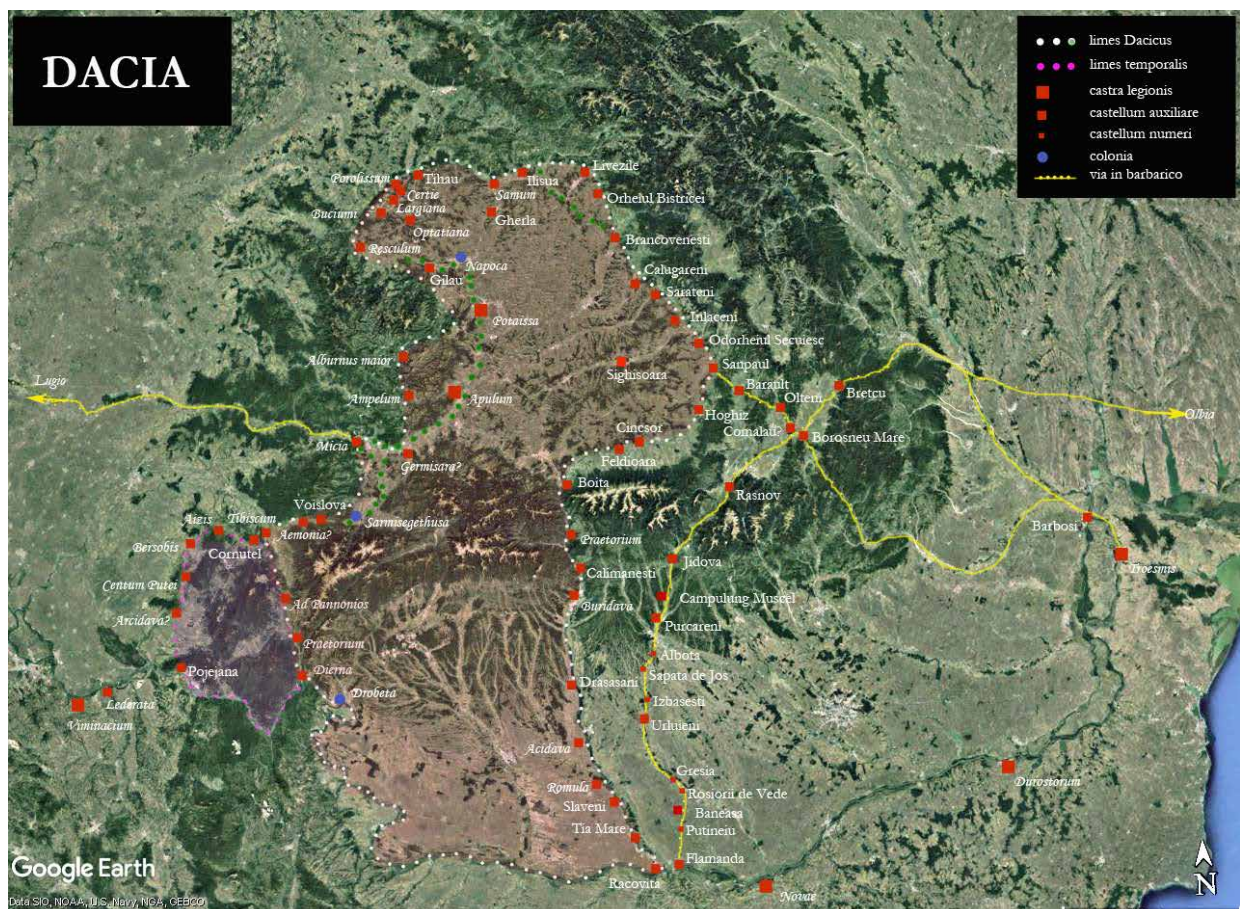


Abbildung 3. Die Karte von Dakien nach den letzten Forschungsergebnissen (© Zs. Visy).

wo sogar villenartige Gebäude – wohl für sie – errichtet wurden (Visy 2002, 203-206. Laut anderer Forscher waren sie von den Römern erbaute germanische Fürstensitze, Kolník 1999, 132 und 135). Einem solchen Vertrag zufolge ließ Caracalla in 213 den Frieden gebrochenen König der Quaden, Gaibomarus, zu sich nach Pannonien ordern und ohne Folgen hinrichten (Cassius Dio *Historia Romana* 77.20.3-4). Obwohl wir über keine diesbezügliche, ähnliche Quelle für Dakien verfügen, es liegt auf der Hand anzunehmen, dass ein ähnlicher Friedensvertrag und eine identische Organisation die römische Hegemonie rund um Dakien gesicherte. Unter solchen Umständen konnte die schwache Turmkette mit ihren wenigen Soldaten die römischen Interessen versichern.

Der *Limes Transalutanus* besteht aber nicht nur aus wenigen Bauten, sondern ist er eine teils befestigte Linie, die die Donau und die Karpaten bogenartig verbindet. Da ihre Interpretation als Provinzgrenze vollständig auszuschließen ist, bleibt nur eine Möglichkeit, um ihre Existenz zu begründen: sie war eine befestigte Straße. Wenn man nun aus dieser Prämisse ausgeht, kann eine beruhigende Lösung gefunden werden. Es kann kein Zufall

sein, dass der *Limes Transalutanus* von der Donau gleich zu dem Bran/Töröcsvár Pass läuft, das von vorherin darauf hindeutet, dass er eine Straße war. Die Frage erhebt sich aber, ob was für einen Zweck eine solcherweise befestigte Straße diente, die nur bis zum diesem Pass, also nach Dakien läuft. Man muss seine Linie weiterverfolgen, und wird dann erkennen, dass diese Straße nicht nur bis zu dieser Stelle lief, sondern weiter innerhalb der Bergkette, um dann bei Oituz/Ojtoz das Karpatenbecken zu verlassen. Drei Kastelle wurden hier in seiner Linie gebaut: in Râșnov/Barcarozsnyó bei dem Bran/Töröcsvár Pass, in Boroșneu Mare/Nagyborosnyó in der Nähe des Buzău/Bodza Passes, und für die Überwachung des Verkehrs durch den Oituz/Ojtoz Pass in Brețcu/Bereck. Hier konnte man das moldawische Gebiet erreichen, um nach Barboși und Troesmis zu gehen. Diese Verbindungsstraße gesicherte auch die Festlandverbindung mit den griechischen Städten in der Nordküste des Schwarzen Meeres (Abb. 3). Ein weiterer Beweis für die Existenz dieser römischen Straße wurde 2 km nördlich von der Gemeinde Oituz/Ojtoz in 1981 gefunden und teils ausgegraben. Aus dem 7 × 7 m großem Wachturm gestempelte Ziegel der *Cohors I*

*Bracaraugustanorum* und der *Cohors I Hispanorum* kamen ans Tageslicht (Székely 2003, 135 sk, Abb. 2).

Der *Limes Transalautanus* ist also kein anderes als die südliche Strecke einer Straße, die Moesien mit Troesmis, Olbia und mit anderen Küstenstädten auf dem Festland verband. Rom baute solche Straßen auch anderswo im Barbaricum. Eine ähnliche Straße war die Dakien mit Pannonien entlang dem Maros und durch die Tiefebene verbindende Straße zwischen *Lugio* (Dunaszekcső) und *Micia* (Veřel), aber bekanntlich gab es eine Verbindung auch zwischen *Aquincum* (Budapest) und *Porolissum* (Moigrad), ferner zwischen *Aquincum* / *Intercisa* (Dunaújváros) und Bologa/Sebesvár. Gabler und Vaday (1986) konnte die aus *Aquincum* ausgehende Handelsstraße in der Tiefebene aufgrund der Terra Sigillata Funden bestimmen, und Vaday (2003) konnte in ihrer Dissertation weitere mögliche Straßenlinien nachweisen. Diese Straßen dienten in erster Linie als Handelsstraßen und gegebenenfalls als Militärstraßen, und konnten so lange in Betrieb gehalten werden, bis die römische Hegemonie durch Foederatenverträge aufrechterhalten werden konnte.

Die Verbindungsstraße Donau – Schwarzes Meer wurde aber nicht in der Severerzeit errichtet. Sie existierte wohl schon in der Vorgeschichte, und auch früher in der Römerzeit, bestätigt nicht nur durch das Kastell Râşnov/Barcarozsnyó, Boroşneu Mare/Nagyborosnyó und Breţcu/Bereck), sondern auch durch die Kastelle Flămânda, Băneasa, Purcăreni(?) und Câmpulung Muscel I (Gudea 1997; Bogdan-Cătănicu 1981; Ţentea & Matei-Popescu 2018 mit der Karte von *Limes Transalutanus* und der Kastellen östlich davon). Es kann auch kein Zufall sein, dass die wichtige Landstraße E 574 von Turnu Măgurele bei der Donau via Piteşti-Braşov-Breţcu nach Bacău/Bákó und zu der Donau läuft.

Angenommen diese Deutung ist es erforderlich, die Rolle der Kastelle in der südöstlichen Ecke des Karpatenbeckens nachzuprüfen. Das Kastell Râşnov/Barcarozsnyó liegt bei dem Bran/Töröcsvár Passes, die von Breţcu/Bereck bei dem des Oituz/Ojtoz Passes. Sie kontrollierten den Verkehr durch diese Pässe. Dieselbe Rolle hatte das Kastell Boroşneu Mare/Nagyborosnyó, das sich in der Kreuzung der Râşnov-Breţcu und der Sânpaul/Homoródszentpál-Barault/Barót-Buzău/Bodza Pass Straßen befindet. Seine Aufgabe war die Kontrolle des Verkehrs und die Verteidigung des Buzău/Bodza Passes. Diese Kastelle sind also nicht als Limeskastelle zu beurteilen, sondern als Festungen für die Kontrolle des hin- und herauslaufenden Verkehrs.

Demzufolge ist die Ostgrenze von Dakien anderswo als früher zu suchen. Die Kastellenkette ist bekannt, sie stehen entlang des Olt, und diese Ordnung entspricht vollständig der römischen strategischen Logik. Die Garnisonen wurden beginnend von dem Turnu Roşu/Vöröstorony Pass in Boiţa/Bojca, Feldioara/Földvár, Cincşor/Kissink,

Hoghiz/Olthévíz stationiert. Die Kastelle wurden stets an der rechten Seite des Olt, also an der Nordseite gebaut. Es ist einwandfrei, dass der Fluss Olt nicht nur in Oltenien, sondern auch innerhalb des Karpatenbeckens bis zu Hoghiz/Olthévíz die Flußgrenze der Provinz bildete. Wir haben keinen Grund anzunehmen, dass der Limes auf den Südkarpaten gelaufen wäre, das Gebiet südlich des Olt muss also als Provinzgebiet gestrichen werden. Der Limes bog wohl bei Hoghiz/Olthévíz nach Norden, und entlang des Flusses Homorod/Homoród das Kastell Sânpaul/Homoródszentpál erreichte. Eine mögliche Annahme auch das Kastell Barault/Barót als Limeskastell vorauszusetzen ist wohl auszuschließen, da die geographischen Verhältnisse zwischen Hoghiz/Olthévíz und diesem Kastell die optimale Linienführung der Limeszone nicht ermöglichten. Es gab – und es gibt – eine vom Fluss Homorod/Homoród, also vom Limes bei Sânpaul/Homoródszentpál abzweigende Straße, die nach Südosten laufend nach Barault/Barót, und danach nach Comolău/Komolló und Boroşneu Mare/Nagyborosnyó lief. Diese Straße gesicherte die Verbindung von Dakien nach Süden mit *Moesia* und mit den Städten der Meeresküste. Die Garnisonen der vorgeschobenen, außerprovinzialischen Kastellen (*outposts*) gehörten der Armee von *Dacia inferior*.

Dieses Phänomen steht im vollen Einklang mit der römischen Machtlogik, dass die Nachbargebiete Rom gehören und unter römischer Kontrolle stehen. Als Hegemon dürfte Rom sich in die barbarischen Machtverhältnisse einmischen, die Nachbargebiete ständig überprüfen, das Vorfeld der Provinzen unter vorheriger Kontrolle halten. Dies wurde durch diplomatische Behandlungen, Friedensverträge oder einfach auf Grund der stärkeren Macht erreicht und verwirklicht. Diese Organisation ließ sich durch zahlreiche literarische und archäologische Belege bestätigen rund um die Grenzen des Römischen Reiches (Breeze 2011, 184-193 mit zahlreichen Beispielen). Eine analoge Situation wie rund um Dakien können die *outposts* entlang der Deerstreet nördlich der Hadrian's Mauer in dem 2.-3. Jahrhundert mit Risingham, High Rochester und anderen Kastellen zu beobachten (Breeze & Dobson 2000, 142-145).

Das Gebiet von Dakien wurde in Transsilvanien vornehmlich durch Berggrenzen geschützt. Diese Art des Limesausbaus wurde auch in anderen Grenzprovinzen angewandt (Breeze 2011, 53-163). Eine allgemeine Charakteristik ist, dass die geographischen Eigenschaften in vollem Maße ausgenutzt wurden, und dass die genaue Grenzlinie stets auf den Bergkämmen lief, ferner, dass die Grenzkastelle nicht oben, sondern bei den Füßen der Berge, in den Wällen gebaut wurden, wo die Lebensbedingungen und die guten Verkehrsmöglichkeiten gesichert werden konnten. Die Kastelle standen so nah wie möglich zum

eigentlichen Limes und dessen Wachttürmen, um den visuellen Kontakt zu besichern. Dieses System wurde in Dakien zuerst an der Westseite in der Meseş/Meszes Gebirge nachgewiesen (Ferenczi 1956, 153-173; 1974, 127-136; Gudea 1979, 63-87), und unlängst an der östlichen Limeslinie der Provinz zwischen Brâncoveneşti/Marosvécs und Odorheiul Secuiesc/Székelyudvarhely (Visy 2009c). Die unter konsequenter Anwendung dieses Systems und unter Berücksichtigung der topographischen Verhältnisse gezogene genaue Linienführung des Limes vermindert die Ausdehnung von Dakien. Ein 10-50 km breiter Streifen außerhalb der Kastelle und Wachturmreihe ist demgemäß nicht annehmbar.

Eine Angabe über Dakien von Eutropius und Rufius Festus (Eutropius *Breviarium Historiae Romanae* 8.2.2; Rufius Festus *Breviarium rerum gestarum populi Romani* 8.2) wird selten zitiert und behandelt. In *Breviarium* 8.2 schreibt Eutropius, dass *provincia Dacia* „*decies centena milia p(assuum) in circuitu tenuit*“. Ausgehend der allgemein angenommenen Umrechnung der römischen Meilen als 1481 m der Perimeter der Provinz war 1000 × 1483 m = 1483 km. Es lohnt sich diesen Abstand mit der jetzt modifizierten Grenzlinie von Dakien vergleichen. Eine flüchtige Messung zeigt, dass diese modifizierte Grenzlinie von etwa 1450 km der Angabe von Eutropius gut entspricht. Das Zweifel von I. Piso (2008, 302) angesichts der 1480 km Länge ist einerseits richtig, andererseits aber nicht, weil er mit einer größeren Provinz rechnete.

Eine alte Schuld der Forschung ist die genaue Bestimmung des Limes zwischen Bologa/Sebesvár und Micia. Die archäologischen Untersuchungen brachten in dieser Nord-Süd Linie kein Ergebnis, bloß für das Goldgebiet, Abrud/Abrudbánya und Roşia Montană/Verespatak stehen archäologische und historische Quellen zur Verfügung (Damian *et al.* 2003-2008). In Abrud war ein in Holz-Erde Technik gebautes Numeruskastell (Gudea 1997, 39, Nr. 20). Die neuesten Forschungen von F. Marcu (2016, 4-10 mit Karte von Dakien, aber dazu auch Ţentea 2009, 371-381) haben die Situation erklärt, nachdem einige Wachttürme südlich von Gilău/Gyalu nachgewiesen werden konnten. Demgemäß hatte der Limes zwischen Gilău/Gyalu und Micia eine große Biegung nach Osten, und nur das Goldgebiet wurde fest als Provinzgebiet aufrechterhalten.

Für den Limes zeichnete Marcu zuerst eine Linie, die auch das Goldgebiet umfasste, damit man einverstanden sein kann. In einer neueren Arbeit gab er aber seine frühere Vorstellung auf, und bestimmte die Grenze in der Linie von Gilău/Gyalu-Napoca-Potaissa-*Ad Batavos* (Razboieni/Székelykocsárd), und von hier entlang des Mureş/Maros (Breeze *et al.* 2021, 77, fig.124). Diese Auffassung scheint unrichtig zu sein, desto mehr, da die Festungen *Ad Batavos* (Razboieni/Székelykocsárd),

*Apulum* und *Germisara* (Cigmău/Csigmó) an dem rechten Ufer des Mureş/Maros liegen. Es ist ferner kaum vorstellbar, dass *Ampelum* und *Alburnus Maior* mit ihrem reichen Goldschatz außerhalb der Provinz blieben. Auch die scharfe Ausbiegung der Grenze zu *Micia* (Vecel), die Grenzsituation der Hauptstadt *Sarmizegetusa*, und im Nordosten die Ausklammerung des Kastells von Orheiu Bistriţei scheint unwahrscheinlich zu sein.

Diese Forschungsergebnisse ermöglichen weitere Schlüsse zu ziehen. Wir müssen die frühere Auffassung über Dakiens konzentrische Verteidigung (Gudea 1979, 63-87; 1997) aufgeben, dass in der Mitte die Legionen, in einem inneren Kreis Reitertruppen, und an der Grenzen Fusstruppen stationiert wurden, weil mit der Grenzmodifizierung von Marcu die beiden Legionen, das Kastell Gilău/Gyalu und die Festungen am Ufer des Mureş/Maros in Grenznähe kamen. Die Strategie der Verteidigung von Dakien und der dakischen Armee, ferner die Dislokation der Truppen müssen also nachgeprüft und modifiziert werden.

Die oft ganz unterschiedliche und kontroverse Bestimmung der Grenzen von Dakien ist eine alte Last und alter Schuld der Forschung. Der obige Lösungsvorschlag interpretiert und stellt das mit militärischen Anlagen umgrenzte Gebiet der Provinz dar, das Rom verwaltungsmäßig, wirtschaftlich und in jeder anderen Hinsicht für ihr eigenes Gebiet gehalten hat. Das bedeutete aber nie, dass Gebiete außerhalb konnten von Rom unberührt und ohne Machtausüben bleiben. Ganz im Gegenteil. Anhand Foederatenverträge band Rom die Nachbarstämme und die Satelliten-Staate zu sich, um dadurch ihre Hegemonie zu versichern. Es gibt dafür zahlreiche archäologische, epigraphische und historische Belege aus Britannien, Raetien, Pannonien und anderen Provinzen auch im Osten und in Africa. Die fassbaren Überreste dieser Hegemonie sind die militärischen Anlagen und Bauten im *Barbaricum*. Der *Limes Transalutanus* samt seinen Bestandteilen gehört dieser Gruppe, genauso wie die Pannonien und Dakien verbindende Straße entlang des Maros/Mureş und andere. Solche *outposts* sind aber nur Beweise der römischen Hegemonie, die über keine territoriale Oberhoheit verfügen.

## Konklusion

Die Erforschung der Ausdehnung und der genauen Grenze der Provinz Dazien hat eine lange Geschichte, aber dank der neueren Forschungen und Überlegungen lassen sich diese Fragen als gelöst betrachtet werden. Dieser Beitrag nimmt die östliche Grenzlinie und den sogenannten *Limes Transalutanus* unter Lupe, und beweist, dass dieser Linie nie eine Provinzgrenze war, sondern ein seit geräumiger Zeit benutzter Weg, der von Donau zu Donau führte, welcher in der Römerzeit die Gegend von *Nicopolis ad Istrum* mit *Troesmis* zusammenschloss.



## Bibliographie

- Alföldy, G., 1971: Der Friedensverschluß des Kaisers Commodus mit den Germanen, *Historia* 20, 84-109.
- Bogdan Cătănescu, I., 1981: *Evolution of the system works in Roman Dacia*, Oxford (British Archaeological Reports International Series 116).
- Breeze, D.J. & B. Dobson, 2000: *Hadrian's Wall*, London.
- Breeze, D.J., 2011: *The frontiers of imperial Rome*, Barnsley.
- Breeze, D.J., F. Marcu & G. Cupcea, 2021: *Frontiers of the Roman Empire. The Roman frontiers of Dacia*, Cluj-Napoca.
- Damian, P. (ed.), 2003-2008: *Alburnus Maior I-III*, Bucureşti/Cluj-Napoca.
- Ferenczi, I., 1956: A római Dacia kiterjedésének, védelmének és felosztásának kérdéséhez, *Victor Babeş és Bolyai Egyetem Közleményei, Társadalomtudományi sorozat* I, 153-173.
- Ferenczi, I., 1974: Neue Forschungsergebnisse über den Limes des innerkarpatischen Dakien. *Dacia* 18, 127-136.
- Gabler, D. & A. Vaday, 1986: *Terra Sigillata im Barbaricum zwischen Pannonien und Dazien*. Budapest.
- Gudea, N., 1979: The defensive system of Roman Dacia, *Britannia* 10, 63-87.
- Gudea, N., 1997: Der dakische Limes, *Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz* 44, 1-113.
- Kolnik, T., 1999: Nordpannonische Limesvorland-Forschung 1984-1996, in: N. Gudea (ed.), *Roman frontier studies 1997. Proceedings of the XVII<sup>th</sup> International Congress of Roman Frontier Studies Zadau 1-10 September 1997*, Zala, 131-138.
- Marcu, F., 2016: Frontierele Imperiului Roman în România, *Limes* 1, 4-10.
- Nemeth, E., 2005: *Die Armee im Südwesten des Römischen Dakien*, Timişoara.
- Piso, I., 2008: Les débuts de la province de Dacie, in: I. Piso (Hrsg.), *Die römischen Provinzen. Begriff und Gründung*, Cluj-Napoca, 297-331.
- Soproni, S. (ed.), 1968: *Tabula imperii Romani. Aquincum-Sarmizetegusa-Sirmium. Auf dem Grunde der Weltkarte 1:1000000, L-34 Budapest*, Budapest.
- Székely, Z., 2003: Adatok Kovászna (Háromszék) megye római és népvándorlás korához, in: Székely Zoltán válogatott tanulmányai, Szolnok (Szolnok megyei múzeumi adattár 35), 135-142.
- Țentea, O., 2009: On the defence of aurariae Daciae, in: O. Țentea & I.C. Oprea (eds), *Near and beyond the Roman frontier. Proceedings of a Colloquium held at Târgoviște*, Bucharest, 371-381.
- Țentea, O. & F. Matei-Popescu, 2018: *Between Dacia and Moesia inferior. The Roman forts in Muntenia under Trajan*, Bucharest.
- Tudor, D., 1978: *Oltenia romană*, Bucureşti (4<sup>th</sup> edition).
- Teodor, E.S., 2013: *Uriaşul invizibil. Limes Transalutanus. O reevaluare la sud de râul Argeş, Târgoviște*.
- Teodor, E.S., 2015: A Romanian World Heritage linear site? Unsolved issues, in: S. Cociş, V. -A. Lăzărescu, M. Gui & D.-A. Deac (Hrsg.), *Ad Finem Imperii Romani. Studies In Honour of Coriolan H. Opreanu*, Cluj-Napoca, 373-390.
- Teodor, E.S., 2018a: Mapping change in the Romanian Plain along the 1<sup>st</sup> millennium, until the 7<sup>th</sup> century AD, in: D. Aparaschivei & G. Bilavski (eds), *Studia Romana et Mediaevalia Europænsia Miscellanea in honorem annos lxxv peragentis professoris emeriti Dan Gh. Teodor oblate*, Bucureşti/Brăila, 431-465.
- Teodor, E.S., 2018b: Watching and warning along the Limes Transalutanus. The Research for watchtowers along its southern sector, in: C.S. Sommer & S. Matešić (Hrsg.), *Limes XXIII. Proceedings of the 23<sup>rd</sup> International Congress of Roman Frontier Studies Ingolstadt 2015 / Akten des 23. Internationalen Limeskongresses in Ingolstadt 2015*, Mainz (Beiträge zum Welterbe Limes Sonderband 4), 331-340.
- Vadai, A., 2003: *A Római Birodalom és a szarmata barbaricum kereskedelmi kapcsolatai*, Budapest (DSc thesis Hungarian Academy of Sciences).
- Visy, Zs., 2002: Angaben zu der Geschichte Pannoniens an der Wende vom 2. zum 3. Jahrhundert, in: K. Kuzmová, K. Pieta & J. Rajtár (eds), *Zwischen Rom und dem Barbaricum. Festschrift für Titus Kolnik zum 70. Geburtstag*, Nitra (Archaeologica Slovaca Monographiae 5), 203-206.
- Visy, Zs., 2009a: The mapping of the south-western limes of Dacia, in: W.S. Hanson (ed.), *The army and frontiers of Rome. Papers offered to David J. Breeze on the occasion of his sixty-fifth birthday and his retirement from Historic Scotland*, Portsmouth RI (Journal of Roman Archaeology Supplementary Series), 115-126.
- Visy, Zs., 2009b: Römische Machtpolitik im Vorfeld der Provinzen Pannonia und Dacia, *Specimina nova* XIII, 219-229.
- Visy, Zs., 2009c: Archäologische Forschungen an der östlichen Grenze von Dacia superior, in: Sz. Bíró (ed.), *Ex officina... Studia in honorem Dénes Gabler*, Győr, 587-598.
- Visy, Zs., 2014: Some notes on the eastern corner of the province Dacia, in: S. Cociş (ed.), *Archäologische Beiträge. Gedenkschrift zum hundertsten Geburtstag von Kurt Horedt*, Cluj-Napoca, 65-68.

# STRATEGY AND STRUCTURES ALONG THE ROMAN FRONTIER

This publication – Strategy and Structures along the Roman Frontiers – is the second volume of the LIMES XXV's congress proceedings and deals with the following themes: Roman military activities during the Republic; the early frontier formation processes and tribal reshuffling; new insights in the installations of the Roman armies; an odyssey along different Limes regions; the collapse of Roman frontiers; the afterlife of frontier fortifications. The proceedings are all arranged around the original sessions, creating coherent thematical collections that make the vast output more accessible to generalists and specialists alike.

Frontiers are zones, or lines, of contact and coercion, of exchange and exclusion. As such they often express some of the most typical elements of the socio-political spaces that are defined by them. Spanning some 6,000 km along rivers, mountain ranges, artificial barriers and fringes of semi-desert, the frontiers of the Roman empire offer a wide variety of avenues and topics for a very diverse community of scholars. They are the central subject of the International Congress of Roman Frontier Studies (or just Limes Congress after the Latin word for 'border'), organised every three years since 1949. This four-volume publication contains most of the papers presented at the 25th edition which was hosted by the municipality of Nijmegen in August 2022.

Proceedings of the 25<sup>th</sup> International  
Congress of Roman Frontier Studies 2

**sidestone**press

ISBN: 978-94-6426-278-0



9 789464 262780 >