

## A SUSTAINABLE FRONTIER? THE ESTABLISHMENT OF THE ROMAN FRONTIER IN THE RHINE DELTA

### PART 1: FROM THE END OF THE IRON AGE TO THE DEATH OF TIBERIUS (C. 50 BC-AD 37)

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At the turn of the 1<sup>st</sup> and 2<sup>nd</sup> centuries AD more than thirty Roman military bases were situated on the left bank of the Lower Rhine (**fig. 1**). They constituted the major elements of a military infrastructure generally referred to as the *limes*, or frontier, of the Roman province of Germania Inferior (Lower Germany). The chain of forts and fortresses was not the product of a single master plan, but had gradually evolved to meet the needs of the Roman Empire.

An intriguing aspect of the military complex in the Rhineland is the series of small forts built between the Augustan base at Vechten (prov. Utrecht/NL) and the North Sea in the early 40s AD. They stand out through their unusual situation and layout, and their setting in an almost inaccessible peat marsh landscape. A further salient feature is the generally excellent preservation of palaeo-ecological remains, the result of these same wetland conditions.

### THE SUSTAINABLE FRONTIER PROJECT

In 2003 the Nederlandse Organisatie voor Wetenschappelijk Onderzoek (NWO) launched the »Oogst van Malta« (Malta Harvest) scientific programme to further the synthetic analysis of excavations of international importance carried out in the Netherlands since the member States of the Council of Europe signed the revised »European Convention on the Protection of the Archaeological Heritage« at Valletta (Malta) in 1992<sup>1</sup>. A group of researchers from diverse backgrounds – archaeology, geomorphology, palaeobotany and zooarchaeology – seized this opportunity to submit a proposal for an interdisciplinary project aimed at a better

<sup>1</sup> The programme allowed for a limited amount of previous work to be included.



**Fig. 1** Location of legionary fortresses (large squares) and of attested and presumed smaller forts (small squares) on the left bank of the river Rhine at about AD 100. The research area is indicated by a red box. – Scale 1:2,000,000.

understanding of the establishment and maintenance of this chain of small forts in the dynamic landscape of the western Netherlands. The proposal was entitled »A sustainable frontier? The establishment of the Roman frontier in the Rhine delta«.

After NWO accepted the proposal, and with substantial financial support from several other parties, the project started in 2004. The project could not be finished by the anticipated date of 2008, partly because



of the introduction of commercial archaeology into the Netherlands, which drew heavily on the availability of most of the participants. Several papers have since been published<sup>2</sup>. Although other contributions are still in preparation, a start has been made on synthesising the project results. They will be presented in three papers, of which this is the first. It has been compiled by two of the nine researchers who participated in the project, but they are standing on the shoulders of their seven colleagues: Chiara Cavallo, Julia P. Chorus, Marieke van Dinter, Monica K. Dütting, Michael Erdrich, Erik P. Graafstal and Pauline van Rijn.

The project was chronologically limited to the period c. AD 40-140, starting with the building of the first forts to the west of Vechten and ending at about the time of emperor Hadrian's death, which can be viewed as the end of a very dynamic phase in the military history of the Roman Empire. For reasons explained below, a much earlier starting point has been chosen for this synthesis: the end of the Iron Age in the Low Countries, which roughly coincides with the end of the Roman Republic. This first part of the synthesis concludes with the death of emperor Tiberius in AD 37. The second part will cover the period from the accession of his successor Caligula to c. AD 85, when the province of Germania Inferior may have been established<sup>3</sup>. The period c. AD 85-140 will be discussed in the third part.

This paper is divided into three chapters. The first, »The Sustainable Frontier Project«, introduces the research project and the synthesis in more detail, focusing on aims, scope and sources. The second, »The end of the Iron Age«, deals with the fall of the Roman Republic and the end of the Iron Age. This latter period can be conveniently dated to 19 BC for the Rhineland, when the first archaeologically attested Roman military base was built there at Nijmegen (prov. Gelderland/NL). The third chapter, »The German challenge«, discusses the German wars of emperors Augustus and Tiberius and their immediate aftermath.

### **Aims and scope of the project**

The title of the project reflects its principal aim and scope. These aspects will be amplified below, in three subsections headed by the constituent elements of the title. For the sake of brevity the project will henceforth be referred to as the »Sustainable Frontier project«.

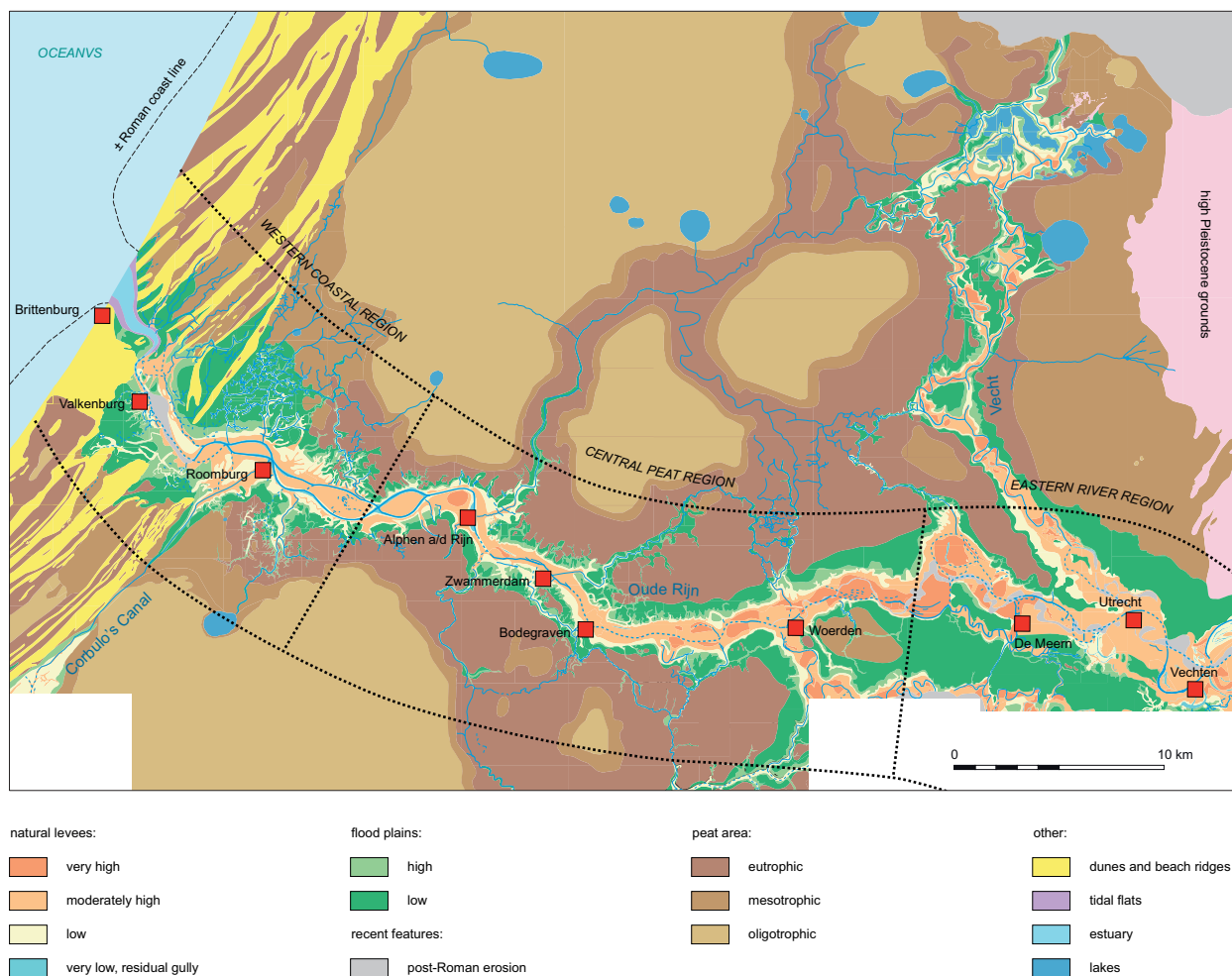
#### **The Rhine delta**

In a strict, geomorphological sense the Rhine delta begins just upstream from Bonn (D), where the river leaves the Rheinisches Schiefergebirge, broadens out into a valley and soon divides into several branches (**suppl. 1**)<sup>4</sup>. The geomorphological scope of the Sustainable Frontier project was limited, however, to the

<sup>2</sup> So far the following publications have appeared: Cavallo/Kooistra/Dütting 2008; Chorus 2008; Van Dinter 2013; Van Dinter et al. 2014; Graafstal 2012; Groot et al. 2009; Groot/Kooistra 2009; Kooistra/Heeren 2007; Kooistra 2009a; 2009b; 2012; Kooistra et al. 2013; Luksen-IJtsma 2010; Polak 2009; Van Rijn 2011.

<sup>3</sup> The transformation of the operational areas of the Upper and Lower German armies into the provinces of Germania Superior and Germania Inferior is generally dated to the early years of Domitian's reign (AD 81-96) (e.g. Bechert 2007, 27f.; Eck 2004a, 215-220). However, a case can also be made for a much earlier date at which a German province was created, whether or not separated into two parts (e.g. Ausbüttel 2011; cf. p. 446f. below).

<sup>4</sup> The soil units distinguished in **suppl. 1** correspond to or have been merged from soil units of the Soil Map of the World published by the Food and Agriculture Organization of the United Nations (FAO) in 1974 and revised for Europe in 1985 by the Commission of the European Communities (FAO85). Cf. Appendix for further details. **Suppl. 1** has been generated from the European Soil Database (cf. legend) and may be an acceptable approximation of the agricultural potential of the mapped area at the beginning of the Common Era, with the exception of the coastal areas of Belgium, the Netherlands and Germany, which have suffered heavily from peat erosion, as the differences between the projected palaeogeographical map of the Netherlands and the adjacent areas amply demonstrate.



**Fig. 2** Palaeogeographical map of the research area for the Sustainable Frontier project. The core area has been divided into three sub-areas, demarcated by dotted lines. – (Map by M. van Dinter [cf. Van Dinter 2013, Appendix 1; Kooistra et al. 2013, fig. 2], with some modifications by the authors). – Scale approx. 1:350,000.

western extremity of the delta, starting from the bifurcation of the Rhine branches known as the Lek and the Kromme Rijn near Wijk bij Duurstede (prov. Utrecht/NL; **fig. 1**). Downstream from this point was a series of Roman forts, on the left bank of the Kromme Rijn and its westward continuation, which is called the Oude Rijn from the point where the river Vecht branches off, in the city of Utrecht today.

The left banks of the Kromme and Oude Rijn, from Vechten to the North Sea coast, feature as the backbone of the research area, since this was where the military infrastructure was located. However, as the natural resources of the immediate foreland and hinterland were an essential research theme (p. 361 f.), a several kilometre-wide zone to the north and south of the Rhine was included. The research area thus consists of a rectangle of about 70 km × 40 km (E-W × N-S), extending from Wijk bij Duurstede in the southeast to Delft (prov. Zuid-Holland/NL) in the southwest and reaching the outskirts of Amsterdam in the north<sup>5</sup>.

<sup>5</sup> From 83,000/445,000 to 153,000/485,000 in the Netherlands Coordinate System, approx. 51°60′/4°20′ to 52°20′/5°20′ in geographic latitude/longitude.



A palaeogeographical reconstruction of most of this area has been made by Van Dinter (**fig. 2**)<sup>6</sup>. The map reveals a tripartite division of the landscape immediately adjacent to the Rhine. From east to west the most conspicuous factors behind landscape formation were, successively, alluvial sedimentation, peat growth and coastal formation. Three sub-areas, based on these factors, have been distinguished within the research area: the eastern river region, the central peat region and the western coastal region (cf. p. 371). These three geographic entities will be used throughout the synthesis, and referred to by these labels.

The demarcation of the research area meant that the early-Roman fort at Velsen (prov. Noord-Holland/NL) was not included in the project, even though it is situated only 12 km further to the north (**fig. 3**). This decision was made for two reasons: firstly, the military occupation at Velsen barely extended into the project's chronological timeframe (AD 40-140), and secondly, this military settlement is situated in the Oer-IJ estuary, where a northerly branch of the Rhine (the Vecht) discharged into the North Sea, which would add a heavy burden to the already challenging palaeogeographical reconstruction. The latter consideration also led to the decision not to extend the research area to the south, as this would entail the inclusion of the large estuary of the river Meuse. Although the Meuse and Oer-IJ estuaries were therefore excluded from the project scope in a geographical sense, they were nevertheless included in many analyses.

#### The establishment of the Roman frontier

The term »Roman frontier« is often used in a rather unspecific way to designate the complex of legionary fortresses, auxiliary forts and watchtowers positioned on the outskirts of the Roman Empire (cf. **fig. 1**), with the accompanying infrastructure including roads, bridges, harbours, etc. To many readers the word »frontier« carries the inseparable connotation of perimeter defence, suggesting an impenetrable barrier protecting the Empire from external dangers. To others it has a less restricted connotation – that of a transitional zone between the provinces under Rome's direct rule on the one hand and external territories where Roman influence may have ranged from less direct to nil on the other.

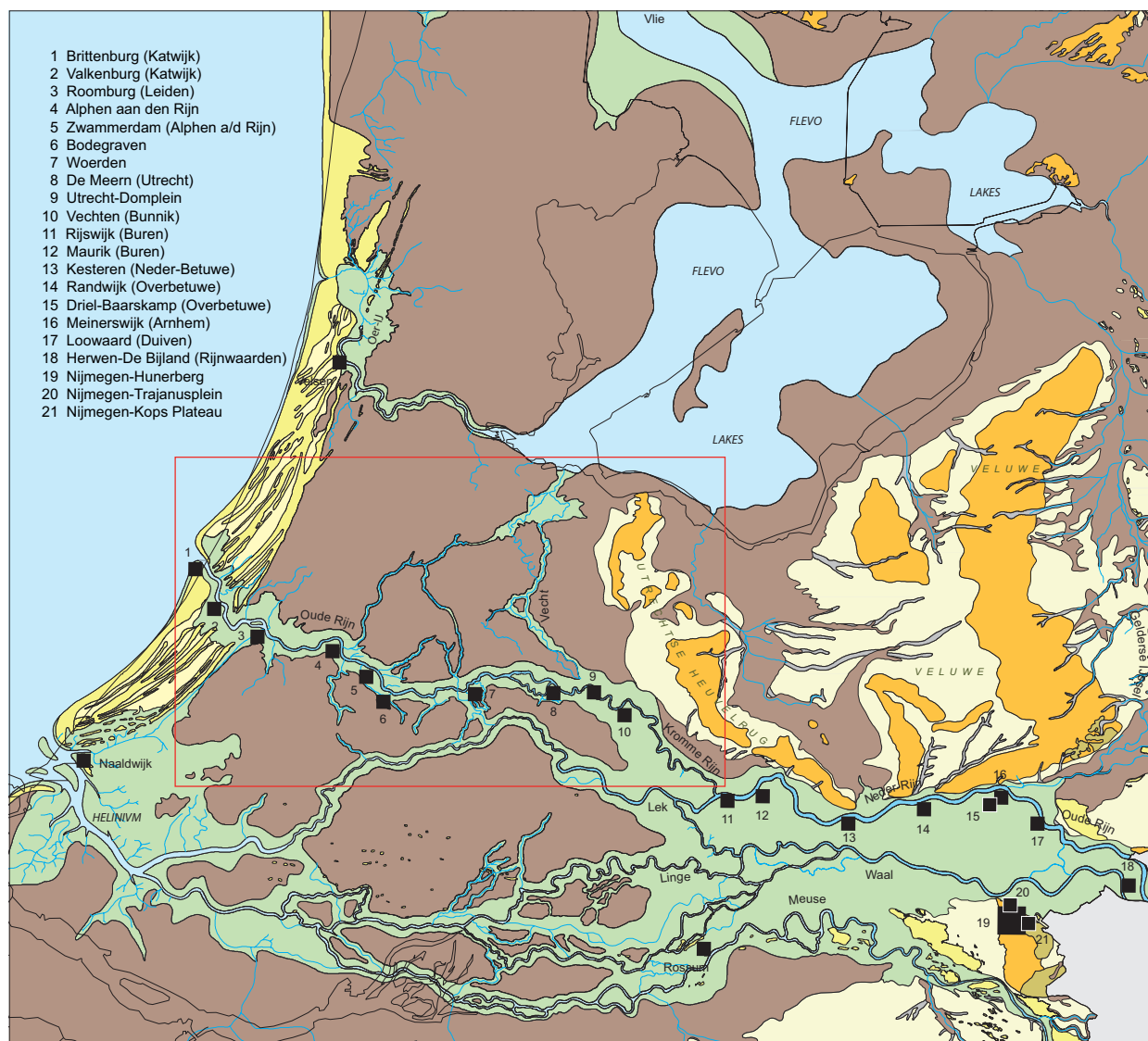
It was customary until recently to view the military forts in the lower Rhine delta as parts of a frontier in the former sense of a barrier. Coins and pottery indicated a building date around the middle of the 1<sup>st</sup> century AD for most of the sites, and it seemed obvious that their foundation sprang from emperor Claudius' decision to abort a new Roman campaign across the Rhine in the year 47: *Claudius adeo novam in Germanias vim prohibuit, ut referri praesidia cis Rhenum iuberet* (Claudius so strictly forbade new actions in German territories, that he issued the order to withdraw the fortifications to the left bank of the Rhine)<sup>7</sup>. Because the annexation of these parts of Germany was never resumed, it seemed obvious that Claudius' order to his unfortunate army commander Corbulo implied the definite abandonment of this plan. The new chain of forts was therefore surely intended as a strict dividing line between the Roman left bank and the German right bank of the Rhine.

Three military bases in the lower Rhine delta had been built in the period of expansion preceding these events: Vechten in the reign of Augustus, Velsen during the campaigns of Germanicus in AD 15 or 16 and Valkenburg (prov. Zuid-Holland/NL) in AD 39 or 40. In the traditional view these three offensive outposts eventually formed a »military triangle«<sup>8</sup>, designed to annex the territories north of the Rhine (**fig. 3**). When this ambition was abandoned in 47, Velsen (the apex of the triangle) was evacuated, while the territory from Vechten to Valkenburg (the base of the triangle) was strengthened with new forts.

<sup>6</sup> Van Dinter 2013, Appendix 1.

<sup>7</sup> Tac. ann. 11, 19.

<sup>8</sup> The term was coined by Van Es in his influential survey *De Romeinen in Nederland* (1981, 97).



**Fig. 3** Location of attested and presumed military fortifications in the Netherlands, from the period c. 20 BC-AD 140, on a palaeogeographical map of c. AD 100 (legend cf. **fig. 7**). The research area is indicated by a red box. – (Palaeogeographical map: Bazelmans/Weerts/Van der Meulen 2011). – Scale approx. 1:900,000.

The excavation of the Roman fort at Alphen aan den Rijn (prov. Zuid-Holland/NL) in 2001-2002 sounded the death knell for this explanation for the appearance of forts on the southern bank of the Oude Rijn<sup>9</sup>. The coin finds had so much in common with those from Valkenburg that it seemed probable that Alphen aan den Rijn had also been founded by Caligula<sup>10</sup>. This supposition was soon confirmed by dendrochronology, which showed felling dates ranging from the winter of AD 40/41 to the summer/winter of 42 for trees used

<sup>9</sup> Polak/Kloosterman/Niemeijer 2004.

<sup>10</sup> Kemmers 2004a; 2004b. Bogaers and Haalebos had recognised some finds »mainly from the time about 40 and before« at Alphen in 1985 and thought it possible that it had been founded at the same time as Valkenburg (Bogaers/Haalebos 1987, 47-49). Surprisingly, this hypothesis did not recur in a paper discussing the *limes* in the Netherlands a decade later (Haalebos 1997),

nor in a report of preliminary excavations at Alphen in 1998-1999, where the earliest buildings are quite consistently dated »around the middle of the 1<sup>st</sup> century« (Haalebos/Franzen 2000, e.g. 39. 52. 187), despite the explicit recording of the remarkable frequency of Caligulan coins: 16 out of a total of 43 specimens (p. 143, contribution by R. W. Reijnen).



to construct the defences and barracks of this fort<sup>11</sup>. Soon afterwards a similar coin series was attested at De Meern (prov. Utrecht/NL), while Woerden (prov. Utrecht/NL) produced an only slightly younger range<sup>12</sup>. The accepted foundation date for the Oude Rijn fort series was suddenly pushed back by several years, and a completely different historical context presented itself<sup>13</sup>.

At the start of the Sustainable Frontier project part of this new evidence had not yet been unearthed, and the interpretation of the fort series as a static defence system still seemed valid. The discovery in subsequent years of additional indications for a foundation date prior to the aborted expedition of AD 47 soon presented a different scenario. A revised *raison d'être* for the chain of forts was suggested in 2006:

At present we are inclined to consider its appearance [around AD 40, MP/LK] as a short-term investment related to the securing of the Rhine delta, with an eye to the conquest of Britain or to control the German pirates, or perhaps both. Corbulo's operations across the Rhine [in AD 47, MP/LK] demonstrate that the river was not a definite end to Rome's territorial ambitions towards northward expansion at that time. When the idea of the incorporation of *Germania Transrhenana* in the Empire was given up – if it ever was – the southern bank of the Rhine with its military structures was the most obvious point to draw the official dividing line. Whereas elsewhere in the Northwest changing strategies produced new linear structures, the military infrastructure on the Lower Rhine seems to have absorbed these functional changes<sup>14</sup>. The view outlined above still prevails and will be elucidated in Parts 2 and 3 of the synthesis.

#### A sustainable frontier?

An interdisciplinary approach was envisaged from the very beginning of the project in order to study the balance between the requirements of the military infrastructure and the natural resources of the landscape in which it was embedded. It was clear that the environmental conditions constantly changed under the influence of the Rhine's dynamics, and that at least the central part of the research area – the peat region – was largely inaccessible and unproductive (**fig. 4**). At the same time the construction and maintenance of a chain of forts and the accompanying infrastructure required vast amounts of timber, while the arrival of several thousand extra mouths demanded enormous quantities of animal and vegetable food, to mention just a few basic necessities.

Although palaeo-ecological material is exceptionally well preserved in the Rhine delta compared to other parts of the Roman Empire's frontier region, it was obvious that the available data would not answer all the relevant questions. In a sense, the blessing of abundant ecological material has been a curse in disguise, as it regularly led to restricted sampling or analysis in the past – and continues to do so today. Consequently, the project members were far from certain that it would be possible to obtain a detailed understanding of the »ecological footprint« of the military infrastructure along the Oude Rijn. On the other hand, they felt relatively secure about being able to estimate its order of magnitude.

Against this background four main research themes were formulated:

- the choice of location – at both macro and micro level – of individual elements (forts, watchtowers, roads, harbours, etc.) of the military infrastructure in this dynamic delta region
- the chronology of military facilities against the backdrop of the military and civilian history of the Roman Empire's northwestern provinces

<sup>11</sup> Van Rijn 2004, especially Bijlage 1 (dendrochronological dates).

<sup>12</sup> Kemmers 2006; 2008a (De Meern); 2008b (Woerden).

<sup>13</sup> Cf. Graafstal 2002 for a first orientation.

<sup>14</sup> Polak 2009, 949 (paper read at the 20<sup>th</sup> International Congress of Roman Frontier Studies at León [com. Castilla y León/E] in September 2006).



**Fig. 4** Impression of the situation of the auxiliary fort of Zwammerdam (prov. Zuid-Holland/NL) in its natural environment during the late 2<sup>nd</sup> century AD. – (Illustration Ulco Glimmerveen).

- the interaction between the construction and maintenance of this line of forts on the one hand and the natural environment on the other: the effort required to build the infrastructure, and its impact on the landscape
- the provisioning of the military zone with basic requirements such as food for men and animals, timber for building and fuel, and leather for tents, shoes and equipment.

At the start of the project, it was generally believed that the landscape of the lower Rhine delta was unable to support the military infrastructure, including the human element. The idea that the forts and their garrisons depended heavily on exterior sources of supply was supported by finds such as the cargo of a late 2<sup>nd</sup>-century ship from Woerden (**fig. 5**), consisting of cereals probably grown in the loess area between Cologne (D) and Boulogne (départ. Pas-de-Calais/F) – perfectly in line with a record of cereal shipments from Tacitus<sup>15</sup> – and the large-scale renovation in AD 123-125, using imported oak, of the road connecting the forts on the Oude Rijn. Thus it was quite unexpected to discover that the carrying capacity of the regional landscape was sufficient in most respects, as will be discussed in Parts 2 and 3 of the synthesis<sup>16</sup>.

### **Aims and scope of the synthesis**

The aim of a synthesis is implied in the word itself: to combine different sources of information into a whole in order to achieve a higher level of coherence, and thus a better understanding. In this case, the sources of information consist of the eight sub-projects defined within the Sustainable Frontier project (p. 366),

<sup>15</sup> Tac. hist. 4, 26.

<sup>16</sup> Cf. also Kooistra et al. 2013; Van Dinter et al. 2014.





**Fig. 5** Woerden (prov. Utrecht/NL). The forward part of a 3 m-wide barge built during the last quarter of the 2<sup>nd</sup> century, excavated in 1978. The bottom of the vessel was found to be covered with a layer of cereals. – (Photo P. Bersch).

covering a range of scientific approaches: ancient history, archaeology, geomorphology, palaeobotany and zooarchaeology. The project members have taken great pains to bridge – or at least narrow – the gaps between these domains. What could be described as »chronological resolution« emerged as a major obstacle. While the construction and renovation of forts and buildings may occasionally be dated down to a season thanks to dendrochronology, and phases of military occupation and other activities often to within one or two decades thanks to coins and pottery, the instruments for dating changes in the natural environment – landscape, vegetation, arable farming, animal husbandry – tend to be much cruder. Usually only broad ranges such as Early versus Middle-Roman or 1<sup>st</sup>- versus 2<sup>nd</sup>-century were available for data from the natural domain.

The Sustainable Frontier project was formally restricted to the period c. AD 40-140, which witnessed the succession of three groups of emperors: the Julio-Claudian house (Caligula, Claudius, Nero), the Flavian dynasty (Vespasian, Titus, Domitian) and the first of the »adoptive« emperors (Nerva, Trajan, Hadrian). The reigns of the Julio-Claudian and Flavian houses were separated by a civil war, known as Year of the Four Emperors, AD 69. This year also saw the uprising of the Batavians and their allies on the Rhine, which was suppressed the following year by the armies of the last of these four emperors, Vespasian.

The Batavian revolt normally features as a sharp caesura in the history of the Rhineland, separating what is conveniently termed the Julio-Claudian or pre-Flavian period from the Flavian era. It is certain that the chaos prompted by the struggle for the throne was felt throughout the Rhineland, and that the changing of the imperial dynasty did not pass unnoticed by the army and the provincial administration. Yet the a priori

assumption that the Year of the Four Emperors and the Batavian revolt constituted a major break in the development of the Rhineland could well obscure a possible continuation in many areas. Recovery from the devastation may have been swift and the replacement of the ruling house may have been of limited importance to most of the regional population. For this reason the year AD 85 is the preferred dividing line for this synthesis, splitting the project period of AD 40-140 into two blocks of more or less equal duration. It is normally assumed that the provinces of Germania Inferior and Germania Superior were created at about this date. At the same time, the start of Domitian's Dacian wars shifted the military focus to the Danube for a long period.

This synthesis discusses the project results in chronological order, inasmuch as the data's »chronological resolution« allows this. Whereas the project proper started with the construction of a series of forts around AD 40, the synthesis has a wider chronological scope. The events of the 40s AD were closely connected with the preceding German wars under Augustus and Tiberius. These conflicts had their roots in the late Roman Republic and go back to well before Caesar's Gallic War, with the battles between the Roman army and the migrating Cimbri and Teutones in the late 2<sup>nd</sup> century BC as near-mythical examples of the clash between Roman and northern European expansion – at least from a Roman standpoint.

This much wider chronological view entails a broader geographical scope as well, involving large parts of Gaul and of the area between the rivers Main, Rhine and Elbe (**suppl. 1**), and sometimes extending beyond these regions. Most of the synthesis focuses on the Rhine delta, often in the wider sense of the area downstream from the Rheinisches Schiefergebirge (p. 357f.). The landscape of this river delta has a long and dynamic history, the broad outlines of which are essential to an understanding of its character and development in the Roman period. In order to explain its evolution, the narrative in the second chapter starts more than 500,000 years ago.

## Sources

The main sources of the Sustainable Frontier project consist of data acquired through fieldwork in the research area. The earliest scientific excavation at one of the fort sites is likely to be the one carried out at Vechten in 1834 by C. J. C. Reuvers, the first director of the Rijksmuseum van Oudheden at Leiden and the first professor of archaeology in the Netherlands. However, antiquarians had been collecting finds since at least the late 16<sup>th</sup> century, as attested by a drawing from 1581 of the »Brittenburg« near Katwijk aan Zee (prov. Zuid-Holland/NL) on the North Sea shore at extremely low tide (**fig. 6**).

Since Reuvers' day, remains of the forts on the Kromme and Oude Rijn have been uncovered from time to time. There is no point listing all the excavations in the research area, but it seems appropriate to recall those which have made the biggest contribution to our present knowledge of the forts and their immediate surroundings<sup>17</sup>:

Vechten	1914, 1920-1927, 1931-1938* (Holwerda & Remouchamps, Braat), 1946-1947 (Van Giffen), 1970, 1982 (Van Tent), 1994-1997 (Hessing)
Utrecht	1933-1935 (Vollgraff & Van Hoorn), 1929, 1936, 1938, 1943-1944, 1949 (Van Giffen)
De Meern	1957, 1960 (Jongkees & Isings), 1982-1983 (Isings & Kalee) 1997-present* (Graafstal et al.)
Woerden	1974-1983* (Bogaers & Haalebos), 1998-2004* (Haalebos, Vos, Lanzing, Blom)

<sup>17</sup> Date ranges including interruptions in the series of campaigns are marked with an asterisk.





**Fig. 6** Ruins of the site known as »Brittenburg« exposed at extremely low tide off the beach at Katwijk aan Zee in 1520, 1552 and 1562. – (Copperplate by Abraham Ortelius [Lodovico Guicciardini, Descrittione di tutti i Paesi Bassi, in Anversa 1581, 344f.]).

Bodegraven 1995 (Van der Kooij et al.)  
 Zwammerdam 1968-1971 (Haalebos)  
 Alphen a/d Rijn 1985 (Bogaers & Haalebos), 1998-2002\* (Haalebos & Franzen, Polak et al.)  
 Leiden-Roomburg 1927 (Holwerda), 1994-1999\* (Hazenbergh et al., Polak et al.), 2009 (De Bruin et al.)  
 Valkenburg 1941-1948\* (Van Giffen), 1973 (»De Woerd«: Bloemers & Sarfatij), 1985-1988 (»Marktveld« and »De Woerd«: Bult & Hallewas), 1994-1997 (»Veldzicht«: Vos & Lanzing)  
 In addition, the *fossa Corbulonis* (Corbulo's Canal), connecting the Rhine near Leiden with the Meuse estuary near Naaldwijk (fig. 2), was repeatedly transected.

Rarely has more than a brief report been published soon after the excavations, but fortunately another recent scientific programme launched by NWO in 2008 (the »Odyssee« programme) is now plugging important gaps<sup>18</sup>. Thanks to the implementation of the Valletta Convention into Dutch legislation in 2007,

<sup>18</sup> The excavations are given in brackets: Zandstra/Polak 2012; Polak 2014 (Vechten 1946-1947); Chorus in prep. a; in press (Utrecht 1949; 1956 and 1964); in prep. b (De Meern 1973 and 1982-1983); Vos/Van der Linden 2011 (Valkenburg-De Woerd 1972). Cf. further (outside the Sustainable Frontier research

area) Van Driel-Murray/Driessen in prep. (Velsen 1); Bosman in prep. (Velsen 2); Van Enckevort 2014a; 2014b (Nijmegen-Kops Plateau/Nijmegen Oost); Waasdorp 2012 (Den Haag-Ockenburgh); Van Dierendonck/Vos 2013 (Aardenburg).

anticipated by most public bodies for a decade, nearly all recent excavations have been published, at least at a basic level. The members of the Sustainable Frontier project are greatly indebted to all the archaeologists who have granted access – without exception or reservation – to published and unpublished data from their excavations, to the institutions responsible for the preservation of records from excavations carried out in a more remote past, and to the regional amateur archaeologists whose contribution to our knowledge of the area has been invaluable.

The main sources for this synthesis are the results of the eight sub-projects in the Sustainable Frontier project:

1. Physical landscape (M. van Dinter)
2. Wood (P. van Rijn)
3. Provisioning with vegetable food products (L. I. Kooistra)
4. Supply of animals and animal products (C. Cavallo, M. K. Dütting)
5. The forts of the western Netherlands in the 1<sup>st</sup> and early 2<sup>nd</sup> century (J. P. Chorus)
6. Organisation of the *limes* zone outside the forts (E. P. Graafstal)
7. Rome's relations with Germanic tribes inhabiting the foreland of the *limes* (M. Erdrich)
8. Construction and consolidation of the *limes* in the western Netherlands (M. Polak)

Although not all the outcomes of the sub-projects have been published, over the years they have been discussed at length by the participants. This has resulted in agreement on most aspects, but it is inconceivable that nine scholars would agree on everything. Ultimately, only the two authors of this synthesis can be held responsible for the views expressed here.

The synthesis is embedded in a chronological framework that relies heavily on ancient historical sources, the most important of which are the writings of Caesar, Velleius Paterculus, Tacitus, Suetonius and Cassius Dio. Although all these authors will probably have shared Tacitus' conviction that he was recording the past »*sine ira et studio*« (without bitterness and partiality)<sup>19</sup>, the commonly held modern opinion is that the historiographers of the late Roman Republic and the Roman Empire did have their own agenda and that their views of the past were essentially biased by their own experiences. This verdict has led to considerable scepticism regarding the reliability of their accounts of past events.

Although there is certainly ground for reservations, it should not be overlooked that the historians of the Roman Empire are likely to have been very well informed, and that too distorted an image of the past would have harmed their credibility among their peers. And whereas Cassius Dio may have been writing more than two centuries after Augustus' German wars, less than thirty years had passed by the time Livy concluded his Roman history with an unpreserved account of Drusus' German campaigns (12-9 BC). Velleius Paterculus had even been an eyewitness to the German wars in AD 4-6, which figure in the more elaborate parts of his history of Rome. And it is not unlikely that Suetonius had accompanied Hadrian on his visit to the German provinces in AD 121/122, serving the emperor as a personal secretary (*ab epistulis*), and thus knowing the Rhineland from his own observations<sup>20</sup>.

Furthermore, several authors will have had access to official records and to historical works now lost to us. The former point may be illustrated by Tacitus' account – composed a century after the events – of emperor Tiberius' reasons for putting an end to the German campaigns of Germanicus in AD 14-16<sup>21</sup>. The arguments attributed to Tiberius are echoed in an official document found in southern Spain in 1982, which goes back to a senatorial decree at the death of Germanicus in 19 (cf. p. 435 f.). Whether Tacitus is justified in assuming that jealousy was the underlying motive is open to debate, but he seems to have his facts in

<sup>19</sup> Tac. ann. 1, 1.

<sup>20</sup> Cf. Birley 1997, 113-115.

<sup>21</sup> Tac. ann. 2, 26.

perfect order here. The second point can be demonstrated by references from both Suetonius and Tacitus<sup>22</sup> to a now lost work on the German wars by Pliny the Elder – »*bellorum Germaniae viginti, quibus omnia, quae cum Germanis gessimus bella, collegit*« (twenty books on the German wars, in which he assembled all the wars we have fought with the Germani)<sup>23</sup> – who had held three military commands in the German army in the period c. 46-58<sup>24</sup>.

From this point of view it would appear rather odd to think that we are better judges of the history of Rome than those who lived it. The fact that Luttwak's preclusive frontier of 1976 is separated from Whittaker's frontier of undefined contact zones of 1994 by the fall of the Berlin Wall in 1989 may serve as a warning that it is yet to be proven that we are better at eliminating the influence of our everyday environment than Tacitus was in his time.

## THE END OF THE IRON AGE

Roman intervention in the Rhineland had its roots in the late Republic, which coincided with the Late Iron Age in our area. The expansion of the Roman Republic that brought Caesar to the Rhine was the territorial manifestation of an ongoing rivalry that gradually uprooted the Roman political system and eventually resulted in the Principate. The tribal landscape of the Rhineland underwent considerable changes as a side effect of this process. Ironically, Roman attempts to protect Gaul from Germanic incursions eventually led to the permanent settlement of large groups from across the Rhine.

The conquest of Gaul and the German wars compelled the Romans to operate in the wetland conditions of the Low Countries and the North German Plain (**suppl. 1**), which presented enormous strategic and logistical challenges. Large parts of the landscape were unsuitable for an army based on heavy infantry and offered very limited opportunities for regional provisioning with goods. Various attempts were made to use the rivers to penetrate into enemy territory, but they repeatedly ended in disaster.

## Landscape and land use

In the research area, the Rhine discharges into the North Sea. The river and the sea were two crucial factors in the formation of the landscape, influencing the natural environment of the inhabitants as well as the conditions for their existence. The physical landscape and its use by humans will be discussed in this section; habitation and population will be the subject of the next section.

### Formation of the landscape

In the last 150km before they flow out into the sea, the Rhine and Meuse have built up a deltaic plain, with the former river as the northern boundary and the latter as the southern one (**fig. 3**)<sup>25</sup>. But it has not always been like this. In some periods during the Middle Pleistocene (about 850,000-130,000 years ago),

<sup>22</sup> Suet. Cal. 8; Tac. ann. 1, 69.

<sup>23</sup> Plin. epist. 3, 5.

<sup>24</sup> Syme 1969, 205-208.

<sup>25</sup> For this subsection cf. Berendsen/Stouthamer 2001, 7-20; Mulder et al. 2003; Van Dinter 2013.



both rivers flowed in a more northwesterly direction, especially the Rhine<sup>26</sup>. At the end of the Saalian stage (between about 160,000-130,000 years ago) – the last stage of the Middle Pleistocene and the second-to-last glacial period – the Scandinavian ice cap extended into the central Netherlands and shaped the glacio-tectonic ridges near Nijmegen and those of the Veluwe and the Utrechtse Heuvelrug. These ridges forced the Meuse and Rhine to take a westerly course. During the subsequent Eemian interglacial (about 130,000-115,000 years ago) the Rhine resumed a northwesterly course along the valley of the present Gelderse IJssel. Only in the last glacial period (Weichselian stage about 115,000-11,700 years ago) and especially in the Middle Weichselian stage (about 20,000 years ago) did the Rhine return to the same basin as the Meuse, and from then on both rivers flowed from east to west through the central Netherlands.

During cold periods in the Middle and Late Weichselian stages, vegetation was limited, and loess and sand were deposited on a large scale. In the eastern Netherlands the Pleistocene coversands occur at the surface today, like the loess deposits further to the south and the older sediments on the ice-pushed ridges. In the western Netherlands, where the research area is located, the aeolian sands occur at great depth as they are covered by peat, sand and clay layers several metres thick, which have been deposited during the Holocene, the present interglacial.

The last glacial period came to an end around 11,700 years ago. The temperature rose, releasing huge amounts of water from the enormous ice caps in the Northern Hemisphere. The North Sea basin, which had been dry during the last glacial period, filled with water and in about 6000 BC the sea reached the Pleistocene sands of the western Netherlands, drowning large parts of the present-day provinces of Zeeland and Noord- and Zuid-Holland. By about 4400 BC the ice caps had largely melted away and there was a decline in sea level rise. The shallow sea covering the modern western provinces developed into an area of tidal flats and low dunes. Around 3800 BC large quantities of sand transported from the bottom of the shallow North Sea by wave action shaped the first durable complex of beach ridges and dunes in Zuid-Holland (**fig. 7**)<sup>27</sup>. Others followed relatively soon, merging into a more or less continuous barrier during the Late Neolithic (3<sup>rd</sup> millennium BC). The reduction in tidal movement and increase in supply of river water created new environmental conditions in the area behind the beach ridges and dunes. Water plants developed in the now fresh water, and marsh vegetations started to extend into the shallow basin. Marsh and water plants barely decayed in these water-rich conditions, leading to the development of swamp and fen peat. For centuries peat accumulation kept pace with the rise in water level. As early as the Late Neolithic, but mainly during the Bronze and Iron Ages, raised bogs developed on top of the swamp and fen peats further away from the rivers and thus from the nutrient-rich surface waters.

During the Bronze and Iron Ages the extensive swamps, fens and bogs in the western Netherlands were only traversed by the Rhine and Meuse, whereas Noord-Holland was transected by the Oer-IJ estuary, which was connected to the Flevo lakes. The movement of the tide caused sea water to penetrate inland through the rivers.

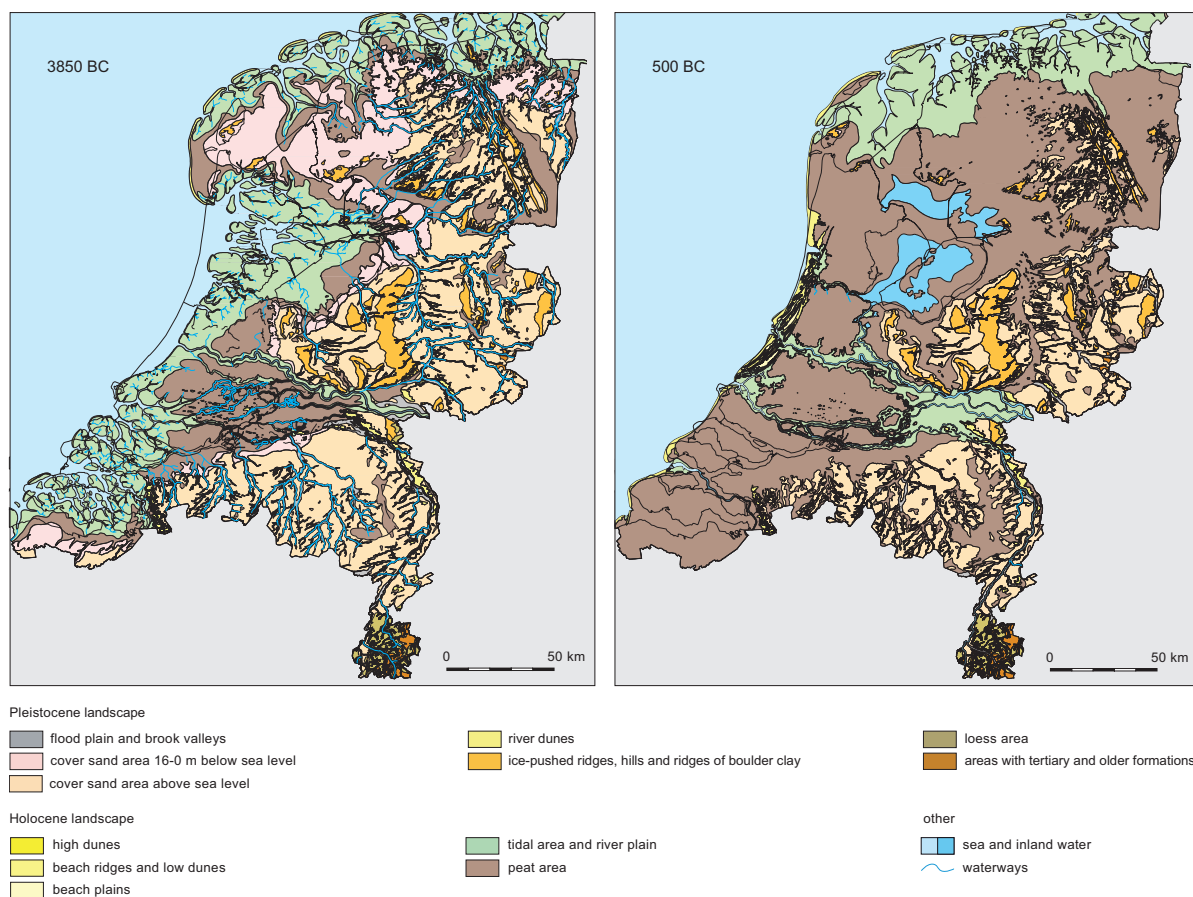
Further inland in the Rhine-Meuse delta, in the part known as the Dutch River Area, the sea level rise led to rapid river migration resulting in meandering and anastomosing river belts. One of these new belts was the Utrecht Rhine system, created around 4500 BC by an avulsion near Wijk bij Duurstede<sup>28</sup>. Here the Rhine created three successive channels within this belt, of which the latest and northernmost – the Kromme Rijn – may have developed around 650 BC<sup>29</sup>. This was the active river belt in the research area until the

<sup>26</sup> Cf. Mulder et al. 2003 and Zagwijn 1996 for a discussion of the starting date of the Middle Pleistocene.

<sup>27</sup> e.g. Louwe Kooijmans 2006, 496-514; Van der Spek 2008, 20-22.

<sup>28</sup> Cohen et al. 2012, Channel belt ID 181, Werkhoven: start of sedimentation 5660 BP.

<sup>29</sup> Ibidem Channel belt ID 85, Kromme Rijn: start of sedimentation probably 2500 BP.



**Fig. 7** Palaeogeographical reconstruction of the Netherlands in 3850 BC and 500 BC. – (After Bazelmans/Weerts/Van der Meulen 2011). – Scale approx. 1:3,500,000.

Middle Ages. Around 400 BC, an avulsion near Utrecht created the river Vecht<sup>30</sup>, which was connected via the Flevo lakes to the Oer-IJ estuary near Velsen and to the Vlie in the north (fig. 3).

At about the same time, the beginning of the Iron Age, the coastal region north of the Meuse estuary went through a phase of inundations, oxidation of the peat and clay sedimentation<sup>31</sup>. Habitation density increased and was accompanied by deforestation and the construction of drainage systems. These developments led to a lowering of the water table and thus to the oxidation of the peat in this area. The same developments may have taken place around the estuaries of the Rhine and Vecht (Oer-IJ), but no evidence is available for this.

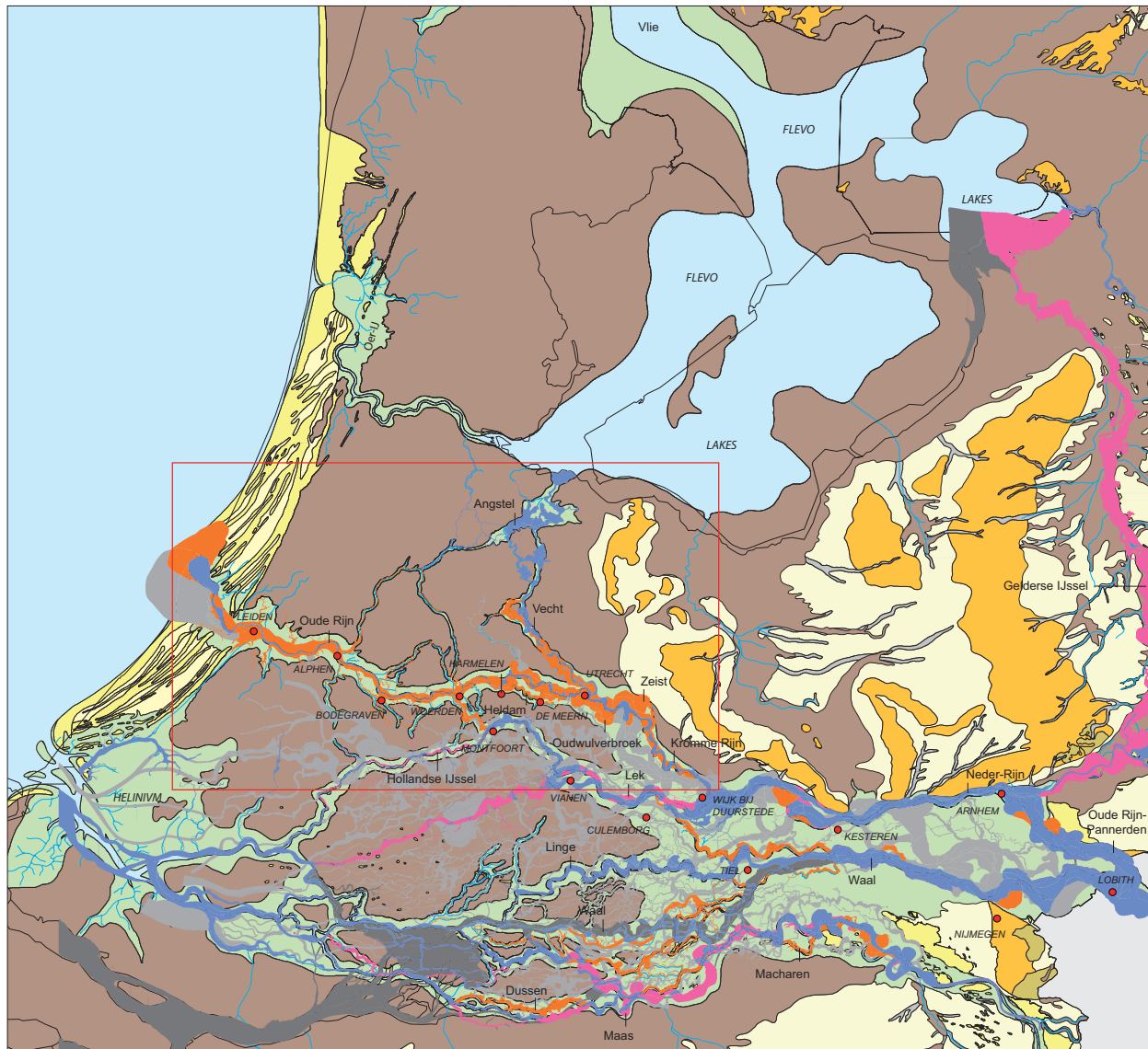
Elsewhere in the Dutch River Area the population underwent a similar increase during the Iron Age (cf. p. 377). Deforestation followed there as well, leading to accelerated draining and an increase in river dynamics. The development of the Lek and the reactivation of residual channels such as the Heldam channel (cf. p. 386f.) at the end of the Late Iron Age or in the Early Roman Period may be related to this process<sup>32</sup>.

Today the eastern part of the Rhine-Meuse delta is bounded by the ice-pushed ridges to the north and the aeolian sands to the south. In this area the Waal branches off from the Rhine, to the east of Nijmegen

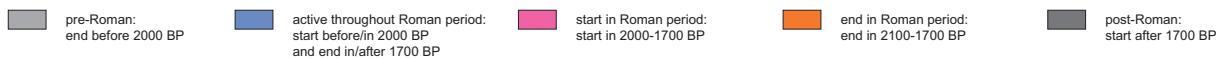
<sup>30</sup> Ibidem Channel belt ID 168, (Utrechtse) Vecht: start of sedimentation 2300 BP.

<sup>31</sup> Van Heeringen 1989; Kooistra 2014.

<sup>32</sup> Van Dinter/Graafstal 2007, 20. Cf. Cohen et al. 2012, Channel belt ID 62, Heldam, reactivation on top of Iron Age vegetation horizon; ID 91, Lek: start of sedimentation 1950 BP (c. AD 50).



start or end of sedimentation (after Cohen et al. 2012)



**Fig. 8** Channel belts of the Rhine-Meuse system, on a palaeogeographical map of c. AD 100 (legend cf. fig. 7), with modern place names mentioned in the text. The names of the channel belts refer to Cohen et al. 2012. The research area is indicated by a red box. – (Channel belts after Cohen et al. 2012, generalised by M. Polak. Palaeogeographical map: Bazelmans/Weerts/Van der Meulen 2011). – Scale approx. 1:900,000.

(fig. 8). The Waal channel downstream from Tiel was not created before the Late Roman Period<sup>33</sup>, but datings of sediments from the river Linge, an earlier downstream branch of the Waal system, indicate that the Waal already existed during the Late Iron Age<sup>34</sup>. Further proof is furnished by the writings of Tacitus, who records the river in the context of the German wars of Augustus in 12-8 BC and of the Batavian revolt in

<sup>33</sup> Cohen et al. 2012, Channel belt ID 174, Waal, downstream from Tiel: start of sedimentation 1625 BP (c. AD 400).

<sup>34</sup> Ibidem Channel belt ID 97, Linge: start of sedimentation 2160 BP (c. 250 BC).



AD 69/70<sup>35</sup>. Last but not least, wrecks of Roman barges have been found both in the upstream Waal channel and in the Linge<sup>36</sup>.

Although the eastern part of the Rhine-Meuse delta is relevant for this synthesis, it is located outside the research area proper, which is confined to the western part of the delta. In the latter region the Pleistocene deposits are buried under Holocene deposits of several metres thickness. This synthesis will distinguish three sub-areas within the research area, which are based on the characteristics of the landscape as sketched above. These sub-areas are, from east to west (**fig. 2**):

- The **eastern river region**<sup>37</sup>. This region covers the upper reaches of the Oude Rijn and Vecht and the northern part of the Kromme Rijn Area, a district bounded by the river Lek to the south, the Kromme Rijn to the north and east and an extensive peat area to the west. The subsoil consists of clastic sediments (a mixture of sand, silt and clay), which have been shaped into alluvial ridges and flood basins. The region constitutes the northwestern extremity of the Dutch River Area.
- The **central peat region**. Between Woerden and Leiden was an extensive peat area with swamps, fens and raised bogs, transected by only a few rivers. Even the largest of these, the Oude Rijn, had only a narrow alluvial ridge, its width ranging from 2 km near Woerden to a minimum of 0.8 km between Bo-degraven and Alphen aan den Rijn. The swamps, fens and raised bogs drained into the Rhine through a complex network of small watercourses, some of which had begun as crevasse splays<sup>38</sup>. Low and narrow natural levees may have been formed along these minor watercourses, making them suitable for habitation.
- The **western coastal region**. Some 10-15 km from the coastline the Rhine fanned out in a several km-wide estuary, cutting through the series of beach ridges and dunes parallel to the coast. Here salt marshes, mud flats, peat, river deposits, beach ridges and dunes were located in close proximity, offering wide-ranging opportunities for habitation.

## Vegetation and land use

As described above, the Dutch River Area is bounded by higher coversand areas. North of the Rhine in particular, relatively high – by Dutch standards at least – ice-pushed ridges occur<sup>39</sup>. By about 5000 BC the coversands and ice-pushed ridges were covered with extensive deciduous woodlands, and the poor, dry coversands also with heathlands<sup>40</sup>. This changed as people developed from hunter-gatherers to farmers. Initially, the farmers lived in woodland clearings, but already in the Bronze Age (from c. 2000 BC) the vegetation of the coversands was transforming into a mixture of woodland, heathland, grassland and arable fields as a result of human activity. In the course of late prehistory, Celtic fields were introduced, a new system of arable farming. The precise mechanism is unknown, but the system is likely to have been geared

<sup>35</sup> Tac. ann. 2, 6, 4; hist. 4, 19 (cf. p. 386 and 401). The mention of the Waal in Caes. Gall. 4, 10 is generally considered a later addition.

<sup>36</sup> L. Th. Lehmann 1991. The boat from the upstream Waal has produced pottery dated around AD 200; for the vessel from the Linge a radiocarbon date of  $1820 \pm 30$  is available (GrN-5646, c. AD 125-250).

<sup>37</sup> This »eastern river region«, which is part of the research area for this study, should not be confused with the »Eastern River Area« as defined by Willems (1980; 1984), which extends from Kesteren (prov. Gelderland/NL; indicated in **fig. 8**) to the Dutch-

German border; the latter area (ERA) covers a stretch of about 45 km from east to west and is separated from our research area by a strip of about 15 km between Kesteren and Wijk bij Duurstede.

<sup>38</sup> The raised bogs in this area could have reached heights of up to about 5 m above the mean water level of the Rhine.

<sup>39</sup> The highest ridges, those of the Veluwe, reach to a maximum of 110 m above sea level, which is approximately 100 m above the valley of the Rhine.

<sup>40</sup> e.g. Janssen 1974, 55-57; Kooistra in prep.

to increasing soil fertility<sup>41</sup>. Celtic fields have been attested on the coversands and ice-pushed ridges just north of the Rhine<sup>42</sup>. It appears that during the Iron Age large tracts of coversand were in use as arable land and the landscape was characterised by alternating arable land, meadows, grassland, woodland and heath<sup>43</sup>.

By this time the lower Rhine-Meuse delta consisted of marshy flood basins and fairly high alluvial ridges, which owed their formation to active and former river channels (fig. 7). When not disturbed by humans, mixed deciduous woodland developed on the natural levees. The composition of these riverside woodlands (also named riparian woodlands) depended on the flooding regime. The higher grounds were eventually covered with mixed oak woodlands, whereas alder, willow and poplar dominated the lower grounds which flooded regularly<sup>44</sup>. Depending on their depth, the flood basins were characterised by open water, reed and sedge marshes or wetland woodlands. Unlike the coversands, the river area was extremely fertile and rich in nutrients, left behind by the floodings. The disadvantage of this source of fertility was that substantial parts of the river area were not suitable for habitation or arable farming. Nevertheless, the region was very attractive, and as early as the Bronze Age the alluvial ridges were partly deforested through human intervention. In the Iron Age the natural woodland gave way in many places to arable fields, grasslands and meadows<sup>45</sup>. The flood basins kept their natural variation in vegetation for much longer; these parts of the landscape were attractive for animal husbandry, amongst other things.

Closer to the sea the Pleistocene coversands disappeared under peat layers, which reached their maximum extension and thickness during the Iron Age. In the last 40 km before the coastline the Rhine, Vecht and Meuse made their way through extensive peat areas, appearing as barely accessible swamps and fens. Close to the rivers fens occurred which were mainly covered with alder carrs. Further from the rivers, the fens became poor in nutrients, with alder and birch carrs giving way to sedge fields. The latter were followed by raised bogs, which were literally »raised« in that they towered several metres above the river banks<sup>46</sup>. These bogs consisted almost exclusively of *Sphagnum* or peat moss, which holds large quantities of water and is impassable. The vast swamps, fens and raised bogs of the western Netherlands could only be crossed by means of the small watercourses that drained the surplus water to the larger rivers.

In the peat region the channel belts of the Rhine, Vecht and Meuse were hardly wider than the active rivers with their natural levees, about 2-2.5 km at most. The adjacent, rather narrow flood basins separated them from the swamps with alder carr. The narrow strips of flood basins were covered with reed marsh vegetation and the natural levees with riverine woodlands. Unlike the natural levees in the Dutch River Area, those of the central peat region were still covered with woodlands at the beginning of the Roman period<sup>47</sup>. Obviously this part of the Rhine-Meuse delta was considered unattractive: the Rhine, Vecht and Meuse passed through a barely cultivated landscape for more than 40 km.

The beach ridges and dunes were the last obstacle before the rivers discharged into the sea. They ran parallel to the coast and alternated with beach plains covered with peat, creating an almost 10 km-wide strip separating the sea from the swamps, fens and bogs of the central peat region. The swamps in the beach plains were mainly covered with alder carrs; birch carrs, sedge fields and heather moors occurred on the most acid and nutrient-poor parts. It is conceivable that raised bogs occasionally developed here as well during the Iron Age. Peat accumulation with reed and sedge vegetation also occurred in the lowest parts

41 e.g. Behre 2000; Groenman-van Waateringe 2013; Spek et al. 2003; Zimmermann 1976.

42 e.g. Kooistra/Maas 2008.

43 Kalis et al. 2008.

44 Van Beurden 2008; Wolf/Storfelder/De Waal 2001; Margl/Zukrigl 1981.

45 e.g. Kooistra 1996; Groot/Kooistra 2009.

46 Zagwijn 1986; Van Dinter 2013, 18; Kooistra et al. 2013, 7-13.

47 Van Rijn 2004; 2006.

of the beach ridges themselves. Where the surface consisted of sand, a vegetation similar to that of the coversand areas developed. The sands of the beach ridges and dunes had turned acidic and nutrient-poor, and during the Iron Age the mixed deciduous oak woodlands gave way to heaths and shrubs with common juniper<sup>48</sup>. The dune ridges were inhabited, as demonstrated amongst other things by the frequently attested ard marks. So far no Celtic fields have been attested, while farm management was centred on both arable farming and animal husbandry. Arable fields alternated with meadows and patches of woodland, and sand-drifts were a regular phenomenon.

All in all, large parts of the Dutch River Area seem to have been used for agriculture during the Iron Age. Only the extensive peat area in the western Netherlands and the parts of the alluvial ridges transecting them were still largely uninhabited.

## Habitation

In the late 2<sup>nd</sup> and the 1<sup>st</sup> centuries BC the central part of the Netherlands belonged to a peripheral cultural zone bounded by the Weser in the east and the Seine in the south (**suppl. 1**). In the northeast it was flanked by the Elb-Germanic cultural area roughly covering the North German Plain and in the south by the Celtic cultural area extending over large parts of Western and Central Europe<sup>49</sup>. The intermediate area was characterised more by the absence of features of Elb-Germanic and Celtic societies and less by a homogeneous cultural identity of its own.

Despite its somewhat marginal position, the area was dragged into the Gallic war – a confrontation of the tribal society of northern Gaul with the gradually expanding empire of the city state of Rome – around the middle of the 1<sup>st</sup> century BC. Several groups from beyond the Rhine were also involved in that contest.

## Gaul

For centuries Greek trading posts had existed along the southern coast of Gaul, with Massalia (Marseille) the earliest and largest. To hold out against the surrounding Gaulish tribes, as well as the Carthagians who tried to monopolise trade in the western Mediterranean, Massalia turned to Rome for support in the early 2<sup>nd</sup> century BC. This resulted in the foundation of the Roman province of Gallia Transalpina in the last quarter of the 2<sup>nd</sup> century (cf. **fig. 13**). It was later named Narbonensis after the veteran colony of Narbo Martius (Narbonne), founded by Rome on its territory in 118 BC.

In his account of the Gallic war, Caesar divided the remainder of Gaul – known as Gallia Comata or »long-haired Gaul« – into three parts: the territory of the Belgae, the Aquitani, and the rest<sup>50</sup>. According to Caesar the three areas differed in language, customs and laws. They received their definite shape as Gallia Belgica, Aquitania and Lugdunensis in the reign of Augustus.

Although the designations of tribes and their territories by Caesar – and more generally by the classical authors – are often imprecise and at times contradictory<sup>51</sup>, his conclusion that the territory of the Belgae

<sup>48</sup> Jelgersma et al. 1970; De Jong/Zagwijn 1983; Kooistra 2008; Zagwijn 1997.

<sup>49</sup> Roymans 1990, 266-269 for a concise overview.

<sup>50</sup> Caes. Gall. 1, 1.

<sup>51</sup> Compare Roymans' discussion (1990, 11-14) of Caesar's notions of Belgae and *Germani cisrhenani*. Some contradictions may simply be because the sources refer to different periods and because the tribes mentioned had migrated over time.



differed in various respects from the remainder of Gaul appears largely correct. Judging by the distribution of gold coins and Mediterranean luxury goods, however, the dividing line was situated somewhat to the north of the rivers Seine and Marne, which Caesar used as a border<sup>52</sup>.

These luxury items are an expression of the social differentiation characterising the tribal groups in the interior of Gaul. They were among the instruments used by tribal elites to generate support for a successful contest with their rivals. This continuous competition resulted in war-booty and slaves, which were converted into Mediterranean consumer goods from the late 2<sup>nd</sup> century onwards.

The relative scarcity of gold coins and other prestige objects in northern Gaul is usually attributed to a lesser degree of structure and hierarchy within the comparatively autonomous tribal groups<sup>53</sup>, although the contrast with more southerly areas has been somewhat diminished as a result of new finds and views<sup>54</sup>.

The conquest of Gaul by Caesar's army (cf. p. 382 f.) produced great changes in the composition of the population of its northern periphery. The Eburones and Atuatuci disappeared from the pages of history, making way for already existing tribes such as the Ubii or new formations such as the Batavi and Tungri, who appeared as the new inhabitants of the northern border of Gaul a few decades later (cf. **figs 9 and 14**)<sup>55</sup>. The contrast in the frequency of high-status objects with the southern part of Belgic Gaul remained, however.

## Germany

In the area extending from the Rhine to the Elbe and beyond, societal changes emerging from the end of the 2<sup>nd</sup> century BC led to confrontations between Germanic groups and the Roman Republic<sup>56</sup>. From 113 BC onwards repeated clashes ensued between Roman troops and the Cimbri and Teutones. These tribes probably originated from Jutland and were migrating first southward to the Danube and then westward into Gaul and the northern part of the Iberian Peninsula. By plundering and intervening in regional conflicts they posed a threat to the increasing Roman interests in the Celtic area. The Teutones were eventually defeated near Aquae Sextiae (Aix-en-Provence) in 102 BC, while the Cimbri could not be halted before reaching the Po valley in the following year.

In the first quarter of the 1<sup>st</sup> century BC Suebian groups living on the lower and middle courses of the Elbe started to extend their influence to the south and west<sup>57</sup>. Historical records are consistent with the extended distribution of several types of brooches, the core of which is situated around the Lower Elbe<sup>58</sup>. From 70 BC at the latest, Elb-Germanic groups intervened in Gaulish tribal conflicts involving allies of Rome. When Caesar seized this opportunity to improve his military reputation and financial situation (cf. p. 382 f.), he found Germanic groups both at his side and among his opponents. The latter included Rhine-Weser-Germanic tribes such as the Usipetes and Tencteri, who inhabited the right bank of the Rhine, but were forced to migrate westward by the persistent Elb-Germanic pressure. The Helvetii, who had previously been driven southwards over the Danube, also tried to migrate into Gaul, joined by some neighbouring tribes.

Whereas Caesar's Gallic War (58-52 BC) had initially terminated German involvement in internal Gaulish conflicts, the ensuing civil wars (49-30 BC, with interruptions) presented new opportunities for the Elb-Germanic groups to expand their influence. Since the protagonists of the Roman Republic had their hands

<sup>52</sup> e.g. Roymans 1990, fig. 7, 2. 6. 8. Wightman (1985, 10-14) also points to differences in the names of places and rivers.

<sup>53</sup> Roymans 1990, 17-51.

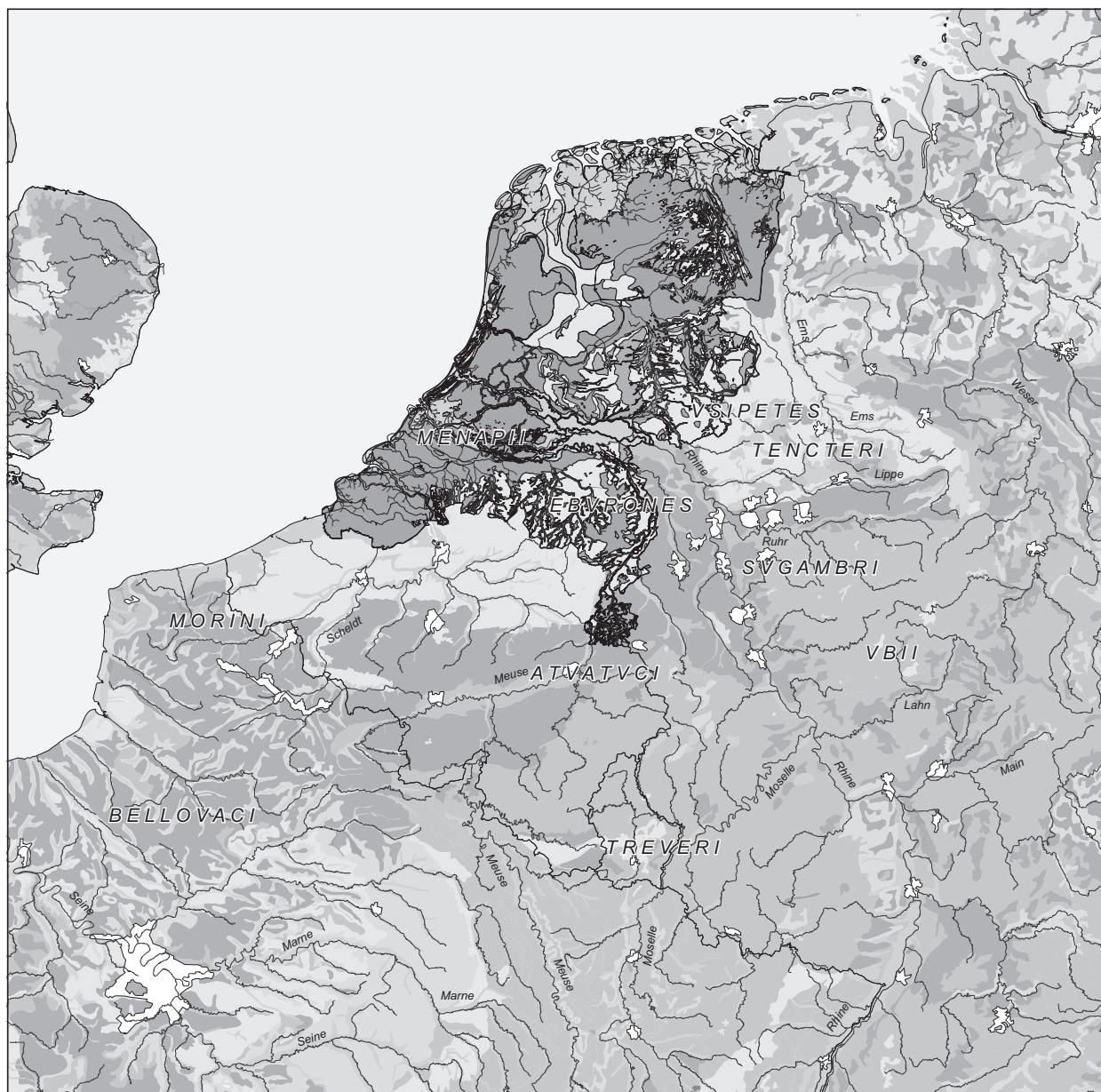
<sup>54</sup> Roymans 2004, 9-22.

<sup>55</sup> Cf. Willems 1984, 197-216; Roymans 2004, 23-29.

<sup>56</sup> Erdrich 2000, 193f.

<sup>57</sup> Cf. Erdrich 2001, 72-82 for the developments in this period.

<sup>58</sup> Erdrich (2001, 77f.) refers to the brooches of types Kostrzewski Var. H, K and M-a.



**Fig. 9** Location of tribes mentioned in the text, c. 50 BC. Cf. suppl. 1 for the base map. – Scale ca. 1:4,000,000.

full with their opponents, the rivalry among the Gaulish elite resurfaced as well. The Suebi and other, unnamed, Germans seized their opportunity. Since ancient historiography focused on the power struggle in Rome in the decades after Caesar's departure from Gaul, the incidental records of German raids may very well represent a more frequent phenomenon. Roman efforts to turn the tide through a controlled relocation of Germanic groups on Gaulish territory and through incidental military actions across the Rhine did not lead to a stable situation. From a Roman point of view, the large-scale operations east of the Rhine launched by Augustus to avert the dangers of Elb-Germanic expansion were therefore both legitimate and inevitable.



**Fig. 10** Indicative map of Late Iron Age habitation densities in the Netherlands, based on find records from the ARCHIS database. Black dots represent finds with a date within the Late Iron Age (c. 250-20 BC). Smaller white dots indicate finds dated within a broader period ranging from the start of the Bronze Age (c. 2000 BC) to the end of the Roman Period (c. AD 450); these records may include Late Iron Age finds as well. – (Base map: palaeogeographical reconstruction of the Netherlands c. AD 100; Bazelmans/Weerts/Van der Meulen 2011). – Scale approx. 1:1,600,000.



The population density of the three regions into which the research area has been divided (p. 371) varied widely in the Late Iron Age (**fig. 10**)<sup>59</sup>. In the eastern river region the natural levees which had silted up in the course of the previous centuries and the adjacent flood basins offered excellent conditions for arable farming and animal husbandry, leading to dense habitation<sup>60</sup>. The Utrechtse Heuvelrug was also inhabited, but the more easterly ice-pushed ridges of the Veluwe only to a lesser degree<sup>61</sup>.

Habitation in the central peat region seems to have been largely confined to the natural levees of the Rhine. The sparse population of the banks of the river Vecht probably mirrors the limited means of existence along this peat-embedded river, but this picture may have been distorted by a lack of research<sup>62</sup>. The near absence of habitation on the narrow banks of the other, even smaller, peat rivers discharging into the Rhine can hardly be a research gap, however.

In the western coastal region, from the mouth of the Meuse to the Oer-IJ estuary, several zones with a dense occupation can be discerned. The beach ridges and dunes appear to have been thinly populated, but much may be buried here below the Younger Dunes, whose formation started in the Middle Ages. The Rhine and Meuse estuaries and the area north of the Oer-IJ show a considerable population density. From about 100 BC onwards a sharp decline in habitation can be observed throughout the coastal area, whereas the clay area north of the Oer-IJ attracted many new inhabitants at about this time. It was not until the beginning of the Common Era that habitation intensified once again in the coastal zone<sup>63</sup>.

To a certain degree the differences in landscape and demography seem to correspond to differences in material culture, which does not necessarily imply a direct relationship. Pottery studies by Van Heeringen and Taayke have demonstrated that the coastal region occupied a separate position in the Late Iron Age (**fig. 11**)<sup>64</sup>. The handmade pottery occurring in the Scheldt estuary and between the Meuse and Rhine had a distinct character and showed no influences from the south or east. Although it shared some features with the pottery from the coastal area north of the Rhine, it differed in other respects. This observation led Van Heeringen to conclude that »the southern coastal region of the Netherlands was inhabited by a group with a clearly distinctive character«<sup>65</sup>.

The pottery tradition of the area north of the Rhine was part of that of a much larger zone whose core reached westward into the modern province of Friesland, but which extended eastward to the Weser. Between the rivers Ems and Weser this pottery group displays an overlap with that of the more easterly Jastorf tradition<sup>66</sup>.

Between the Rhine and Waal, in the eastern river region and further to the east, an earlier southern influence made way for influences from the coastal zone in the Late Iron Age, although clear differences remained<sup>67</sup>. In the absence of a proper survey, the situation is unclear in the central peat region along the Oude Rijn, but it appears to have received influences from the coast<sup>68</sup>.

<sup>59</sup> The distribution patterns in **fig. 10** are based on the records in the ARCHIS database of the Rijksdienst voor het Cultureel Erfgoed (August 2012). The records have not been filtered or processed in any other way to account for variations in quality or intensity of archaeological research. The map therefore only has an indicative value.

<sup>60</sup> Berendsen/Stouthamer 2001 and the ARCHIS database mentioned in the previous note.

<sup>61</sup> Willems 1981, Appendix 1; ARCHIS database (cf. note 59); Kooistra/Maas 2008.

<sup>62</sup> Few excavations have been carried out in the area, and the presence of vast grassland areas and covered sites hampers field surveys (cf. Kok 2008). The area has also suffered from later river erosion.

<sup>63</sup> Van Heeringen 1989, 222 f.

<sup>64</sup> Van Heeringen 1989; Taayke 1996-1997.

<sup>65</sup> Van Heeringen 1989, 219 fig. 73.

<sup>66</sup> Taayke 1996-1997, 173 f. fig. 5.

<sup>67</sup> Van Heeringen 1989, 214; Taayke 2002, 214 f.; Van den Broeke 2012, 139.

<sup>68</sup> Taayke 2009, 53 f. 59.



**Fig. 11** Pottery style groups in the Netherlands during the Late Iron Age (c. 200-0 BC). – (After Van Heeringen 1989, fig. 73 [dotted lines] and Taayke 1996-1997, 174 fig. 5 [dashed lines]. Base map: palaeogeographical reconstruction of the Netherlands c. AD 100; Bazelmans/Weerts/Van der Meulen 2011). – Scale approx. 1:1,600,000.



**Fig. 12** Distribution of Late Iron Age glass bracelets (black) and of silver and bronze *triquetrum* coins (white). – (After Roymans/Ver-niers 2010, fig. 2 [bracelets] and Roymans/Aarts 2009, fig. 9 [coins]. Base map: palaeogeographical reconstruction of the Netherlands c. AD 100; Bazelmans/Weerts/Van der Meulen 2011). – Scale approx. 1:1,600,000.



The distinct position of the coastal area is mirrored by the findspots of glass bracelets (fig. 12, black dots) and gold coins from the Late Iron Age<sup>69</sup>. The distribution of these finds is almost exclusively confined to the area east of Utrecht<sup>70</sup>. Although habitation along the Oude Rijn, to the west of this dividing line, was much sparser than further to the east (fig. 10), this cannot satisfactorily explain the absence of gold coins and glass bracelets.

Around the beginning of the Common Era the material culture underwent considerable change. Strong influences from the northern coastal region are discernible in the handmade pottery from the coastal area between the Scheldt and Rhine<sup>71</sup>, as well as in the pottery of the eastern river region<sup>72</sup>. Further to the east a shift occurred towards the ceramic traditions of the Rhine-Weser-Germanic area<sup>73</sup>. Gold coins made way for silver and bronze specimens in unprecedented quantities (fig. 12, white dots); at least some of these series must have been minted in the region<sup>74</sup>. Glass bracelets disappeared around this time, although the precise dating is uncertain<sup>75</sup>.

It is beyond doubt that these changes were influenced, if not caused, by the Roman intervention in northern Gaul, whose effects became tangible in the Dutch River Area in the course of the 1<sup>st</sup> century BC.

### The Roman expansion to the northwest at the end of the Iron Age

During the late 2<sup>nd</sup> and the 1<sup>st</sup> centuries BC the Roman state underwent a radical transformation, from republic to principate. The incorporation of the Low Countries into the Roman Empire may be considered a – largely accidental – side effect of this metamorphosis. It is therefore important to outline some of the factors in that process, although we are fully aware that the very rough sketch presented below does not do justice to its complexity<sup>76</sup>.

#### Overture

Once the last king had been evicted in around 500 BC, the city of Rome succeeded in expanding its influence through a combination of friendly treaties and brute force. This expansion brought Rome into conflict with Carthage, which had built up a trading monopoly in the western Mediterranean, and with the monarchs ruling the Greek East after the collapse of Alexander the Great's empire. Hard-fought victories provided Rome with war-booty and large overseas territories, which were assigned to representatives of the Senate in the form of a *provincia*<sup>77</sup>: Sicilia, Corsica/Sardinia, Hispania, Illyricum, Macedonia and Africa (fig. 13).

Both the spoils of war and the territorial extension had a major social and political impact. The landed senatorial elite, which supplied both the army commanders and the provincial magistrates, multiplied its wealth. The elite rapidly enlarged their estates with parts of the newly acquired *ager publicus* or state land. Tens of thousands of war captives sold as slaves were available to work the *latifundia* (large estates). In their efforts

<sup>69</sup> Roymans/Aarts 2009; Vos 2009, 183-196; Roymans/Verniers 2010.

<sup>70</sup> Roymans/Aarts 2009, figs 4. 7; Willems 1984, fig. 120; Vos 2009, fig. 5, 1.

<sup>71</sup> Van Heeringen 1989, 243.

<sup>72</sup> Taayke 2009, 59; 2010, 235.

<sup>73</sup> Taayke 2010, 235; Van den Broeke 2012, 141 f.

<sup>74</sup> Known as *triquetrum* and *Avaucia* coins, cf. Roymans/Aarts 2009, figs 9. 13.

<sup>75</sup> Vos 2009, 184 note 6; for additional references cf. Van den Broeke 2012, 260 note 150.

<sup>76</sup> For the topics discussed in this section cf. Scullard 1959; Jehne 2006; 2008; Clark 2010; Eck 2014, among others.

<sup>77</sup> Our »province« reflects only the territorial aspect of the concept of *provincia*, which has the more general meaning of »assignment«.



**Fig. 13** Roman *provinciae* and client kingdoms in Europe at the death of Augustus. Earlier names used in the text are bracketed. – (Base map adapted from Map of Europe with Countries – Single Color by FreeVectorMaps.com).

to acquire land to continue the agrarian family tradition, the returning legionaries, mainly small farmers and their sons, did not stand a chance against the elite.

The new territories also offered attractive possibilities for commercial exploitation. Since restrictions were placed on senators' trading activities, the next highest class of the *equites* – »horsemen« or »knights« (originally Rome's cavalry) – seized the opportunity to significantly boost their wealth. In return for their increasing importance to Roman society they demanded greater political influence and thus contributed to a growing political problem.

In the republican system executive power rested mainly with the Senate, but the magistrates were chosen annually by the people, who could also pass bills and veto unwelcome decisions of the Senate via the tribunate (the *tribuni plebis* were chosen representatives of the people). This ostensibly balanced system was upset by the ever-increasing enrichment of the landed elite and the growth of the unpropertied lower class, making it easier for the former to buy the votes of the latter and, with them, offices and decisions. In 133 BC the tribune Tiberius Sempronius Gracchus tried to bypass the Senate and enforce a redistribution of land in order to improve the situation of small farmers. This initiative, for which Gracchus paid with his life, is often regarded as the beginning of the end of the Roman Republic. In the decades to follow, the fate of society would be determined by the rivalry between the close network of 10-25 families who traditionally pulled the strings and those who tried to gain influence through the support of the people.

The collapse of the republican model was hastened further by increased recruitment of legionaries from the landless lower class. Compared with their landed fellow soldiers, the recruits from this new category were more dependent on their commander, who could share possible war-booty with them and who might provide them with a means of livelihood by donating a plot of land when the army was dissolved.

The increasing personal loyalty of the legions developed into a powerful weapon in the hands of ambitious politicians appointed by the Senate as army commanders to settle external conflicts, or as governor of a province where troops were stationed to protect it from external aggressors. A growing number of legions were used as pawns during the struggle for power between Pompey, Caesar and Crassus (c. 70-44 BC) and later between Mark Antony, Lepidus and Octavian (44-31 BC). The problems involved in the formation and dissolution of these troops eventually led to the establishment of a standing professional army under Augustus.

## Caesar and the Belgae

In the 50s BC the Low Countries were confronted for the first time with the expanding Roman Empire. In 59 Gaius Julius Caesar served as one of the two consuls who constituted the executive committee of the Roman Republic. He belonged to one of the foremost senatorial families, but his career had stalled when Lucius Cornelius Sulla emerged as victor of the first and second civil wars (88-87 and 82-81 BC)<sup>78</sup>; Caesar was also hurt financially through Sulla's agency. New career prospects opened up for Caesar when Sulla died in 78 BC. To finance his career he turned to the extremely wealthy Marcus Licinius Crassus, who was embroiled in a power struggle with the successful politician and general Gnaeus Pompeius Magnus. The three were eventually united in an informal alliance known as the First Triumvirate (60-53 BC).

Although a member of the old senatorial network, Caesar did not shrink from pursuing his purposes through the people and their tribunes, not least because the *triumviri* had influential opponents in the Senate in the form of Cicero and Cato minor. During his first consulship in 59 Caesar proposed a bill to distribute land to Pompey's veterans, which caused a head-on confrontation with the Senate. It was vitally important for Caesar to obtain a proconsular *provincia* that would provide him with legions and thus allow him to acquire military prestige and wealth. At the same time it would extend his immunity from trials. The Senate intended to assign him a non-military *provincia*, but thanks to one of the tribunes he was given Gallia Cisalpina and Illyricum for a period of five years; Gallia Transalpina was added shortly afterwards. This provided Caesar with four legions, and Cisalpina was a welcome recruitment area for new troops. Both Illyricum and Transalpina offered prospects of military glory and booty.

From Illyricum, Caesar might have taken a firm line with the Dacian king Burebista, who was substantially expanding his power at that time. Yet he gave priority to Transalpina, which was threatened by an internal Gaulish conflict to the north, in the course of which more than 100,000 Suebi had settled on Gaulish soil, and by the attempted migration of allegedly no fewer than 368,000 Helvetii and other peoples from the area between the Alps and the Danube. In Gallia Comata a conflict had arisen between the Aedui, who had supported Rome when it advanced into what later became Transalpina, and the neighbouring Arverni and Sequani. The latter tribes had turned to Suebian mercenaries, who were led by Ariovistus. Initially, Rome had let the Aedui down and went as far as recognising Ariovistus as *rex et amicus* (king and friend). The peace in Gaul was further threatened by the migration of the Helvetii and some neighbouring tribes, and more Suebi were heading for Gaul. The appeal from the Aedui and the threat posed to Transalpina by the wandering Helvetii legitimised Roman military interference outside the *provincia*, although not on the scale that soon developed.

In 58 BC Caesar's troops first defeated the Helvetii and then the Suebi. In the following year they marched against the Belgae, who had united and armed themselves, probably because they were alarmed by the

<sup>78</sup> Caesar was a nephew by marriage of C. Marius and son-in-law of L. Cornelius Cinna, Sulla's opponents.

Roman intervention outside the *provincia* Transalpina. During the tough war with the Belgae, Caesar also had to deal with incursions by Usipetes and Tencteri, Germanic peoples driven over the Rhine by the Suebi (fig. 9). To discourage further German interference, Caesar twice crossed the Rhine, where he destroyed the lands of the Sugambri and tried to deter the Suebi. He also twice set foot on British soil, to prevent tribes living in the southeast from supporting their Belgic relatives on the continent.

The Eburones and Menapii were among the most stubborn of the Belgic opponents. According to Caesar the Eburones lived mainly between the Rhine and Meuse, and the Menapii on either bank of the Rhine, possibly indicating the Waal branch in this context<sup>79</sup>. Even if the actual hostilities did not reach the Dutch River Area, their consequences would certainly have been felt.

Although it is no longer believed today that the Eburones were exterminated in accordance with Caesar's order<sup>80</sup>, the situation of the Belgic tribes half a century later leaves no doubt that the Gallic War caused major displacements to the north of the rivers Seine and Marne.

By the year 53, when Belgic resistance was nearly broken, the more southerly Gauls finally united under the Arvernian leader Vercingetorix. After this uprising had been quelled with great difficulty, Caesar stayed in Gaul for two more years to deal with the last pockets of resistance and to restore order; his renewed pro-consulate was due to expire late in 50 or in the course of 49. With Gaul settled, a loyal army at his side and an immense war-booty at his disposal, he was ready to enter into battle with the Senate and with Pompey, who tried to cut him out. After a vain attempt to reach an agreement, Caesar crossed the Rubico in January 49, the river border between Gallia Cisalpina and Italy. With that step he exceeded the powers assigned to him by the Senate and a new civil war was born. In 45 Caesar emerged victorious and eventually succeeded in being proclaimed *dictator in perpetuum* – sole ruler for an indefinite time. However, his overt autocracy was too much at odds contrast with the republican tradition and led to his violent death in 44.

#### Octavian, Augustus and the Rhineland

Caesar's death set the scene for the man who would effectively close the chapter of the Roman Republic. In the dictator's last will Gaius Octavius, the son of his niece Atia and his closest male relative, was adopted as his heir and endowed with most of his capital. Octavius thereupon took his adoptive father's name, Gaius Julius Caesar; today, to avoid confusion, he is normally simply referred to as Octavianus (Octavian). His adoption and appointment as Caesar's heir was a severe setback for Marcus Antonius (Mark Antony), who had rendered Caesar important military services during his conflict with Pompey, and who had been appointed as his fellow consul for the year 44. Mark Antony's efforts to fill the gap left by Caesar were frustrated by Octavian who, although only 18 years old, refused to be pushed aside. From Illyricum, where he had been sent in advance of a planned expedition with Caesar against the Parthians, Octavian travelled to Rome to claim a prominent position in political life.

Initially, Octavian and Mark Antony concluded an agreement (known as the Second Triumvirate, 43-33), with Marcus Aemilius Lepidus, Caesar's *magister equitum* (»master of the cavalry«, a dictator's second-in-command) as a third partner. Their rivalry soon got out of hand, however, and ended in armed conflict. In

<sup>79</sup> Caes. Gall. 4, 4 (Menapii). 5, 24 (Eburones). There is little doubt that the territory of the Eburones extended to the west of the Meuse; cf. the distribution of the coins of type Scheers 31 attributed to the Eburones (Roymans/Aarts 2009, fig. 7).

<sup>80</sup> Cf. Caes. Gall. 6, 32-35. 43, especially 34: *stirps ac nomen civitatis tollatur* (that the race and name of that community be destroyed).



33 BC Octavian succeeded in shoving Lepidus aside, leaving him only his position of *pontifex maximus*. The sea battle near Actium in 31 heralded the end of Mark Antony, who fled to Egypt where he committed suicide in the following year.

The past decades had demonstrated that ambitious politicians could easily deploy the provincial garrisons against the central government, a possible future threat to Octavian's dominant position. On the other hand, Caesar's fate had taught him that the senatorial elite did not agree with unlimited military despotism. In the years to come Octavian and the Senate would solve this dilemma by working out a compromise, which in retrospect proved surprisingly sustainable.

With no powers other than an annually renewed consulate, Octavian restored order after the defeat of Mark Antony and his Egyptian ally and bedfellow Cleopatra. The closing of the temple of Janus at Rome marked the restoration of peace, allowing for a drastic reduction in the army. Octavian used Cleopatra's treasures to buy land on which to settle the numerous veterans, thus avoiding the unrest that usually accompanied other forms of land allocation. He also distributed money to the people, spent a fortune on public building and remitted debts to the state, as well as conducting a *census* and revising the Senate.

In 27 BC Octavian renounced all his powers in what was probably a very carefully staged meeting of the Senate, but the senators immediately voted him the administration of Hispania, Gallia and Syria for a period of ten years, and bestowed on him the honorary title of Augustus. Octavian preferred the term *princeps* or »first man«, the traditional republican designation for prominent statesmen of outstanding virtue, which could be earned through irreproachable behaviour and services rendered to the state. Successive consulships guaranteed Augustus' hold on the situation in Rome, and his extensive *provincia* provided him with the command of more than three quarters of the 28 remaining legions.

This carefully orchestrated situation nearly came to an end in 23 BC. After a conspiracy was discovered, Augustus was struck by a disease which almost killed him. On recovery, he resigned his consulship. This doubled the chances for senators to be elected as a consul and increased the pool of ex-consuls from which the provincial magistrates were recruited. By way of compensation Augustus received the *tribunicia potestas* for life and his *imperium* (aggregate of powers) was extended to a *maius imperium proconsulare* or its equivalent for ten years. The former invested him with the prerogatives of a people's tribune to pass bills and pronounce a veto, and the latter with powers superior to those of all other proconsuls, leaving him in control of all the provinces and their garrisons. These two powers constituted the basis of all consecutive imperial reigns. In 19 BC Augustus accepted the *imperium consulare* for life; his *imperium proconsulare* was repeatedly prolonged.

After Caesar's departure Gaul disappeared from the historiographical limelight for several decades. The order that Caesar believed he had restored did not remain undisturbed, however. In 46 BC a rebellion of the Bellovaci (fig. 9) had to be suppressed and in the following year problems arose with some Germanic peoples<sup>81</sup>. When the western provinces were assigned to Octavian at the renewal of the Second Triumvirate in 40, Gaul was turbulent. His faithful lieutenant Marcus Vipsanius Agrippa crushed an uprising in Aquitania in 39/38 and crossed the Rhine to fight a battle<sup>82</sup>. A decade later the governors Gaius Carrinas and Nonius Gallus were facing rebellious Morini and Treveri and invasions of Suebi, while Marcus Valerius Messalla once again had to settle scores with the Aquitani<sup>83</sup>.

<sup>81</sup> Bellovaci: Liv. Periocha 114. Germans: Cic. Att. 14, 9.

<sup>82</sup> App. civ. 5, 75. 5, 92; Cass. Dio 48, 49. Roddaz (1984, 66-75) is of the opinion that Agrippa left for Gaul in or shortly after September 40, defeated the Aquitani in 38, crossed the Rhine in

the winter of 38/37 and did not return to Rome before 37. The precise chronology of his stay in Gaul is irrelevant to the present argument.

<sup>83</sup> Cass. Dio 51, 20-21; App. civ. 4, 38; Tib. 2, 1, 33.

In the opinion of Cassius Dio a period of over 20 years of ad hoc policy ended when, in 27 BC, Augustus personally took care of the province that the Senate had just assigned to him. He carried out a *census* and organised the administration<sup>84</sup>. Although it is conceivable that the division of Gallia Comata into Aquitania, Belgica and Lugdunensis (fig. 13) goes back to this period, a connection with Augustus' second and more protracted stay in Gaul in 16-13 BC seems to have more to recommend it.

The improved organisation of the province was no guarantee for peace. In 19 BC internal Gaulish dissension and German incursions presented themselves once more<sup>85</sup>. Counteractions by Agrippa involved the establishment of the earliest military bases on the Rhine, at Nijmegen and Neuss. This may be viewed as the end of the Iron Age in the Dutch River Area.

## THE GERMAN CHALLENGE

The incidents in Gaul which have been handed down in historical sources convey the impression that Rome counteracted with half measures only during the first decades after the Gallic War. The administrative organisation and the *census* that Augustus carried out in 27 BC reveal a more thorough approach, but they failed to produce the desired stability, as historiographers recorded new Gaulish conflicts and German incursions eight years later. This prompted Augustus to send his trusted troubleshooter Agrippa to the Rhine. The actions taken by Agrippa had no long-term effects either, however, since two or three years later the Sugambri, Usipetes and Tencteri – the plagues of olden times – crossed the Rhine and succeeded in defeating a Roman army. During the next three decades a very large military force was to operate east of the Rhine almost without interruptions. For most of that period the armies were commanded by Augustus' stepsons Tiberius and Drusus (the Elder) and by Drusus' son Germanicus.

Augustus' habit of entrusting important military operations to his next of kin and his tried and tested companion Agrippa – who married into Augustus' family in 28 BC – is one of the measures he took in order to check over-ambitious plans of prominent senators<sup>86</sup>. His adoptive father Caesar was a telling example of the power of a politician backed by a large and loyal army. Augustus further weakened the role of the legions as an instrument of political power by reducing their number – from about 60 at the battle of Actium to 28 – and by changing the command of a legion every two to three years. The striking force of the legionaries was supplemented by an approximately equal number of auxiliaries, who were increasingly organised in regular units. The creation of better conditions of service and more secure career prospects fostered troop loyalty to the central authorities.

### The Rhine

The Rhineland was no *terra incognita* to the Roman army, since Caesar (55 and 53 BC), Agrippa (39/38) and M. Vinicius (25) had already operated across the Rhine. The previous chapter has sketched the landscape

<sup>84</sup> Cass. Dio 53, 22.

<sup>85</sup> Ibidem 54, 11. The German expedition of M. Vinicius in 25 BC (ibidem 53, 26) was not related to raids into Gaul, but was a response to the murder of Roman merchants.

<sup>86</sup> In this sense also Eck 2004b, 13. Cf. Cass. Dio 55, 10, 18: ἄλλον δὲ τινα πέμψαι τῶν δυνατῶν οὐκ ἔτολμα (he did not dare to send one of the influential men), at the uprising of the Armenians and Parthians in AD 1, when Tiberius had retired on Rhodes and Gaius and Lucius were still too young and inexperienced.

and land use in the research area at the end of the Iron Age. Since the Rhine delta was to play a prominent part in the decades around the beginning of the Common Era, some points will be elaborated here.

## The Rhine delta at the beginning of the Common Era

Thanks to the comprehensive study of the central Dutch river area by Berendsen and his students and successors, a detailed picture can be given of the Rhine branches that were active around the beginning of the Common Era (**fig. 8**)<sup>87</sup>. The major branches will be briefly discussed here, from east to west.

Immediately west of the Dutch-German border, near Lobith (prov. Gelderland/NL), the Waal branched off from the then active Rhine channel, the Oude Rijn-Pannerden<sup>88</sup>. From about 250 BC the Waal developed into the major distributary, as appears from datings of the river Linge, its initial downstream continuation<sup>89</sup>. Together with the Meuse the Linge flowed into a large estuary called the *Helinium* in the Roman period<sup>90</sup>. The present Waal branch downstream from Tiel (prov. Gelderland/NL) has only existed since the Late Roman Period<sup>91</sup>.

In 1707 the Waal and the Neder-Rijn were connected by the artificial Pannerdens Kanaal, whose northern stretch is situated within the Oude Rijn-Pannerden channel belt. Today the Gelderse IJssel branches off from the Pannerdens Kanaal just to the east of Arnhem (prov. Gelderland/NL). Berendsen and Stouthamer have dated the start of the Gelderse IJssel around AD 400, but they regarded a more gradual development from the beginning of the Common Era as possible<sup>92</sup>. This issue will be further discussed below (p. 402-404). Nowadays the Rhine from Arnhem to Wijk bij Duurstede is called the Neder-Rijn. The present channel is situated within the channel belt of the same name, which developed around 650 BC<sup>93</sup>.

The next bifurcation occurs at Wijk bij Duurstede, where the river Lek was formed by an avulsion around AD 50<sup>94</sup>. Near Culemborg (prov. Gelderland/NL) and Vianen (prov. Utrecht/NL) it seems to have rejuvenated an earlier channel. From Vianen onwards this channel belt is called the Hollandse IJssel; the stretch downstream from Montfoort (prov. Utrecht/NL) is believed to have developed as late as around AD 200<sup>95</sup>. Downstream from Wijk bij Duurstede the Rhine has created three successive channel belts. The latest of these, the Kromme Rijn, developed around 1250 BC<sup>96</sup>. After it was dammed up at Wijk bij Duurstede in AD 1122 it was reduced to a narrow winding residual channel. Between Zeist (prov. Utrecht/NL) and Utrecht the Kromme Rijn channel belt is flanked by two Roman channel belt remains which may have been interconnected, the Oudwulverbroek and Zeist channel belts. The southern remnant, the Oudwulverbroek,

<sup>87</sup> Cf. Berendsen/Stouthamer 2001; Cohen et al. 2012.

<sup>88</sup> In this section the channel belts have been labelled with the names used by Berendsen and Stouthamer (2001, Appendix 3) and Cohen et al. 2012. For the Oude Rijn-Pannerden cf. Cohen et al. 2012, Channel belt ID 135: start of sedimentation 2200 BP (c. 300 BC).

<sup>89</sup> Cohen et al. 2012, Channel belt ID 97, Linge: start of sedimentation 2160 BP.

<sup>90</sup> In some stretches of the Meuse system from the Roman period sedimentation started as early as c. 1200 BC (e.g. Cohen et al. 2012, Channel belt ID 40, Dussen: 2980-1760 BP), in others only around the beginning of the Common Era or in the Late Roman Period, when various avulsions seem to have occurred (cf. *ibidem* ID 101, Maas). In the Macharen channel belt three Roman coins and the remains of a Roman ship have allegedly been found (*ibidem* ID 102, referring to a further unconfirmed assertion by Van Diepen 1952, 115f.).

<sup>91</sup> Cohen et al. 2012, Channel belt ID 174, Waal: start of sedimentation 1625 BP (c. AD 400).

<sup>92</sup> Berendsen/Stouthamer 2001, 201 no. 50: »The clay content of the dated peat samples gradually increases between 2000 BP and 1575 BP. This suggests that the river gradually became more important over a period of 400 years.« Calibration (IntCal13, 2 sigma) produces ranges of 179 BC-AD 130 (2000±65 BP) and AD 406-560 (1575±35 BP).

<sup>93</sup> Cohen et al. 2012, Channel belt ID 116, Neder-Rijn: start of sedimentation 2500 BP.

<sup>94</sup> *Ibidem* Channel belt ID 91, Lek: start of sedimentation 1950 BP.

<sup>95</sup> *Ibidem* Channel belt ID 68, Hollandse IJssel: start of sedimentation 1900 BP.

<sup>96</sup> *Ibidem* Channel belt ID 85, Kromme Rijn: start of sedimentation 2500 BP.

is believed to have been cut off between 20 and 135<sup>97</sup>; the Roman military base of Vechten was built on its southern bank. The Zeist channel belt was cut off in the 3<sup>rd</sup> or 4<sup>th</sup> century<sup>98</sup>.

From this point on the geomorphology of the research area has been mapped in detail by Van Dinter (fig. 2)<sup>99</sup>. She locates the bifurcation of the Rhine and the Vecht at least 3 km downstream from Vechten, because the Oudwulverbroek residual channel is situated along the edge of the meander belt<sup>100</sup>. The river Vecht developed around 400 BC and was partly a rejuvenation of the older Angstel channel belt<sup>101</sup> (fig. 8). The Vecht was continually fed by drainage water from the peat area and by seepage water from the ice-pushed ridges to the east and is likely to have been navigable throughout the Roman period<sup>102</sup>.

The Oer-IJ estuary has recently been studied by Vos<sup>103</sup>. This tidal outlet had started silting up by 400 BC. Vos assumes a relationship between this process and the development of a northward outlet of the Flevo lakes to the Wadden Sea, known as the Vlie. The Oer-IJ gradually ceased to function as a drain for the peat lake area, and the reduced discharge was no longer sufficient to keep the outlet to the sea cleared. The formation of the Lek around AD 50 is likely to have accelerated this process; from then on the Kromme Rijn transported less water and the Vecht will soon have ceased to contribute to the clearing of the Oer-IJ<sup>104</sup>.

Around the beginning of the Common Era the silting-up of the Oer-IJ was already advanced, and the tidal outlet was nearly blocked by the extending coastal barriers. Only a small opening is believed to have remained, with a depth of 1-2 m below sea level. »Probably only at high tide or extreme high water could it be used as a waterway«<sup>105</sup>. Some time later this opening was also blocked, and from then on the area was drained in the opposite direction, through the Flevo lakes and the Vlie into the Wadden Sea.

From Utrecht to the coast the Rhine followed the Oude Rijn channel belt, which had started to deposit sediment around 4600 BC<sup>106</sup>. A small channel belt, the Heldam, is situated to the south, between De Meern and Harmelen (prov. Utrecht/NL). This was reactivated in the first centuries of our era, probably until c. AD 240<sup>107</sup>.

Downstream from Woerden small crevasse splays occur on both sides of the Oude Rijn (fig. 2); these were formed because the discharge of river water was hindered by tides as far upstream as this location. Some of these splays developed in the Roman period; the age of others is unknown<sup>108</sup>. Between Alphen aan den Rijn and Leiden the Rhine may have had two parallel channels, dividing and merging several times over a distance of 15 km. Complex drainage systems are situated to the north of the Rhine near Leiden, created by the development of crevasse splays in the flood basin, which fanned out here just before the river estuary<sup>109</sup>.

The extended Roman settlement at Valkenburg was transected by several tidal gullies which were oriented more or less perpendicular to the main channel of the Rhine. Inland, these gullies split up into a network

<sup>97</sup> Berendsen/Stouthamer 2001, 228f. no. 138: 1915±50 BP (AD 20-135, IntCal 13, 1 sigma). Recent AMS dates from the residual gully immediately to the north of the Vechten forts are remarkably similar, with calibrated dates ranging from AD 23-86 for a sample taken from *gyttja* layers more than 4 m below the present surface, which must have been deposited in fairly deep but stagnant waters, to AD 69-130 for a sample taken from peaty clay at a depth of nearly 2 m (Van den Bos et al. 2014, 281 tab. 2: 1940±30 BP and 1900±30, respectively; recalibrated with the OxCal13 standard, date ranges for 1 sigma, MP/LK). Cohen et al. 2012, Channel belt ID 138, Oudwulverbroek: end of sedimentation 1915 BP.

<sup>98</sup> Cohen et al. 2012, Channel belt ID 195, Zeist: end of sedimentation 1774 BP.

<sup>99</sup> Van Dinter 2013.

<sup>100</sup> Ibidem 20.

<sup>101</sup> Cohen et al. 2012, Channel belt ID 168, (Utrechtse) Vecht: start of sedimentation 2300 BP; ID 10, Angstel: start of sedimentation 2857 BP (c. 1000 BC).

<sup>102</sup> Cf. ibidem Channel belt ID 168, (Utrechtse) Vecht: end of sedimentation 828 BP (i.e. AD 1122, when the Kromme Rijn was dammed at Wijk bij Duurstede).

<sup>103</sup> Vos 2008, especially 88-93 fig. 3, 7. 9.

<sup>104</sup> Cf. Van Dinter/Graafstal 2007, 25.

<sup>105</sup> Vos 2008, 93.

<sup>106</sup> Cohen et al. 2012, Channel belt ID 133, Oude Rijn: start of sedimentation 5730 BP.

<sup>107</sup> Van Dinter/Graafstal 2007, especially 20-25. Cf. Cohen et al. 2012, Channel belt ID 62, Heldam: end of sedimentation 1930 BP (disregarding the evidence discussed by Van Dinter and Graafstal).

<sup>108</sup> Van Dinter 2013, 19 fig. 6.

<sup>109</sup> Ibidem 18.



of shallow brooks<sup>110</sup>. As the sea level has risen about two metres since the Roman period, the coastal strip has suffered from erosion. It is assumed that the coastline was situated at some distance to the west of the present dunes<sup>111</sup>.

### The Rhine delta in the ancient literary sources

The bifurcating character of the Rhine in its lower delta is not only demonstrated by physical-geographical evidence, but it is also mentioned by several authors from the Roman period. One of them, Pliny the Elder (23/24-79 AD), knew the delta landscape from his own observations because he had taken part as an army officer in Corbulo's expedition against the Chauci in AD 47<sup>112</sup>.

The classical sources leave no doubt that it was known in Rome that the Rhine discharged into the Ocean through several mouths. The earliest record is to be found in Virgil's Aeneid, which describes the Rhine as *bicornis*, »with two horns«<sup>113</sup>. Virgil (P. Vergilius Maro, 70-19 BC), is obviously referring to the existence of two mouths, but their identification remains uncertain.

Pomponius Mela, who published a description of the world in AD 43/44, also mentions two mouths. He describes how the Rhine bifurcates near the Ocean in a left branch discharging into the sea under its own name (*Rhenus*) and a right branch broadening into an enormous lake called *Flevo*, and then narrowing again before flowing out into the sea<sup>114</sup>. The Oude Rijn is the obvious candidate for the left branch, while the right branch must be either the Gelderse IJssel (p. 402-404) or the Vecht, since the Flevo lake can be nothing other than the large peat lake which is the predecessor of the IJsselmeer (fig. 8).

When Tacitus (c. AD 55-120) recorded two mouths, he was evidently referring to the *Helinium* and the Oude Rijn-Pannerden and its continuation<sup>115</sup>. He describes how the Rhine split into two channels near the beginning of the Batavian territory. One of these, named *Rhenus*, ran a wild course along Germania before discharging into the ocean, while the other, given the local name *Vahalīs* (Waal), flowed more quietly along the Gaulish bank, and subsequently, under the name *Mosa* (Meuse), through the immense mouth of that river into the Ocean. The latter branch is certainly that of Waal-Meuse/*Helinium*. The former, wilder branch must be the lower course of the Rhine (Oude Rijn-Pannerden, Neder-Rijn, Kromme Rijn and Oude Rijn, successively). In theory, the Vecht or the Gelderse IJssel could be meant, but considering their respective terminal and initial development stages neither is a likely candidate for a »wild« channel. Moreover, we would expect that if either of these was meant, Tacitus would have included the northerly peat lakes in his description, which he mentions no fewer than four times elsewhere<sup>116</sup>. Tacitus consistently uses the plural form when referring to these lakes, which he explicitly links with the Frisii at one place, and with the sea at another<sup>117</sup>.

The three Rhine branches that can be inferred from Tacitus' works – the Waal, the Oude Rijn and a branch through the peat lakes – also occur in the writings of Pliny the Elder. He describes how the Rhine discharges into the sea through three mouths: a northerly one, which he calls *Flevum*, through the lakes; a southerly one, which he calls *Helinium*, via the Meuse; and in between these a modest mouth where the Rhine kept

<sup>110</sup> Vos/Lanzing 2000, 18 fig. 8.

<sup>111</sup> Van Dinter 2013, 15, with further references.

<sup>112</sup> Plin. nat. 16, 1: »sunt vero et in septentrione *visae nobis Chaucorum qui maiores minoresque appellantur*« (but there are also in the north peoples **seen by us** who are called the greater and the lesser Chauci).

<sup>113</sup> Verg. Aen. 8, 727. In Caes. Gall. 4, 10 the rivers Rhine, Meuse and *Vacalus* (Waal) are also mentioned, but the passage is generally considered a later insertion.

<sup>114</sup> Mela, 3, 24.

<sup>115</sup> Tac. ann. 2, 6.

<sup>116</sup> Tac. Germ. 34; ann. 1, 60. 2, 8. 13, 54.

<sup>117</sup> Tac. Germ. 34 (ann. 13, 54 is almost certainly to be understood in this sense as well); ann. 2, 8.

its name<sup>118</sup>. Despite the singular form *Flevum*, Plinius speaks of the (peat) lakes in the plural. Elsewhere he mentions **two** lakes, not far from the Chauci, which must surely refer to the same lakes<sup>119</sup>. He vividly describes how the high oaks bordering the lakes were occasionally undermined by the waves or torn apart by the wind, carrying vast islands, entangled in their roots, away with them, drifting with their branches outstretched like a ship's rigging – clearly an eyewitness account of the erosion of the peatlands.

Finally, Ptolemy (Claudius Ptolemaeus, mid-2<sup>nd</sup> century AD), a scholar writing in Greek, lists three mouths of the Rhine: a western, a central and an eastern one<sup>120</sup>. They are preceded by the Meuse, which should surely be equated with the *Helinium*. The three Rhine branches must therefore refer to the Oude Rijn, the Oer-IJ and the northern outlet of the peat lakes, the Vlie.

On the whole the image evoked by the ancient sources corresponds remarkably well with the physical-geographical reconstruction. Since the texts were written in the period ranging from 19 BC (Virgil) to well into the 2<sup>nd</sup> century (Tacitus, Ptolemy), we may assume that changes like the development of the Vlie and the silting-up of the Oer-IJ estuary are reflected in the sources, or at least in some of them.

Viewed from the south we first encounter a rather gently flowing Waal, which joins the Meuse via the present Linge and discharges into the sea through the »immense« *Helinium*. To the north of that estuary the Rhine had at least two outlets that functioned simultaneously. The first is the »modest« mouth of the »wild« Rhine under its own name *Rhenus*, which – from Tacitus account – may be equated with the Oude Rijn. The apparent contradiction between »modest« and »wild« may be of a purely literary nature, prompted by a desire to contrast the Rhine with the broad channel of the Waal discharging into the »im-mense« *Helinium* estuary.

The second Rhine branch is the one which flows into the sea through the peat lakes, and was called *Flevo* or *Flevum*. In principle, both the Oer-IJ and the Vlie qualify for this branch, and they probably succeeded each other as such. Mela's description of a river which first broadens into an enormous lake and then narrows again into the actual mouth seems to argue in favour of the Vlie, because the Oer-IJ is situated rather marginally with respect to the lakes. When Mela published his work in AD 43 or 44, the Oer-IJ was probably almost silted up. In view of the early building of a military base at Vechten, the branch which gave access to the lakes is likely to have been the Vecht, although the Gelderse IJssel cannot be ruled out (p. 402-404). Since both Pliny and Tacitus refer to the lakes in plural form, and Pliny even explicitly mentions two lakes, it is better to adhere to the plural. This ties in well with the recent reconstruction of two connected water masses<sup>121</sup>. The fact that Mela or his source record a single lake cannot be regarded as a contradiction in this light.

### New inhabitants of an existing landscape

Earlier (p. 377), we sketched a broad tripartite division of the pottery traditions during the Late Iron Age in the Dutch river area: 1) the coastal area comprising the estuaries of the Scheldt and Meuse; 2) the coastal area to the north of the Rhine; and 3) the river area between the Rhine and Waal (**fig. 11**). The latter region also differs through the occurrence of glass bracelets (**fig. 12**, black dots) and gold coins in a Celtic tradition. By the end of the 1<sup>st</sup> century BC various cultural changes became apparent, which seem to reflect the arrival of new groups.

<sup>118</sup> Plin. nat. 4, 101.

<sup>119</sup> Ibidem 16, 2.

<sup>120</sup> Ptol. 2, 9.

<sup>121</sup> Vos 2006, map 50 AD (1900 BP); Bazelmans/Weerts/Van der Meulen 2011, map 100 AD; Van Dinter 2013, fig. 2.

In the river area between the Rhine and Waal the pottery began to show influences from the Rhine-Weser-Germanic area. It seems obvious that this change was connected with the arrival of a group referred to as the Batavi (fig. 14). According to Tacitus they had split off from the Chatti, who were living in what is now Hesse<sup>122</sup>. They settled in the uninhabited periphery of Gallia and also on an island bounded by the Ocean in front and by the Rhine at the back and on both sides<sup>123</sup>. A glance at the map (fig. 8) suffices to identify this *insula Batavorum*, the island of the Batavians<sup>124</sup>, with the entire area enclosed by the Rhine and the Waal/Linge/*Helinium*, including the peatlands and the coastal area between the *Helinium* and the mouth of the Oude Rijn. The »periphery of Gaul« is likely to refer to the alluvial deposits south of the Waal<sup>125</sup>.

Tacitus' description of the territory of the Chattian newcomers leaves us with two problems. The first concerns the description of the edge of Gaul as »uninhabited«. Although Caesar wanted to exterminate the Eburones who were living there previously (p. 383), he does not seem to have succeeded<sup>126</sup>, and the Batavians must have encountered at least some Eburonean survivors. The opinion expressed by Roymans that the Chattian immigrants consisted of no more than a small elite group<sup>127</sup> is difficult to prove or reject<sup>128</sup>.

The second problem relates to Tacitus' assertion that the *insula Batavorum* extended as far as the North Sea coast. The Kromme Rijn Area is in fact the western boundary of a dense distribution area for *triquetrum* coins (fig. 12, white dots), which Roymans rightly associated predominantly with the Batavians<sup>129</sup>. It therefore seems likely that the sphere of influence of these Chattian immigrants did not extend west of this point. It may not be a coincidence that it was not until the middle of the 1<sup>st</sup> century AD that northern characteristics in the pottery styles made way for Rhine-Weser-Germanic influences in the Kromme Rijn Area<sup>130</sup>. Despite the apparent limit of Batavian influence to the area east of Utrecht, Ptolemy situated Βαταῦων Λουγόδεινον, Lugdunum of the Batavians, on the North Sea coast, between the Meuse estuary and the southernmost outlet of the Rhine<sup>131</sup>. This fits with Pliny's statement that the island of the Batavi and Cananefates was nearly a hundred miles long<sup>132</sup> – the distance between the Dutch-German border and the present coastline is approximately 130 km or 88 Roman miles as the crow flies. Thus, there appears to be a discrepancy between the **formal** extent of the area which the Romans initially considered Batavian and the **actual** extent of the area which was inhabited by these Chattian newcomers as indicated by the distribution of the coins associated with them.

Until recently Roymans argued that the Batavians had settled on the left bank of the Rhine long before the expeditions of Drusus<sup>133</sup>. He supposed that their arrival took place around 50 BC, as a result of a treaty

<sup>122</sup> Tac. Germ. 29; hist. 4, 12.

<sup>123</sup> Tac. hist. 4, 12: »Batavi (...) extrema Gallicae orae vacua cultoribus simulque insulam iuxta sitam occupavere, quam mare Oceanus a fronte, Rhenus amnis tergum ac latera circumluit« (the Batavians occupied the uninhabited extreme end of Gaul and at the same time an adjacent island, which was washed by the Ocean at the front and by the river Rhine in the rear and at both sides).

<sup>124</sup> This term is literally used in Tac. ann. 2, 6; hist. 5, 23. Cf. Cass. Dio 54, 32, 2. 55, 24, 7.

<sup>125</sup> In »extrema Gallicae orae« (Tac. hist. 4, 12) *ora* does not have to be read in the specific sense of »coast«. Especially in connection with *extrema* it may well be understood in the more general sense of »region, land, district« (OLD ora 3). The phrase is reminiscent of *ad Gallicam ripam* (Tac. ann. 2, 6), which characterises the southern bank of the Waal as the Gaulish bank of that river.

<sup>126</sup> Roymans 2004, 23-28.

<sup>127</sup> Ibidem 55-65, especially 65: »an aristocratic leader and his *comitatus*, whom Rome recognised as a king and who subsequently succeeded in organising migrant and indigenous groups in a new polity«.

<sup>128</sup> That the Cananefates were outnumbered by the Batavians (Tac. hist. 4, 15) is not an argument in favour of Roymans' hypothesis, to say the least. The only slightly later transfer of allegedly 40,000 Sugambri and Suebi to the left bank of the Rhine (p. 407) shows that a large-scale »migration« is not inconceivable.

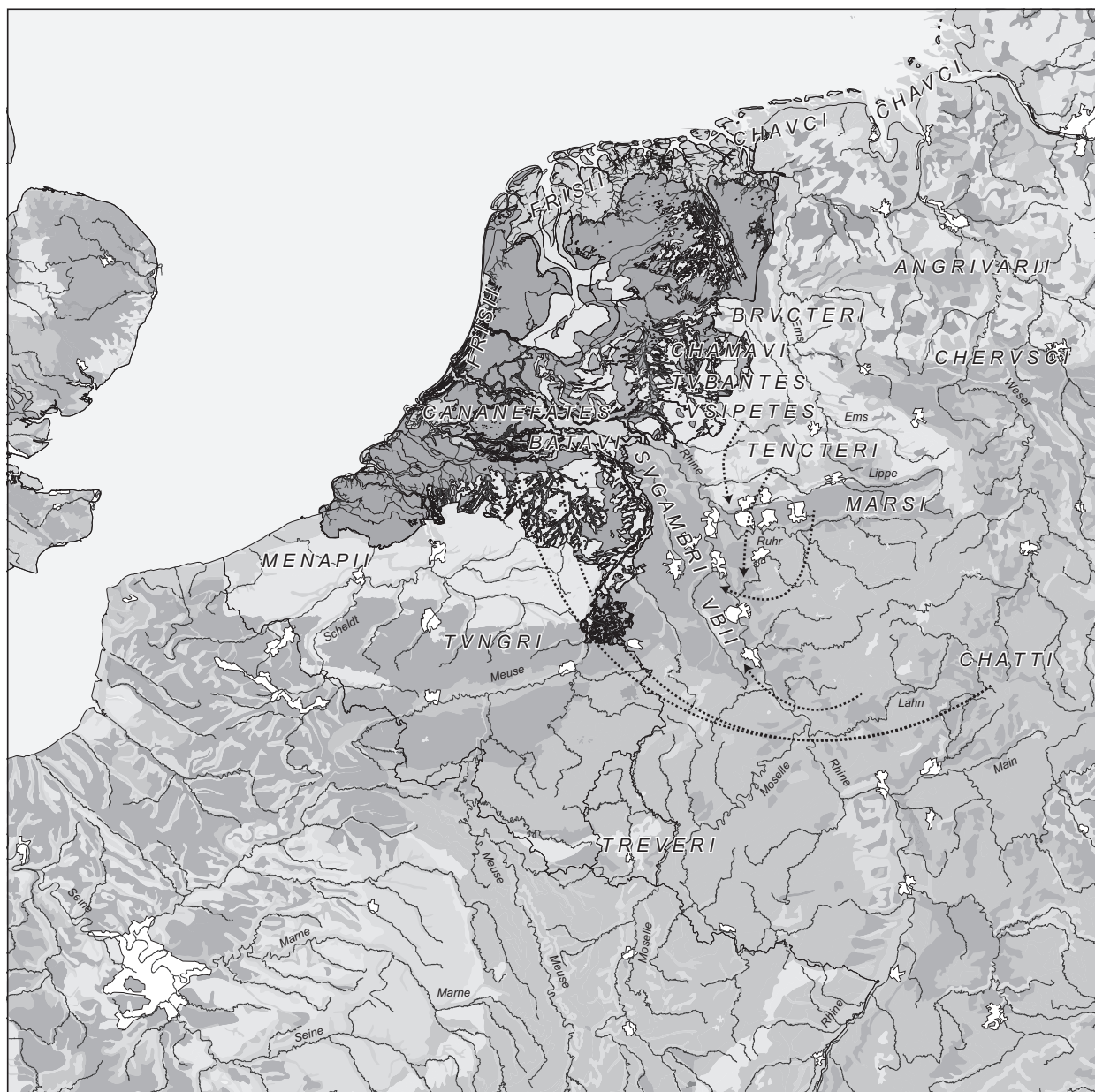
<sup>129</sup> Roymans 2004, 67-96 fig 6, 1-2; the earliest silver emissions, however, have recently been assigned to the Eburones (Roymans/Dijkman 2012, 179-183).

<sup>130</sup> Taayke 2002; 2010, 235f.; Van den Broeke 2012, 142f.

<sup>131</sup> Ptol. 2, 9. Compare the situation of *Lugduno* on the Tabula Peutingeriana, near the coast and to the west of *Foro Adriani* (Voorburg; prov. Zuid-Holland/NL) and *Praetoriu Agrippine* (Valkenburg). The Itinerarium Antonini designates Lugdunum as the starting point of the road leading from the North Sea over the left bank of the Rhine to *Argentorate* (Strasbourg; dép. Bas-Rhin/F).

<sup>132</sup> Plin. nat. 4, 101.

<sup>133</sup> Roymans 2004, 67-96.



**Fig. 14** Location of tribes mentioned in the text, c. AD 10. Cf. suppl. 1 for the base map. – Scale ca. 1:4,000,000.

that Caesar had concluded with them when they were still living in Hesse<sup>134</sup>. Heinrichs dated the migration to about 40 BC<sup>135</sup>, allowing a connection with Agrippa's first stay in Gaul. Now that the earliest silver *triquetrum* emissions have recently been attributed to the Eburones<sup>136</sup>, however, previous objections to the association of the transfer of the Batavians with Agrippa's second governorship in 19 BC appear to have been removed.

The coastal area between the outlets of the Meuse and Rhine is generally regarded as the territory of the Cananefates, who are believed to have arrived at the same time as the Batavi. Tacitus merely records that

<sup>134</sup> Roymans 2004, 55-61.

<sup>135</sup> Heinrichs 2003, a. o. 328.

<sup>136</sup> Cf. note 129.



the Cananefates inhabited a part of the Batavian island, without further specification<sup>137</sup>. Since *Forum Hadriani*, the small Roman town buried beneath the present Voorburg, is designated as *municipium Aelium Cananefatium* on several milestones from the 2<sup>nd</sup> century AD<sup>138</sup>, it seems obvious that this group settled in the western coastal area.

This assumption raises some problems, however. Tacitus describes the Cananefates as equal to the Batavi in origin, language and courage, but inferior in number<sup>139</sup>. Their common origin and language are often regarded as an indication of kinship, but Roymans prefers a different type of connection: »a hierarchical relationship between both groups that was recognised by Rome«, with the Cananefates acting as a client of the dominant Batavi<sup>140</sup>.

A different kind of relationship between the two groups is not enough to explain the conspicuous difference in material culture between the coastal area assigned to the Cananefates and the Batavian core region southeast of Utrecht. Roymans suggests the possibility that by about 10 BC »the Cananefates [...] were not yet integrated into the client network of the Batavians; this would have been a more recent development«<sup>141</sup>. Such an assumption cannot be rejected, of course, but there is plenty of scope for alternative explanations.

It is conceivable, for instance, that the Cananefates arrived from Hesse later than the Batavians. They did not make their appearance in historiography until AD 28, when the Romans deployed an *ala Canninefas* against the rebelling Frisians<sup>142</sup>. There is nothing to contradict a migration at some point after the transfer of the Batavians, for example when (most of?) the Chatti had betrayed the Roman cause in 10 BC or as a consequence of Germanicus' actions against the Chatti in AD 15-16. Another possibility is that the coastal area was initially simply too unattractive. In the Late Iron Age the area north of the Meuse estuary was for a long time unfit for habitation due to frequent inundations, and the remaining coastal strip extending to the outlet of the Oude Rijn was narrow and rather inaccessible from the east. Conditions were much less favourable than on the fertile alluvial soils between the Rhine and Waal. Therefore, it cannot be ruled out that the Cananefates initially lived east of Utrecht as well.

Observations by Bloemers and Van Heeringen indicate that the »recolonisation« of the western coastal area around the beginning of the Common Era was rooted in migration from the more northerly coastal region, rather than in the arrival of a group of Chattian immigrants designated by the Romans as Cananefates<sup>143</sup>. The rare references in ancient literary sources indicate that the coastal area between the Meuse and Oude Rijn was considered part of Batavian territory. How and at what pace it subsequently developed into the *civitas Cananefatium* is a pressing question for future research.

<sup>137</sup> Tac. hist. 4, 15: *ea gens partem insulae colit*, this people inhabited a part of the island. The context clearly shows that the *insula Batavorum* is meant. Cf. Plin. nat. 4, 101: »*nobilissima Batavorum insula et Cananefatium*« (the very noble island of the Batavi and Cananefates).

<sup>138</sup> Waasdorp 2003; AE 2003, 1229-1232.

<sup>139</sup> Tac. hist. 4, 15: »*ea gens [...] origine lingua virtute par Batavis, numero superantur*« (this people [...] was equal to the Batavi in origin, language and courage, but they were outnumbered by them).

<sup>140</sup> Roymans 2004, 205-208 (citation on p. 206).

<sup>141</sup> Ibidem 92 f.

<sup>142</sup> Tac. ann. 4, 73. In many text editions and translations of Velleius' histories the Cananefates are mentioned as an object of the military actions by Tiberius in AD 4 (Vell. 2, 105), but

there is no justification for this emendation of the corrupted passage in the manuscript (cf. Kehne 2008, 257 f.).

<sup>143</sup> Bloemers 1978, 89: »Es könnte eine friesische Expansion bis in die Westniederlande rund Christi Geburt und früher geben, die in der einheimischen Keramik und in den Fibeln zum Ausdruck kommen würde.« Van Heeringen 1989, 243: »Around the beginning of the 1<sup>st</sup> century BC the peat areas, the dunes and the clay deposits were all abandoned, to be recolonised again around the beginning of our era, in the Roman period. The handmade pottery of these colonists, the Cananefates, shows much influence from that produced in the coastal region of the northern part of the Netherlands (Frisian ware).« His identification of the colonists as Cananefates is a further unexplained supposition which is at odds with the observed northern influence.

## The Rhineland in 19-13 BC

When Agrippa was sent to the north in 19 BC<sup>144</sup> the Roman troops were still stationed in the interior of Gaul. In view of the revolts by the Morini, Treveri and Aquitani around 30 BC there was every reason to leave them there. The situation and extent of the Gaulish garrisons are still largely unknown<sup>145</sup>.

Agrippa's intervention was a response to both Gaulish unrest and German incursions. In 39/38 BC he had already crossed the Rhine, in 25 BC followed by M. Vinicius. We can expect that temporary bases for these operations were established in the Rhineland, but their location is still unknown, unless they are hidden beneath camps which are first associated with later actions. In this context it must not go unrecorded that García-Bellido believes, in view of the presence of some early Spanish coins, that the Kops Plateau at Nijmegen may already have been used as a military base during Agrippa's first governorship<sup>146</sup>. So far her hypothesis has not been given a warm reception<sup>147</sup>.

At the present state of knowledge the earliest military bases in Nijmegen and Neuss should be regarded as the first Roman fortifications in the Rhineland. The large camp on the Hunerberg at Nijmegen appears to have been built in the context of Agrippa's actions in 19 BC, whereas that at Neuss is generally connected with the events of a few years later.

### The first military bases

The Augustan base at Nijmegen was an irregular square of about 42 ha, laid out on the Hunerberg, some 30 m above the Waal river plain and with a wide view to the east (**fig. 15**)<sup>148</sup>. Southwards the Meuse could easily be reached over the western flank of the ice-pushed ridge of Groesbeek-Kleve (**fig. 8**), only 9 km distant from the camp as the crow flies, connecting Nijmegen to the Gaulish hinterland (cf. **suppl. 1**).

Kemmers has pointed out that nowhere in the Rhineland do coins occur that are as early as those found at this Nijmegen base<sup>149</sup>. The assemblage stands out by virtue of a relatively large and varied collection of Celtic coins from Gaulish peoples. The range is remarkably similar to that of the Titelberg, an *oppidum* of the Treveri in the southwest of Luxembourg which was probably occupied by Roman troops around 30 BC<sup>150</sup>. At about the same time a Roman base was established on the Petrisberg at Trier (D), overlooking an ancient crossing of the Moselle<sup>151</sup>. Kemmers considers it likely that the troops stationed at Nijmegen came from the Titelberg and/or Petrisberg, supplemented with fresh recruits from northern Italy<sup>152</sup>.

The latest Roman coin that can be assigned to the first occupation phase of the Nijmegen base was struck in 15 BC at the latest, and the same seems to apply to the Celtic coins. Kemmers convincingly argues for the existence of the base in the years 19-16; the end might have come slightly later, but it should certainly

<sup>144</sup> Roddaz (1984, 383f.) is of the opinion that Agrippa left for Gaul as early as 20.

<sup>145</sup> Reddé et al. 2006, 24-27.

<sup>146</sup> García-Bellido 2007, 165-168; she further points to the great number of asses from Vienna (80 exx.). »To accept this early date for the occupation of the Kops Plateau at Noviomagus, we must wait of course for further archaeological arguments« (ibidem 168).

<sup>147</sup> Beliën (2008, 181-188, especially 186) does not think that the coin assemblage of the Kops Plateau suggests such an early military presence.

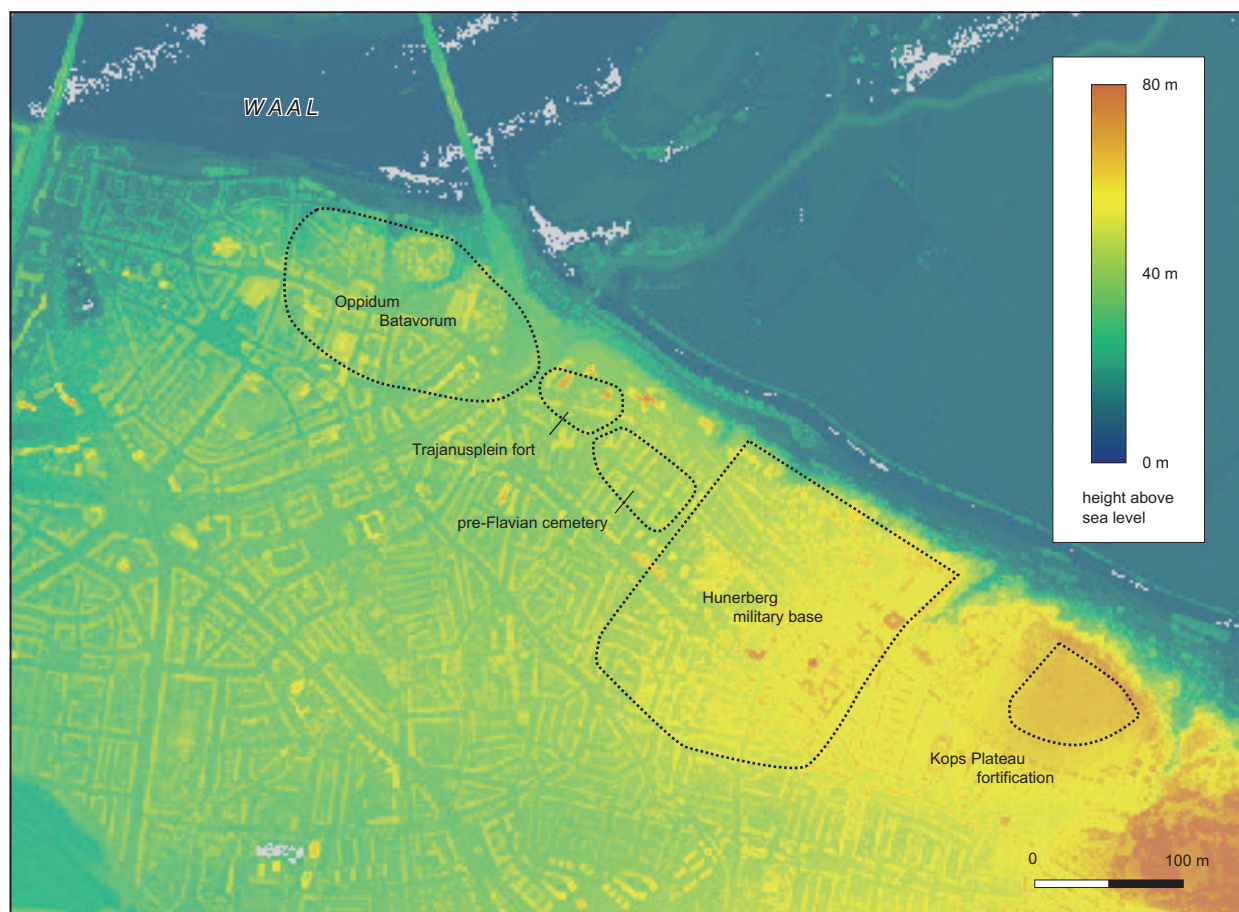
<sup>148</sup> Driessen 2007, 25-62; Niemeijer 2013.

<sup>149</sup> Kemmers 2005, 13-57.

<sup>150</sup> Metzler 1995, e.g. 95-98. 111-119; the Treveran and Roman occupation phases are separated by a layer on which some pieces of wood have been found which originate from trees felled in 31 BC (ibidem 118); Hollstein (1980, 128), however, merely gives »um 30 v. Chr.« as the dendrochronological date.

<sup>151</sup> Löhr 2003. – For some pieces of wood found on the Petrisberg in 1938 felling dates in the spring or early summer of 30 BC have been established (Hollstein 1980, 132f.).

<sup>152</sup> Kemmers 2005, 54f. – The camp on the Petrisberg is assumed to have been evacuated in 27 BC (Löhr 2003; von Schnurbein 2011, 77), but that assumption merely rests on the absence of Nemausus asses in the very modest coin assemblage (Löhr 2003, 29: c. 25 coins).



**Fig. 15** Nijmegen (prov. Gelderland/NL) in the Early Roman Period. – (Base map: Lidar-based digital elevation model AHN2 [Actueel Hoogtebestand Nederland, [www.ahn.nl](http://www.ahn.nl)]). – Scale approx. 1:5,000.

be placed (well) before the campaigns of Drusus<sup>153</sup>. It should be noted that the camp appears not to have been immediately dismantled, but was probably occupied by a small detachment for some time<sup>154</sup>.

The establishment of the Nijmegen base is perfectly understandable in the context of the German raids that Agrippa had to halt in 19 BC, although a precise reconstruction remains impossible. In the historical sources two initiatives are connected with Agrippa's presence in Gaul: the development of a basic network of roads and the transfer of the Germanic tribe of the Ubii to the left bank of the Rhine<sup>155</sup>. It is unclear, however, whether these events should be linked to his first or second governorship, in 39/38 and 19 BC respectively.

The dendrochronological date of 17 BC for the building of a bridge over the Moselle at Trier<sup>156</sup> argues for the construction of (some of?) the roads from 19 BC onwards. The bridge was a link in a road which started at Lyon (F) and led through the valley of the Saône, over the Plateau de Langres and through the Moselle valley to Trier (**suppl. 1**). According to Strabo († c. AD 24) the bridge was built »just now, by the Romans

<sup>153</sup> Kemmers 2005, 44–49.

<sup>154</sup> e.g. Haalebos 1991, 107; Heirbaut/Van Enckevort 2009, 106.

<sup>155</sup> Strab. 4, 6, 11, p. 208 C (roads). 4, 3, 4 p. 194 C; Tac. ann. 12, 27; Germ. 28 (Ubii).

<sup>156</sup> Hollstein 1980, 135: four posts with felling dates in 18 BC and two with felling dates in 17 BC.

commanding in the German war«<sup>157</sup>. The bridge replaced an ancient ford and its construction was obviously prompted by the military need in or soon after 19 BC for a land route to the Rhine. It cannot be ruled out that the stretch from Lyon to Trier was built earlier, from 39/38 onwards.

Eck has made a passionate plea to date the transfer of the Ubii to 19 BC<sup>158</sup>. Tacitus stresses that the Ubii had proven loyal to Rome and were therefore allowed to settle on the left bank of the Rhine (fig. 14), »to repel, not to be guarded«<sup>159</sup>. With his remark about Ubian loyalty Tacitus is probably referring to the events of the year 55, when the Usipetes and Tencteri had invaded the territory of the Menapii under Suebian pressure<sup>160</sup>. Caesar attempted to convince them to withdraw over the Rhine and to settle in the area of the Ubii, who offered a treaty to the Romans. The conflict with the German invaders escalated, however, and Caesar eventually succeeded in defeating them. When the Sugambri refused to hand over the cavalry of the Usipetes and Tencteri who had taken refuge with them, Caesar bridged the Rhine and destroyed the lands of the Sugambri, who had since fled.

By displacing the Ubii to the Gaulish bank of the Rhine, Agrippa took a different position from Caesar, who felt »that it was not right that those who are unable to defend their own lands occupy those of others«<sup>161</sup>. Agrippa's decision reflects a new policy, intended to reduce the Suebian pressure on the Rhine-Weser-Germans and to install in the periphery of Gaul, where habitation was probably drastically thinned out by Caesar's merciless actions, a population loyal to Rome and with a personal interest in preventing new raids or migration attempts<sup>162</sup>. There is no proof that the Batavians were settled on the left bank on the same occasion, but the conditions appear identical and the archaeological evidence is consistent with this possibility. With the Ubii and probably the Batavians installed on the Gaulish side of the Rhine, it is conceivable that Agrippa considered the danger of new German incursions to have been averted.

The capacity of the Nijmegen base, large enough for 15,000 troops<sup>163</sup>, reveals an important offensive role. In view of its position it is quite conceivable that the Usipetes and the Tencteri had once more crossed the Rhine and were dispelled and chased over the river<sup>164</sup>. In 16 they crossed the Rhine again with the Sugambri, who may in turn have been among the invaders of 19. In the aftermath of the campaign the Nijmegen camp may have served to keep an eye on the Batavian settlement.

The army base at Neuss seems a good candidate for actions against the Sugambri (suppl. 1 and fig. 9), and to supervise the newly settled Ubii. The earliest camp known so far (Lager A)<sup>165</sup> was situated on the low terrace of the Rhine, wedged between the marshy Meertal and the outlet of the Erft tributary. The size is estimated at 13-14 ha, approximately one third of the Nijmegen base. The remains are covered by a series of later camps, which must have quickly succeeded each other until the building of the stone »Koenenlager« (Lager G) in the reign of Claudius.

<sup>157</sup> Strab, 4, 3, 4, p. 194 C.

<sup>158</sup> Eck 2004a, 46-55.

<sup>159</sup> Tac. Germ. 28: »*transgressi olim et experimento fidei super ipsam Rheni ripam conlocati, ut arcerent, non ut custodirentur*« (they [the Ubii] had once crossed the Rhine and were settled on the bank of the Rhine as a reward for their proven loyalty, to repel, not to be guarded).

<sup>160</sup> Caes. Gall. 4, 1-19.

<sup>161</sup> Caes. Gall. 4, 8: »*neque verum esse, qui suos fines tueri non potuerint alienos occupare*«.

<sup>162</sup> Timpe (1975, 134-137) thinks it possible that a passage by Cassius Dio (54, 36) implies that Rome permitted (a part of) the Chatti to settle in the area left by the Ubii, and concluded a treaty with them.

<sup>163</sup> This generally used estimate may rely too heavily on the size of later legionary fortresses in a more stabilised situation. For

a forward base it is essential to keep generous stocks and to provide sufficient space for all the people and animals accompanying the troops.

<sup>164</sup> Cassius Dio (54, 32, 2) in 12 BC has Drusus cross to the area of the Usipetes from the Batavian island. It may well be that Agrippa took the same route.

<sup>165</sup> Gechter (2007) has recently rearranged the successive camps at Neuss; Lager A is Lager 1 in the new order, but it is still the earliest camp: »Lager 1 datiert in den Voroerberhorizont« (p. 207). See however the difficulties in dating the camps put forward by Hanel (2002, 497f.). In the internet edition of the Westdeutsche Zeitung of April 11 2012 mention is made of the discovery of a ditch cut by that of Lager A, and dated to 30/29 BC. [www.wz-newsline.de/lokales/rhein-kreis-neuss/neuss/ausgrabung-sensationsfund-ist-noch-aelter-als-das-roemerlager-a-1.957508](http://www.wz-newsline.de/lokales/rhein-kreis-neuss/neuss/ausgrabung-sensationsfund-ist-noch-aelter-als-das-roemerlager-a-1.957508) (16.10.2014).



It is beyond doubt that the earliest finds at Neuss precede those from the bases established by Drusus from 12 BC onward. Ettlinger dated the earliest *terra sigillata* vessels to the years 20-15 »ohne Fixierung an ein bestimmtes Jahr, weil das eben einfach nicht möglich ist«<sup>166</sup>. In view of the coin finds Chantaine preferred 16 BC (the defeat of Lollius, cf. p. 397) to 19 BC (Agrippa). Kemmers likewise assumes that Neuss was built slightly later than Nijmegen<sup>167</sup>.

Based on the *terra sigillata* finds Eschbaumer supposes that the earliest fortification of *Asciburgium* (Moers-Asberg, Kr. Wesel/D, **suppl. 1**) was probably also founded before the Drusian campaigns<sup>168</sup>. Kemmers, however, assigns the *Asciburgium* coin assemblage to the »Oberaden-Horizont«, that is to the bases built by Drusus<sup>169</sup>. As in the case of Neuss it is impossible to provide certainty on the foundation date. Unlike Nijmegen, both sites continued to serve as military bases for several decades. Since the size of the successive camps remains unclear, no conclusions can be drawn from the ratios between early and later finds. All that can be said is that the finds assemblage includes an early component that is either absent or negligible elsewhere.

The first military bases in the Rhineland had to be supplied from the Gaulish interior (cf. p. 398-401). For Nijmegen the Meuse is the likely transport route, necessitating only a few kilometres of land transport to the Hunerberg. From this perspective it is not surprising that a substantial amount of early Augustan material has been unearthed at Venlo (prov. Limburg/NL, **suppl. 1**), situated about 70 km upstream on the Meuse. Until recently the earliest finds at Venlo could not be dated before the »Haltern-Horizont«<sup>170</sup>, but a recent excavation has produced finds that certainly belong to the »Oberaden-Horizont«<sup>171</sup>, while nothing contradicts an initial date in the time of the early base at Nijmegen, which would make perfect strategic sense<sup>172</sup>.

Although no features have been unearthed to support an interpretation as a military post, early imports in such quantities as at Venlo are unthinkable in any context other than military. The presence of a fortification of some sort may well be explained by the need to transfer supplies for *Asciburgium* and Neuss, situated no more than 40 km from Venlo and easily accessible over land. For the provisioning of the latter two bases the road leading from Trier to the Rhine may have been used as well, but as it involved a 200-km journey over land that route was much less efficient. In principle supplies may have been shipped along the Moselle and the Rhine, but this is likely to have been too hazardous, since the right bank of the latter river was not under Roman control.

<sup>166</sup> Ettlinger 1983, 99-107 (citation on p. 104).

<sup>167</sup> Kemmers 2005, 47f. In this context she points to the differing ratios between the coins from the Republic, the imperial period and the principate of Augustus, and to those between the emissions from Copia and Vienna. It must be noted that the percentages of Copia and Vienna are not far apart (ibidem 28 fig. 2, 7) and that the ratios of the coins from these three periods are indisputably biased by the swift evacuation of the Nijmegen base as opposed to the continuous occupation at Neuss. The fact remains that, besides Nijmegen, Neuss is the only site in the Rhineland that has produced more than a single coin of the *divos Iulius* type. In comparison with the Copia and Vienna asses, however, these are much less frequent than at Nijmegen (ibidem 26-28; ratio between *divos Iulius* and Copia-Vienna at Nijmegen 23:52 and at Neuss 8:104), but it cannot be ruled out that this is due to differences in the recruiting area of the troops.

<sup>168</sup> Eschbaumer 2011, 30: »In dem später von mehreren aufeinander folgenden Kastellen jüngerer Zeitstellung besetzten Areal auf dem Burgfeld von Asberg ist durch die Analyse der italischen Sigillata zweifelsfrei ein älterer Stützpunkt nach-

zuweisen, der zumindest in die Zeit der Drusus-Offensive 12 v. Chr. zu setzen ist, aufgrund zahlreicher Indizien wahrscheinlich aber bereits einige Jahre vorher angelegt wurde«. Cf. Eschbaumer 2010.

<sup>169</sup> Kemmers 2005, 45, arguing among other things from the absence of *divos Iulius* coins, the rarity of Copia and Vienna asses and the large proportion of Nemausus coins (idem 27 and fig. 2, 7). However, the percentage of countermarked Nemausus coins of the first series appears to be small (Gorecki 1981, 34), which does not fit Kemmers' image of the Oberaden horizon (2005, 28f.).

<sup>170</sup> Haalebos 1993.

<sup>171</sup> Erdrich 2009, 205-207; Kemmers 2009; Van der Linden/Reigersman-van Lidth de Jeude 2009, especially 110-126; Van der Velde 2009, 599-602.

<sup>172</sup> The comparison of the assemblage from Venlo with that from the Nijmegen base is complicated by the presence of a considerable number of later Augustan finds at Venlo, which are virtually absent at Nijmegen; percentages of early material are therefore inevitably biased.

Neuss and Asciburgium are situated opposite the area where the Sugambri can be located at this time (fig. 9). If the assumption is correct that these camps were built shortly after the large base at Nijmegen, it is likely that their foundation relates to the events of 16 BC<sup>173</sup>. The Sugambri, Usipetes and Tencteri had crucified some Romans in their own territories and had subsequently crossed the Rhine to cause havoc on the left bank of the Rhine and deeper into Gaul. When the Roman army came into action, the German raiders first defeated the cavalry and then the troops of the legate M. Lollius, seizing the eagle of the Fifth Legion<sup>174</sup>. When Lollius was preparing a counterattack and Augustus personally came to Gaul, the Germans withdrew over the Rhine, offered a treaty and handed over hostages.

The defeat of Lollius is often presented as a turning point in the Roman strategy on Germania. After all, a large military campaign over the Rhine was launched in 12 BC, to be continued for several years. From this point of view the fact that Augustus stayed in Gaul from 16 to 13 BC would mean that these operations were carefully prepared.

However, this interpretation is not necessarily correct. The defeat of Lollius appears to have been a political rather than a military catastrophe<sup>175</sup>. Although its eagle had been lost, there is no record that the legion was destroyed, and Lollius was apparently able to launch a counteroffensive. But the return of the eagles lost by Crassus to the Parthians in 53 had been celebrated in grand style as recently as 19 BC, with the dedication of an arch and the emission of gold and silver coins bearing the legend *signis Parthicis receptis*. In that context the renewed loss of an eagle in 16 was an enormous disgrace. It is not inconceivable that inflating the German threat was seen as the least painful way to reduce the loss of face<sup>176</sup>.

Although Cassius Dio associates the arrival of Augustus in Gaul with the defeat of Lollius, he also offers two leads for an alternative explanation of his lengthy stay in the province. The first is his assertion that Augustus merely used the Lollius affair as an excuse to leave Rome, where his presence was a source of tension<sup>177</sup>. The other is his observation that Augustus did not have to resort to military actions, but nevertheless stayed for the rest of the year and the following year, because Gaul had suffered a good deal not only from the German incursions, but also from extortionate taxation by the procurator Licinus, who was responsible for the provincial finances<sup>178</sup>. Velleius Paterculus also accused governor Lollius of misconduct<sup>179</sup>. All in all, Augustus' prolonged presence may from the start have had more to do with internal Gaulish affairs than with averting the German threat.

The division of Gallia Comata into the three provinces of Aquitania, Belgica and Lugdunensis (fig. 13) would tie in well with a more administrative character of Augustus' stay in Gaul. Although the three parts remained in the care of a single *procurator*, the administration was divided over three legates, which would reduce the scale of unhoped-for misbehaviour in the future.

When Augustus finally returned to Rome in 13 BC he left Drusus in Gaul. The *census* which his stepson subsequently carried out, and the inauguration of the *ara Romae et Augusti* at Lugdunum (Lyon) on August 1 of the year 12 may easily be understood as the conclusion of the process started in the presence of Augustus<sup>180</sup>. Responsibility for the cult was given to the *concilium Galliarum*, which was – finally – to unite the elites of the Gaulish tribes.

<sup>173</sup> Most information can be found with Cass. Dio 54, 19-21.

<sup>174</sup> Vell. 2, 97 records the loss of the eagle.

<sup>175</sup> Compare the wording of Suetonius (Aug. 23): »[cladem] Lollianam maioris infamiae quam detrimenti« (the defeat of Lollius was infamous rather than detrimental).

<sup>176</sup> In this sense, e.g. Christ 1977, 187.

<sup>177</sup> Cass. Dio 54, 19.

<sup>178</sup> Cass. Dio 54, 21.

<sup>179</sup> Vell. 2, 97.

<sup>180</sup> Liv. Periocha 139 (12 BC): »ara dei Caesaris ad confluentem Araris et Rhodani dedicata sacerdote creato C. Iulio Vercondaribudubno Aeduo« (the altar of the god Caesar at the confluence of the Saône and Rhône was inaugurated, and the Aeduan C. Iulius Vercondaribudubnus appointed as a priest).

Those who support the idea of a lengthy preparation of Drusus' German operations tend to relate Lollius' defeat to the submission of the Raeti and the conquest of the Alpine passes by Drusus and Tiberius in 15 BC. However, Martin-Kilcher has pointed out that their actions merely represent an overexposed episode in a process which started earlier and was finished as late as 7/6 BC<sup>181</sup>. Although the securing of the Alpine passes certainly improved access to the Rhineland from Italy, it was already set in motion when Lollius was disgraced.

Everything considered, the defeat of Lollius did not necessarily lead to a drastic revision of Roman strategy. Although it demonstrated that Agrippa's new policy was not without flaws, the German eruption of the year 16 was quickly suppressed. With a new treaty with the Sugambri and one or two military bases (Neuss, possibly Asciburgium) on the edge of their territory, the danger may once again have seemed averted.

The only alternative to the Caesarian approach, supplemented by the buffer of Batavi and Ubii created by Agrippa, was a much more radical operation across the Rhine. In retrospect this step was taken in 12 BC; it was not necessarily the product of years of preparation, or planned as a long-lasting campaign, but this cannot be ruled out either.

### Feeding the Roman army on the Hunerberg at Nijmegen

When Agrippa and M. Vinicius crossed the Rhine in 39/38 and 25 BC respectively, they were operating from Gaul, where the base camps were situated and the armies wintered (cf. p. 393). Nothing is known about how their armies were supplied, but Caesar's account of his Gallic War provides us with some clues. In his actions against the Helvetii in 58 BC Caesar applied a three-pronged strategy<sup>182</sup>. The army carried a stock of corn sufficient for about 17 days, which seems to have served primarily as an emergency ration, while the regular supplies followed by ship. When Caesar diverted from the Saône in pursuit of the Helvetii, his troops were cut off from the food supply via that river. A third source was available, however, in the form of food that could be gathered en route. It was for good reason that the Romans preferred to campaign during the summer, when the corn was ripening in the fields. At the time of Caesar's operation against the Helvetii, however, the corn was still unripe and there was not enough fodder available either. He therefore pressed the tribal leaders in the area to provide him from their own stocks. Agrippa and M. Vinicius presumably turned to the same strategies to feed their armies while operating in Germany.

Historical sources indicate that the army commanders were responsible for the provisioning of their soldiers. The troops had to be supplied on a daily basis with basic requirements such as corn, vegetables, fruits, nuts, meat, wine, olive oil and fish sauce<sup>183</sup>, all ingredients used by the soldiers to prepare their meals. On top of that, they were free to buy food or to obtain it through their private networks, but this is unlikely to have occurred while they campaigned in enemy territory. Part of the rations was imported from the Mediterranean. In the Augustan period amphorae containing wine, olive oil and fish sauce were transported from Spain, Italy and Narbonensis. In addition, nuts and fruits from the Mediterranean have been attested in military bases, often in a preserved or dried state. They demonstrate that the Roman army had very extensive supply networks.

As long as the networks were embedded in areas controlled by Rome, long supply routes were not a major concern, but this changed as soon as the army operated in enemy territory. The construction of an army camp at Nijmegen considerably extended the supply routes, some of which may have built on existing ones.

<sup>181</sup> Martin-Kilcher 2011, 30-32.

<sup>182</sup> Caes. Gall. 1, 16. 1, 23.

<sup>183</sup> Pol. 6, 39, 13-15; Caes. civ. 3, 47; compare the discussions in Davies 1989, 198f. and Erdkamp 1998, 31f.

The routes had to be suitable for uninterrupted use, as well as secure. As stated above (p. 396), the river Meuse and its valley must have been used to provide the army camp at Nijmegen with food and other necessities; the Rhine was much too vulnerable, as its right bank was largely enemy territory. A second reason for using the Meuse was that it rises in Gaul (**suppl. 1**), which was renowned for its vast crops of cereals<sup>184</sup>. Arable farming was little developed in the Rhineland at that time; it would be a century before it began to be organised on a larger scale<sup>185</sup>.

Most food products and other goods must have been imported via the Meuse, since it is unlikely that the regional population near the army base on the Hunerberg at Nijmegen could produce enough to feed the equivalent of at least two legions<sup>186</sup>. Besides, the climate was not suitable for a number of common food products, and others had to be imported from the South in any case. The landscape was not ideal for large-scale food production and at the start of Agrippa's campaign the population density must have been far too low for surplus production – the Menapian and Eburonian rural population had suffered heavily from Caesar's Gallic Wars and the Batavians had probably not yet arrived to fill the gaps (p. 390 f.).

In the 1970s Teunissen and Teunissen-van Oorschot carried out palynological research on colluvial deposits that had accumulated on the steep eastern slope of the Kops Plateau at Nijmegen. This plateau is situated immediately southeast of the large Augustan army camp, on a prominent part of the ice-pushed ridge (**fig. 15**). Thanks to this palynological study we know that the ridge was covered with deciduous oak woodlands, whereas woodlands with alder occurred at its foot. After the arrival of the Roman army these two types of woodland made way for dry and wet grasslands respectively<sup>187</sup>. The woodlands on the ice-pushed ridge may have been felled to provide a clear view, but certainly also because timber was needed to build the camp on the Hunerberg. Driessen has calculated that the defences alone required 5400 m<sup>3</sup> of timber<sup>188</sup>; a natural woodland the size of the army base would have had to be cleared for such a volume. However, Driessen's calculations were based on the assumption that the wall had a timber framing on the exterior. A revised interpretation by Niemeijer suggests that the wall was built from sods; only on the northeastern side of the camp was timber framing used in a repair<sup>189</sup>. In that case the woodlands on the Hunerberg were felled to provide timber for the interior buildings and firewood for heating, cooking and industrial activities. All in all the arrival of the Roman troops must have drastically changed the landscape on and near the Hunerberg.

According to the above studies the timber used to build the camp could be sourced locally, but this certainly does not apply to the supplies required to feed the soldiers, with cereals being the major component. Several Roman authors have written about the daily rations. When converted to modern weight equivalents they amount to 700-900 g per man<sup>190</sup>, covering 70-90 % of the daily energy needs<sup>191</sup>. Based on an average corn ration of 800 g per soldier and a maximum population of 15,000, a volume of 12 tons of cereals was needed per day for the Nijmegen base, amounting to nearly 4400 tons per year. To provide this volume, 2400-5500 ha of arable land were required, depending on the amount of sowing seed and the yield per hectare<sup>192</sup>. This amounts to 60-130 times the surface of the army camp of 42 ha for cornfields and twice that surface

<sup>184</sup> e. g. Strab. 4, 2.

<sup>185</sup> e. g. Gechter/Kunow 1986; Kooistra 1996; 2009a; Schamuhn/Zerl 2009.

<sup>186</sup> Compare p. 395 for the capacity of the Nijmegen base.

<sup>187</sup> Teunissen/Teunissen-van Oorschot 1980.

<sup>188</sup> Driessen 2007, 57 f.

<sup>189</sup> Niemeijer 2013.

<sup>190</sup> Cf. Pol. 6, 39, 13-15 (2<sup>nd</sup> century BC); Tac. Agr. 22, 2-3 (1<sup>st</sup> century AD); Garnsey/Saller 1987, 89 f. (4<sup>th</sup> century AD); Roth 1999, 24.

<sup>191</sup> Dietetics has taught that a mature man in active service needs 3000-3600 kcal of food a day (e. g. Roth 1999, 7-13; Den Hartog 1963, 78 f.; Gregg 1988, 143). One kilogram of cereals provides 3100-3300 kcal of energy depending on the growing conditions (Bloemers 1978, 70; Bakels 1982).

<sup>192</sup> In this calculation yield ratios of 1:5 and 1:10 were used, and 200 kg of sowing seed per hectare. The fields were probably left fallow, which required double the amount of arable land in a two-field system (cf. e. g. Kooistra 1996).



area in a two-field system<sup>193</sup>. This calculation does not include the fodder for cavalry horses and pack animals. Based on about 240 horses and 4000 pack animals, a supplementary volume of nearly 3000 tons of cereals – probably barley and oats – would be needed per year<sup>194</sup>, requiring another 1600-3600 ha of arable land. Until the Late Modern Period farmers grew their own crops. If food products were required for market or to pay taxes, these were added to the crops grown for their own use<sup>195</sup>. The preceding calculations and the low population density of the area leave no doubt that cereals were imported. The closest source for spelt wheat was Northern Gaul<sup>196</sup>. Bread wheat was not produced there in this period, but it may have grown further to the south or east<sup>197</sup>. The plant remains from the Augustan base at Nijmegen have been found to include grains of barley, emmer and millet, which were grown in this period by Germanic tribes<sup>198</sup>. Although it is certain that food products and other goods were imported from Gaul and more southerly areas – as demonstrated by the amphorae and also by a single olive stone – it appears that at least some corn was obtained from Germanic territories. It is not inconceivable that this was requisitioned or seized during the expeditions to the east of the Rhine.

It has repeatedly been questioned whether fresh meat was supplied to the soldiers on a daily basis<sup>199</sup>. As meat cannot be kept well unless it has been salted, dried or smoked, this is nevertheless likely, at least as long the army was not in the field. There is only one historical source in which quantities are mentioned. Egyptian papyri from the 4<sup>th</sup> century AD record rations of one or half a Roman pound of meat per day, which amounts to 330 or 165 g<sup>200</sup>. Roth assumes that half a pound of meat per soldier is likely, since in the Late Roman Period a soldier had to share his food with his family.

The papyri do not record which kind of meat was involved. The Roman army is known to have preferred pork. Already in republican times the Po valley was renowned for its pig herds kept for the army and fed amongst other things with acorns<sup>201</sup>. Once salted, pork could easily be transported, but it was certainly not only provided in this ready-to-eat state. According to Polybius' Histories, covering the period c. 220-145 BC, cattle spent the night in army camps, in the *intervallum*<sup>202</sup>. Vegetius, who wrote in the 4<sup>th</sup> century but used earlier sources, recommended that in the event of a siege pigs and other animals should be slaughtered to build up an adequate stock of meat<sup>203</sup>. Both sources imply that live animals were available for consumption in and around Roman army camps. Animals supplied for slaughter may have been kept alive for some time on the territory of a fort (*territorium* or *prata legionis*)<sup>204</sup>, and the extensive grasslands at Nijmegen indicated by Teunissen and Teunissen-van Oorschot may well have served that purpose. The question that remains is whether the fatstock came from the region or from further afield.

The zooarchaeological remains from the Augustan base at Nijmegen include a remarkable number of pig bones (55-60 %), while cattle and sheep/goat predominate in the surrounding rural settlements<sup>205</sup>. Ac-

<sup>193</sup> A two-field system with a fallow year every other year is not inconceivable. In that case the arable field area required for a population of 15,000 men would amount to 2 × 2400 to 2 × 5500 = 4800-11,000 ha, roughly 110-260 times the size of the camp.

<sup>194</sup> Based on two legions with 120 horsemen, each with one riding horse, and with one pack animal for every three soldiers (the latter after Roth 1999, 82 f.). It is likely that there were more horses and pack animals. A horse is assumed to have needed about 2.5 kg of cereals a day, and a pack animal between 1.5 and 2 kg.

<sup>195</sup> e.g. Jobse-Van Putten 1995, 500 f.

<sup>196</sup> Derreumaux/Lepetz 2008, 56-62.

<sup>197</sup> Bakels 2009, 289.

<sup>198</sup> De Hingh/Kooistra 1994. Remains of an Iron Age settlement have been found beneath the army base at Nijmegen (Louwe Kooijmans 1973, 87 f. fig. 8a; Fontijn 1996, 44 f.), but since the palaeobotanical groups studied included dozens of remains per sample, it has been assumed that the cereal grains cannot be explained as scattered litter from the pre-Roman settlement and must belong to the army base.

<sup>199</sup> Compare the discussions in Davies 1989, Erdkamp 1998, 31-33, and Roth 1999, 27.

<sup>200</sup> Cf. Roth 1999, 32.

<sup>201</sup> Pol. 2, 15.

<sup>202</sup> Pol. 6, 31.

<sup>203</sup> Veg. mil. 4, 7.

<sup>204</sup> Cf. von Petrikovits 1979, 231.

<sup>205</sup> Lauwerier 1988; Cavallo/Kooistra/Dütting 2008; Groot/Ro-beerst 2014, 265-271.

cording to C. Cavallo, L. I. Kooistra and M. K. Dütting high percentages of pig appear to occur especially in the earliest phases of Roman military settlements; the animal remains are dominated by cattle in camps that existed for longer<sup>206</sup>. They have explained this phenomenon by assuming that pigs and chickens were brought by the army to a new garrison. These animals served as »start-up food«, since pigs and chickens are easy to keep and have high reproduction rates. They live from litter and scratch for their own food.

Groot, who has analysed the data from various studies of zooarchaeological remains from the Nijmegen military base<sup>207</sup>, concluded that cattle and pigs arrived on the hoof, since bones have been found of both meaty and non-meaty parts of the animals. Analyses of the age distributions have taught that the pigs were slaughtered at the age of 1-2.5 years and cattle at 2-3 years, the optimal slaughtering ages for these animals. Sheep or goat bones have been found as well, but the numbers were too low to determine at what ages they were slaughtered and whether they had arrived alive.

In view of the low percentages of pig bones in the neighbouring rural settlements it is not inconceivable that pigs were bred on the Hunerberg. A sow can produce four to twelve piglets that are sexually mature after a year. Reproduction therefore requires only a few animals. This is quite different for cattle, as a cow produces only one calf a year. A viable herd requires multiple elderly cows to ensure an adequate number of animals aged 2-3 years. It is therefore not likely that the soldiers at Nijmegen were breeding cattle themselves; these animals will have been obtained from Gaul or from Germanic territory.

To estimate the required stocks of meat a calculation has been made of the numbers of pigs and cattle required to feed 15,000 mouths. Based on a daily requirement of 165 g of meat per person<sup>208</sup>, over 40 pigs or 20 cattle had to be slaughtered each day<sup>209</sup>.

### The campaigns of 12-8 BC

While Drusus was occupied with the inauguration of the *ara Romae et Augusti* at Lyon in the summer of 12, the Sugambri and some other Germanic tribes once more set foot on Gaulish soil. Drusus' response marked the start of an offensive that would carry the Roman troops as far as the river Elbe. For the first time Germany was also penetrated via the North Sea and the rivers discharging into it from the North German Plain. The course of the Rhine was adjusted to facilitate this route.

#### Water management: Drusus and the Rhine

The name of Drusus is indissolubly connected with two hydraulic works located in the Netherlands: a groyne (*agger*, *moles*) and one or more canals (*fossa*, *fossae*). Both structures are mentioned in two literary sources. In his account of the reign of Nero, Tacitus mentions the completion of an *agger* or mound<sup>210</sup>, the construction of which was started 63 years earlier by Drusus and which served to restrain the Rhine (*coercendo Rheno*)<sup>211</sup>. If the date given by Tacitus is correct, building may have started as late as 9 BC<sup>212</sup>. The purpose

<sup>206</sup> Cavallo/Kooistra/Dütting 2008.

<sup>207</sup> Groot/Robeerst 2014, 265-271.

<sup>208</sup> Roth 1999, 32.

<sup>209</sup> Based on the numbers presented by IJzereef 1981, 183-186.

<sup>210</sup> *Agger* is related to *aggero* or *adgero*, which amongst other things means »to heap or pile up«; thus, an *agger* may be a heap or pile of any possible material. It is used more often in the sense of a dam or some other sort of barrier in water (OLD s.v. *agger*, 3).

<sup>211</sup> Tac. ann. 13, 53: »ille [i.e. Paulinus] *inchoatum ante tres et sexaginta annos a Druso aggerem coercendo Rheno absolvit*« (Paulinus completed the mound which Drusus started 63 years before to restrain the Rhine).

<sup>212</sup> Tacitus attributed the completion to (A.) Pompeius Paulinus, who is supposed to have commanded the Lower German army in 54-56 AD (Eck 1985, 120-122); in that case the construction of the *agger* should have started between 9 and 7 BC; Drusus' death in 9 means that a start in 8 or 7 is out of the question.

of the structure is further explained in Tacitus' account of the Batavian revolt: »He [Civilis] even destroyed the dam (*moles*) made by Drusus, and he made the Rhine flow towards Gaul, rushing downwards, by breaking up what prevented this. After the river had been diverted as it were, the narrow remaining channel conveyed the impression that the soil between the island [of the Batavians] and the Germans was uninterrupted«<sup>213</sup>. It is therefore beyond doubt that the *agger* or *moles* constructed by Drusus was a groyne designed to have the opposite effect: less water through the Waal and more through the Oude Rijn-Pannerden and its continuation (fig. 8, near Lobith). This intervention must have been intended to make the northern Rhine branches more navigable, and thus to provide the safest and shortest possible naval route into the German interior.

The siting of these engineering works at the bifurcation of the Waal and the Oude Rijn-Pannerden is confirmed by the text on a pre-Claudian gravestone from De Bijland<sup>214</sup>, a pool created in the 1930s by dredging the first meander of the Waal downstream of the bifurcation, just west of Lobith. The inscription commemorates M. Mallius, a soldier of the First Legion, who is buried *Carvio ad molem*, in Carvium at the groyne. The text implies that the stone was not erected on the grave itself and undoubtedly refers to the structure some 2-3 km upstream.

It is Tacitus again who, in his description of Germanicus' campaigns, records the *fossam cui Drusianae nomen*, »the canal bearing the name of Drusus«, which gave access »over the lakes and the Ocean« to the river Amisia, which can be identified as the Ems<sup>215</sup>.

In his biography of Claudius, Suetonius writes about the emperor's father Drusus: »this Drusus, who in his function of *quaestor* and *praetor* led the army in Raetia and later in Germania, was the first Roman commander to sail the northern Ocean and had canals dug across the Rhine in an immense operation; they are still called the Drusian canals today«<sup>216</sup>. As mentioned above (p. 366), Suetonius is likely to have visited the German provinces in AD 121/122, and he may be describing his personal experiences here.

There has been a lively debate on the identification of Drusus' canal(s), with the Vecht and the Gelderse IJssel as exclusive alternatives. The candidature of the Vecht was supported by the presence of an early military base at Vechten, on the Oudwulverbroek Rhine channel just upstream of the bifurcation of the Vecht (suppl. 1)<sup>217</sup>. However, a mere five Nemausus asses among 213 republican and Augustan aes coins make it unlikely that the camp at Vechten goes back to the days of Drusus, and the pottery assemblage does not support that view either<sup>218</sup>. Further, it does not seem probable that the navigability of the Vecht required Roman intervention, since it was continuously supplied with drainage water from the surrounding peat area and with seepage water from the Pleistocene ice-pushed ridges to the east.

The discovery in 1979 at Arnhem-Meinerswijk of a small fort from the Middle Roman period with a dozen early finds (fig. 16)<sup>219</sup> added fresh fuel to the alternative identification of the Gelderse IJssel as Drusus' ca-

<sup>213</sup> Tac. hist. 5, 19: »*quin et diruit molem a Druso Germanico factam Rhenumque prono alveo in Galliam ruentem, disiectis quae morabantur, effudit. Sic velut abacto amne tenuis alveus insulam inter Germanosque continentium terrarum speciem fecerat.*«

<sup>214</sup> Nesselhauf/Lieb 1959, no. 258: *M(arcus) Mallius / M(arcus) f(ilius) Galer(ia) Genua / mile(s) leg(ionis) I / (centuria) Rusonis / anno(rum) XXXV stip(endiorum) XVI / Carvio ad molem / sepultus est ex test(amento) / heredes duo f(aciendum) c(uraverunt);* cf. Willems 1981, 52f.

<sup>215</sup> Tac. ann. 2, 8: »*fossam, cui Drusianae nomen, ingressus [...] lacus inde et Oceanum usque ad Amisiam flumen secunda navigatione pervehitur*« (after he entered the canal bearing the name of Drusus, he sailed from there over the lakes and the Ocean all the way to the river Amisia on a safe journey). Cf.

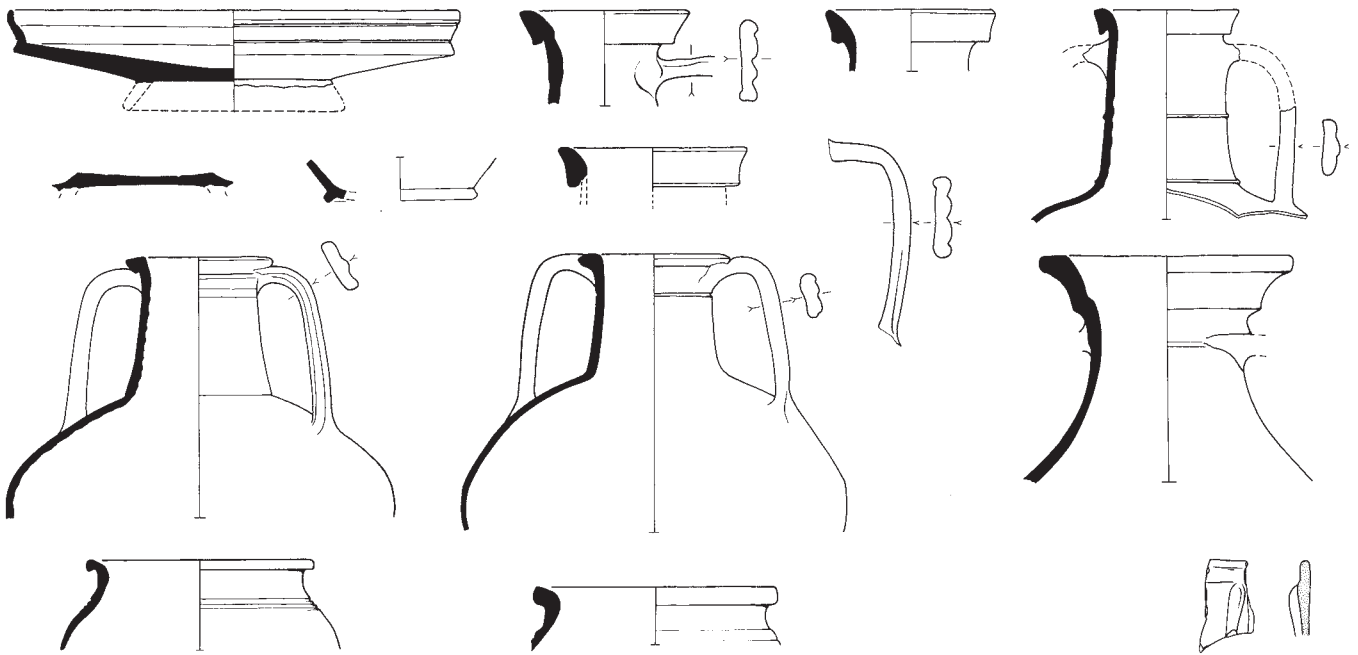
Strab. 7, 1, 3, p. 290 C, who places the Amisia between the Rhine and the Albis (Elbe).

<sup>216</sup> Suet. Claud. 2: »*is Drusus in quaesturae praeturaeque honore dux Raetici, deinde Germanici belli Oceanum septemtrionalem primus Romanorum ducum navigavit transque Rhenum fossas navi et immensi operis effecit, quae nunc adhuc Drusinae vocantur.*«

<sup>217</sup> Polak/Wynia 1991, with previous literature; Zandstra/Polak 2012; Polak 2014.

<sup>218</sup> Tijmann 1996, 149f. fig. 1 (coins); Zandstra/Polak 2012, 243 (pottery); Polak 2014, especially 70-75 (discussion).

<sup>219</sup> Willems 1984, 169-196 (173-175 for the early finds). – No features from the earliest phase have been distinguished which can be related to a fortification.



**Fig. 16** Arnhem-Meinerswijk (prov. Gelderland/NL). Finds from Early Roman deposits. – (After Willems 1984, fig. 97). – Scale 1:4.

nal<sup>220</sup>. The fort is situated 3-4 km downstream of the joining of the IJssel and the Rhine (**suppl. 1**). However, the early finds are dated to the second decade AD<sup>221</sup> and, like those from Vechten, are not consistent with a camp from the times of Drusus. Yet it must be noted that the finds assemblage is very small, so a »Drusian component« may still be hidden at Meinerswijk – after all, the excavation did not reach virgin soil<sup>222</sup>.

Recent research seemed to have put paid to the candidature of the Gelderse IJssel, however. AMS dates of botanical remains located below river deposits along the lower course of the river proved much younger than the conventional radiocarbon dates from the top of the peat close to Meinerswijk, which were previously used to argue for the existence of an artificial connection between the Oude Rijn-Pannerden and the Gelderse IJssel<sup>223</sup>. Based on the new samples, sedimentation along the lower course is believed to have started as late as AD 950 and along the upper course around AD 600. A connection between the Oude Rijn-Pannerden and the peat lakes via the Gelderse IJssel would thus be out of the question in the Roman period<sup>224</sup>.

Yet it is doubtful whether the new evidence really rules out this possibility. There seems little doubt that in the Roman period brook systems were functioning in both the southern and northern IJssel valley (cf. **suppl. 1**), but in opposite directions. The systems were separated by a watershed which appears to have been broken around AD 300 by a peak discharge of Rhine water pushed up in the southern valley. From that point on a meandering river developed, flowing from the Rhine to the Flevo lakes<sup>225</sup>.

Drusus' canal or canals may well have been built to connect the separate brook systems in the IJssel valley, whether by digging an artificial connection or by creating some kind of portage<sup>226</sup>. The latter has recently

<sup>220</sup> Willems 1981, 56-61.

<sup>221</sup> Willems 1984, 175: »the most probable dating is surely the second decade AD«.

<sup>222</sup> Willems 1984, 170.

<sup>223</sup> Makaske/Maas/Van Smeerdijk 2008, 325 f.

<sup>224</sup> Makaske/Maas/Van Smeerdijk 2008.

<sup>225</sup> Cohen et al. 2009, 95-107.

<sup>226</sup> Cf. *ibidem* 104: »Het is best mogelijk dat Drusus zijn »fosse« (gracht, kanaal) langs een tracé in het IJsseldal groef, [...] als dwarsverbinding tussen noordwaarts en Rijnwaarts afwaterende beken. Maar getraceerd is zo'n verbinding tot nog toe niet« (It is quite possible that Drusus dug his »fossa« [ditch, canal] along the IJssel valley, [...] as a connection between streams draining to the north and to the Rhine, respectively. But such a connection has not been traced as yet).



also been assumed for the canal which Corbulo is said to have dug in AD 47<sup>227</sup> – to connect two natural brook systems discharging in opposite directions – between the Rhine and Meuse near the North Sea coast. Portages were known in Antiquity, with the *diolkos* across the Isthmus of Corinth as a famous example<sup>228</sup>. Their use may have been restricted to the transfer of relatively light military ships and is likely to have been risky<sup>229</sup>. For Roman flatboats a water depth of a few dozen centimetres sufficed<sup>230</sup>, and the Roman fort at Velsen with its harbour and boat house (**fig. 24**) demonstrates that military ships could also function in the shallow waters of a silting-up estuary. Therefore, a waterborne connection is perhaps more likely. A difference in water level could be overcome by the construction of a lock, possibly in the form of temporary dams or weirs.

All in all it is still impossible to place Drusus' canal or canals with certainty. If the Vecht/Angstel received enough water to be navigable without human intervention, the Gelderse IJssel with its originally separated brook systems has the best credentials, but decisive arguments are unavailable for either alternative. On present evidence neither Vechten nor Meinerswijk was founded by Drusus. As such the establishment of a fortification near the access to a canalised water course would be perfectly understandable, whether as a base camp for the soldiers who had to do the digging, or as a link in the logistical chain from the Rhine to the mouths of the German lowland rivers.

The construction of a groyne and the canalisation of a water course may well have been connected. Since they made it possible to sail to the Ems, Weser and Elbe over the Flevo lakes and the North Sea or Wadden Sea, it would appear obvious that the engineering activities were part of the preparations for the campaign of 12 BC, when Drusus made use of this route. However, this assumption is irreconcilable with Tacitus' assertion that the groyne was finished by the legate Paulinus 63 years after construction started, apparently as late as 9 BC. If that is correct it was a *sequel* to the first campaign(s) and intended for the future. Is it meaningful in this context that Tacitus mentions a *start* by Drusus and a *completion* by Paulinus? And does the precision of his dating perhaps echo a formal ceremony that was recorded in an official document that he consulted?

#### The lowlands: Drusus in 12-11 BC

According to Cassius Dio the actions of Drusus were provoked by the Sugambri, who were on the warpath again, joined by other, unnamed Germanic tribes<sup>231</sup>. In Dio's words this enterprise was prompted by their observation that Augustus had finally returned to Rome and that the Gaulish elite was now held in check, as expressed by the inauguration of the *ara Romae et Augusti* at Lugdunum.

The Periochae reveal that Gaul was nevertheless turbulent in 12 BC, in reaction to the *census* carried out by Drusus. The preceding statement is intriguing: »the German communities placed on this and that side of the Rhine were attacked by Drusus«<sup>232</sup>. The Sugambri belonged to the groups across the Rhine (*trans Rhenum*, on the other side), but who were the German groups on the left bank (*cis Rhenum*, on this side) of the river? The Periochae are a 4<sup>th</sup>-century summary of T. Livius' *Ab urbe condita libri*, which ended with the death of Drusus in 9 BC. Since Livy died in AD 17 the operations of Drusus were recent history to him and he is likely to have been well informed. The passage concerning the groups on the left bank might well

<sup>227</sup> De Kort/Raczynski-Henk 2014.

<sup>228</sup> The use of this portage by Octavian in 30 BC, in the aftermath of the Battle of Actium, is recorded by Dio (Cass. Dio 51, 5, 2), so the construction may well have been familiar to Drusus.

<sup>229</sup> Cf. Pettegrew 2011.

<sup>230</sup> Bremer (2001, 73) reckons with a draught of merely 40 cm for a flatboat of the Zwammerdam 2 type.

<sup>231</sup> Cf. Cass. Dio 54, 32 for these events.

<sup>232</sup> Liv. Periocha 139: »*Civitates Germaniae cis Rhenum et trans Rhenum positae oppugnantur a Druso, et tumultus, qui ob censum exortus in Gallia erat, conponitur*«.

refer to the recently displaced Batavi and Ubii (cf. **figs 9. 14**), especially if the term *positae*, »placed«, in the Periochae was taken from the original.

Dio may also be hinting at troubles on the left bank: »when the Sugambri and their allies ... were looking for war, he [Drusus] first occupied the subdued territory (τό τε ὑπήκοον προκατέλαβε), summoning the most prominent men and using the festival that is still celebrated today at the altar of Augustus at Lugdunum as an excuse; and after observing the Germans who were crossing the Rhine he repelled them«<sup>233</sup>. It is evident that these events took place on the left bank, which from a Roman point of view was »subdued territory« (τό ὑπήκοον), while προκατέλαβε indicates a military occupation<sup>234</sup>, with προ- possibly implying that there was no garrison at that time. If not only the base at Nijmegen, but also those at Neuss and Asciburgium had been evacuated in or shortly after 16, this would not be a false representation of things. Up to this point the text need not be more than an account of troop deployment on the left bank in response to the invasion by the Sugambri and other tribes from across the Rhine. Considering the situation of the Sugambri at least the territory of the Ubii must have been involved, but in view of the sequel a broader interpretation is likely. The summoning of the tribal elite might well indicate that there was more going on. The entire passage is not incompatible with a wavering attitude on the part of the Ubii and/or Batavi, which had to be suppressed by a firm military presence and reprimand<sup>235</sup>.

Subsequently, Drusus crossed the Rhine, departing from the island of the Batavians, and advanced through the territory of the Usipetes to that of the Sugambri, which was thoroughly ravaged by his troops (cf. **fig. 9**). So far his strategy towards the transrhene peoples did not differ in any respect from that of Caesar in 55 BC. The altar at Lyon had been inaugurated as late as August 1, and the events just mentioned must have taken quite some time. Nevertheless a quite different enterprise was to follow, and that by ship. Drusus sailed along the Rhine to the Ocean and entered into a treaty with the Frisii (**fig. 14**). Dio's wording does not suggest that military action was involved<sup>236</sup>. Next Drusus crossed the lakes and attacked the Chauci – this time the wording explicitly indicates aggression<sup>237</sup>. He got into trouble, however, as his ships were stranded by the tide, but he was saved by the Frisians who had advanced with him over land – a further reason to believe in a friendly treaty with this tribe. As winter set in Drusus withdrew his troops, while he personally wintered in Rome.

It is hard to assess the significance and implications of this naval expedition. The late time of departure seems to indicate that it was pressing, and travel by ship may have been for reasons of speed. The scale of the operation depends on the number of available ships, which is one big question mark. No less relevant is the provenance of the ships. Von Schnurbein's supposition that the Augustan base at Nijmegen served among other things to facilitate the regional building of a fleet for campaigns planned for the years after 12 BC<sup>238</sup> cannot be correct in view of its evacuation in or shortly after 16, but it touches on an important issue: if the ships were built on the Rhine, the campaign cannot have been launched in great haste, but if the campaign was unforeseen, the ships must indeed have been requisitioned here and there<sup>239</sup>.

The Frisii and Chauci had not appeared in the annals before. The swift pact with the Frisians indicates that they were not the cause of this expedition so late in the year. It is highly conceivable, however, that the

<sup>233</sup> Cass. Dio 54, 32, 1.

<sup>234</sup> LSJ s.v. καταλαμβάνω and προκαταλαμβάνω.

<sup>235</sup> Immediately after the defeat of Varus in AD 9 the actions of army commander L. Asprenas meant that »the already wavering tribes on this side of the Rhine remained loyal« (Vell. 2, 120, 3: »vacillantium etiam cis Rhenum sitarum gentium animos confirmavit«) – another sign that the loyalty of the peoples on the left bank was not always a matter of course.

<sup>236</sup> Cass. Dio 54, 32, 2: τοὺς τε Φρισίους ὤκειώσατο. The final word is derived from οἰκειόω, or »make someone οἰκεῖος«, i.e. »belonging to the house or family« (LSJ). By entering into a treaty with Augustus the Frisian elite became part of his *clientela* and as such practically his family.

<sup>237</sup> Cass. Dio 54, 32, 2; LSJ s.v. ἐμβάλλω.

<sup>238</sup> von Schnurbein 2011, 77 f.

<sup>239</sup> Konen (2008, 305) also reckons with the requisitioning of ships to supply the German campaigns in the reign of Augustus.

Chauci were expanding or migrating to the west at this time, pushing the Frisii to the southwest. This might explain the increasing northern (Frisian) influence in the pottery of the western coastal area around the beginning of the Common Era (p. 392) and the contemporaneous extension of the Ems-Elbe pottery into Groningen and northern Drenthe<sup>240</sup>. In such a constellation it is not surprising that the Frisii were happy to come to an agreement with the Romans and to accompany Drusus in his assault on the Chauci. Cassius Dio does not explicitly record that the latter were defeated, but this must have been the case<sup>241</sup>.

One difficulty is Strabo's assertion that Drusus defeated the Bructeri in a naval battle on the river Ems (fig. 14)<sup>242</sup>. After 12 BC he seems not to have advanced so far to the north, although Dio's account of the year 10 is very succinct, and there is no record of further deployment by water for those years. If the stranding near the Chauci was preceded by a voyage along the Ems, the Bructeri might have been one of the targets of the expedition in 12. Strabo places the Bructeri near the Ocean<sup>243</sup>, so it is certainly possible. In the early spring of the year 11 Drusus crossed the Rhine again<sup>244</sup>. He subdued the Usipetes, bridged the river Lippe and invaded the area of the Sugambri, who had left their homes to march against the Chatti, as a punishment for their refusal to join their cause. Drusus advanced to the territory of the Cherusci, until he was forced to turn back at the river Weser because of a shortage of supplies and the setting-in of winter. On his return »to friendly territory« he suffered great losses through German ambushes, but he succeeded in building a camp »where the Lupia and Eliso unite, and another camp in the area of the Chatti along the Rhine«. The camp on the Lippe is generally identified with that at Oberaden (Kr. Unna/D) (cf. suppl. 1 and p. 408). Where the second camp was situated remains unclear. Dio's placing of the Chatti on the Rhine is remarkable, but since they will have been living in the Schiefergebirge to the southeast of Bonn, at first glance this is an unexpected destination for a retreat from the Weser/Werra<sup>245</sup> and from the area of the Cherusci (cf. fig. 14). Part of the army may have marched (via Hedemünden, Lkr. Göttingen/D?) through the valley of the river Lahn (via Dorlar, Lahn-Dill-Kreis/D?) to the Rhine.

Drusus was awarded the *ornamenta triumphalia* and an *ovatio*, the modest version of a triumph. Cassius Dio further records the decision to close the gates of the temple of Janus, formalising the achievement of a state of peace throughout the empire<sup>246</sup>. Wolters regards this as a sign that the German campaigns were regarded as concluded<sup>247</sup>. The presented result would be the subjection of the German lowlands between the Rhine, Ruhr, Weser and North Sea. Although Gruen has argued that there was a continuous discrepancy under Augustus between military reality and its representation in Rome<sup>248</sup>, Wolters' theory has met with little agreement so far<sup>249</sup>.

#### The Mittelgebirge: Drusus in 10-9 BC

The plan to close the gates of the temple of Janus could not be put into effect because the Daci crossed the Danube. While Tiberius dealt with that problem Drusus resumed the war in Germania. We have little infor-

<sup>240</sup> For the latter cf. Taayke 1996-1997, 174f. fig. 5. 7.

<sup>241</sup> Liv. Periocha 140: »item Cherusci, Tencteri, Chauci aliaeque Germanorum trans Rhenum gentes subactae a Druso referuntur« (further the Cherusci, Tencteri, Chauci and other subdued German peoples across the Rhine were subjected again). Velleius (2, 106) for AD 5 refers to *receptae Cauchorum nationes*, where *receptae* expresses that they had been subjected earlier.

<sup>242</sup> Strab. 7, 1, 3, p. 290 C: ἐν τῷ Ἀμασίᾳ Δροῦσος Βρουκτέρους κατεναυμάχησε.

<sup>243</sup> Strab. 7, 1, 3, p. 291 C.

<sup>244</sup> Cf. Cass. Dio 54, 33 for the events in this year.

<sup>245</sup> The Werra is the upper course of the Weser.

<sup>246</sup> Cass. Dio 54, 36, 2.

<sup>247</sup> Wolters 1999, 600f.

<sup>248</sup> Gruen 1990.

<sup>249</sup> John 2006, 95 is of the same opinion.

mation on the events of the year 10. Cassius Dio merely records that Drusus cornered or subjected several tribes, especially the Chatti who had left the territory assigned to them by Rome and joined the Sugambri after all<sup>250</sup>. It cannot be ruled out that the building of a fortification in their area was (partly) responsible for this change in course<sup>251</sup>.

In 9 BC Drusus invaded the area of the Chatti once more and advanced as far as the Elbe. After a failed attempt to cross the river he erected trophies and set out on his return. At some point he fell from his horse and died a few weeks later, at the age of thirty.

Judging by the tribes recorded by Dio the Mittelgebirge to the north of the Main was the main theatre of operations in 10 and 9 BC. The involvement of the Sugambri and the continued occupation of the base at Oberaden, however, suggest that the Lippe area was nevertheless still playing a part, which may have been necessary from a logistical point of view. In this context it should not be overlooked that other bases on the Lippe may have been used in these years, such as the camps discovered at Haltern (Kr. Recklinghausen/D) outside and beneath the »Hauptlager«<sup>252</sup> (suppl. 1).

In view of the apparent shift in focus of the operations from the northern lowlands to the Mittelgebirge, it seems surprising at first glance that the construction of a groyne at the bifurcation of the Rhine and Waal would have started in 9 BC of all times – assuming that the date reconstructed from Tacitus is correct. However, it may also indicate that Drusus planned to return to his strategy of using the sea route to the Weser and Elbe, since in his experience the Lippe and the Lahn allowed only a restricted eastward penetration. Rome's largest plague of all, the Suebi, could hardly be reached without using that supplementary route. This explanation is far from certain, as Dio asserts that a second *ovatio* was already being prepared at Rome, which – like that of 11 BC – might mark the closure of the offensive.

#### Closure: Tiberius in 9-8 BC

Tiberius had only just celebrated the second *ovatio* voted to him for his successes in Illyricum and Pannonia when the news of Drusus' accident arrived. He was immediately sent to Germania, where he found his younger brother only just alive. He led the expedition army back to the winter camp on the Rhine and then escorted Drusus' remains to Rome. The Senate awarded Drusus a triumphal arch and the hereditary honorary name of Germanicus<sup>253</sup>.

In 8 BC Tiberius crossed the Rhine once more and apparently achieved great successes. According to Dio all tribes except the Sugambri surrendered, which fits Velleius Paterculus' assertion that Tiberius victoriously traversed the whole of Germany without losses and »subjected the area so thoroughly that he nearly turned it into a tributary province«<sup>254</sup>. For this Tiberius was honoured with a full triumph, which he celebrated at Rome in 7 BC. It is generally assumed that the displacement of allegedly 40,000 subjected Germans – elsewhere specified as Suebi and Sugambri – to the left bank of the Rhine should be dated to 8 or 7 BC and be regarded as the tail end of the operations (fig. 14)<sup>255</sup>.

<sup>250</sup> Cass. Dio 54, 36, 3.

<sup>251</sup> Johne 2006, 96.

<sup>252</sup> von Schnurbein 1974; Kühlborn 1995, 82-102; 2008.

<sup>253</sup> Flor. epit. 2, 30: »*senatus cognomen ex provincia dedit*« (the Senate gave him a *cognomen* derived from the [name of the] province); cf. Cassius Dio 55, 2.

<sup>254</sup> Cass. Dio 55, 6 (cf. Cassiodorus, Chronikon 746: »*inter Albim et Rhenum Germani omnes Tiberio Neroni dediti*« – all Germans between the Elbe and Rhine surrendered to Tiberius Nero); Vell. 2, 97: »*sic perdomuit eam, ut in formam paene stipendiariae redigeret provinciae*«.

<sup>255</sup> Suet. Aug. 21; Tib. 9. Cf. Eutr. 7, 9; Oros. 6, 21; Tac. ann. 2, 26. 12, 39.



According to Florus, who wrote a summary of Livy's work in the reign of Hadrian, Drusus built fortifications all along the Meuse, Elbe and Weser, and even more than fifty on the banks of the Rhine<sup>256</sup>. Although new camps are still being discovered, Florus is generally assumed to have grossly exaggerated.

The only military base which can be safely attributed to the expeditions of Drusus is that at Oberaden on the Lippe (**suppl. 1**). Various construction elements of the earth-and-timber wall, two wells and two latrines originate from trees which must have been felled between the late summer of 11 and the spring of 10 BC, as shown by their annual ring patterns<sup>257</sup>; added to the historical sources it is as good as certain that the camp was built in the autumn of 11 BC.

Some consider the well-dated fortification at Oberaden to be a *pars pro toto* for a range of bases east of the Rhine that were more or less in temporary use, both in the Lippe area (including Holsterhausen, Kr. Recklinghausen/D; Haltern »Ostlager« and »Feldlager«) and further to the east (Hedemünden) and south (including Dorlar and Rödgen, Wetteraukreis/D). As indicated by the presence of luxury dwellings with large gardens, Oberaden was built as or developed into long-stay accommodation (»Standlager«). So far this character has not been attested for other transrhene fortifications assigned to the expeditions of Drusus. It is conceivable that Oberaden had a different function, as an operational base for army staff or a »watch post« for the Sugambrian troublemakers, or in both capacities<sup>258</sup>.

In the Dutch River Area there is no fortification that can be related to Drusus' operations. As pointed out earlier (p. 402 f.), the bases at Vechten and Meinerswijk appear to be of later date, although their situation would make sense in the context of the expedition of 12 BC. Nor is it far-fetched to suppose a camp near the groyne at Carvium (p. 402) close to the bifurcation of the Rhine and Waal, if only as a base for the construction troops; it may have been located on the site of the presumed Middle Roman fort at De Bijland, where the pre-Flavian gravestone referring to the *moles* was found.

The large base on the Hunerberg at Nijmegen appears to have been largely or entirely evacuated at this time. The smaller and peculiar fortification on the adjacent Kops Plateau is likely to have been founded in this period, judging by its coin assemblage, as the large collection contains numerous Nemausus asses<sup>259</sup>. The camp from period 1 stands out through the presence of a disproportionately large *praetorium* and a large number of officer's dwellings (**fig. 17**)<sup>260</sup>. The excavators are therefore of the opinion that it may have served as a command post in the hinterland, »to provide for an officer with at least the rank of legionary commander, perhaps even for Drusus«<sup>261</sup>.

It cannot be ruled out that the camp was built with this purpose in 12 BC. A command post on the left bank of the Rhine, on the edge of the territory of the Batavian allies, might have made sense in the first year of operations. However, as the military's focus shifted from the campaign of 11 onward, first to the east and then to the south, a command post to the left of the Rhine would have been awkward. Moreover, Drusus' presence in the theatre of war east of the Rhine is recorded for the years 11 and 9 BC; he spent the winters

<sup>256</sup> Flor. epit. 30: »*Praeterea in tutelam provinciae praesidia atque custodias oblique disposuit per Mosam flumen, per Albin, per Visurgim. In Rheni quidem ripa quinquaginta amplius castella dixerit*«.

<sup>257</sup> Hollstein 1980, 102 f.; Kühlborn 1992, 122-133; Schmidt 1992. – A growth ring developed after 11 BC has not been attested for any of the timbers belonging to these structures, although the sapwood was no longer entirely present in some (Hollstein 1980, 102; Schmidt 1992, 218-220).

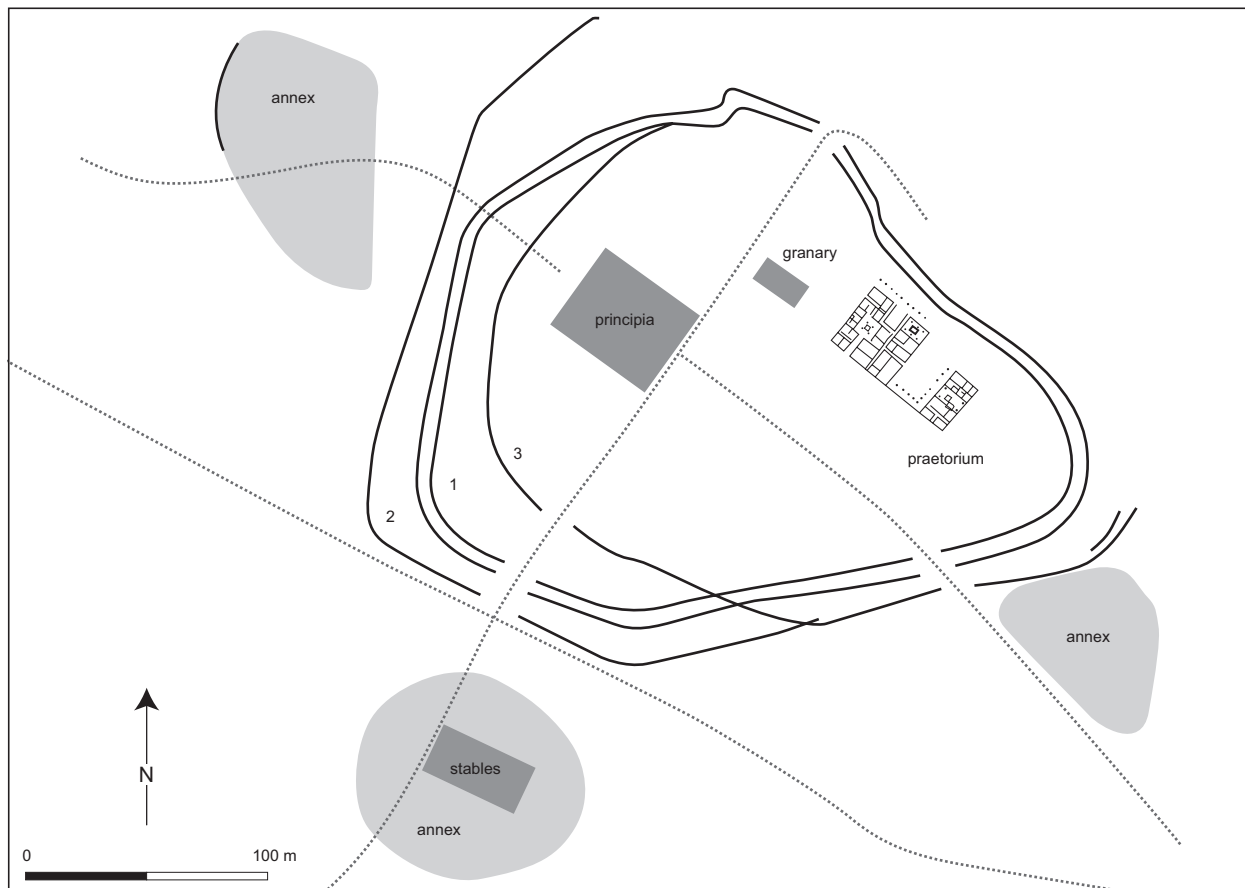
<sup>258</sup> Based on the architecture of the *praetorium* Förtsch (1995, especially 630) considers a function as a command base a

possibility for Oberaden, Nijmegen-Kops Plateau, Haltern and Anreppen (Kr. Paderborn/D).

<sup>259</sup> There are 586 Nemausus asses and 113 imitations in a collection of nearly 4500 coins (Van der Vin 2002). Cf. Beliën 2008, 181-183 (with slightly differing frequencies in note 62). See p. 393 for the hypothesis that the Kops Plateau had already been occupied during Agrippa's first governorship in 39/38 BC.

<sup>260</sup> Driessen 2007, 67-80; Willems/Van Enckevort 2009, 35-41.

<sup>261</sup> Willems/Van Enckevort 2009, 39. In this sense also Förtsch 1995, 629 f.



**Fig. 17** Nijmegen. Fortification on the Kops Plateau, with defensive ditches from periods 1-3, major roads and selected buildings. – (After Willems/Van Enckevort 2009, figs 11-12). – Scale approx. 1:3,000.

in Rome, so the Kops Plateau did not have to provide him with winter quarters. All this does not rule out that the camp may have served as (temporary) accommodation for other high officers.

Slofstra has advanced an alternative interpretation as the seat of a *praefectus gentis or civitatis* supervising the observance of the Batavian treaty with Rome<sup>262</sup>. If the Batavi belonged to the *civitates Germaniae cis Rhenum positae* closed down by Drusus (p. 404 f.), the replacement of a Batavian kingship by a prefecture as postulated by Slofstra would make perfect sense. Whereas Slofstra is inclined to assign the function of prefect to members of the Batavian family of the Julii, the (possibly initial) appointment of a non-Batavian *primipilaris* – comparable to Olennius, *e primipilaribus regendis Frisiis impositus* (a former *primipilus* assigned to control the allied Frisii)<sup>263</sup> – would be more likely. As a prefect's seat, continuing the fortification on the Kops Plateau after the first expedition is quite understandable – much less so is the positioning of such a »watch post« on the periphery of the Batavian island.

#### Supply networks in the days of Drusus

During the summers of 12-9 BC Drusus traversed the area between the Rhine and Elbe, from Hesse to the North Sea (suppl. 1). The northern part belonged to the North European Plain, a relatively flat landscape

<sup>262</sup> Slofstra 2002, 27 f.; cf. Driessen 2007, 65, 72.

<sup>263</sup> Tac. ann. 4, 72.



A



B



C



D

**Fig. 18** Present-day landscapes presumably resembling landscapes from the Roman period: **A-B** dry coversand landscapes. **A** oak woodland (Meinweg, prov. Limburg/NL). **B** heathland (near Vierhouten, prov. Gelderland/NL). – **C-D** wet landscapes. **C** meadow with Galloway cattle (island of Texel, prov. Noord-Holland/NL). **D** tidal flat with salt marsh vegetation (island of Texel, prov. Noord-Holland/NL). – (Photos J. A. de Raad / L. I. Kooistra).

consisting of wind-borne sand deposits alternating with ice-pushed ridges from the second-to-last glacial period, with a few large rivers – the Ems, Weser and Elbe – flowing roughly from south to north. Extensive salt marshes existed at this time in the northern coastal area (**fig. 18D**)<sup>264</sup>. Inland the lower parts of the Pleistocene landscape were covered by inaccessible fen peats and bogs (**fig. 19C-D**). On the west coast a strip of beach ridges and dunes separated the sea from the land, which merely consisted here of large fen-lands and bogs, with small and large lakes (**fig. 18C**) (cf. p. 372). The Pleistocene coversands in the northern and central parts were not particularly fertile. The natural vegetation consisted of deciduous oak and birch woodlands and heaths (**fig. 18A-B**).

The area was occupied by small agrarian settlements geared to self-sufficiency<sup>265</sup>. Nearly all their inhabitants must have been engaged in a mixture of arable farming and animal husbandry. Farmers on the Pleis-

<sup>264</sup> Behre 1995; 1999; Behre/Kučan 1999.

<sup>265</sup> e.g. Hiddink 1999, 180.





A



B



C



D

**Fig. 19** Present-day landscapes presumably resembling landscapes from the Roman period: **A-B** alluvial landscapes. **A** riverine woodland on a natural levee of the river Pripyat (Republic of Belarus). **B** flood basin of the Pripyat, with the higher parts used as grazing grounds for cattle and the lower parts for fishing. – **C-D** peat landscapes. **C** alder carr in early spring (Nieuwkoopse Plassen, prov. Zuid-Holland/NL). **D** bog vegetation (near Haaksbergen, prov. Overijssel/NL). – (Photos J. A. de Raad / L. I. Kooistra).

tocene land adopted the Celtic field system in the last century BC in order to improve yields<sup>266</sup>. Thanks to this innovation in arable farming the fallow period in the crop rotation system may have been considerably shortened<sup>267</sup>.

The Pleistocene coversands in the north are separated from the Mittelgebirge by a relatively narrow loess belt. Loess is a fertile soil which is very suitable for arable farming, but susceptible to erosion. As a result, arable farming on slopes steeper than 8 % tends to be less successful<sup>268</sup>. However, the thick loess deposits in the gently sloping landscapes of the German Rhineland, Dutch Zuid-Limburg, Belgium and Northern France

<sup>266</sup> Celtic fields have been attested in Denmark, Northern Germany and the Pleistocene areas in the Netherlands.

<sup>267</sup> Research in the Siedlungskammer of Flögel (Lkr. Cuxhaven/D), situated in Northern Germany between the Elbe and Weser, has shown that in the period preceding the Celtic fields the

land was abandoned after a period of tilling. Deciduous oak and birch woodlands and heaths developed on the deserted fields (Behre/Kučan 1994, 153-155).

<sup>268</sup> Poelman 1971, 179.



were pre-eminently suitable for large-scale arable farming in the Roman period. From this vast loess area only Northern Gaul supplied cereals for Drusus' army on the Rhine. In the other regions mentioned, the rural communities were still engaged in a subsistence economy based on mixed farming<sup>269</sup>.

It seems that Drusus' actions were targeted towards pacifying the Germanic tribes to the right (and left) of the Rhine. He was therefore mainly operating in hostile territories, which must have influenced the provisioning of his army. Another critical factor for supply logistics is the size of his army force, which is essentially unknown<sup>270</sup>.

In 12 BC Drusus' actions were initially directed towards the tribes west of the Rhine, whose loyalty seems to have been wavering. In this phase he could fall back on existing logistical networks extending as far north as Nijmegen (cf. p. 396). This might explain the building of a new camp on the Kops Plateau at Nijmegen, immediately east of the earlier and much larger base on the Hunerberg (fig. 15). The new fort bordered the steep slope of the ice-pushed ridge, and in the course of time eroded sediment and refuse accumulated in a broad gully along the lower half of the slope<sup>271</sup>. A remarkable feature of the eroded sediment is the occurrence of large quantities of cereal pollen in the lowest 40 cm<sup>272</sup>. Teunissen and Teunissen-van Oorschot concluded that the establishment of the army camp was followed by a considerable extension of the arable fields. It is more probable, however, that the pollen occurred in food remains which were dumped from the plateau with other waste. Unfortunately, because it is rarely possible to specify the type of cereal from pollen, we do not know what the troops were fed with and where it originated.

The voyage to the Frisii, the skirmishes with the Chauci and the naval battle on the Ems in the autumn of 12 BC may have required a specific logistical approach (suppl. 1). The trip was made by ship and the timing rather late in the season may indicate that the campaign had not been scheduled. If that is true Drusus must have requisitioned boats, and perhaps food as well. For the latter the timing was opportune, since the corn must have been recently harvested. It is conceivable that the treaty which Drusus concluded with the Frisians partly served logistical purposes: it allowed the storage of food and other supplies in their territory, situated more or less halfway to the Ems.

Various estimates have been made of the numbers of boats required to transfer a Roman army over sea, based amongst other things on Caesar's account of his voyages to Britain in 55 and 54 BC<sup>273</sup>. They demonstrate that the simultaneous movement of two legions (troops and horses) easily required a hundred ships – not counting the vessels needed to transport food and other necessities. However, it was fairly common to maintain a shuttle service<sup>274</sup>, which saved on ships but slowed the pace.

As mentioned above, the size of Drusus' expedition army is unknown, but if he travelled for two months with two legions and additional personnel (some 15,000 men), he would have needed at least 720 tons of corn for the troops and another 36 tons as fodder for the horses<sup>275</sup>. River vessels of the Zwammerdam type, 20-34m long and 3-4.5m wide, are presumed to have carried from about 22 to less than 100 tons of cargo<sup>276</sup>. Some seagoing ships may have stored 100 tons, but generally ships with a capacity of 30-40 tons at most were used<sup>277</sup>. Based on a cargo of 35 tons, at least 22 shiploads would have been needed to transport cereals, assuming that all the corn was shipped in from the hinterland. The supply of wine, olive oil and meat has not been included in the calculations.

269 Kooistra 1996, 89; Schamuhn/Zerl 2009.

270 Cassius Dio is the main historical source for his expeditions, and he is generally sparing with military details.

271 Bogaers/Haalebos 1975, especially 130-132.

272 Teunissen/Teunissen-van Oorschot 1980, 260f.

273 Manley 2002, 41 f.; Fulford 2000.

274 Roth 1999, 189-222.

275 Calculation based on daily rations of 0.8 kg per man and 2.5 kg per horse (cf. p. 399 f.).

276 Bremer 2001, 71. Bremer believes that the 105-110 tons of cargo for the Zwammerdam 4 (34 m × 4.5 m) calculated by De Weerd (1988) is an overestimation.

277 Roth 1999, 192.

It is therefore likely that a substantial logistical effort was needed, since even a short campaign required a constant supply of food and other goods. To guarantee a proper delivery the supply routes and transfer points had to be secured. Yet a different logistic approach is possible in which Drusus did not have to establish transport chains from the hinterland. He may have obtained corn and meat from the Frisii or requisitioned the stocks of the defeated Chauci and Bructeri. Such a strategy might have been more risky, but for short unscheduled campaigns it is a good alternative. Palaeobotanic research on agrarian settlements in the North German Plain has demonstrated that barley was by far the most important food crop at this period, although emmer and millet were known as well. Further, linseed was cultivated for its oil-bearing seeds<sup>278</sup>. Barley was not a preferred cereal among the Roman legionaries, but it was consumed when nothing else was available. In Roman sources barley is often mentioned as fodder for horses and pack animals<sup>279</sup>.

The turbulent summer of 11 BC was spent in hostile territory on the middle Weser. Drusus eventually had to withdraw his army because of a shortage of supplies. Subsequently, the army marched to »friendly territory« (cf. p. 406) and founded at least two camps, one at Oberaden on the Lippe and another presumably somewhere to the southeast of Bonn, also east of the Rhine. Whereas in the winter of 12/11 BC the army had overwintered in Gaul, at least some troops spent the following winter at Oberaden and in the area of the Chatti. The supply network must have expanded quickly, since the military staff at Oberaden obviously wanted for nothing. Exotic foods such as pepper, figs and olives reveal excellent contacts with the Mediterranean<sup>280</sup>. As for cereals, mainly emmer, barley, spelt, millet and einkorn are represented. In some samples remains of corn cockle (*Agrostemma githago*) and white lace flower (*Orlaya grandiflora*) have been found. The former of these field crop weeds occurred in the cornfields of Gaul in the time of Drusus<sup>281</sup>, while the northern boundary of the latter seems to have coincided with the northern border of the loess soils<sup>282</sup>. These weeds therefore suggest that at least some of the cereals were shipped from Gaul, where emmer, barley and spelt were grown in this period. Emmer and barley, however, also occurred on the Celtic fields of the Germanic tribes. These were cultivated together with millet, einkorn and linseed, amongst other things. Rye has also been recorded in one of the samples. At this time, rye occurred as an arable weed in cornfields on the northern coversands in Germany and the Netherlands<sup>283</sup>. The presence of einkorn, millet and rye seems to suggest that some of the barley and emmer was procured from Germanic territory. It may have been bought or requisitioned by the army, depending on relations with the tribe whose territory was traversed. There are also indications that some of the cereals at Oberaden had been grown nearby. This may be inferred from the remains of *rachis internodia* of barley<sup>284</sup>.

This survey of the vegetable remains reveals three supply strategies: 1) a supply network with the Roman hinterland, 2) creaming off the local population's food stocks during summer campaigns, and 3) creaming off the food stocks of the rural population around the military bases<sup>285</sup>.

Florus records that Drusus built fortifications on the Meuse, Rhine, Elbe and Weser. Their functions may have varied considerably. At Rödgen in the Wetterau a camp measuring 3.3 ha has been found which incorporated three large granaries. Kehne has calculated that their storage capacity was enough to supply corn to three legions for six months<sup>286</sup>. The camp itself was much too small for such a garrison, so it is obvious that it acted as a node in the supply network. The camp at Rödgen owes its discovery merely to the building of a school in the 1970s, so other similar camps may still be hidden from sight. It is evident that Drusus had

<sup>278</sup> Behre 1972; 1977; 1998; Behre/Kučan 1994; Kooistra 2009a.

<sup>279</sup> For example discussion in Vossen/Groot 2009.

<sup>280</sup> Kučan 1992, 242-247.

<sup>281</sup> Derreumaux/Lepetz 2008, 56-62.

<sup>282</sup> Kooistra 1996, 170.

<sup>283</sup> Behre 1992; Van Zeist 1976; 1981; Van Zeist/Palfenier-Vegter 1991/1992.

<sup>284</sup> Kučan 1992, 254.

<sup>285</sup> Bremer 2001, 12.

<sup>286</sup> Kehne 2008, 278.

various other camps built between the Rhine and Elbe, differing in size, function and intended lifespan. His supply network was only fed from the south and the routes must have partly gone over land. Water transport was preferred and it is no coincidence that most Roman provinces bordered on the sea (**fig. 13**)<sup>287</sup>. The North Sea, however, was harder to navigate than the Mediterranean because of the tide with its currents. This may have been an extra incentive for Drusus to improve the route over the Flevo lakes by constructing a groyne at the bifurcation of the Rhine and Waal. A swift and safe passage over the Flevo lakes to the estuaries of the Ems, Weser and Elbe allowed the efficient transport of supplies and troops deep into Germania. But it proved difficult to put the theory into practice.

### Gain and loss: 7 BC-AD 13

Eck rightly argues that the triumph celebrated by Tiberius in 7 BC is a sign that the German war was regarded as having been concluded; this distinction had not been awarded since 19 BC<sup>288</sup>. Nevertheless, Tiberius had to return to the Rhine shortly after the celebration »because there was some unrest in Germania«, as Dio states. Apparently the situation was not very alarming, as he asserts later that »in Germania nothing worth mentioning happened«<sup>289</sup>. It is striking that in both cases Dio uses the term Γερμανία, which he reserves for the left bank while using Κελτική for the right bank<sup>290</sup>. As in 12 BC it conveys the impression that there was tumult on the **west** bank of the Rhine. Perhaps the displacement of the Suebi and Sugambri met with some resistance.

### Out of the limelight: 6 BC-AD 4

In 6 BC Tiberius was sent to Armenia<sup>291</sup>, suggesting that his presence in the north was no longer required. He would not get beyond Rhodes, escaping the machinations in Rome and the events elsewhere in the Empire for eight years in succession. As for the backgrounds to this retirement the ancient sources alone disagree strongly<sup>292</sup>; here they are not relevant.

Since Agrippa and Drusus had died in 12 and 9 BC, and Gaius and Lucius Caesar, the sons born in 20 and 17 from the marriage of Agrippa with Augustus' daughter Julia, were too young to be burdened with military commands, Tiberius' absence obliged Augustus to recruit his commanders from a wider circle. The Illyrian command was entrusted to L. Domitius Ahenobarbus, married to Augustus' niece Antonia the Elder; around the beginning of the Common Era he was charged with Germania. In his first capacity he displaced the wandering Hermunduri to the former territory of the Marcomanni, and he crossed the Elbe to enter into treaties of friendship; during his German command his intervention in a conflict among the Cherusci apparently led to large-scale troubles<sup>293</sup>. Whether or not as a consequence of Domitius' actions, his successor M. Vinicius – a personal friend of Augustus<sup>294</sup> – was involved in or around AD 1 in an *immensum bellum* (immense war), as Velleius Paterculus describes it<sup>295</sup>. Since Vinicius was awarded the *ornamenta triumphalia*

<sup>287</sup> Roth 1999, 189-195.

<sup>288</sup> In 19 a triumph was awarded to Agrippa for his subjection of the Cantrabri, but he refused to accept it (Cass. Dio 54, 11, 6).

<sup>289</sup> Cass. Dio 55, 8, 3. 9, 1.

<sup>290</sup> Ausbüttel 2011, 395 f., referring to Cass. Dio 53, 12, 6.

<sup>291</sup> Cass. Dio 55, 9, 4.

<sup>292</sup> Suet. Tib. 10-13; Cass. Dio 55, 9-10; Vell. 2, 99.

<sup>293</sup> Cass. Dio 55, 10a. – For his exploits across the Elbe cf. Tac. ann. 4, 44.

<sup>294</sup> Suetonius (Aug. 71) mentions a letter in which Augustus recalls a pleasant game of dice with Vinicius, amongst others.

<sup>295</sup> Vell. 2, 104.

and an honorary inscription, his actions will not have been without success<sup>296</sup>, but apparently he did not reach a breakthrough, as Tiberius took over the German command in AD 4. He had returned from Rhodes two years before; once Lucius and then Gaius Caesar had died, Augustus adopted Tiberius in AD 4 and invested him with the *tribunicia potestas*. However, on the same day he also adopted Agrippa's posthumously born son M. Agrippa Postumus and he made Tiberius adopt Drusus' 19-year-old son Germanicus, though he had a son of the same age himself, Drusus (the Younger)<sup>297</sup>.

Although it had not been altogether quiet in Germany in the decade following the celebration of Tiberius' German triumph in 7 BC, the cases of Waldgirmes (Lahn-Dill-Kreis/D) and Haltern may be taken as an indication that a process of provincialisation and urbanisation had begun in the western part of the conquered area (suppl. 1). The settlement of Waldgirmes in the Lahn valley is strongly reminiscent of an early military camp, but it differs in its relative scarcity of military equipment and in the nature of some of its buildings, which have urban characteristics unparalleled in an Augustan military context<sup>298</sup>. Military architecture dominates in the Hauptlager at Haltern on the northern bank of the Lippe<sup>299</sup>, but there is an excess of domestic buildings, increasing in a second building phase (fig. 20, shaded); furthermore, the monumental graves to its south are an unusual element in an early military setting<sup>300</sup>.

#### Tiberius back in Germania: AD 4-6

Tiberius' campaigns in the years AD 4-6 seem to have been preceded by extensive logistical preparations in Gaul (suppl. 1). Shortly after his adoption by Augustus he wrote a letter from Boulogne to the citizens of a town in Phrygia to thank them for congratulating him on that occasion<sup>301</sup>. An inscription from Bavay (départ. Nord/F) in honour of his visit may also be connected with these preparations<sup>302</sup>. Tiberius' tour of Belgica is likely to be related to the corn supply to the army on the Rhine. The presence of a military complex with large warehouses on the bank of the Seine at Melun (départ. Seine-et-Marne/F), dated some time before AD 30, fits well into such a scheme<sup>303</sup>. An alternative or an additional aim may have been the requisitioning or construction of ocean-going ships for the expedition the following year<sup>304</sup>.

It may have been thanks to the successes of M. Vinicius that Tiberius could penetrate deeply into Germania in the year 4, crossing the Weser. The operations were recorded firsthand and in very laudatory terms by Velleius Paterculus, who accompanied Tiberius during these campaigns as *praefectus equitum* or cavalry commander<sup>305</sup>. The opening of his account of AD 4 is corrupt, resulting in a debate on the tribes subdued in that year<sup>306</sup>. The list seems to have included the Bructeri and Cherusci, and possibly the Chattuarii. The

<sup>296</sup> Vell. 2, 104. These honours alone are not enough to dismiss Velleius' use of *immensum bellum* as a mere exaggeration to sing the praises of Vinicius (Velleius' historical work is dedicated to Vinicius' grandson of the same name) or to present the conclusion of the war by Tiberius as all the more impressive.

<sup>297</sup> Vell. 2, 103; Cass. Dio 55, 10a, 13.

<sup>298</sup> von Schnurbein 2003, 98-104, especially 99.

<sup>299</sup> Cf. von Schnurbein 1981, 53: »es deutet manches darauf hin, daß mehr Wohngebäude bestanden haben, als allein für die militärische Führung der im Lager stationierten Truppen notwendig waren«; von Schnurbein 2003, 97: »these might be buildings for higher ranking individuals whose tasks were not purely military, but were connected with organisation and administration«.

<sup>300</sup> In this sense e.g. Eck 2004b, 16f.

<sup>301</sup> Levick 2000, 127f. no. 119. Cf. also Vell. 2, 104.

<sup>302</sup> CIL XIII 3570: *Ti(berio) Caesari Augusti f(ilio) / divi nepoti adventu(i) / eius sacrum / Cn(aeus) Licinius C(ai) f(ilius) Vol(tinia) Navos* (to Tiberius Caesar, son of Augustus, grandson of the deified (Caesar) Cnaeus Licinius Cai filius Navos from the tribus Voltinia has dedicated this on the occasion of his arrival).

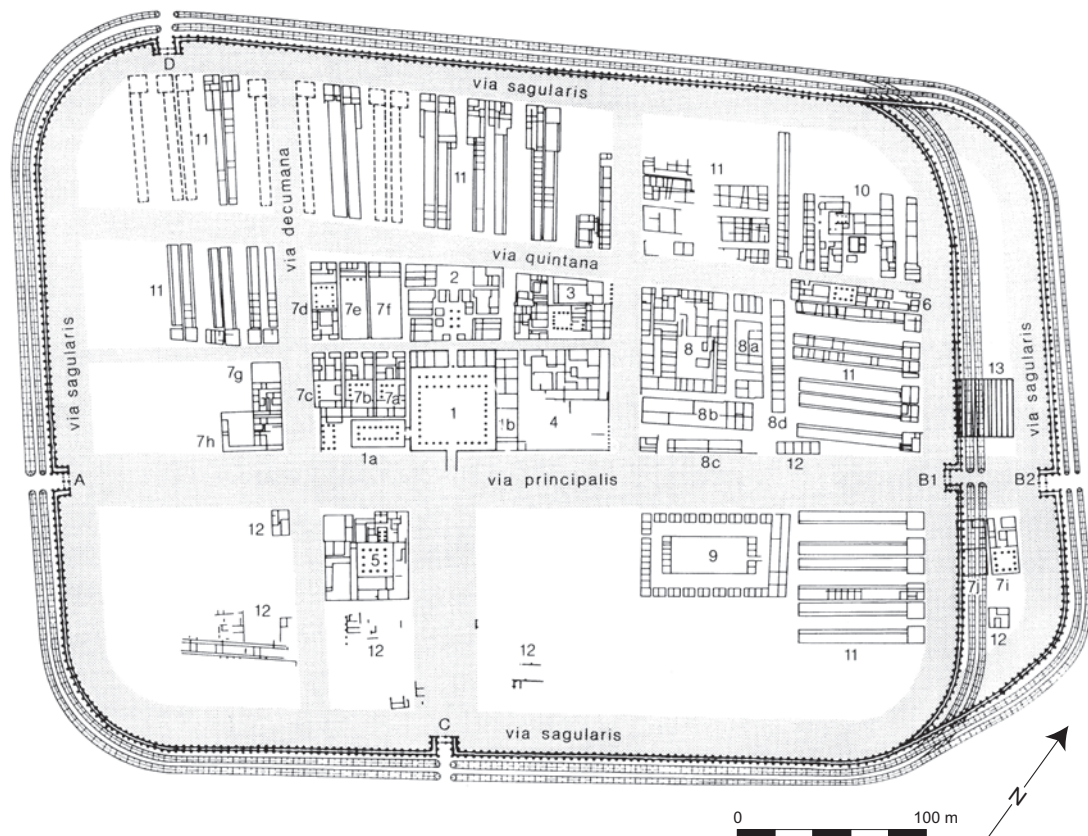
<sup>303</sup> Reddé et al. 2006, 330f. The interpretation of the buildings as warehouses is not certain, and neither is their precise date, but they precede the building of a villa c. AD 30.

<sup>304</sup> Cf. Konen 2000, 130.

<sup>305</sup> Vell. 2, 104-109.

<sup>306</sup> For a concise discussion cf. Kehne 2008, 257f.





**Fig. 20** Haltern (Kr. Recklinghausen/D). Remains of the »Hauptlager«: **1** *principia* with annex buildings (**1a-b**). – **2** *praetorium*. – **3. 5-7** officer's residences (shaded). – **4. 10. 12** buildings with unknown function. – **8** *fabrica* with annex buildings (**8a-d**). – **9** *valetudinarium*. – **11** barracks. – **13** *horreum*. – **A-D** gates. – (After Kühnborn 2000, Abb. 22). – Scale 1:4,000.

Cananefates, Chamavi and Sugambri have been suggested as a fourth tribe; the Cananefates can be ruled out by the fact that nothing points to actions so far west.

The campaign was carried forward to as late as December, when a winter camp was established near the source of the Lippe. Dendrochronological dates in AD 5 have contributed to its identification with the 23 ha base at Anreppen (Kr. Paderborn/D)<sup>307</sup>.

In the following year AD 5 all of Germany was victoriously traversed, according to Velleius, and at least the North Sea coast and the Elbe were reached and the Chauci and Langobardi were defeated. On this occasion a fleet sailed over the North Sea to the headwaters of the Elbe to join the ground forces; the route taken to the mouth of the Elbe remains unknown. The exalted words of Velleius contrast sharply with Cassius Dio's account stating that Tiberius accomplished nothing worthy of mention, although Augustus and he were proclaimed *imperator* and C. Sentius Saturninus, who as the regular legate had assisted Tiberius, received the *ornamenta triumphalia*<sup>308</sup>.

By the end of the year, according to Velleius, nothing remained to be conquered, except for the Marcomanni. The tribe had probably been defeated by Drusus<sup>309</sup> and then retired to Bohemia, where they had built up a very powerful position under their king Marbod. The major offensive against them, which had

<sup>307</sup> Kühnborn 1995; Tremmel 2008. Cf. p. 418.

<sup>308</sup> Cass. Dio 55, 28, 5-6.

<sup>309</sup> Oros. 6, 21, 15; Flor. epit. 2, 30.

only just started in AD 6 with Saturninus marching from the Rhine and Tiberius from the Danube, had to be aborted due to a revolt of the Pannonians and Dalmatians.

### The misfortune of P. Quinctilius Varus

During the Pannonian uprising of AD 6-9 nearly half the Roman army was concentrated on the Danube. Nevertheless, it initially remained quiet in Germania, which had been so turbulent until very recently. When Tiberius had left for the Danube the command had been entrusted to P. Quinctilius Varus. Although the ancient sources do not paint a flattering picture of him<sup>310</sup>, he must have been considered capable of the task assigned to him, not just because of his ties with the emperor, but also because of his past career<sup>311</sup>. In 7-4 BC he had been governor of Syria, the province with the largest army in the East. In that capacity he had amongst other things suppressed a revolt in adjacent Judea after the death of the client king Herod. Velleius blames Varus for supposing that the Germans, »whom they could not control with the sword, could be brought to reason with the law«<sup>312</sup>, while Dio adds that Varus commanded the Germans as though they were slaves and demanded tribute as though they were subjected<sup>313</sup>. Taking a less negative view, this was the obvious approach, for the tribes between the Rhine and Elbe had been defeated in 8 BC and were therefore subjected to Roman authority and were tributaries. Thus, from that point on the situation east of the Rhine matched that of Gaul after the conclusion of Caesar's wars. The troubles occupying L. Domitius Ahenobarbus, M. Vinicius and Tiberius in Germany reveal no substantial differences from those that occurred in Gaul in 46, 39/38 and 30/29 BC. Once Tiberius had restored order in AD 5 Varus had every reason to believe that he could adopt the approach between the Rhine and Elbe that Augustus himself had chosen for Gaul in 16-13 BC.

Velleius ascribes the failure of Varus' policy primarily to the savage and treacherous character of the Germans, but perhaps the main cause is one of tempo: nearly forty years had passed between the end of the Gallic Wars and the inauguration of the altar at Lugdunum, while only thirteen years separated the submission of the transrhene Germans from the moment when Varus took office – considerably less than a generation. While Varus applied himself to his tasks the prominent Cheruscan Segestes warned him that his fellow tribesman Arminius was preparing a major revolt<sup>314</sup>. Since Arminius had so far sided with the Romans<sup>315</sup>, Varus may have considered this warning as the voicing of a personal grudge – Arminius had raped and married Segestes' daughter<sup>316</sup>. Varus ignored the signs and in AD 9 he penetrated deep into Germania to crush a revolt that had allegedly broken out there. His large army was lured into an ambush in the territory of the Cherusci, near the Weser<sup>317</sup>. As the Romans assumed that they were crossing friendly territory, they did not advance in battle array, and the long army train made them particularly vulnerable. Their misapprehension eventually led to the destruction of most of three legions and the auxiliary equivalent of a legion<sup>318</sup>.

Varus and several other high officers committed suicide on the battle field. The commander's head was severed from his body and taken to Marbod<sup>319</sup>, undoubtedly to convince the Marcomanni to turn against

<sup>310</sup> Cf. Timpe 1970, 123-126 for a discussion.

<sup>311</sup> In 7 BC – after an earlier marriage with a daughter of Agrippa – Varus had married a granddaughter of Octavia the Younger, the full sister of Augustus. In 13 BC he had been *consul* with Tiberius as his colleague.

<sup>312</sup> Vell. 2, 117: »*quique gladiis domari non poterant, posse iure mulceri*«.

<sup>313</sup> Cass. Dio 56, 18, 3.

<sup>314</sup> Tac. ann. 1, 55. 58.

<sup>315</sup> Cf. Timpe 1970 for a thorough analysis.

<sup>316</sup> Vell. 2, 118; Tac. ann. 1, 55.

<sup>317</sup> Cass. Dio 56, 18-19.

<sup>318</sup> Cass. Dio 56, 20-22. Vell. 2, 117: three legions, three *alae* and six *cohortes auxiliae*. The losses must have been less, since parts of these units had been left behind to man the camps on the Rhine, and at least some of the soldiers survived the battle (Tac. ann. 1, 61).

<sup>319</sup> Vell. 2, 119.

Rome. Marbod, however, sent his present straight to Augustus, possibly because he did not wish to measure his forces against those of Tiberius and Germanicus, who had their hands free after quelling the Pannonian uprising.

The events in Germany led to a sense of panic and various emergency measures in Rome. Gauls and Germans were ejected from the City, Augustus' German bodyguard was dismissed<sup>320</sup>, and new troops were levied. The remains of Varus' army assembled on the Rhine, where they were supplemented by troops from Illyricum and Spain and by hastily recruited additional units. Tiberius took over command.

Dio reports that Tiberius initially confined himself to consolidating the left bank of the Rhine, awaiting further action by the Germans. It was only in AD 11 that he crossed the river in the company of Germanicus, but seemingly without noticeable success<sup>321</sup>. Velleius' account is much more favourable, as may be expected from him. Since it is lacking in detail it remains uncertain where and when the »expeditions of fleet and ground troops« took place that allowed Tiberius to break the German resistance<sup>322</sup>. In October of the year 12, however, he was in Rome to celebrate – at last – the triumph over the Dalmatians and Pannonians which had been awarded to Augustus and him three years earlier.

Yet peace had not entirely returned to Germania, judging by Augustus' decision to send Germanicus to the Rhineland to »deal with the last flarings of the war«<sup>323</sup>. Apparently this was no sinecure, as Augustus, Tiberius and Germanicus seem to have been proclaimed *imperator* in AD 13, which must imply a notable military success<sup>324</sup>. The presence of a legionary detachment in the Chaucian area in AD 14 may indicate that permanent troops were stationed east of the Rhine once again<sup>325</sup>.

#### Military bases in the Netherlands in the years 7 BC-AD 13

Dendrochronology offers two anchors for the military occupation east of the Rhine in this period. At Oberaden one of the wells was made from trees felled between the late summer of 8 and the spring of 7 BC<sup>326</sup>. Consequently, the structure cannot have been built before the autumn of 8, providing a *terminus post quem* for the evacuation of the army base. On that occasion the camp was reduced to ashes, and the wells were poisoned by throwing in the remains of dead pigs, dung and human faeces<sup>327</sup>. The abandonment of the base is generally linked to the subjection of the Germanic tribes by Tiberius in 8 BC, although it is impossible to be certain.

At Anreppen, the 23 ha base at the headwaters of the Lippe, timbers were used with felling dates in AD 5<sup>328</sup>. With the additional evidence of the remaining finds Anreppen is usually identified with the winter camp built near the sources of the Lippe after the campaign of AD 4<sup>329</sup>. It was evacuated after the defeat of Varus at the latest, but possibly already at the end of Tiberius' campaign in AD 6<sup>330</sup>.

<sup>320</sup> Cass. Dio 56, 23 (Dio normally uses τὸ δορυφορικόν for the Praetorian guard, but as this was recruited from Italy [Tac. ann. 4, 5] Augustus' bodyguard must be meant here). Velleius' reference (2, 120) to the Cimbri and Teutones (cf. p. 374) reveals an irrational panic.

<sup>321</sup> Cass. Dio 56, 24, 6. 25, 2-3; there is a lacuna in the text here, however. Vell. 2, 120.

<sup>322</sup> Vell. 2, 120-121 (citation from 121, 1: »concussis hostium viribus classicis peditumque expeditionibus«).

<sup>323</sup> Vell. 2, 123: »quippe Caesar Augustus cum Germanicum nepotem suum reliqua belli patratum misisset in Germaniam«.

<sup>324</sup> Syme 1978, 53-61.

<sup>325</sup> Tac. ann. 1, 38: in »Chaucis [...] praesidium agitantes vexillarii [...] legionum«.

<sup>326</sup> Kühlborn 1992, 130. The samples in question were not included in Schmidt 1992.

<sup>327</sup> Kühlborn 1992, 129.

<sup>328</sup> Kühlborn 2008, 28 note 41. – They consist of construction elements of a latrine inside a barracks building and of a well framing.

<sup>329</sup> Vell. 2, 105. – Cf. Kehne 2008, 261-265 for a discussion of the issues.

<sup>330</sup> Kühlborn 2008, 28f.

Although it does not concern an army camp in the proper sense but rather a fortified pioneer settlement, it is relevant in this context that two wells have been uncovered at Waldgirmes with timbers producing felling dates in the autumn or winter of 4/3 BC<sup>331</sup>. The wells at Waldgirmes provide circumstantial evidence for the building – or at least the ensuing adaptation – of the Hauptlager at Haltern, which in the absence of timber remains still cannot be dated more precisely than after the abandonment of Oberaden, but not later than the beginning of the Common Era<sup>332</sup>. The succession of Oberaden by Haltern may well be related to the navigability of the Lippe. It is assumed that the river was accessible as far as Haltern all year round for large cargo ships; to reach destinations further upstream transfers would have been necessary<sup>333</sup>. If the base at Haltern played a part in the administrative organisation of the area, as has been assumed for some time now, the felling dates of 4/3 BC for the wells at Waldgirmes may indicate that less time elapsed between the evacuation of Oberaden in 8 or 7 BC and the building of the Hauptlager at Haltern than some are inclined to believe<sup>334</sup>.

The foundation date of the main camp at Haltern is in turn very relevant to the research area, because the earliest *terra sigillata* from Vechten is very similar to that from Haltern, while the remaining ceramic assemblages and the coin finds have much in common as well<sup>335</sup>. A detailed comparison of the finds from Haltern and Vechten and an assessment of the attested similarities and differences are therefore desirable, but as yet they meet with insurmountable problems<sup>336</sup>.

Even if a broad range is taken for the foundation date of the Haltern camp – between Tiberius' departure from Germany at the end of 8 BC and his return in AD 4 – there is no obvious military context for the building of a fortification at Vechten, assuming that it took place in this interval. There is no indication that the operations of L. Domitius Ahenobarbus or M. Vinicius extended so far to the west, and the often recalled interference of Tiberius with the Cananefates in AD 4 rests on a corrupt passage in the account of Velleius (p. 414-416). Admittedly, the absence of an historical anchor is a precarious *argumentum e silentio*, which loses value as soon as there is adequate proof of the building of Vechten in this period.

An assessment of the role and significance of the earliest base at Vechten is complicated not only by the problems outlined previously but also by the absence of understandable structures. So far the traces of the earliest camp (phase I.1) are limited to a possible remnant of a defensive ditch and an array of pointed posts covered by a burnt layer<sup>337</sup>. The extent of the fortification cannot be estimated, but may have been considerable; the northern part has suffered from erosion by the Rhine<sup>338</sup>.

Vechten is situated at the last elevated point before the peat area and may have played an important logistical part in any expedition heading for the German lowland rivers over the Rhine, the Vecht/Angstel and the Flevo lakes (fig. 2 and suppl. 1). It seems a convenient place to gather supplies for further transportation to an army operating north and east of the Lippe. The excavated remains also include a double granary (fig. 21); it had only a modest storage capacity<sup>339</sup>, but it is not unlikely that there were more *horrea*, either

<sup>331</sup> Deutsches Archäologisches Institut, Jahresbericht 2011 (Archäologischer Anzeiger 2012/1 Beiheft), 129.

<sup>332</sup> von Schnurbein 1981, 39-44; 1991; recently supported by Rudnick 2006, 64-68.

<sup>333</sup> Bremer 2001, 53. 56-60.

<sup>334</sup> e. g. Simon 1976, 252; Oxé/Comfort/Kenrick 2000, 29; Roth-Rubi 2006, 19. Cf. von Schnurbein 1991, 4, for a very relevant consideration: »Gleichzeitig existierende Lager können also bei bestimmten Fundgruppen erheblich abweichende Spektren bieten. Mögliche Ursachen sind selbst geringfügig auseinanderliegende Gründungsdaten, geographische Distanz oder wegen der unterschiedlichen Kriegslage ungleiche

Versorgungsmöglichkeiten bzw. verschiedener Bedarf«. Oberaden was built in hostile territory by a campaigning army, while the Haltern Hauptlager was constructed in a consolidating phase after Tiberius had »subjected the area so thoroughly that he nearly turned it into a tributary province« (Vell. 2, 97).

<sup>335</sup> Rudnick 2006, especially 56 and 61; Zandstra/Polak 2012, especially 115f. and 243-245; Polak 2014, 71-75.

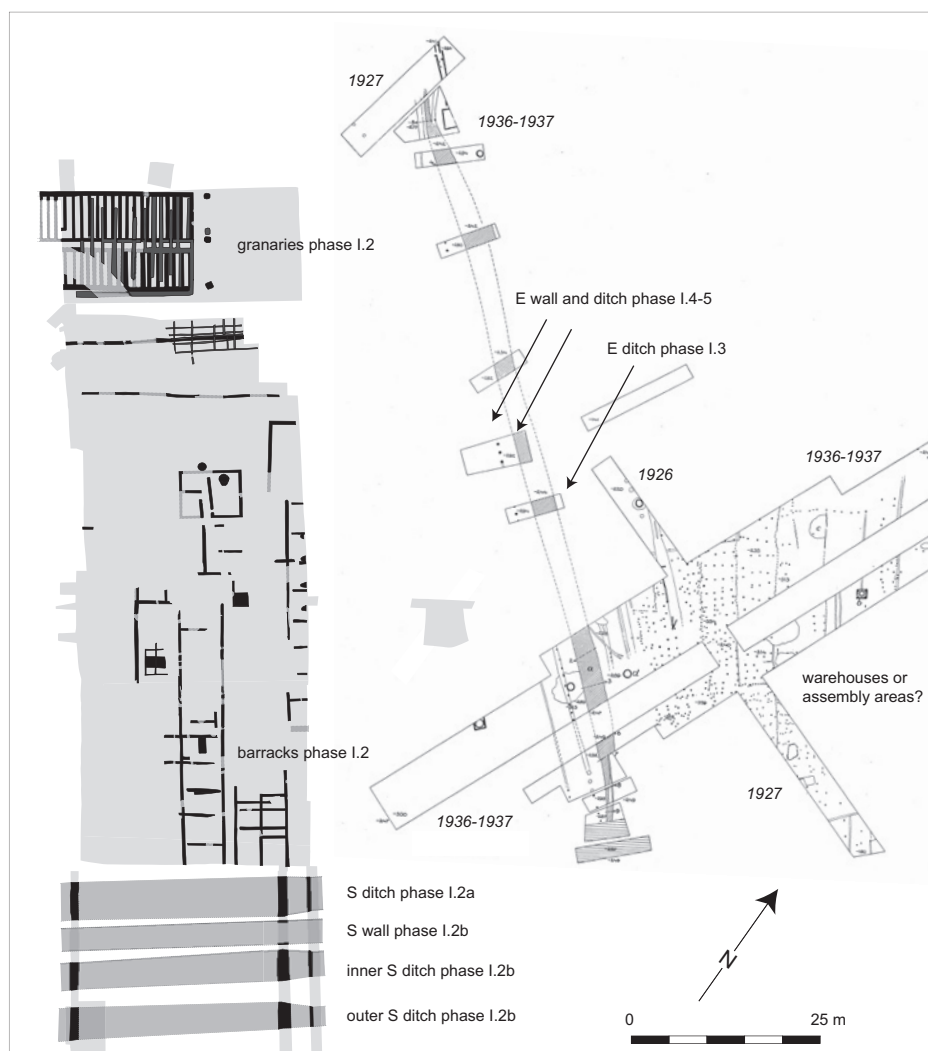
<sup>336</sup> Polak 2014, 70-75.

<sup>337</sup> Zandstra/Polak 2012, 36f. 67. 248.

<sup>338</sup> Ibidem 33 fig. 11; Polak 2014, 76 fig. 4.

<sup>339</sup> Their joint capacity supposedly sufficed to feed 500 men for a year (cf. p. 432f.).





**Fig. 21** Vechten. Southern defences and internal buildings from phase I.2 (Tiberian-early Claudian?) and eastern defences from phases I.3-5 (early Claudian-Hadrianic?), excavated in 1926, 1927, 1936-1937 and 1946-1947 (shaded areas). – (After Zandstra/Polak 2012, figs 25, 37.) – Scale 1:1,000.

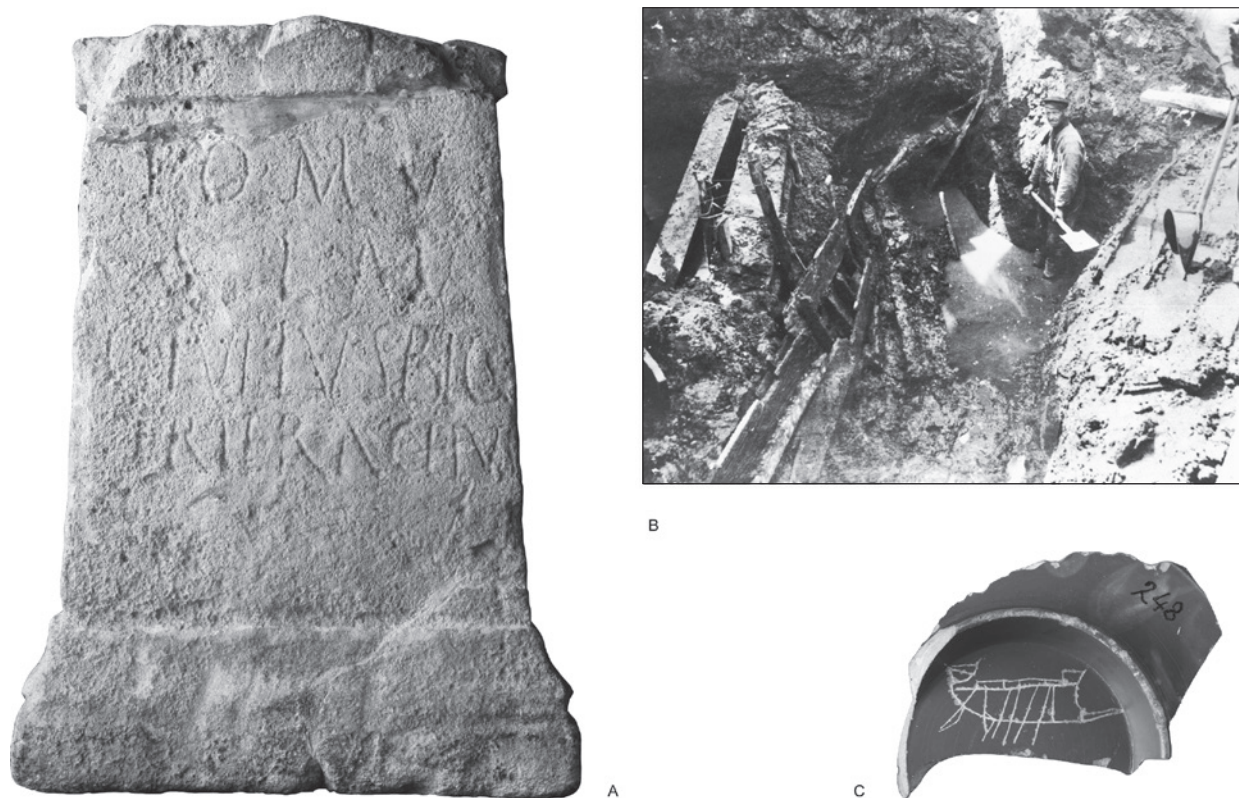
unexcavated or eroded by the Rhine<sup>340</sup>. Not far to the east of the granaries various structures have been unearthed which may have been warehouses for storing bulk goods or assembly areas for livestock, perhaps including horses. All these features are consistent with the picture of a supply base for naval operations. A naval character has always been suggested for Vechten by the excavated remains of an early Roman ship and by the discovery of a dedicatory inscription mentioning a *trierarchus* by the name of C. Julius Bio; a graffito of a warship on an early *terra sigillata* dish is no less evocative (fig. 22).

Although these finds seem to converge to create a clear picture of a base designed for a naval function<sup>341</sup>, the image is blurred by chronological issues. The granaries belong to the second building phase (I.2), starting at some point after AD 10, and the other buildings mentioned may not be earlier. A radiocarbon analysis of the ship has produced a calibrated date range of 44 BC-AD 54, but this provides us only with a *terminus*

<sup>340</sup> In 1894 a layer of carbonised grain was discovered somewhat further to the west (Muller 1895, 136f.). A sample has been subjected to radiocarbon analysis, which provided a date of 1950±40 BP (GrA-11834), calibrated with OxCal and the

IntCal13 dataset to date ranges of AD 3-86/AD 110-115 (1 sigma) and 41 BC-AD 128 (2 sigma).

<sup>341</sup> Cf. Polak 2014 for a more detailed discussion of the subject.



**Fig. 22** Vechten. Circumstantial evidence of a naval function for the military settlement: **A** votive monument for Jupiter, dedicated by the *trierarchus* C. Julius Bio. – **B** remains of a Roman ship found in 1893. – **C** South Gaulish *terra sigillata* dish Drag. 18 or Hofheim 1 with a graffito of a warship. – (Photos municipality of Utrecht/PUG). – A scale 1:4 ; B 1:2.

*post quem* for its construction<sup>342</sup>. The Flavian-Trajanic date of two very similar ships from Oberstimm<sup>343</sup> may be taken as a warning that an Augustan date of the Vechten ship is possible, but not guaranteed. The dedication of C. Julius Bio is likely to be pre-Flavian, but not necessarily Augustan either. The graffito probably dates to the second quarter of the 1<sup>st</sup> century AD. All in all there is much to be said for an interpretation of Vechten as an early supply base, but there is no firm proof of this in the earliest phase.

The resemblance between the Vechten coin and pottery assemblages and those from the Haltern Hauptlager suggest that these sites are likely to have a similar foundation date. It seems legitimate to ask whether they may have had a similar function as well. If Haltern (also?) served as the base for the administrative organisation of the area north of the Mittelgebirge, Vechten may (also?) have acted as such for the coastal area extending from the *Helinium* to the north, perhaps as far as the mouth of the Elbe (**suppl. 1**). Its geographical setting guaranteed good access to the entire coastal zone. At the same time it was situated on the boundary between the densely occupied river area between the Rhine and Waal on the one hand and the sparsely inhabited banks of the Oude Rijn and the thinly occupied coastal strip between *Helinium* and Rhine on the other (cf. **fig. 10**). Although this entire area must have been formally assigned to the Batavians,

<sup>342</sup> The outcome of the analysis was  $1997 \pm 20$  BP (GrN-20347). Calibration with OxCal and the IntCal13 dataset resulted in calibrated date ranges of 38-9 BC/3 BC-AD 25 (1 sigma) and 44 BC-AD 54 (2 sigma).

<sup>343</sup> The ships were built from timbers felled in  $AD 90 \pm 10$  and  $AD 102 \pm 10$ . Both were pierced by rows of oak posts from timber felled in AD 118 (Mees/Pferdehirt 2002, 104).

they appear to have left the less attractive parts downstream from Vechten to the sparse inhabitants of the coastal area (p. 390-392). Vechten may have been considered a suitable base for the recolonisation of the coastal zone, which provided a possible outlet for Chaucian pressure on the territory of the Frisii.

In or shortly before the period under discussion a start was made on building a civil settlement at Nijmegen, close to the river Waal and 2 km from the fortification on the Kops Plateau (fig. 15). The settlement is generally identified with the Oppidum Batavorum mentioned by Tacitus<sup>344</sup>. A recent excavation suggests that it started as a linear settlement inhabited by veterans, and was intended to become the administrative centre of the *civitas Batavorum*<sup>345</sup>. There was a short-lived irregular fortification of some 1.9 ha in the eastern periphery of this settlement, known as the Trajanusplein fort<sup>346</sup>. Although the earth-and-timber wall reveals two phases, the camp is believed to have been occupied for a short period only. The finds were initially dated in the Haltern horizon, but this was later adjusted to the years 10-20 AD<sup>347</sup>.

Various explanations have been given for the brief presence of a fort here: a connection with the establishment of Oppidum Batavorum as a *civitas* centre, to protect and possibly control the settlement, to observe the eastern part of the Batavian island, or as part of Germanicus' military infrastructure<sup>348</sup>. In view of the fort's date in the second decade and the measures taken by Tiberius on his arrival in the Rhineland after Varus' defeat (»he secured the rest in Gaul, divided the troops and established fortifications«, as Velleius reports<sup>349</sup>), it is conceivable that the Trajanusplein fort served two of the above-mentioned goals: observing a large part of the river area and protecting the developing civil settlement. The new fort was better equipped for these purposes than the nearby fortification on the Kops Plateau. The natural relief meant that the civil settlement was not visible from the latter site, which also offered a more restricted view of the river area<sup>350</sup>. As the situation soon stabilised, the Trajanusplein fort would have been redundant after a relatively short occupation period.

The camp on the Kops Plateau is believed to have been replaced by a slightly larger fortification of 4.5 ha (fig. 17). Its rebuilding has been connected with the same event – the redeployment of the troops in AD 9. The oversized *praetorium* remained in use<sup>351</sup>.

### The campaigns of AD 14-16

By AD 13 the last pockets of German resistance had been dealt with. The restored order involved garrisoning a legionary detachment in the territory of the Chauci. Apparently the situation allowed Germanicus to devote himself to a new *census* in Gaul<sup>352</sup>. The Lower German legions were accommodated in a summer camp in Ubian territory – on the left bank of the Rhine – and had little to attend to. The air of tranquillity evoked by all this was soon to be disturbed by the death of the emperor Augustus in AD 14, on the 19<sup>th</sup> of the month bearing his name.

<sup>344</sup> Tac. hist. 5, 19.

<sup>345</sup> Van Enckevort/Heirbaut 2010, 91-93.

<sup>346</sup> Willems/Van Enckevort 2009, 41; Van Enckevort 2011, 64-68, with references to earlier literature.

<sup>347</sup> Bloemers 1973, 18; 1979, 29; the latter date is still used in the latest survey of Roman Nijmegen (Willems/Van Enckevort 2009, 41).

<sup>348</sup> Driessen 2007, 81 (observation); Willems/Van Enckevort 2009, 41 (all others, with further references).

<sup>349</sup> Vell. 2, 120: »*Gallias confirmat, disponit exercitus, praesidia munit*«.

<sup>350</sup> These aspects were clearly pointed out by Driessen (2007, 81 figs 5. 35).

<sup>351</sup> Willems/Van Enckevort 2009, 35-41.

<sup>352</sup> Tacitus (ann. 1, 31-71; 2, 5-26) is the only detailed source for the events of AD 14-16. Velleius and Suetonius (Aug., Tib.) do not waste many words on them and only a summary has survived of Dio's account. Cf. Timpe 1968, 8-23 for a discussion of the sources and possible motives of the authors to be more or less exhaustive.

### Three reckless campaigns

The news of Augustus' death provoked a mutiny among the legionaries in both Pannonia and the Rhineland. The revolt arose at least partly from discontent about matters such as pay and length of service. As for Germany, Tacitus pointed to the Fifth and Twentieth Legions as the main culprits. He assigned a central role to the soldiers recently recruited in Rome »who were not used to discipline and not fit for labour«<sup>353</sup>. The presence of these good-for-nothings from the city must have been the result of the emergency levies which were necessary to supplement the army after the heavy Roman losses suffered in the Pannonian-Dalmatian wars of AD 6-9 and the Varian disaster. Excessive lengths of service caused by the refusal to let veteran soldiers go probably had the same cause.

The rioting legions could only be brought to heel by a mix of concessions, extra payments and bloodshed. According to Tacitus it was the repentant Lower German legionaries themselves who took the initiative to wipe out the stain on their character by having a go at the transrhene enemies; there is no hint of an immediate external cause for operations east of the river. An army of nearly 30,000 men crossed the Rhine over a hastily constructed bridge. After a forced march they attacked the Marsi (**fig. 14**), who had convened for a festival. A sanctuary was razed to the ground and a large area thoroughly destroyed while no man was spared. The massacre induced the Bructeri, Tubantes and Tencteri to take the Roman troops in the rear on their way back to the Rhine. The attack was repelled, however, and the Romans returned to their winter quarters in *Vetera* (Xanten, Kr. Wesel/D) and *apud aram Ubiorum*, in or near Cologne (**suppl. 1**).

In the following year Germanicus invaded the Chattian territory in advance of a planned summer campaign. He hoped to profit from the festering rivalry between the anti-Roman Arminius and the pro-Roman Segestes (cf. p. 417). While Germanicus butchered the Chatti much in the same way as he had done with the Marsi a year before, the Lower German army prevented the Cherusci and the Marsi from intervening. Once the troops had returned to the Rhine, Segestes – by then besieged by his opponents – successfully called for Roman assistance. He had his pregnant daughter, the wife of Arminius, with him. In the end he and his retinue were allowed to settle in Gaul.

Arminius thereupon raised a coalition of the Cherusci and neighbouring tribes. Germanicus decided to take his forces to the Ems using various routes: forty infantry cohorts through the area of the Bructeri, the cavalry through the territory of the Frisians and four legions by ship »through the lakes«<sup>354</sup>. The Bructeri turned to the scorched earth policy but were nevertheless defeated, which was followed by the destruction of the entire area between the Ems and Lippe by the Roman troops. On their way they came across the eagle of the Nineteenth Legion lost in the Varian disaster. Germanicus decided to visit the scene of that battle – at least some of the survivors were still serving in his army – and to bury the remains of the butchered soldiers. As they were chasing Arminius the Roman forces were ambushed once more. Tacitus' words convey the impression that they barely managed to save their necks and rather ingloriously retreated to the Rhine, suffering great losses. The main force was attacked while restoring some old boardwalks and nearly met with disaster in the ensuing chaos. Germanicus personally led the remaining troops back by water. In the tidal area he disembarked two legions to prevent the ships from being stranded. However, the combination of a northern gale and the autumnal equinox caused an extreme high tide, and the rising water got the disembarked legions into serious trouble. In a desperate state they eventually managed to reach higher ground, where they were later picked up by the ships.

<sup>353</sup> Tac. ann. 1, 31: »igitur audito fine Augusti vernacula multitudo, nuper acto in urbe dilectu, lasciviae sueta, laborum intolerans, implere ceterorum rudes animos«.

<sup>354</sup> Tac. ann. 1, 60.



According to Tacitus an evaluation of the past campaigns convinced Germanicus that he had to aim for an increased transport of supplies and troops over water. This would not only reduce the vulnerability of the army and the baggage train during the long marches, but it would also bring his forces in better condition deep into Germania. A thousand ships suitable for varying tasks and conditions were reportedly built. The Batavian island was chosen as an assembly point.

In expectation of the formation of the fleet the Upper German army was ordered to again invade the area of the Chatti. Because of bad weather this had little result, but the troops succeeded in capturing the wife and daughter of the Chattian leader Arpus. Germanicus himself advanced with no less than six legions to the Lippe in order to relieve a fort there, but the attackers escaped in time. The occasion was seized to protect the area between the Rhine and a fort by the name of Aliso – it is unclear whether this is the aforementioned fort on the Lippe – *novis limitibus aggeribusque*<sup>355</sup>. In view of the events of the preceding year these words may best be understood as an extension of the road network<sup>356</sup>.

Once the fleet had been assembled Germanicus entered »the canal named after his father« Drusus, and sailed over the lakes and the Ocean to the Ems. Contrary to the considerations ascribed to him by Tacitus, the troops already disembarked in the estuary, and moreover on the wrong side of the river, necessitating the building of a bridge later on. After the Angrivarii had been punished for their defection, the Romans and the Cherusci met at the Weser. The Batavian cavalry belonging to the vanguard of the Roman army was ambushed and suffered heavy losses. A pitched battle ensued on the plain of *Idistaviso* east of the Weser, resulting in a resounding victory for the Romans. As of old they were ambushed on their way back, but once again the German coalition came off worst.

Although the summer had not yet come to an end several legions were sent back to their winter quarters over land. The remaining troops embarked and sailed down the river Ems. Once the Ocean had been reached the fleet was scattered in stormy weather. Some ships went down and others were stranded, even as far as the British and Scandinavian coasts. In order to prevent the Germans from resuming hope, Germanicus ordered the Upper German army to advance against the Chatti and with the remaining troops he invaded the area of the Marsi, where he recovered another of Varus' eagles. Deeper in Germany the Roman army created havoc before returning to their winter camps.

Although Germanicus deemed a further campaign necessary to finish what he had started, Tiberius more or less forced him to return to Rome by offering him a consulate. In the words of Tacitus, Tiberius judged that the results achieved did not compensate for the heavy losses. Personally, »he had accomplished more by policy than by force«<sup>357</sup>. Now that Roman honour had been restored the Cherusci and the other revolting tribes could be left to their internal dissensions.

The reasonableness of Tiberius' arguments is the more conspicuous because Tacitus generally favours Germanicus in order to show Tiberius in a less favourable light. A judgement of Germanicus' actions partly depends on the significance of the Gaulish *census* which he was carrying out at the death of Augustus. It is conceivable that it served to finance an already existing plan to continue the German war<sup>358</sup>; in that case the mutiny of his legions merely accelerated the plans. However, the fact that the four Lower German legions »were spending their time doing nothing or carrying out light tasks«<sup>359</sup> in their summer camp in Ubian ter-

<sup>355</sup> Tac. ann. 2, 7.

<sup>356</sup> For the advance to the territory of the Marsi in AD 15 the *limitem a Tiberio coeptum* was used (»the *limes* started by Tiberius«, Tac. ann. 1, 50). The nearly fatal delay to repair the boardwalks (ann. 1, 63) had demonstrated the importance of well-maintained routes. In this context *agger* might indicate the embankment for a road.

<sup>357</sup> Tac. ann. 2, 26: »se novies a divo Augusto in Germaniam missum plura consilio quam vi perfecisse«.

<sup>358</sup> In the build-up to the campaign of AD 16 a (new or resumed?) *census* in Gaul is explicitly connected with the preparations (Tac. ann. 2, 6).

<sup>359</sup> Tac. ann. 1, 31: »nam isdem aestivis in finibus Ubiorum habebantur per otium aut levia munia«.

ritory is difficult to reconcile with preparations for a large-scale offensive. If the crossing of the Rhine was indeed unforeseen, it can be said in defence of Germanicus that this was forced by a barely suppressed revolt on the part of his legions. He nevertheless lighted the fuse of the German powder keg through the scale and ruthlessness of his assault on the Marsi.

A triumph was awarded to Germanicus as early as AD 15<sup>360</sup>. This may be a signal that Tiberius rejected his adoptive son's initiative from the start and that this offer was intended to call him back to Rome without loss of face. It is uncertain when precisely it was awarded<sup>361</sup>, since Tacitus records it at the very start of his account of the year 15, which he concludes with the awarding of the *ornamenta triumphalia* to Germanicus' legates. Added to the remark that the triumph was voted »while the war still continued«, this might indicate that it referred to the expedition of AD 14, but its results hardly justified a triumph. Whatever the case may be, if it was meant to bring Germanicus to Rome the plan failed.

The ruthless attack on the Chatti in 15 was a repetition of the offensive against the Marsi in the previous year. The ensuing rescue of Segestes added to Arminius' fury. The large-scale offensive in the northern lowlands finally resulted in even greater destruction. If Tiberius regarded deportation and judgement as the core of his own successful German policy, as Tacitus claims, he is likely to have denounced Germanicus' approach.

Inasmuch as Germanicus' actions of AD 15 may really be considered a success, Roman losses on the way back, both by land and by sea, detract from this. That these should not be played down may be inferred from the offer made by Italy and the Spanish and Gaulish provinces to supplement the losses; Germanicus actually accepted the supply of horses and weapons<sup>362</sup>. Whether the reactions were spontaneous may be doubted, since in advance of the campaign of AD 16 Tacitus has Germanicus contemplate that »the Gaulish provinces were tired of supplying horses«<sup>363</sup>.

Tacitus' account of the campaign of 16 follows a sketch of troubles developing in the East, including the observation that it gave Tiberius an excuse to remove Germanicus from the large army concentration on the Rhine. Yet the situation in the East does not figure among the arguments he puts into the mouth of Tiberius to increase the pressure on Germanicus to return to Rome<sup>364</sup>. In spite of that Germanicus doubled his efforts by assembling a large fleet to allow him to operate more effectively and with fewer risks deep in Germany in AD 16. Like the repeated action against the Marsi in the previous year, the renewed attack on the Chatti demonstrates that despite their destructive character the offensives had no lasting success. At the end of the war season both the Chatti and the Marsi had to be faced again, for the second time in a year. The extensive summer campaign of AD 16 was essentially a repetition of position, too: destruction and resounding victories, but also ambushes and heavy losses.

From this point of view it is understandable that Tiberius did not yield to Germanicus' plea that another season would allow him to conclude the war once and for all. The two recovered eagles from Varus' legions lent enough colour to the triumph celebrated in AD 17, as illustrated by a further undated emission of *dupondii* with Germanicus on a four-in-hand and the boasting legend *signis recept(is) devictis Germ(anis)*<sup>365</sup>. Tacitus records that the triumph was awarded for victories against the Cherusci, Chatti, Angrivarii and all other peoples as far as the Elbe, which was a rather favourable account of the final situation. In the same

<sup>360</sup> Tac. ann. 1, 55.

<sup>361</sup> Cf. the discussion by Timpe (1968, 43-51), who argues for an award at the end of AD 15. That the triumph was voted for victories over the Cherusci, the Chatti and the Angrivarii, who were only attacked in the course of the year 15 (the Angrivarii are called *nuper in fidem accepti*, recently subdued, in AD 16, Tac. ann. 2, 24), is a strong argument. Syme (1978, 59-61) is of a different opinion, however.

<sup>362</sup> Tac. ann. 2, 71.

<sup>363</sup> Ibidem 2, 5: »fessas Gallias ministrandis equis«.

<sup>364</sup> Ibidem 2, 26.

<sup>365</sup> Assigned to Tiberius in RIC I (RIC I 36), but to Germanicus' son Caligula in RIC I<sup>2</sup> (RIC I<sup>2</sup>, 57). – Cf. Zandstra/Polak 2012, 213, with further references. – The third eagle was recovered in AD 41 (Cass. Dio 60, 8).

year that Rome celebrated the victory over the Cherusci, they succeeded in posing such a serious threat to Marbod that the German king felt obliged to call for Tiberius' assistance<sup>366</sup>.

### Military bases in the Netherlands in the days of Germanicus

The site of the early base on the Hunerberg at Nijmegen has produced *terra sigillata* which seems to span the entire Augustan period. Since relatively late vessels have been found mainly on the eastern side, it is assumed that a reduced garrison may have been accommodated there<sup>367</sup>. Perhaps a small unit had been left to keep the base in a good state of repair, although the building of a new camp on the Fürstenberg at Xanten would have made the Nijmegen base redundant (**suppl. 1**). An alternative or additional possibility is that the finds indicate that the site was used by troops garrisoned on the Kops Plateau. It has also been suggested that it may have accommodated troops at the time of Germanicus' expeditions<sup>368</sup>. In view of the contemporaneous occupation of both the Kops Plateau and the Trajanusplein forts this latter supposition does not seem very plausible (**fig. 15**).

The enlargement of the fortification on the Kops Plateau around AD 10 has been linked to the redeployment of troops after the defeat of Varus (p. 418), but it cannot be ruled out that it related to Germanicus' operations or their conclusion. Unfortunately, the best dateable groups of finds, coins and *terra sigillata*, do not allow precise dating within the late Augustan and Tiberian period. Since the oversized *praetorium* continued to be used, the function of the camp will not have changed.

Two blocks of a monumental pillar have been unearthed in the settlement on the Waal identified as *Opidum Batavorum*<sup>369</sup>. The iconography and the illustration of an altar with the legend TIBR/CSAR (**fig. 23**) justify the assumption that the monument refers to the actions of Germanicus. The monument is likely to have been erected on the occasion of this triumph in AD 17 or his death in AD 19.

Reference has been made earlier to a small groups of finds from Arnhem-Meinerswijk, which has been dated to the second decade AD (**fig. 16**)<sup>370</sup>. In this interval Germanicus' expeditions offer the most plausible historical context for the establishment of a fortification, although remains of a fort have only been attested for a later period. From Tacitus' point of view Meinerswijk was the northeastern extremity of the island of the Batavians (p. 388)<sup>371</sup>. The construction of a camp at this point could relate to the assembling of the fleet of nominally a thousand ships in preparation for the campaign of AD 16. It is even possible that Germanicus embarked here and entered Drusus' canal, if that is to be identified with the Gelderse IJssel (**suppl. 1**).

Driel-Baarskamp (prov. Gelderland/NL) is often bracketed together with Meinerswijk as a possible location of an early Roman camp (**fig. 3, 15-16**). The numerous surface finds from this site, situated over 3 km southeast from Meinerswijk, include a countermarked coin of Augustus and »about a dozen identifiable fragments of early-Roman pottery«<sup>372</sup>. Willems regarded these as an indication of an early Roman military presence<sup>373</sup>. Recent research has not produced any additional early material<sup>374</sup>. But for the absence of a

<sup>366</sup> Tac. ann. 2, 44-46.

<sup>367</sup> e.g. Haalebos 1991, 107; Willems/Van Enckevort 2009, 41; Niemeijer 2014.

<sup>368</sup> Van Enckevort 2004, 113.

<sup>369</sup> The stone blocks were found in a ditch of the Late Roman fortification which was built over the remains of the early civil settlement. Cf. Panhuysen 2001 and 2002 for a discussion of the monument.

<sup>370</sup> Willems 1984, 175.

<sup>371</sup> Tac. hist. 4, 12.

<sup>372</sup> Willems 1984, 77.

<sup>373</sup> Ibidem 77f.: »Together with one (countermarked) Augustan coin, these dozen sherds are all definitely early-Roman material. But in view of the exceedingly small chance of finding such material at the surface and the near absence of it elsewhere in the region, these finds can be regarded as the »tip of the iceberg« and an indication of early-Roman military occupation«.

<sup>374</sup> Heunks 2003.

later fort, Driel does not differ from Meinerswijk and it remains a possibility that ships, supplies and troops were assembled at both sites for transport to the mouth of the Ems.

While Driel and Meinerswijk constitute the north-eastern point of the Batavian island, Vechten is the northwestern point – not in the definition of Tacitus, who considered the North Sea coast as its western boundary, but *de facto*. For a passage »over the lakes« to the Ems, Vechten was the last obvious station on the Rhine. From here the Flevo lakes could be reached via the Vecht/Angstel.

The earliest building phase at Vechten for which coherent remains of defences and buildings have been preserved (phase I.2) certainly dates after AD 10<sup>375</sup>. The buildings include granaries and barracks (fig. 21). The size of the fortification is unknown, but it may easily have measured 5 ha or more if the plots with warehouses or assembly areas for horses or cattle further to the east are assigned to this phase<sup>376</sup>. The structures from phase I.2 have partly been eroded by a flooding of the Rhine, possibly in the Tiberian period or slightly later<sup>377</sup>.

It is tempting to interpret the features from this phase as a supply base built for Germanicus' expeditions, but as yet there is no decisive evidence (cf. p. 419-421). It is less than certain that the camp of phase I.2 was built or used in AD 15-16, when Germanicus transported troops and supplies by water to the Ems. Yet it seems a logical station on the way to Velsen. That the fortification of Velsen 1 (fig. 24) was built for the campaign of AD 15 or 16 is undisputed<sup>378</sup>. Although the coins and pottery unearthed at this site offer no guarantee for its foundation date, it is corroborated by felling dates in or shortly after AD 21 of timbers used for the repair of the west pier<sup>379</sup>.

The position of the base at Velsen is remarkable. It is situated immediately behind the coastal barrier, 25-30 km downstream from the junction of the Vecht with the Flevo lakes (fig. 3). The presence of the fort can



**Fig. 23** Nijmegen. Remains of a monumental pillar commemorating the victory of Germanicus over the German peoples. – (Photo Museum Het Valkhof Nijmegen).

<sup>375</sup> Zandstra/Polak 2012, 43-47 (V1-V2). 69-77 (»gebouwfase« 1). 249-252 (phases I.1 and I.2). fig. 37.

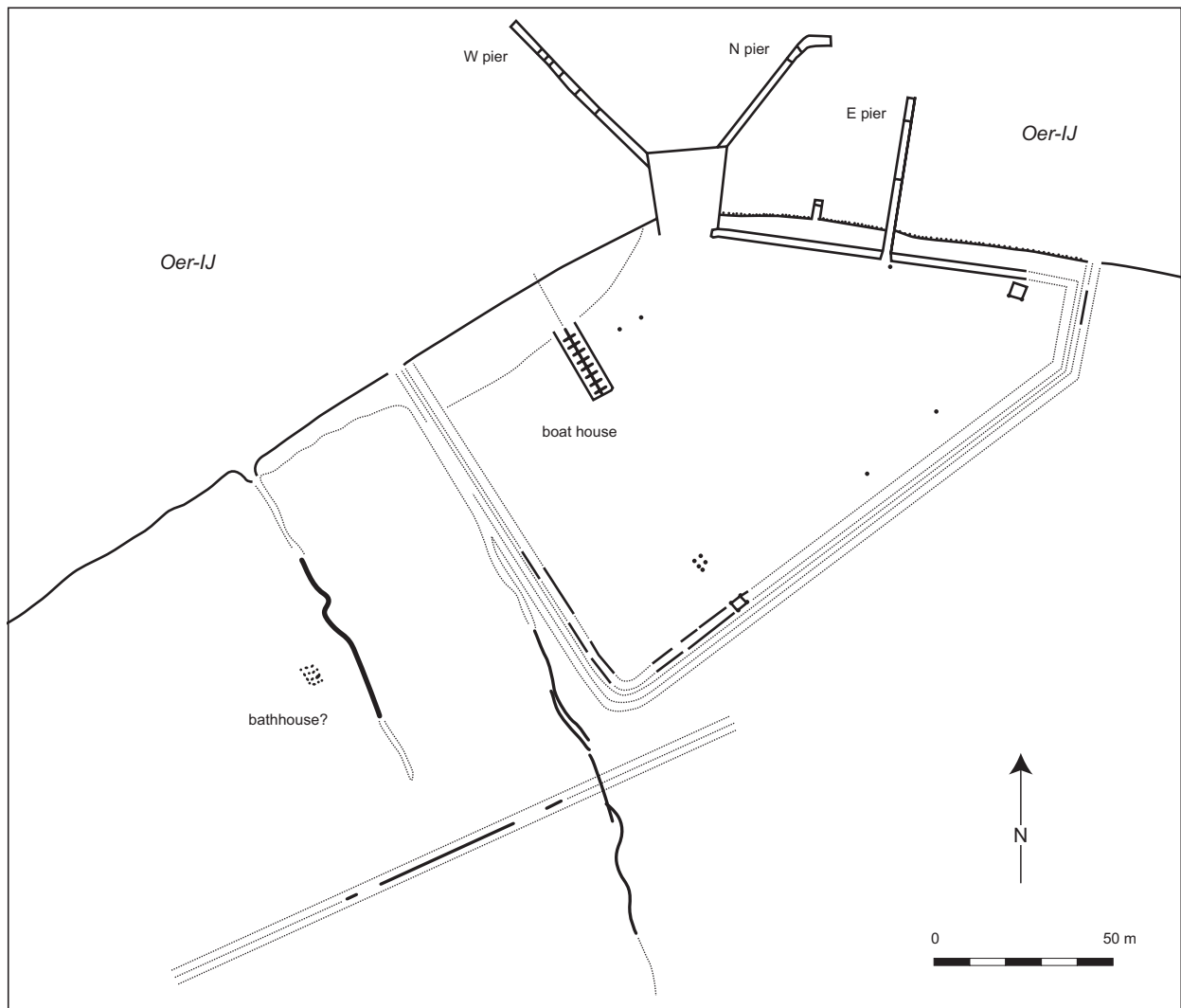
<sup>376</sup> Zandstra/Polak 2012, 50 fig. 25, outside ditch V3.

<sup>377</sup> Ibidem 17. 21 (Caligulan?); cf. however Polak 2014, 84f.

<sup>378</sup> Bosman/De Weerd 2004; Rudnick 2006, 53-63; Van Lith et al. in prep.

<sup>379</sup> Bosman 1997, 27; Bosman/De Weerd 2004, 52 note 92. For six posts the last measured ring dates to AD 21; there is however no information on the sapwood (data from the Digital Collaboratory for Cultural Dendrochronology, dataset 1985001).





**Fig. 24** Velsen (prov. Noord-Holland/NL). Fortification of Velsen 1 in period 1b (c. AD 15-pre 21?). – (After Bosman 1997, fig. 1, 4). – Scale 1:2,000.

be taken as proof that the tidal outlet of the Oer-IJ still functioned (cf. p. 387) and was actually used by Germanicus for the transfer of troops or supplies from riverine to seagoing ships. There is no reason to assume a function other than that of a link in the offensive. The base was located in the territory of the Frisians and there is no indication that they had violated the treaty entered into in 12 BC.

Initially the camp at Velsen had a more or less triangular form, with a ditch and earth-and-timber wall defending two sides and the Oer-IJ the third<sup>380</sup>. A short pier extended from the approx. 1 ha large camp into the estuary (phase 1a), but this was soon followed by a much longer pier and two piers attached to a large platform (phase 1b). A boat house is nearly all that remains of the inner buildings. The troops are supposed to have been housed in tents, but this is highly unlikely for a camp on the windy coast that was occupied for years on end; the remains of barracks may simply not have survived. A further defensive ditch is considered to demarcate an annex of unknown size, which may have contained a bathhouse.

<sup>380</sup> Cf. Bosman 1997, 10-12 for an overview of the features.

For some time now the presence of a base from the time of Germanicus is also assumed for Valkenburg (suppl. 1)<sup>381</sup>. This hypothesis rests on a hoard of 11 bronze coins, which could only be partly identified due to their advanced corrosion<sup>382</sup>. The identifiable coins were two moneyer's asses and three asses and/or *dupondii* from the altar series I, I/II and II issued at Lugdunum. The as from the first altar series was countermarked with TIBC, the other four with CAESAR<sup>383</sup>. Two further unidentified coins were countermarked with TIB. These countermarks are dated to the early Tiberian period, but they might be too late to connect them with the actions of Germanicus<sup>384</sup>.

A Tiberian base at Valkenburg only makes strategic sense if there was no fort at Velsen. The existence of such an early camp at Valkenburg is in any case unlikely because of the apparent prolonged use of the Velsen base. Italian *terra sigillata*, which is abundantly present at Velsen<sup>385</sup>, is so far conspicuously absent from Valkenburg<sup>386</sup>.

It is therefore doubtful whether the Valkenburg coin hoard should be dated to the Tiberian period. No fewer than 23 moneyer's and altar asses have been found in the fort of Alphen aan den Rijn built in AD 40/41, including 11 countermarked ones<sup>387</sup>. This indicates that the Valkenburg hoard may be linked to the fort, which was also built under Caligula<sup>388</sup>, although one or more of the Tiberian Providentia asses common in the western Netherlands would have been welcome then<sup>389</sup>, and perhaps also some Caligulan bronzes. In a discussion of military bases in the Netherlands from the days of Germanicus, Winsum (prov. Friesland/NL) cannot be ignored (suppl. 1)<sup>390</sup>. During the 19<sup>th</sup>-century levelling of the terp which had been raised there from the Iron Age onwards, early Roman finds were recovered, including a *sigillata* dish with a potter's stamp of Ateius. An excavation in 1997-1998 has provided more than 500 additional Roman finds. Most of them can be dated to the late Augustan and Tiberian periods on the basis of close parallels at Haltern and Velsen. A small component from the 2<sup>nd</sup> and 3<sup>rd</sup> centuries merely consists of coins and *sigillata* fragments. Galestin rightly pointed to the presence of Italian *sigillata* cups of the type Conspectus 14, which must be Augustan on account of their absence from Velsen<sup>391</sup>. In view of the large quantity of Italian *sigillata* at Velsen<sup>392</sup> this must be considered a significant difference. There is however no reason to follow Galestin in assuming activities under Drusus in 12 BC<sup>393</sup>. The latest pre-Flavian coin, an as of the second altar series from Lyon, provides a »hard« *terminus post quem* of AD 12 for the end date of the finds assemblage<sup>394</sup>,

<sup>381</sup> De Weerd 2003, 191; Bosman/De Weerd 2004, 55f.

<sup>382</sup> Bult/Vons 1990.

<sup>383</sup> One of the four countermarks was not identified with certainty (Bult/Vons 1990, 61), but it is not clear which example this relates to.

<sup>384</sup> Kraay 1956, 118-125; MacDowell/Hubrecht/De Jong 1992, 47-50; Kemmers 2005, 68f. Most of the coins with countermarks of Tiberius or with the text CAESAR occur on moneyer's asses and asses of the Lyon altar series (the second series included examples recording the 7<sup>th</sup> imperial acclamation of Tiberius accepted in AD 12) and incidentally on asses struck in AD 15-16. However, there are also a few countermarked »Drusus asses« (RIC I<sup>2</sup> Tiberius 45), which are generally – but not unanimously – dated to AD 22-23 or even later. Irrespective of the discussion on the date of the Providentia asses – especially the countermarked examples from our area – the question remains whether the countermarked coins with the latest issue dates offer a *terminus post quem* for the use of the countermark, or just for the end of a more protracted use.

<sup>385</sup> Bosman 1997, 173-175; Van Lith et al. in prep.

<sup>386</sup> Cf. Glasbergen 1948-1953, 129: »Vrijwel alle tot dusverre te Valkenburg gevonden sigillataproducten moeten zijn vervaardigd in Gallië. Hoewel enkele fragmenten voorhanden zijn [...] die qua techniek nog zeer sterk doen denken aan Italische

*sigillata*, zal het hier vrij zeker gaan om vroege Gallische producten, wellicht nog daterend uit het laatst van de regering van keizer Tiberius« (Nearly all the *sigillata* vessels found so far at Valkenburg must have been produced in Gaul. Although there are some fragments [...] which by their technique recall Italian *sigillata*, it is fairly certain that they are early Gaulish products, which may still date from the last years of Tiberius' reign).

<sup>387</sup> Kemmers 2004a, 20 tab. 2.

<sup>388</sup> The Valkenburg fort itself has also produced a moneyer's as countermarked with CAESAR, as well as six altar asses (Gerritsen 1940-1944, 273; 1948-1953, 166f.).

<sup>389</sup> Cf. Bult/Vons 1990, 64.

<sup>390</sup> Galestin 2000; 2002a; 2002b. Winsum in the province of Friesland must not be confused with Winsum in Groningen province (NL), 60 km to the northeast.

<sup>391</sup> Galestin 2002a, 438-440. Contrary to her assertion (ibidem 457) flagons with ribbed rims Haltern 45 do occur at Velsen (Bosman 1997, fig. 6.46, 1).

<sup>392</sup> Cf. the tables in Bosman 1997, 173-175; Van Lith et al. in prep.

<sup>393</sup> Galestin 2002a, 438.

<sup>394</sup> RIC I<sup>2</sup>, Augustus 245, with the portrait of Tiberius and mention of his 7<sup>th</sup> imperial acclamation dated to AD 12.

supplemented by halved asses of the altar series I and I/II countermarked with AVG and TIB and a moneyer's as with the countermark CAESAR<sup>395</sup>. The latest 1<sup>st</sup>-century pottery vessels are 12 fragments of South Gaulish *terra sigillata*; they may be pre-Claudian as well (cf. p. 440)<sup>396</sup>.

The finds from Winsum closely resemble those from Bentumersiel (Lkr. Leer/D) in the mouth of the Ems (**suppl. 1**), the only other large group of early Roman imports in the northern coastal area<sup>397</sup>. Assemblages of this size, composition and date are undoubtedly of a military nature. Yet the absence of recognisable features of military structures at both Bentumersiel and Winsum has always cast doubt on their character, resulting in diverging explanations: a military settlement after all (with characteristic elements such as a defensive ditch or wall missing, eroded or still undiscovered), a rural settlement used by the army (geared towards military supply or to house tax collectors), a settlement close to a military camp, or the villa or settlement resembling the villa of the former mercenary Cruptorix mentioned by Tacitus<sup>398</sup>.

In the absence of further clues it is impossible to choose from this muddle of hypotheses. While it is to be expected that further military stations existed along the northern coast on the route from Vechten and Velsen to the mouths of the Ems, Weser and Elbe, there is also a passage in Pliny the Elder recording a camp in the Frisian coastal area, which had been moved forward over the Rhine by Germanicus<sup>399</sup>. As Pliny was familiar with the area and described the river belt discharging through the Flevo lakes into the Ocean as the most northerly Rhine branch (p. 388f.), this camp cannot have been Velsen, since this was situated to the left of that branch. This does not necessarily imply that Winsum was the camp mentioned by Pliny, the more so as some of the finds pre-date those from the Velsen base founded by Germanicus; the early sherds from Winsum might be related to the campaigns of Tiberius in AD 5 or 11.

#### Supply strategies of Tiberius and Germanicus

The ancient sources suggest that there were great differences in the attitudes of Tiberius and Germanicus, which may be traced back to the almost diametrically opposed characters of (adoptive) father and son. While Tiberius appears to have planned his operations in detail and to have fought only necessary battles, it seems that Germanicus operated with minimal preparation and extensive violence. Both generals had several legions and auxiliary forces at their disposal and their deployment required at least some preparation, both from a logistical and a tactical point of view.

During the eleven years separating Tiberius' German victory of 8 BC from his return in AD 4 many changes must have occurred in Germania, where Rome's influence proved less than hoped for. There were Roman bases on the banks of the Rhine and Lippe (**suppl. 1**) and it is likely that others existed to the east of the Rhine. The expeditions of Domitius Ahenobarbus and Vinicius will undoubtedly have added to the knowledge of the landscape, which will have improved the choice of routes over land and water and of sites for temporary camps and supply bases. Despite the closer contacts between Germanic tribes and the Romans the area apparently did not produce enough food, or not the right kinds. It was only in the course of the

<sup>395</sup> Galestin 2000, 230. Cf. note 384.

<sup>396</sup> Galestin 2002a, 440. Six out of 12 sherds have been identified at the type level. Three of them belong to type Drag. 17 and one to Hofheim 5; these will be Tiberian. Two sherds of types Drag. 27 and 29 cannot be dated as such.

<sup>397</sup> Ulbert 1977; Strahl 2011.

<sup>398</sup> For Winsum cf. the overview by Galestin (2002a, 463-465, with further references). For the association with the villa of Cruptorix cf. Roymans 2011, 153; Tacitus mentions it in the

context of the Frisian revolt (ann. 4, 73: »*Cruptorigis quondam stipendiari villa*«). For Bentumersiel cf. Strahl 2011.

<sup>399</sup> Plin. nat. 25, 6, 20-21: »*in Germania trans Rhenum castris a Germanico Caesare promotis maritimo tractu [...] Frisi, gentum fida, in qua castra erant [...]*« (in Germania in the camp advanced by Germanicus Caesar over the Rhine into the coastal area [...]) The Frisians, at that time still a faithful ally, in whose territory our camp was situated [...]).

1<sup>st</sup> century AD that animal husbandry intensified, and perhaps arable farming as well<sup>400</sup> – too late to be of benefit to Tiberius and Germanicus.

On the whole, the historical sources lack the level of detail required to reconstruct the supply networks. There are some hints as to supply strategies, but it is difficult to gain insights into preferences. Since we are often unaware of the sizes of the field armies and their trains it is impossible to be precise about the organisation of individual campaigns. The written sources offer some clues, however. It will have been common to all planned campaigns for food and other necessities to be brought in from the hinterland. This was only possible if the supply routes were secure or the transports well protected. It regularly occurred that actions had to be halted when an army was cut off from its supplies, although we have no records concerning the German operations of Tiberius and Germanicus.

It can be inferred from the written sources that goods were transported over land by pack animals and carts, and over water by river boats and seagoing ships<sup>401</sup>. There must have been a preference for transport by ship on account of their carrying capacity and speed, but especially in the case of large areas which were not bordered by a sea or crossed by navigable rivers – and at least some parts of transrhene Germanica rank among these – this may have proved problematic. The sea and the rivers were not navigable at all times and marching routes could not always be adapted at will. Kehne therefore assumed that supplies were mainly transported over land during the campaigns of Tiberius in AD 4–6<sup>402</sup>, disregarding Velleius' lively account of the arrival of Tiberius' fleet on the Elbe in AD 5<sup>403</sup>. Transport over land was slower and required more effort, but it was relatively easy to protect; moreover, the choice of routes was more flexible. The army carried part of the required food and other goods along with it, as an emergency supply (cf. p. 398). For campaigns extending over several months separate supply units were needed to maintain a shuttle service between the operational area and the hinterland. Such a supply chain depended on logistical depots, both in the hinterland and along the supply routes.

Germanicus may have had as many as 80,000 troops at his disposal: eight legions and possibly their equivalent in auxiliary units<sup>404</sup>; the legions were evenly divided over an Upper and a Lower German army corps<sup>405</sup>. This number does not include additional personnel like the thousands of *calones* (servants) who were responsible for the *impedimenta* (baggage train) and other non-combatants involved in the transport of food and other requirements. The size of the army and its train was such that the supply routes to the base camps on the Rhine had to be very robust. When campaigning in enemy territory across the river the armies could only be successful – or survive at all – if they were split up and kept moving<sup>406</sup>. Only then was there a chance of procuring sufficient food in the area traversed.

The impact of a passing field army may be illustrated by the following calculation. In AD 14 Germanicus with some 30,000 men<sup>407</sup> attacked the Marsi, who were living between the Lippe and Ruhr to the east of the Rhine. An army of this size with its train and pack animals needed about 50 tons of cereals per day; some 1500 tons would be required if the operation took a month<sup>408</sup>. The production of such volumes

400 Cf. p. 411 f.; Behre/Kučan 1994, 155; Zimmermann 1992.

401 Cf. Roth 1999 (supply strategies); Bremer 2001 (water transport); Kehne 2008 (land transport).

402 Kehne 2008, 268 f.

403 Vell. 2, 106.

404 Tac. ann. 1, 3: »at hercule Germanicum Druso ortum octo apud Rhenum legionibus inposuit« (and, by Hercules, he [Augustus] had charged Drusus' son Germanicus with eight legions on the Rhine); cf. Alföldy 1968, 137–143, for the *auxilia* of the Lower German army.

405 Tac. ann. 1, 56.

406 Cf. the well-chosen words of Bishop (1999, 111): »a field army demanded that, like a shark, it not stop moving«.

407 Tac. ann. 1, 49: »Caesar iunctoque ponte tramittit duodecim milia e legionibus, sex et viginti socias cohortis, octo equitum alas« (Caesar [Germanicus] has a bridge built and takes 12,000 legionaries, 26 auxiliary cohorts and 8 cavalry units over the river).

408 Assuming that 30,000 soldiers and 10,000 non-combatants (Roth 1999, 82–85) consumed 0.8 kg of cereals per day, horses 2.5 kg and pack animals 1.75 kg (cf. ibidem 61–67).



would have demanded an area of 50 ha per day or 15,000 per month<sup>409</sup>. If there was meat on the menu some 55 cattle a day were needed, in the order of 1600 per month. Clearly, if such quantities were procured from the German territories, the effects on the local population would have been devastating – which may at times have been the intention.

In AD 15 the movements of troops were even more extensive. Four legions marched through the territory of the Bructeri, who preferred burning their fields to handing their food over to the Roman army. Therefore, these legions had to be fed with what they carried with them. Kehne argues that pack animals could transport an extra ration for 7 days on top of the usual ration for 17 days<sup>410</sup>. The supplies were nevertheless small, because the troops had to be fed on their return to their bases as well. Another four legions were transported over the Flevo lakes to the mouth of the Ems. These troops may have taken additional food for the ground forces. Their journey took them across the territory of the Frisians, but as they were friendly allies it is unlikely that the army drew heavily on their stocks. Therefore, a good deal had to be supplied from the Roman provinces. From this point of view the complaints uttered by the Gauls may be easily understood<sup>411</sup>, since enormous quantities of food, other goods and horses were needed. The winter and spring of 15/16 were spent in preparation for the next summer campaign, including on the island of the Batavians.

For this period information on landscape and provisioning is available from the forts at Vechten and Meinerswijk. The fort at Vechten was strategically situated near the bifurcation of the Rhine and Vecht, where three different types of landscape met (fig. 3). To the east of the Kromme Rijn was the coversand area of the Utrechtse Heuvelrug, where deciduous oak woodlands and heaths alternated with a man-made landscape made up of settlements and Celtic fields. To the northwest of Vechten there were fenlands and bogs, while the fort itself was situated in the Kromme Rijn Area, which de facto constituted the western end of the territory of the Batavi (cf. p. 390-392. 421 f. 427). Sediments from the residual channel of the Rhine bordering the fort have been subjected to palynological analysis<sup>412</sup>. The successive sedimentary layers cannot be dated accurately, but they are likely to include information on the landscape as it existed when the fort was built. The arrival of the Romans is marked by bran fragments of wheat species, cereal pollen and a chaff remain of spelt in the lowest levels of the residual channel. The arboreal pollen suggests that woodland with alder occurred near the fort, and hazel, birch, oak, beech and hornbeam at some distance, possibly on the Pleistocene coversands across the Kromme Rijn<sup>413</sup>.

Fairly soon after the arrival of the Romans the wetland woodland with alder disappeared, and the woodlands across the Rhine seem to have been felled as well<sup>414</sup>. The changes in vegetation did not coincide with the arrival of the Romans, but occurred after some delay – perhaps of only a few years? It is tempting to connect the degradation of the deciduous and wetland woodlands with the activities preceding the campaigns of AD 15-16<sup>415</sup>.

If the fort of phase I.2 already existed by this time (fig. 21), there was a double granary large enough to store cereals to feed 500 soldiers for six months if the corn was stored in its chaff and more than one year if

409 Kooistra 1996, 67. This example is based on the total yield of the fields, without reserving the necessary sowing seed.

410 Kehne 2008, 276 f.

411 Tac. ann. 2, 5, possibly in response to ad hoc levies similar to those between the campaigns of 15 and 16 (ibidem 2, 6).

412 Van den Bos et al. 2014.

413 Ibidem figs 3. 6.

414 According to Van den Bos et al. (2014, 279. 281. 289-292) sedimentation in the residual gully was rapid, sealing the palynological remains of the swift changes in the landscape.

415 Above a level of about 3.45 m below the present surface the arboreal pollen practically disappeared. This has nothing to do with changes in the vegetation, but is caused by the presence of a layer of horse manure between 345 and 185 cm below the surface. The palynological material from this layer mainly provides information on horse fodder and stabling facilities (Van den Bos et al. 2014, 291 f. fig. 3). This manure may be connected with the presence of *ala I Thracum* from c. 125 AD (Polak 2014, fig. 13: layer of manure among levels of the gully dominated by *terra sigillata* from c. AD 130-160; Zandstra/Polak 2012, 21).



**Fig. 25** Vechten. Charred barley found during the 1894 excavation. – (Photo Biax Consult).

stored without<sup>416</sup>. The granaries were not completely preserved and there may have been more of them, in which case the storage capacity of the fort would have been much larger. The palynological analysis of the samples from the Rhine channel has demonstrated that barley and spelt were eaten, with the latter suggesting imports from Gaul. In the late 19<sup>th</sup> century a layer of carbonised barley was uncovered (**fig. 25**) which was later subjected to radiocarbon analysis; the resulting date range was too broad to confidently link it to the first decades of the 1<sup>st</sup> century<sup>417</sup>.

As mentioned in the previous subsection, the fort at Meinerswijk was situated at the northeastern extremity of the island of the Batavians (**fig. 3**). Palynological research of clay sediments that accumulated during the first century of its existence has produced information on the surrounding landscape and its use<sup>418</sup>. A small

<sup>416</sup> The preserved surfaces measured at least 6.m×19.9m and 5.1m×16.7m respectively (Zandstra/Polak 2012, 70f.). The calculation was based on the following assumptions: 1) the corn was stored to a height of one metre; 2) 1 m<sup>3</sup> of corn stored in its chaff produced 300kg of consumable cereals; 3) 1 m<sup>3</sup> of corn only produced 800kg of consumable cereals; 4) a soldier's daily ration included 0.8kg of cereals, or about 80 % of the required kCal.

<sup>417</sup> The layer was discovered 1.25m below the surface. The radiocarbon analysis resulted in a date of 1950±40 BP (GrA-11834). Calibration with OxCal and the IntCal13 dataset produced calibrated date ranges of AD 3-86/AD 110-115 (1 sigma) and 41 BC-AD 128 (2 sigma) (Polak 2014, 90 note 88).

<sup>418</sup> Teunissen/Teunissen-van Oorschot/De Man 1987.

group of pottery indicates that the deepest level reached during the excavation dates to the second decade AD. The palynological spectrum of this level is remarkable. The percentage of arboreal pollen decreased markedly, while pollen of walnut and cereals were present. Walnut did not occur in the Netherlands in the Early Roman Period, so the pollen must have originated from the troops' food stocks<sup>419</sup>. In view of the initial amount of arboreal pollen (around 40 %), the army must have arrived in an open landscape with relatively few trees<sup>420</sup>. Initially, trees and shrubs decreased strongly in number, but later the woodlands seem to have recovered to some extent. The palynological research has further revealed that both banks of the Rhine were used by the Roman army<sup>421</sup>.

The third military base offering information on the campaigns of Germanicus is Velsen, situated on the left bank of the Oer-IJ estuary. Although this fort was located in the territory of the Frisii, there is no indication that they had to evacuate houses and fields for its construction. The foundation of the military base with its huge demand for timber led to an open landscape with few trees<sup>422</sup>. There are no indications that wood from the coastal zone was used for the building of ships. Although many wooden remains have been found, the excavation records include hardly any waste from woodworking, but these may not have been recognised as such. Nevertheless, a tarbrush has been recovered, consisting of an alder stick with a tuft of cloth soaked in tar<sup>423</sup>. This tool is not necessarily related to ship construction, however; it may have been used for maintenance purposes.

Of these three army bases Velsen has provided the most information on supply. Besides the usual amphorae for transporting wine, fish sauce<sup>424</sup> and olive oil, several wooden wine barrels have been unearthed, as a well-lining<sup>425</sup>; wine barrels used as linings were not rare at Vechten either, but in most cases their dating is uncertain<sup>426</sup>. The barrels and the quantity and variety of wooden bowls and jars at Velsen sorely demonstrate how much information is lost if such organic remains are not preserved or studied.

Velsen has produced a broad spectrum of vegetable food remains<sup>427</sup>, from various provenances. They include luxury products such as almonds, figs, grapes, olives, stone pines, peaches and water melons, but also products from less remote provinces. Examples of the latter are walnut and the wheat species bread wheat and spelt. The arable weed corn cockle proves that at least some of the cereals arrived from Gaul<sup>428</sup>. A further source consisted of regional products and war booty. Examples of this category of food products are the cereals barley and millet, the oil-bearing linseed and the fruits crab-apple and sloe. So far less information is available on animal food, but there is some evidence for Meinerswijk and Velsen<sup>429</sup>. At both sites cattle was the major source of animal food; it is hardly surprising that the soldiers at Velsen supplemented their menu with fish and shellfish<sup>430</sup>.

## Tiberius and the end of the offensive

Tiberius' refusal to allow Germanicus a campaign – a decisive one in the latter's view – in AD 17 concluded the Roman offensive across the Rhine for that time. In retrospect we can establish that it was never resumed,

419 It is quite normal for large quantities of pollen grains to end up on all parts of the plant. They also adhere to the fruits.

420 Teunissen/Teunissen-van Oorschot/De Man 1987, 218f. fig. 5.

421 Ibidem.

422 Groenman-van Waateringe 2004.

423 Van Rijn 1997.

424 The presence of a *vertebra* of Spanish or chub mackerel (*Scomber japonicus*) may have arrived in fish sauce (Brinkhuizen 1989).

425 Bosman 1997, 32; Van Rijn 1997.

426 Zandstra/Polak 2012, 93f. W1 and W3 have been dated to the Augusto-Tiberian period.

427 Pals in prep.

428 Derreumaux/Lepetz 2008. Compare the discussion on p. 413.

429 Cavallo/Kooistra/Dütting 2008, 72; Bosman in prep. and Van Driel-Murray/Driessen in prep. will include additional information on animal food from Velsen.

430 Brinkhuizen 1989.

at least not on the scale on which Drusus, Tiberius and Germanicus had been operating. It is much debated as to whether Tiberius' decision to recall his adoptive son to Rome should be regarded as a postponement or an abandonment of further actions in Germania.

We do know for certain that the army, which had been expanded from five to eight legions after Varus' defeat, was not reduced. This is all the more remarkable since a new Illyrian command was created for Drusus the Younger at the same time, to control the entanglements with Marbod. In this context reducing the Rhine army in favour of that on the Danube would have made sense. The army in the Rhineland did not pass its time in idleness, however, as it had to deal with an uprising in Gaul in AD 21 and the Frisian revolt in AD 28.

### Tiberius' point of view

When Germanicus gave way to the pressure from Tiberius and prepared to finally celebrate the triumph awarded to him as early as AD 15, Rome formally had much to rejoice. Two of the eagles lost by Varus had been returned and »the peoples between the Rhine and the Elbe« had been subjected; they included at least the Angrivarii and the Marsi (**fig. 14**)<sup>431</sup>. To what extent the Chatti and Cherusci could still be viewed as subjected on the eve of the triumph remains to be seen<sup>432</sup>; as far as these tribes are concerned the victory may not have extended far beyond the asylum of the Cheruscan leaders Segestes and Segimerus and the hostageship of close relatives of Arminius and of the Chattian leader Arpus<sup>433</sup>.

Had Germanicus not died two years later, the honours awarded for his exploits in Germania may have been confined to the triumph that was held on May 26 of the year 17. However, his death in AD 19 at the age of 34 years was commemorated by the erection of three triumphal arches: at Rome, on the Amanus pass in Syria and on the Rhine at Mainz<sup>434</sup>. In 1982 a bronze tablet known as the *Tabula Siarensis* was found in southern Spain. Its text is based on a senatorial decree issued in response to Germanicus' death, awarding him various honours. The document adds important details to Tacitus' short statement on this matter<sup>435</sup>. A statue was to be erected on top of the arch at Mainz, representing Germanicus receiving the recovered eagles. The monument at Rome was to bear a well-defined inscription: »Senat und Volk von Rom hätten dieses Denkmal [...] geweiht dem (ehrenden/ewigen) Andenken an Germanicus Caesar, da dieser – nachdem die Germanen im Kriege besiegt und nachdem sie [...] (erneut/sehr weit?) von Gallien zurückgetrieben worden sind, nachdem ferner die Feldzeichen zurückgewonnen wurden und Rache für die durch Heimtücke zugefügte Niederlage des Heeres des römischen Volkes genommen worden ist, und nachdem der Status der gallischen Provinzen eine feste Ordnung erhalten hat«<sup>436</sup>.

This text leaves no mistake about how Tiberius wished to present the acts of Germanicus: they were reduced to the securing of the Gaulish provinces and revenge for Varus' defeat. There is no reference to a sustained occupation of transrhene Germania as an aim of its own. The design of the arch to be erected at Mainz, with Germanicus receiving the eagles, is perfectly in keeping with this »Uminterpretation«<sup>437</sup>. The same goes for the arguments which Tacitus puts in the mouth of Tiberius for refusing a new campaign:

<sup>431</sup> Tac. ann. 2, 23. 41 (Angrivarii); 2, 25 (Marsi).

<sup>432</sup> Tacitus (ann. 2, 41) mentions them without reservation.

<sup>433</sup> Tac. ann. 1, 57-58 (Segestes and Arminius' wife and son). 2, 71 (Segimerus). 2, 7 (Arpus' wife and daughter).

<sup>434</sup> Tac. ann. 2, 83.

<sup>435</sup> Lebek 1989, with further references.

<sup>436</sup> *Tabula Siarensis*, Fragn. I, 12-18: »*senatum populumque Romanum id monum[entum] aeternae dedi]casae memoriae Germanici Caesaris cum i]is Germanis bello superatis [et ... longissime ?] / a Gallia summotis receptisque signis militaribus et vindicata frau[dulenta clade] / exercitus p[opuli] R[omani] ordinato statu Galliarum*«. Translation by G. A. Lehmann 1991, 90.

<sup>437</sup> G. A. Lehmann 1991, especially 90-93.



Rome's honour had been satisfactorily revenged and the Cherusci and other Germanic peoples could be left to their internal dissensions. Arminius' coalition had never made a move to cross the Rhine, and most of the tribes were (once more) tied to Rome by treaties, while others were living under constant pressure because relatives of their leaders were in Roman custody. After the devastating actions which Germanicus had undertaken in the spirit of Caesar and Agrippa, Tiberius could once again foster the expectation that Gaul would remain free from German incursions. The safety margins were even larger than before, since an army of unprecedented size was now garrisoned on the Rhine. The major difference from Caesar and Agrippa is that this time there had been a plan to accept transrhene territory into the Roman provincial structure. This plan had evidently been fostered by Augustus, but was now abandoned by Tiberius. The events of AD 9-16 had made it perfectly clear which sacrifices had to be made.

## Revolts in Gaul and Germany

The Germanic internal disputes that Tiberius had counted on presented themselves as soon as Germanicus celebrated his triumph. The epicentre was situated on the Danube, where the position of Marbod, persuaded by Tiberius to stand aloof when the Pannonian revolt broke out in AD 6, was now threatened by the Cherusans and by rivals from his own circle. Marbod turned to Tiberius for help and the emperor considered the developments worrying enough to invest his son Drusus the Younger with an extraordinary command in Illyricum. Yet the alarming situation on the Danube did not lead to a reduction in the Rhine army. The Upper German legions were distributed over a double legionary fortress at Mainz and newly built fortresses in Strasbourg and Vindonissa (**suppl. 1**). The latter two camps were founded far from the German hotbeds of the past decades. It requires little imagination to recognise this as a sign that they were partly aimed at Gaul<sup>438</sup>. According to Velleius, Tiberius had been confronted with »serious troubles in the Gaulish provinces and disputes arisen among the inhabitants of Vienna« in the aftermath of Varus' defeat<sup>439</sup>. The rationale for keeping a watchful eye on Gaul was demonstrated in the year 21, when the Treveran Julius Florus and the Aeduan Julius Sacrovir tried to provoke a large Gaulish revolt<sup>440</sup>. Tacitus, the only important source for the events<sup>441</sup>, blames it on the pressure of taxation; here we see an echo of his account of AD 16<sup>442</sup>. In his words the rumour went round Rome that the whole of Gaul had risen in rebellion, that the Germans had joined them and that the Spanish provinces were wavering, but the rest of his account conveys quite a different impression. The Andecavi and Turoni, living on the middle and lower courses of the river Loire, were the first to rebel, but the Andecavi were defeated by the governor of Lugdunensis with his guard and the Turoni by legionaries from Lower Germany assisted by troops offered by some other Gaulish leaders. Next, Florus tried to persuade the *ala Treverorum* to start a war, but he failed to seduce more than a minority of his tribesmen. His retinue consisted further of his own *clientes* and of people burdened with debts. The legionaries of the Upper and Lower German armies who were set on them did not even have to enter into combat. Julius Indus, a Treveran rival of Florus, had been sent in advance with some elite troops and suc-

<sup>438</sup> This point is equally stressed by G. A. Lehmann 1991, 223 f. Compare in this context Tac. ann. 4, 5: »sed praecipuum robur Rhenum iuxta, commune in Germanos Gallosque subsidium, octo legiones erant« (but the main army consisted of the eight legions on the Rhine, a common stronghold against the Germans and the Gauls). The passage is part of an overview of the Roman troops, which is an intermezzo in his account of AD 23.

<sup>439</sup> Vell. 2, 121: »res Galliarum maximae molis accensasque plebis Viennensium dissensiones coercitione magis quam poena molisset«; the chronology of the events is unclear in its details.

<sup>440</sup> Cf. Urban 1999, 39-45, with further references.

<sup>441</sup> Tac. ann. 3, 40-47. Velleius (2, 129) confines himself to one sentence, and Dio and Suetonius make no mention of the episode.

<sup>442</sup> Tac. ann. 2, 5.

ceeded in scattering the rebels. Florus fled and committed suicide when faced with his hopeless situation. »And that was the end of the Treveran uprising«, Tacitus dryly concludes<sup>443</sup>.

Sacrovir with »armed cohorts« occupied Augustodunum (Autun, dép. Saône-et-Loire/F), the capital of the Aedui situated between the Loire and Saône. The children of the Gaulish elite were studying in this city, and Sacrovir wanted to force their parents to cooperate. He raised 40,000 men, most of them equipped with no more than hunting weapons. Initially, there was no Roman response, since the legates of the Upper and Lower German army corps disagreed on who was allowed to take command. Once this dispute was settled in favour of the Upper German legate C. Silius, two legions and some auxiliary forces created havoc on the Sequani, who were living between the Saône and Rhine and had joined the rebels. Next, Silius' troops settled scores with those of Sacrovir, who followed Florus' example and eventually committed suicide.

Tiberius is said to have remained deaf to the alarming messages that had been reaching Italy. Once the hostilities had ceased he let the Senate know that it had not seemed appropriate to him or his son Drusus to leave Rome to its fate as soon as »one or two *civitates* revolted«. Tiberius' trivialisation of events that were considered alarming by others probably reveals the real reason for Tacitus' comprehensive account<sup>444</sup>. It fits perfectly with the image he was building of an increasingly morose emperor who had begun avoiding the political arena in Rome: Tiberius was staying in Campania during the revolt of Florus and Sacrovir, »allegedly to improve his health«<sup>445</sup>. That the emperor refused to discuss the revolt before it was suppressed also follows from the words of Velleius, who regarded it as an illustration of Tiberius' swift and conclusive intervention in a Gaulish war of considerable importance<sup>446</sup>.

If Tacitus' account is correct, the conflict with the Treveri was of minor importance and hardly more than an escalation of the rivalry between a pro-Roman and an anti-Roman leader or faction. The limited success of Florus' effort to find allies is in keeping with the situation in AD 14, when Germanicus' pregnant wife Agrippina sought refuge with the Treveri from the rioting Lower German legionaries<sup>447</sup>; this hardly suggests an anti-Roman attitude on the part of the tribe as a whole. Apparently Florus was no more successful in bringing the other *civitates* of Belgica to side with him, and the insignificant Roman effort that was needed to defeat his improvised army reveals its modest size.

Sacrovir succeeded to some degree in his mission to win over the *civitates* of Lugdunensis. The revolting Andecavi and Turones were however confronted with the opposition of other tribal leaders, and like the Sequani later they were easily overrun by the Roman troops. By taking the next generation of the Gaulish elite as hostages Sacrovir managed to raise a substantial army, but it proved no match for a Roman army less than half its size. Urban argues that this rebellion was not considered a revolt of »the« Aedui, since they were the first people from the *Tres Galliae* who were allowed to provide members for the Senate in AD 48<sup>448</sup>.

All in all the events do not evoke an image of a war of independence involving the whole of Gaul, which, according to Tacitus, Florus and Sacrovir used to try to obtain allies. This does not mean that the alleged

<sup>443</sup> Tac. ann. 3, 42: »isque Trevirici tumultus finis«.

<sup>444</sup> Compare the well-chosen words of Timpe (1968, 2): »Auch wo bei Tacitus einmal Einzelheiten sehr eingehend geschildert werden, besteht weniger Anlaß zu der beruhigenden Gewißheit, daß wir hier eingehend informiert werden, als Grund zu der Frage, warum der Autor gerade hier so ausführlich berichtet, ein anderes Mal aber ganz anders verfährt. Vielleicht geschieht es nicht wegen der individuellen, sondern der exemplarischen Bedeutung des Einzelfalles.«

<sup>445</sup> Tac. ann. 3, 31: »quasi firmandae valetudini«.

<sup>446</sup> Vell. 2, 129: »quantae molis bellum principe Galliarum ciente Sacroviro Floroque Iulio mira celeritate ac virtute compressit, ut ante populus Romanus vicisse se quam bellare cognosceret nuntiosque periculi victoriae praecederet nuntius« (with what swiftness and courage did he suppress the enormous Gaulish war started by Sacrovir and Florus Julius, so that the people of Rome heard that it was won before it heard that there was a war and the news of the victory preceded that of the dangers).

<sup>447</sup> Tac. ann. 1, 40-42; cf. Cass. Dio 57, 5 (without record of the destination); Suet. Cal. 9 (*in proximam civitatem*, in the nearest *civitas*).

<sup>448</sup> Urban 1999, 45, referring to Tac. ann. 11, 23-25.

causes – the endless taxes, the debt burden and the cruelty and arrogance of the administrators – lacked any foundation. The influence and revenues of the tribal elites had been seriously reduced by the annexation and administrative organisation of Gaul. The misbehaviour of *procurator* Licinus and possibly of Lollius (p. 397), the tensions caused by Drusus' *census* in 12 BC (p. 404), Germanicus' complaint that the Gaulish provinces were fed up with supplying horses for the German wars (p. 425) – there were precedents for every complaint that Tacitus puts in the mouths of the rebel leaders.

Although Tiberius is reported to have taken measures to meet the essence of the complaints<sup>449</sup>, Tacitus advances precisely the same factors as a motivation for the uprising of the Frisii in AD 28: »they threw off peace, more as a consequence of our greed than because they could no longer bear submission«<sup>450</sup>. When Drusus entered a treaty with the Frisians in 12 BC, he had imposed on them an obligation to supply cow-hides for the army, without specifying their size and quality. However, the *primipilaris* Olennius, who was supervising the observance of the treaty in AD 28, adopted an aurochs hide as a standard. Since the cattle of the Frisii were rather small, this stricter obligation brought them to ruin. After giving up their cattle and land and offering their wives and children as slaves, all that was left to them was to revolt. They crucified the soldiers who came to collect the taxes and besieged the fort »*cui nomen Flevum*« (named Flevum) where Olennius had sought refuge.

When the Lower German legate L. Apronius received this news he summoned detachments of the Upper German army and led them together with his own troops into Frisian territory. By then, the Frisii had already abandoned the siege of the fort and left for home. Apronius had causeways and bridges constructed to cross the swampy estuaries, but he took the disastrous decision to send the legionary cavalry and part of the auxiliary units ahead. When these were routed he threw the remaining auxiliaries into the fray, but they too were driven into a corner. Finally, he brought the legionaries into action, who succeeded in rescuing the vanguard and repelling the Frisii. The soldiers who had been killed in action, including many officers, were left lying on the battlefield, as dishonourably as after Varus' defeat.

As with the revolt in Gaul, Tacitus is alone in paying attention to the Frisian uprising. The explanation may once more be found in the composition of this portrait of Tiberius. The end of the revolt was downright unsatisfactory, the defection remained unpunished and the dead unburied. According to Tacitus, Tiberius ignored the losses. But since his son Drusus the Younger had died in 23, whom could he have charged with a major counteroffensive? The Senate did not show any interest either in a disgraceful defeat on the far edge of the Empire, preoccupied as it was with the perilous situation at the centre, where Tiberius was increasingly shielded by his power-hungry lieutenant Seianus.

The *castellum cui nomen Flevum* is usually identified with Velsen 1, not least of all because of the vivid reconstruction of a battle based on the distribution pattern of over 500 lead slingshot<sup>451</sup>. It is beyond doubt that the fortification in question must have been located near the Flevo lakes (fig. 14), but Velsen is not the only candidate. Pliny mentions a base in Frisian territory which cannot have been Velsen (cf. p. 430). The fact that Apronius had to bridge *proxima aestuaria* (the nearest estuaries, plural) is more consistent with the northern coastal area than with the surroundings of Velsen, where the Oer-IJ was the only outlet.

<sup>449</sup> Tac. ann. 4, 6: »et ne provinciae novis oneribus turbarentur utque vetera sine avaritia aut crudelitate magistratuum tolerant providebat« (and he took measures to prevent the provinces from being disturbed by new burdens, and to ensure that they would bear the old ones without greed and cruelty). The measures are discussed in the account of the year AD 23, which Tacitus presents as a turning point in Tiberius' reign (ann. 4, 1): »cum repente turbare fortuna coepit, saevire ipse

aut saevientibus viris praeberere« (when all of a sudden Fortune started to disturb things; he started to behave savagely or to cause others to do so). Cf. Levick 1976, 132-137.

<sup>450</sup> Tac. ann. 4, 72: »eodem anno Frisii, transrhenanus populus, pacem exuere, nostra magis avaritia quam obsequii impatientes«. The account of the revolt takes up *capita* 72-74.

<sup>451</sup> Morel/Groenman-van Waateringe 1993; Bosman 1997, 51. 64f. fig. 4, 5-8.

Tacitus' account of the actions of the Lower German legate Corbulo in AD 47 confirms that the Frisii had not been restored to order in AD 28<sup>452</sup>. The fact that Corbulo built a fortification to restrain them may indicate that there was no longer a camp in Frisian territory at that time. This is not a compelling conclusion, since he apparently forced the Frisii to migrate, which may have necessitated the building of a new fort – additional to or as a replacement of an existing one. Be that as it may, we cannot pinpoint the location of Corbulo's camp any better than the one mentioned by Pliny. Velsen is once again not a candidate, since finds characteristic of this period are absent there.

The much debated writing tablet from the terp at Tolsum (prov. Friesland/NL, **suppl. 1**)<sup>453</sup> has little to add regarding the question of whether Rome had any say over the Frisian area in the period AD 28-47. According to a new interpretation it is part of a slave's obligation, composed in February of the year 29 in the presence of a tribune of the Fifth Legion and a Batavian soldier. Assuming that the date, which is based on the consulate of C. Fufius Geminus, is correct<sup>454</sup> and that the many uncertain details justify the proposed interpretation of the document, it still does not qualify as evidence of a Roman military or legal intervention in Frisian affairs. The presence in a Frisian terp of an obligation drawn up in AD 29 does not prove that the statement was composed there. It may have been written elsewhere and have ended up there later (possibly much later), however unsatisfactory this explanation may be<sup>455</sup>.

#### Diminishing military activities in AD 17-37?

»Mit der Abberufung des Germanicus trat eine grundlegende Änderung der römischen Germanienpolitik ein. Rom brach jetzt alle Versuche einer militärischen Unterwerfung des Gebietes zwischen Rhein und Elbe ab.« Erdrich's concise phrasing reflects a widely – though not unanimously – supported conviction<sup>456</sup>. It is certainly correct that from the departure of Germanicus to the middle of the 1<sup>st</sup> century hardly any Roman coins or other commodities occur between the Rhine and Elbe<sup>457</sup>, and that besides the Frisian revolt no military confrontations have been recorded east of the Rhine. Both observations require further comment, however.

Dating curves of coins and *terra sigillata* display minima in the period under discussion. Assessments of coin series are complicated by the fact that only a few large emissions seem to have taken place<sup>458</sup>; regular coin production does not appear to have resumed until the end of Tiberius' reign. Until the middle of the

<sup>452</sup> Tac. ann. 11, 19: »et natio Frisiorum, post rebellionem clade L. Apronii coeptam infensa aut male fida, datis obsidibus consedit apud agros a Corbulone descriptos: idem senatum, magistratus, leges imposuit. ac ne iussa exuerent praesidium immunivit« (and the Frisian people which had been hostile or disloyal since the rebellion starting with the defeat of L. Apronius, offered hostages and settled in the area appointed by Corbulo; he further gave them a senate, magistrates and laws. And to prevent them from ignoring his orders, he built a fortification).

<sup>453</sup> Bowman/Tomlin/Worp 2009, with further references.

<sup>454</sup> There is an earlier, very broad radiocarbon date, which in the absence of sapwood offers only a *terminus post quem* for the manufacturing of the tablet (Slob 1998, 27-29. 49-51): 1880±70 BP (GrA-769). Calibration with IntCal13 provides calibrated date ranges of 38 BC-AD 260/AD 280-325 (2 sigma), and of AD 61-225 (1 sigma) respectively. The first range is not at odds with the consular date of AD 29, but the last range does not match. The statement by A. Bowman,

R. Tomlin and K. Worp that the radiocarbon date »supported the idea that it was written in the early Roman imperial period (probably the first century A.D.)« (Bowman/Tomlin/Worp 2009, 156) is an incorrect rendering of the opinion of Slob, who considers a narrower date within the 1<sup>st</sup> and 2<sup>nd</sup> centuries impossible, and a date in or before AD 28 implausible; Slob decided on a *terminus ante quem* of AD 70 merely on the basis of the identification of the First and Fifth Legions in an earlier interpretation of the text (Slob 1998, 28. 51).

<sup>455</sup> Cf. Galestin 2010, 12 f.

<sup>456</sup> Erdrich 2001, 91. For a contrary opinion cf. Timpe 1968, 63: »Außerhalb jeder römischer Vorstellung liegt ferner der Gedanke, Germanien vollständig fahren zu lassen, also gleichsam die Grenze des außenpolitischen Interesses an den Rhein zurückzulegen.«

<sup>457</sup> Erdrich 2001, 79-93.

<sup>458</sup> For the dating of these emissions cf. note 384 and Kemmers 2005, 74 f., with further references.



1<sup>st</sup> century the coin circulation in the Rhineland mainly consisted of older, republican and Augustan or early Tiberian emissions. The absence or rarity of Tiberian coins may therefore not be viewed as a straightforward indication of a lack of activity – in this case of military presence to the east of the Rhine. Such a supposition would only be possible if substantial numbers of coins were available and demonstrated a consistent absence of the countermarks commonly applied in or after the 20s AD.

Although *terra sigillata* belongs to the best dateable find categories, the Tiberian period is fraught with difficulties. Previously, the northern provinces had been supplied with *sigillata* from kiln sites in Italy and Lyon, and afterwards by ones at La Graufesenque (Millau, dép. Aveyron/F). During Tiberius' reign the provisioning with this type of pottery therefore changed radically, but as yet we are at a loss as to the starting point of this switch, its speed and the factors that influenced it. The conspicuous lack of *sigillata* in the Tiberian period does not imply, therefore, that little or nothing was going on in the Rhineland or beyond the river. It is conceivable that this vacuum was mainly or exclusively caused by external factors – production or transport problems – or by our inability to date the *sigillata* properly<sup>459</sup>.

In view of the absence of records of military actions across the Rhine it is important to bear in mind the Rhineland was not visited by members of the imperial house from the time of Germanicus' departure in AD 16 until the arrival of his son Caligula in 39. This mirrors the situation in the period from 6 BC to AD 4, which was almost ignored by the ancient historiographers as far as the Rhineland goes, in sharp contrast to the previous and following years, when Drusus and Tiberius were active there (p. 414f.). More may have happened from AD 17 to 37 than the silence of the sources suggests<sup>460</sup>. Suetonius' dramatic reproach is relevant in this context: that after Tiberius' return to Capri in 27 he »neglected the fact that Armenia was occupied by the Parthians, that Moesia was looted by the Dacians and Sarmatians, and the Gaulish provinces by the Germans«<sup>461</sup>. It is difficult to believe that Suetonius is referring to the Frisian revolt here, which hardly qualifies as an incursion into Gaul. He may therefore very well be revealing that some German raids occurred in the years 27-37.

Since none of the eight Upper and Lower German legions left the area before AD 43, the enormous army at Germanicus' disposal seems to have been maintained in its entirety<sup>462</sup>. Whereas De Weerd is of the opinion that the Lower German army was not »at full strength« in 28, since detachments were called in from the Upper German army to suppress the Frisians<sup>463</sup>, it appears to have been rather a matter of common sense to leave the bases on the Lower Rhine adequately manned.

### The early Roman »Germanienpolitik«

The synthesis of a research project focusing on the period 40-140 AD is not the proper context for an extensive discussion of the strategy of late republican and early imperial Rome towards the peoples between the Rhine and Elbe, on which so much ink has already been spilled in the past<sup>464</sup>. Nevertheless, it seemed impossible not to take a stand on this matter, in the light of the evidence and views presented in this chapter and of their relevance to the events after the death of Tiberius.

<sup>459</sup> Cf. Oxé/Comfort/Kenrick 2000, 8: »in the vast majority of cases the dates suggested [for the stamps from Italy and Lyon presented in this corpus, MP/LK] are extremely tentative«.

<sup>460</sup> Cf. Syme 1978, 66: »Operations not conducted (or supervised) by the ruler and his associates tend to suffer eclipse«.

<sup>461</sup> Suet. Tib. 41: »*Armeniam a Parthis occupari, Moesiam a Dacis Sarmatisque, Gallias a Germanis vastari neglexerit*«. The Parthian occupation of Armenia refers to the difficulties after

the death in 34 or 35 of Zeno alias Artaxias, whom Germanicus had installed on the Armenian throne. Raids into Moesia after AD 27 have been documented no more than those into Gaul.

<sup>462</sup> In the same sense: Alföldy 1968, 137-143.

<sup>463</sup> De Weerd 2006, 21.

<sup>464</sup> Cf. Deininger 2000 for a good overview of earlier studies; Johne 2006; Kühlborn et al. 2008.

Any judgement of the early Roman »Germanienpolitik« is hampered by the nature of the ancient historical sources, focusing on a few protagonists and filtered in accordance with their authors' agendas. But our own biases are no less of an impediment. The most important is perhaps an ingrained tendency to judge chains of events retrospectively and to confuse their actual outcomes with the views, aims and expectations at their start. Intimately connected with this distorting reflex is the classical fallacy of *post hoc, ergo propter hoc* (after this, therefore because of this), expressing the erroneous conclusion that there must be a causal relationship between two successive events.

There is probably general agreement on the assumption that the protracted conflicts between Romans and Germans were the inevitable outcome of two opposing movements: Roman expansion from the western Mediterranean to the north and Germanic expansion from Denmark and the Northern German Plain to the south. Eastern Gaul and, eventually, the Rhine developed into the epicentre of their confrontation. If the historical sources do not deceive us – and as they were written from a Roman perspective this cannot be taken for granted – Roman military operations were for a long time mere reactions to German provocations, whether it be migration, raiding or interference with inner Gaulish conflicts. This accounts for most if not all of the confrontations extending from the late republic into the early principate: the migration of the Cimbri and Teutones, Caesar's actions against interfering Suebi, Usipetes and Tencteri, and those of Agrippa and other generals against invading Suebi and other unnamed Germans. The Germanic groups involved had not infrequently been invited by rival Gaulish tribal leaders and constituted less a problem of their own than part of a larger problem.

Rome had always furthered its interests by concluding treaties with powerful rulers outside their own territory, and they made no exception for the north. Ariovistus was initially declared *rex et amicus* before he became too much of a threat to Roman interests in the periphery of Transalpina, and in the course of his Gallic War Caesar converted the Ubii and possibly other Germanic groups and rulers of southeastern Britain into allies of Rome. Such alliances, not infrequently sealed by grants of Roman citizenship and the sending of foreign hostages to the City, undoubtedly meant a large saving in direct military effort, but they were no guarantee of lasting peace – according to Strabo the Germanic peoples resumed hostilities »forsaking hostages and oaths«<sup>465</sup>.

Agrippa's second governorship in 19 BC is the most likely context for a change in policy, with the transfer of the Ubii and probably the Chattian Batavi to the left bank of the Rhine, in areas left partly vacant after the Caesarian massacre of the Eburones. The large army base on the Hunerberg at Nijmegen was in all probability built at this time, and the fact that it is the earliest attested military camp in the Rhineland requires some consideration. Camps had undoubtedly been built before, in the context of earlier operations east of the Rhine, but so far they have not been recognised<sup>466</sup>. This must be due to their ephemeral nature, leaving so few features and finds that they are hard to discover. With its connection to Gaul via the Meuse and its valley, Nijmegen was a perfect springboard for operations across the Rhine (**suppl. 1**), and that must surely have been its initial role. But the Nijmegen base was of a much more »tangible« character than its assumed predecessors, with timber gates, wall towers and inner buildings requiring vast amounts of building materials and considerable effort to construct<sup>467</sup>. It is therefore likely that the Nijmegen base was maintained for longer than initially intended, at least for longer than required by a punitive campaign east of the Rhine. It is difficult to escape the conclusion that this afterthought was related to the transfer of the Batavi and the

<sup>465</sup> Strab. 7, 1, 4 (C. 291).

<sup>466</sup> With the possible exceptions of Neuss (cf. note 165) and of the Kops Plateau at Nijmegen (p. 393).

<sup>467</sup> Cf. Driessen 2007, 43-60. His assumption that the camp was defended by a wall with timber facings appears to be incorrect (Niemeijer 2013), but even without this construction element the need for timber will have been enormous.

Ubii. Neuss, situated closer to the Ubii but somewhat further from the »lifeline« of the Meuse, may have been added at that time or slightly later. Whether these longer-standing bases were primarily intended to keep a close watch on the newcomers or to prevent further aggression from across the Rhine is open to debate.

The river Meuse is only fed by rain, which causes considerable variations in discharges, with a low summer flow. The construction of a road from Trier to the Rhineland, dendrochronologically dated to 17 BC, provided an extra logistical axis. Transport over water was preferred for bulk goods, but the Eifel road was more reliable than the whimsical Meuse and it may have provided a better connection with the Mediterranean.

In the light of the presence of perhaps as many as 15,000 troops at Nijmegen, the raids by the Sugambri, Usipetes and Tencteri in 16 BC are difficult to comprehend. As a large concentrated army may not provide adequate protection against raiding it cannot be ruled out that the Germans simply outfoxed the Nijmegen troops, but the renewed occurrence of raids might just as well indicate that the base had been recently evacuated or its garrison reduced, and that the Germans saw their way clear. If Neuss was built a few years after Nijmegen it may have served to prevent further Sugambrian harassment. From that point of view a resumed or continued occupation of the Nijmegen base to deter the Usipetes and Tencteri might be expected. The revived German troubles brought Augustus to Gaul, where he would eventually stay for three years. His return to Rome in 13 BC was soon followed by a new campaign across the Rhine, under the command of Drusus. This campaign turned out to be the first of a series, culminating in Tiberius' victory over »all Germans between the Elbe and Rhine« in 8 BC. This chain of events has often been explained in terms of cause and effect: as Agrippa's new policy had failed, Augustus would have decided that a large-scale war in Germany was the only remedy, and his prolonged stay in Gaul would reveal a very thorough preparation. When Drusus died in 9 BC he was on his way back from the Elbe. In Augustus' *Res Gestae* the mouth of this river is mentioned as the limit of the Roman pacification of Germany<sup>468</sup>. Added to Augustus' advice to Tiberius to keep the empire within its boundaries<sup>469</sup>, this has often been regarded as evidence that the Elbe was the goal of the Roman military policy from the start. Drusus' penetration to the Elbe may reflect an awareness that the only way to put an end to the German nuisance was to quell the Suebi. If they were his objective from the outset, the series of campaigns should have been a carefully planned operation.

However plausible this interpretation may seem, several objections can be made. Dio presents several alternative motives for Augustus' presence in Gaul, so the German raids were not the only and not necessarily the most important reason. The conversion of Gaul into a province was far from completed by 16 BC and may well have been a legitimate cause for imperial supervision on its own merits. And even after three years of personal attention by Augustus, Gaul was all but settled, judging by the troubles accompanying the *census* that followed.

While Gaul may therefore have provided sufficient grounds for the presence of Augustus, the start of Drusus' actions across the Rhine in 12 BC does not come across as a planned operation. According to Dio it was provoked by an imminent invasion of the Sugambri and some unnamed allies, whereas the *Periochae*

<sup>468</sup> R. Gest. div. Aug. 26: »*omnium provinciarum populi Romani quibus finitimae fuerunt gentes quae non parerent imperio nostro fines auxi. Gallias et Hispanias provincias, item Germaniam, qua includit Oceanus a Gadibus ad ostium Albis fluminis pacavi*« (I have extended the boundaries of all the provinces of the Roman people that border on nations not subjected to our rule. I have pacified the Gaulish and Spanish provinces and also Germania, bordered by the Ocean from Gades [Cádiz, com. autónoma Andalucía/E] to the mouth of the Elbe).

<sup>469</sup> Tac. ann. 1, 11: »*quae cuncta sua manu perscripserat Augustus addideratque consilium coercendi intra terminos imperii, incertum metu an per invidiam*« (all this Augustus had written in his own hand, and he had added the advice to keep the empire within its boundaries – out of fear or out of jealousy, that remains uncertain).

indicate that the groups recently migrated to the left bank needed his attention as well. The naval operation directed against the Chauci (and Bructeri?) very late in the season appears to have been pressing as well. The overall impression is one of haste and improvisation. In 11 BC new operations were carried out in the northern lowlands, in the territories of the Usipetes, Sugambri and Cherusci. At the end of the year a fortress was built at Oberaden to keep the Sugambri in check, and another camp in the territory allocated to the Chatti. The senate rewarded Drusus with the *ornamenta triumphalia* and an *ovatio*, and it was decided to close the gates of the temple of Janus. Wolters may well be correct that this indicates that the war was viewed as successfully concluded. If so, Drusus' achievements resemble those of Agrippa: punishment of the major plagues and securing peace through the instruments of reallocation and direct military supervision. Although direct control was now extended across the Rhine, the Elbe was still far beyond the horizon. Judging by Dio's very brief account the continuation of the war in 10 BC was prompted by the Chatti, who left their territory to join the Sugambri. Apparently both tribes refused to resign themselves to the settlement of the previous year. The struggle with the Chatti was resumed in 9 BC and it was only then that Drusus penetrated into the territories of the Suebi and eventually as far as the Elbe, which he unsuccessfully tried to cross. After his death Tiberius concluded the war with the subjection of all the tribes between the Rhine and Elbe, followed by the displacement of 40,000 Suebi and Sugambri.

Although permanent occupation and the extension of direct rule as far as the Elbe may not have been a goal from the start of Drusus' campaigns, it was the outcome all the same. Augustus was allowed to enlarge the *pomerium* at Rome<sup>470</sup>, a telling symbol of the expansion of the empire. There are at least two reasons to believe that the emperor's disinclination for further eastward expansion was a practical rather than an ideological consideration. The first is the assessment conveyed by Strabo that the war could be concluded more easily if the peoples across the Elbe were left in peace instead of making further enemies<sup>471</sup>. The second is that the Elbe is the easternmost of the northern lowland rivers which can be reached via the North Sea, and may have constituted a natural limit for military operations based on the Rhine.

Tiberius' victory in 8 BC was soon followed by the building of the pioneer town of Waldgirmes. The stone foundations of the central building reveal that it was meant to stay. The existence of monumental graves at Haltern equally indicates that there were no plans to evacuate the subjected territories. Judging by the earliest dendrochronological dates of 4/3 BC for Waldgirmes, there is reason to believe that it had been decided by then to pursue the course that Augustus had set in Gaul a decade before and to complete the work of Tiberius, who had »turned the area into almost a tributary province«. The replacement of Oberaden – no longer required to supervise the relocated Sugambri – by the logistically better situated Haltern ties in well with this scheme. Although Rome's rule kept being challenged, as Domitius Ahenobarbus and M. Vinicius experienced, Tiberius once again managed to restore order. If Varus was not merely continuing his predecessors' development project, he must have instigated it. At some point the Hauptlager at Haltern was (further?) adapted to house extra personnel presumably involved in administrative tasks. Cologne must have been designated as the capital of a German province including territories on both banks of the Rhine, with an altar after the Lyon model symbolising the unity and dependency of the Germanic peoples.

Keeping a firm hand on the troublemakers of the past decades must have been a major motive for the annexation of the area between the Rhine, Main and Elbe, but strategic needs and economic gains are

<sup>470</sup> Dio 55, 6, 6 (8 BC). The *pomerium* is the formal boundary of a town. The symbolic value of its enlargement can be read from Tac. ann. 12, 23, referring to Claudius' annexation of Britannia (AD 49): »et pomerium auxit Caesar, more prisco, quo iis, qui protulere imperium, etiam terminos urbis propagare datur«

(and the Caesar enlarged the *pomerium*, in accordance with the old custom conferring on those who expanded the empire the right to extend the boundaries of the City as well).

<sup>471</sup> Strab. 7, 1, 4 (C. 291).



likely to have been another incentive. It has been amply demonstrated that the military occupation of the territories east of the Rhine was followed by the exploitation of lead mines in the Bergisches Land and the Sauerland<sup>472</sup>. These mines constituted valuable additions to others in the northwestern Eifel, the more so since the lead ores in the Sauerland were richer in silver. The German lead soon replaced the lead from Spanish mines in the army camps on the Rhine, but it was also traded to the Gaulish hinterland and the Mediterranean, as illustrated by lead ingots advertising *plumb(um) germ(anicum)* recovered at Tongeren (prov. Limburg/B) and from shipwrecks on the southern coast of Gaul and off Sardinia. The Rheinisches Schiefergebirge was also rich in iron and copper ores, on both sides of the Rhine, a fact that is unlikely to have escaped the Roman authorities. The same accounts for the occurrence of recoverable volcanic stone, including tephrite for millstones and building stone such as basalt, tuff and trachyte.

The stamps on the German lead ingots prove that the mines were imperial property and contracted to private entrepreneurs<sup>473</sup>. Therefore, the strategic metals did not form part of the tribute exacted from the subjected peoples. In the absence of a monetary economy the taxes could not be collected in coin either. This explains why the Frisii were taxed in cow hides and the Batavi in army recruits. Similar levies in kind will have been imposed on the other Germanic tribes, probably all of them tailored to supplying the Rhine armies. Considering the environmental similarity between the North German Plain and the territory of the Frisii there may well have been more suppliers of cow hides, and the military career of the Cheruscan Arminius indicates that the Batavi were not an exception either<sup>474</sup>. The loess belt separating the northern lowlands from the Mittelgebirge might have held the promise of developing into the region's granary.

Finally, the firm incorporation of the Rhine into Roman territory may well have been an important motive. The river constituted a third logistical axis to the Rhineland, besides the Meuse and the road from Trier. The small military installations of Augustan and Tiberian date at Bingen (Lkr. Mainz-Bingen/D), Koblenz (D), Urmitz, Andernach (both Lkr. Mayen-Koblenz/D) and Remagen (Lkr. Ahrweiler/D) are perfectly understandable as a means of controlling vulnerable points and stretches of the Middle Rhine (suppl. 1)<sup>475</sup>. The primary interest may have been the link to inner Gaul and the Mediterranean via the Moselle, as the connection with the Upper Rhine was hindered by the transverse stone reefs in the river bed between Bingen and Koblenz, which still hamper river transport today.

The ancient historiographers have blamed Varus for the failure of his policy, but considering his close ties with Augustus and Tiberius he must surely have been acting on imperial orders; the same accounts for his predecessors Domitius and Vinicius. In retrospect it was probably too much, too soon: while the process of provincialisation in Gaul did not pass without incidents nearly two generations after its conquest, less than twenty years separated the Varian disaster from Tiberius' subjection of all tribes between the Elbe and Rhine in 8 BC.

The loss in AD 9 of most of three legions and of a considerable number of auxiliary units drew heavily on the Roman army, which was already overstrained by the recent Pannonian revolt. In order to suppress the

<sup>472</sup> Rothenhöfer 2003; Durali-Müller 2005; Bode 2008; Bode/Hauptmann/Mezger 2009. Cf. Tac. ann. 11, 20 for the (military!) exploitation of a mine across the Rhine in the area of the Mattiaci in or shortly after AD 47.

<sup>473</sup> Rothenhöfer 2003.

<sup>474</sup> Tacitus' remarks on the Batavian tribute do not imply that he considered them an exception. His immediately following comment on the Mattiaci suggests the opposite, although the wording is not unambiguous. Tac. Germ. 29: »*nam nec tributis contemnuntur nec publicanus atterit; exempti oneribus et conlationibus et tantum in usum proeliorum sepositi, velut*

*tela atque arma, bellis reservantur. Est in eodem obsequio et Mattiacorum gens*« (they [the Batavians] were not humiliated by taxes and no tax contractor impoverished them; they were exempted from burdens and tributes, and they were set aside for fighting only and kept in reserve for wars, like arms and weapons. The tribe of the Mattiaci was subjected to the same regime). Timpe (1970, especially 14-48) has argued strongly in favour of the early existence of a regular Cheruscan auxiliary unit, with references to presumed regular units from other tribes (Ampsivarii, Cananefates, Frisii, Sugambri, Ubii).

<sup>475</sup> Cf. Graafstal in prep. for a more detailed discussion.

allegedly more than a million rebels involved in the latter uprising, veterans had been recalled and freedmen recruited<sup>476</sup>. After Varus' defeat these emergency levies had to be repeated and the assembled troops were sent to the Rhine army<sup>477</sup>, which saw the Varian legions replaced by legions from Hispania and Illyricum. Tiberius' decision to initially confine himself to the consolidation of the left bank of the Rhine seems a matter of common sense, since the loyalty of the »peoples placed on this side of the Rhine« was at stake. The Sugambri and Suebi relocated in 7 BC are the most likely candidates, but it cannot be ruled out that the Ubii and Batavi were involved as well, the latter in view of the construction of the Trajanusplein fort at Nijmegen. The right bank of the Rhine had not been given up for good, however. Based on a dendrochronological date of winter AD 9/10 for the remains of a ladder found in a well at Waldgirmes, it has been argued that »der Ausgang der ›Schlacht im Teutoburger Wald‹ auf diese Region keine starken Auswirkungen hatte und das römische Waldgirmes offenbar ohne Unterbrechung weiter existierte«<sup>478</sup>. Whether this is correct or not<sup>479</sup>, Tiberius and Germanicus appear to have made important progress in recovering *transrhenane Germania* in AD 11-13, judging by the wordings of Velleius<sup>480</sup> and by the imperatorial acclamations of Augustus, Tiberius and Germanicus<sup>481</sup>. The presence of legionary detachments among the Chauci in AD 14 may well reflect a stabilised situation, which would satisfactorily explain the absence of Germanicus for a *census* in Gaul and the idleness of the main army corps on the left bank at the death of Augustus.

If it is assumed that order had been restored by AD 13 there was every reason for the »toothless and crooked« veterans of the Lower Rhine legions to complain about the extreme extension of their service<sup>482</sup>. There is no indication of an external cause for the massacre of the totally unprepared Marsi in AD 14. The ensuing attacks by the Bructeri, Tubantes and Tencteri could be seen as a reflection of the anger which the bloodbath caused among the Germanic peoples. It might also explain the vexed reaction of Tiberius to Germanicus' exploits: why stir up the hornets' nest? The grant of a triumph in 15 – while the war was going on! – has repeatedly been interpreted as an effort to stop him<sup>483</sup>. Tiberius' assessment that Germanicus' achievements did not make up for the considerable losses of Roman lives appears a fair judgement. The recovery of two of the eagles lost by Varus offered a valid *post hoc* justification of Germanicus' actions, but it may be seriously doubted whether these were carried out *propter hoc*.

It has been generally assumed that once Germanicus was recalled after the campaign of 16, *transrhenane Germania* was left to its fate, in accordance with Tiberius' views. His rejection of military operations does not rule out other types of involvement, however. He considered *consilium* (policy, diplomacy) a sensible alternative for *vis* (military force), and returning to indirect rule as a preferred or primary instrument does allow for some form of military occupation, mirroring the situation immediately after 8 BC and AD 13. It should not be overlooked that Varus had for quite some time been able to carry out his tasks with the main body of his army garrisoned on the Rhine. And the apparent absence of archaeologically attested military camps east of the Rhine which can be dated to the years following Germanicus' withdrawal need not imply that there were none. After all, the camp of the legionary detachment garrisoned in the Chaucian area in AD 14 has not been located so far, unless we are ready to regard the finds from Bentumersiel as remains of that base. In the latter case the finds from Winsum would represent a camp among the Frisii, and in view of their

476 Vell. 2, 110-111.

477 Cass. Dio 56, 23, 1-3.

478 Deutsches Archäologisches Institut, Jahresbericht 2011, Archäologischer Anzeiger 2012/1 Beiheft, 129f.

479 The presence in the same well of, among other things, eight unused millstones and a horse's head made from gold-plated bronze indicates a chaotic evacuation which ties in better with the events of AD 9 than with the proposed termination of Germanicus' campaigns after AD 16.

480 Vell. 2, 121, 1.

481 Compare the detailed reconstruction of the events in those years by Syme (1978, 53-64).

482 Tac. ann. 1, 34-36.

483 The question of whether it was awarded at the beginning of the year (Syme 1978, 59-61) or at the end (Timpe 1968, 43-51) is not of overriding importance, although an early grant would stress the urgency.

date range one that outlived Germanicus' campaigns. In the absence of recognisable features of military structures neither hypothesis may be very satisfactory, but it should be remembered that the Frisii – *trans-rhenanus populus*<sup>484</sup> – were still paying tribute in AD 28. And whether or not Velsen was the fort *cui nomen Flevum* where Olennius sought refuge from the rebelling Frisii, there clearly was a garrison in their territory. No Germanic tribe had crossed the Rhine since 12 BC, not even in the aftermath of the defeat of Varus' legions, but the army which had been enlarged to eight legions on the latter occasion was not reduced after the departure of Germanicus. The safety of Gaul depended on peace and quiet across the Rhine, and it appears that this was best served by an army force of unparalleled size. The provisioning of that army with food and other supplies represented an enormous burden, which the right bank could lighten by providing auxiliary recruits, strategic metals, stone, leather and cereals. It is unlikely that access to these necessities was easily surrendered by leaving the area entirely to its fate.

The Bergisches Land and the Siebengebirge were certainly not given up, as evidenced by the continued exploitation of the lead mines and trachyte quarries in these respective areas. Although it must have been easier to control territories immediately adjacent to the Rhine than more remote areas, the ongoing occupation of these parts sheds more doubt on the supposition that Germany was evacuated. Since some or most of the presumed military installations may have been briefly occupied, they will be difficult to detect, the more so since we are still in the dark as to where such camps may be expected.

The attentive reader will have sensed a disinclination to believe in the existence of a »grand strategy«, a »Gesamtkonzept« conceived in 16-13 BC at the latest and including the annexation of the territories between the Rhine and Elbe and their conversion into the province of Germania. It is questionable whether knowledge of the geography and terrain allowed a proper assessment of the feasibility of such a policy at all<sup>485</sup>.

Drusus' decision to build a more or less permanent base at Oberaden in the winter of 11/10 BC may have been inspired by a wish to control the Sugambri and/or by the need to create a logistical node for ground operations further to the east – after all he had only just fallen short of supplies on the Weser. By 9 BC he had traversed the whole of the northern lowlands as far as the Elbe, and the entire Mittelgebirge to the north of the Main. By that time he had acquired a thorough knowledge of the region. He may well have decided that a proper control of the area required a reliable passage over the Rhine and the Flevo lakes to the Ems, Weser and Elbe – hence the construction of a groyne near *Carvium* and the digging of the *fossa* or *fossae* named after him.

It now appears beyond doubt that once Tiberius had finished the job after his brother's death, it was decided to create a German province including territories both east and west of the Rhine, with Cologne as its capital. Haltern and Waldgirmes were built as stepping stones in the process, and if we attach credence to Dio's use of the plural *πόλεις* (cities)<sup>486</sup> there are more pioneer towns awaiting discovery. In view of the dating evidence for Waldgirmes the provincial development project must have started immediately or soon after Tiberius' victory in 8 BC, but it suffered from violent interruptions culminating in the defeat of Varus in AD 9. The formal status of Germania between 8 BC and the first occurrence of Germania Inferior in a military diploma dated to AD 90 is the subject of much discussion<sup>487</sup>. With the exception of the following two points, that discussion will not be addressed here. Firstly, the mention of auxiliaries serving in units *qui sunt in Germania* (who are [stationed] in Germania) in military diplomas dated to as early as AD 65 seems to imply

<sup>484</sup> Tac. ann. 4, 72.

<sup>485</sup> Cf. Timpe 2007.

<sup>486</sup> Dio 56, 18, 2.

<sup>487</sup> Compare for recent contributions: Eck 2004a, 214-220; 2004b; Ausbüttel 2011.

that a province of Germania existed before Domitian's victory over the Chatti in AD 83, which is often taken as a *terminus post quem* for the formal creation of the province. Secondly, the early existence of a German province would prevent competence disputes between the legates of the province of Gallia Belgica, who were of praetorian rank, and the legates of the Lower German army – if there was no German province these legates were merely army commanders – who were ex-consuls<sup>488</sup>.

Whether or not the ladder from Waldgirmes proves that the town was either not evacuated or reoccupied after the Varian defeat, there is reason to believe that transrhene Germania had been recovered by Tiberius and Germanicus in AD 13, restoring the situation reached by 8 BC. If so, it is difficult to see why the process of provincialisation would not have been resumed again, in which case Augustus' testamentary claim that he had pacified Germania as far as the mouth of the Elbe was in keeping with reality.

Germanicus' campaigns immediately following Augustus' death might constitute a major argument against the former interpretation. But if they were merely a desperate attempt to wipe away the stains of the legionary mutiny they were not an extension of the preceding operations – just *post*, not *propter*. Such a view would tie in well with Tiberius' efforts to immediately abort the actions of Germanicus and to return to the situation of AD 13. And that situation was not the ultimate evacuation of transrhene Germania, but the maintenance of the status quo with a minimum of military presence to the east of the Rhine, backed up by a huge army force on the left bank. The tributary status of the Frisians in AD 28 and the continued exploitation of metals and stone may serve to illustrate that Germania was simply too important to be abandoned.

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<sup>488</sup> This point is raised by Eck (2004a, 220, but with different conclusions).



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## APPENDIX

List of soil units used in **supplement 1** with corresponding (classes of) soil units from the European Soil Database ESDB 2.0 (cf. Jones/Montanarella/Jones 2005, 25-33 and 40 f.).

### Supplement 1

*water*  
 sea and ocean  
 lakes and rivers  
*lowlands*  
 fens and bogs  
 periodically flooded/wet areas  
 dunes and beach barriers, coversand areas and acid soils on clay  
 fertile soils developed in loess, silt and clay (black soils)  
 fertile soils moderately developed (brown soils)  
*anthropogenic areas*  
 urban centres  
 disturbed areas  
*mountainous areas*  
 glaciers  
 rock outcrops  
 undulating land and steep slopes

### ESDB 2.0

water body  
 -  
 O, marsh  
 G, J  
 D, P, Q, U  
 C, H, L, M, V  
 B  
 urban  
 ATa, ATc  
 glacier  
 rock outcrops  
 E, R

### **Eine nachhaltige Grenze? Die Etablierung der römischen Grenze im Rheindelta**

Dieser erste von drei Artikeln befasst sich mit den Resultaten einer interdisziplinären Studie über die Kette von Kleinkastellen aus den Jahren um 40 n. Chr. am Südufer des Rheins zwischen Vechten (prov. Utrecht/NL) und der Nordseeküste. Das Projekt konzentrierte sich auf die Gründe für die Etablierung dieser Militäranlagen und auf die dazu notwendigen Anstrengungen zu ihrer Erbauung und Unterhaltung. Diesen Fragen hat sich ein Team aus Wissenschaftlern verschiedener Fachbereiche gewidmet: Archäologie, Geomorphologie, Paläobotanik und Archäozoologie.

Während das Projekt formell auf den Zeitraum von ca. 40-140 n. Chr. beschränkt war, diskutiert dieser Artikel die vorangehende Zeit: den Übergang von der späten Eisenzeit in die frühe Kaiserzeit. Die Geschehnisse von 40 n. Chr. an können ohne ein Grundverständnis des Vorausgehenden nicht klar bewertet werden: die vorrömische Landschaft und Besiedlung des Niederrheindeltas, Roms Eroberung Galliens und seine Streitigkeiten mit den rechtsrheinischen germanischen Völkern.

Die Geschichte ist in die historischen Quellen eingebettet und daher grundsätzlich chronologisch aufgebaut, aber es gibt verschiedene Exkurse zur Landschaft und ihrer Nutzung, mit dem Rhein und seinem Delta als herausragendem Element, sowie zur militärischen Versorgung, die in einer Zeit der Eroberungen von lebenswichtiger Bedeutung war. Es scheint, dass der politische Wettstreit während der späten Republik der Schlüsselfaktor für die Expansion in den Nordwesten war, und einmal begonnen, gab es kein Zurück. Jede Eroberung bewirkte neue Bedrohungen, die wiederum weitere Aktionen erforderten, soweit es die natürliche Landschaft und das militärische Versorgungsnetzwerk erlaubten.

Schließlich rückten die römischen Truppen bis an die Elbe vor, und es besteht wenig Zweifel daran, dass Augustus den größten Teil der eroberten Gebiete zwischen Rhein und Elbe zur römischen Provinz machen wollte. Obwohl dieses Ziel schon in greifbare Nähe rückte, als Tiberius 8 v. Chr. alle germanischen Völker zwischen Rhein und Elbe unterwarf, wurde der tatsächliche Erfolg immer wieder vereitelt. Generell wird angenommen, dass der Abbruch der römischen Militäraktionen nach 16 n. Chr. die endgültige Aufgabe des imperialen Traums von einer germanischen Provinz östlich des Rheins bedeutet, aber der fortwährende Tributstatus der rechtsrheinischen Frisii und das Potenzial des Gebiets für die militärische Versorgung – einschließlich Getreide, Fleisch, Leder, Metallrohstoffe, Gestein und Armeerekruten – wirft Zweifel an dieser Schlussfolgerung auf.

Zum Zeitpunkt des Todes von Kaiser Tiberius 37 n. Chr. wurde Germanien nicht notwendigerweise als verloren angesehen, und es mag kein Zufall sein, dass sein Nachfolger Caligula den Rhein überquerte, als er zur Sicherung seiner Machtansprüche einen schnellen militärischen Erfolg benötigte.

### **A sustainable frontier? The establishment of the Roman frontier in the Rhine delta**

This is the first of a series of three papers synthesising the results of an interdisciplinary study of the chain of small forts built c. AD 40 on the southern bank of the Rhine between Vechten (prov. Utrecht/NL) and the North Sea coast. The project focused on the reasons for the establishment of these military installations and on the efforts required to build and maintain them. These questions were addressed by a team of researchers from diverse backgrounds: archaeology, geomorphology, palaeobotany and zooarchaeology.

Whereas the project was formally restricted to the period c. AD 40-140 this first paper discusses the preceding era: the transition from the Late Iron Age into the early principate. The events from AD 40 onwards cannot be properly assessed without a basic understanding of what preceded: the pre-Roman landscape and habitation of the lower Rhine delta, Rome's conquest of Gaul and its struggles with the Germanic peoples from the right bank of the Rhine.

The narrative is embedded in the historical sources and therefore essentially chronological, but there are several digressions on the landscape and its use, with the Rhine and its delta as a prominent element, and on military supply, which is of vital importance in a period of conquest. It appears that the political rivalry of the late Roman Republic was the key factor in the expansion to the Northwest, but once set off there was no way back. Each conquest induced new threats demanding further actions, as far as the natural landscape and the military supply network allowed.

Eventually the Roman troops advanced to the Elbe, and there remains little doubt that Augustus intended to turn most of the annexed territory between the Rhine and Elbe into a Roman province. Although this goal came within reach once Tiberius subjected all Germanic peoples between Rhine and Elbe in 8 BC, its full achievement was time and again frustrated. It is generally assumed that the abortion of the Roman military campaigns after AD 16 marks the definite abandonment of the imperial dream of a German provincial territory east of the Rhine, but the continuing tributary status of the transrhene Frisii and the potential of the area for military supply – including cereals, meat, leather, metal ore, stone and army recruits – shed doubt on that conclusion.

At the death of emperor Tiberius in AD 37 Germania was not necessarily considered lost, and it may not be a coincidence that his successor Caligula crossed the Rhine when he needed a quick military success to secure his grip on the imperial throne.

### **Une frontière durable? L'établissement de la frontière romaine dans le delta du Rhin**

Cette contribution est le premier d'une série de trois articles qui synthétisent l'étude interdisciplinaire sur la chaîne de fortins établis vers 40 ap. J.-C sur la rive sud du Rhin, entre Vechten (prov. Utrecht/NL) et la côte de la mer du Nord. Ce projet vise les motifs qui ont déterminé l'implantation de ce dispositif militaire et les efforts nécessaires à sa construction et à sa maintenance. Ces questions ont été élaborées par une équipe de chercheurs venant de différentes disciplines: archéologie, géomorphologie, paléobotanique et zooarchéologie.

Bien que le projet soit limité formellement aux années 40-140 ap. J.-C. environ, ce premier article aborde la période précédente: la transition de l'Âge du Fer tardif au début du Principat. On ne peut évaluer correctement les événements à partir de 40 ap. J.-C. sans disposer des connaissances essentielles sur ce qui a précédé: le paysage pré-romain et l'occupation du delta du Rhin, la conquête de la Gaule par Rome et ses luttes avec les peuples germaniques de la rive sud du Rhin.

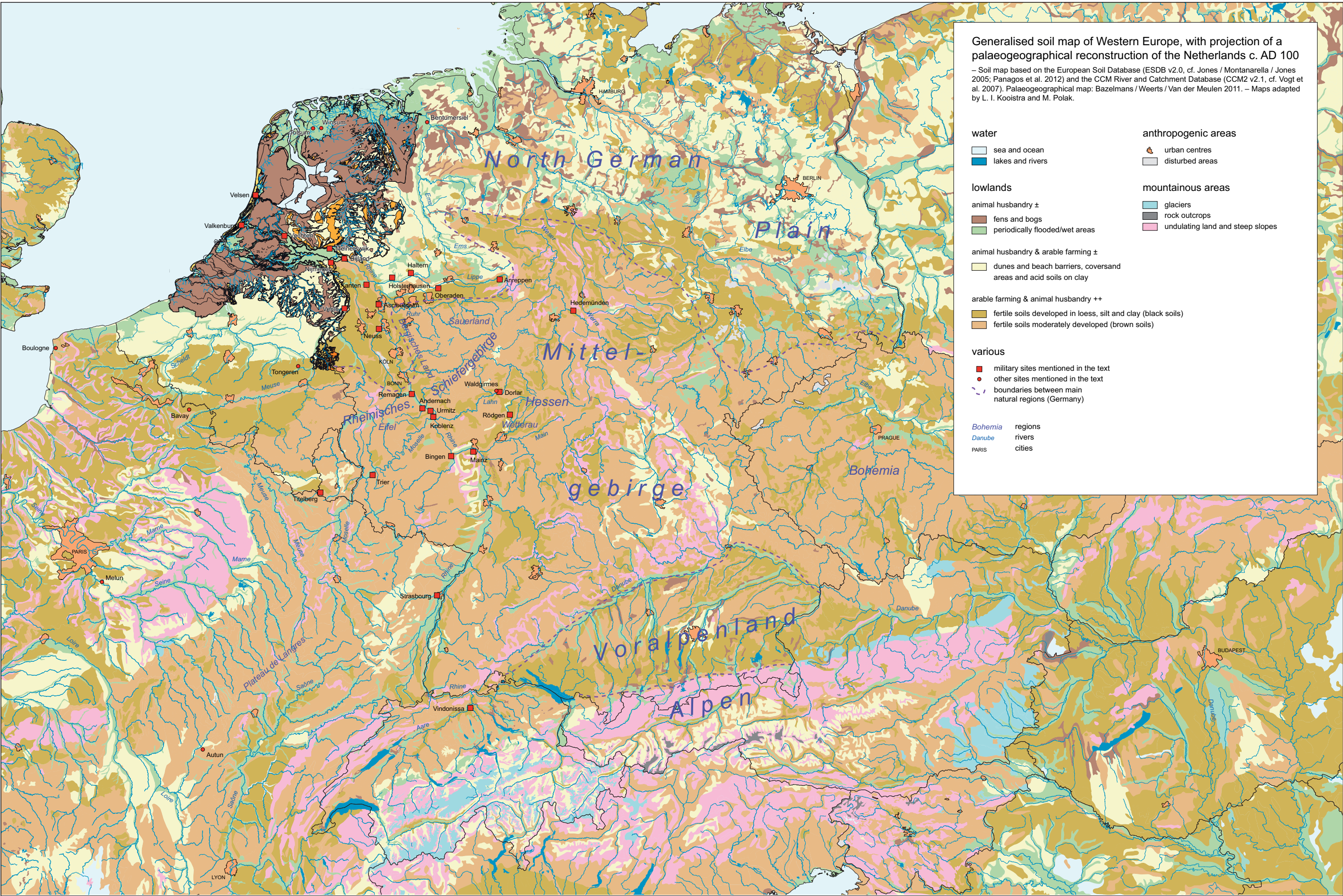
Le récit est intégré aux sources historiques et donc essentiellement chronologique, mais il présente quelques digressions sur le paysage et son exploitation, avec le Rhin et son delta comme éléments principaux, et sur le ravitaillement militaire, d'une importance vitale en période de conquête. Les conflits politiques de la fin de la République furent apparemment un facteur clé de l'expansion vers le nord-ouest, mais une fois déclenchée, plus moyen de l'arrêter. Chaque conquête entraînait de nouvelles menaces qui, à leur tour, réclamaient de nouvelles actions dans la mesure où le permettaient le terrain et le réseau de ravitaillement militaire.

Les troupes romaines avancèrent finalement jusqu'à l'Elbe et il n'y a guère de doute qu'Auguste avait l'intention de créer une province avec les territoires conquis entre le Rhin et l'Elbe. Ce but fut presque atteint avec la soumission en 8 av. J.-C. de toutes les tribus vivant entre le Rhin et l'Elbe, mais sa réalisation échoua chaque fois. On admet généralement que l'arrêt des campagnes militaires après l'an 16 ap. J.-C. marque l'abandon du rêve impérial d'une province germanique à l'est du Rhin. Mais le fait que les Frisons d'outre-Rhin continuaient de payer un tribut et que la région offrait un potentiel intéressant pour le ravitaillement militaire – céréales, viande, cuir, minerais de métaux, roches et recrues – fait douter de cette conclusion.

La Germanie, après la mort de Tibère en 37 ap. J.-C., ne fut pas nécessairement considérée comme perdue et le fait que son successeur Caligula ait franchi le Rhin pour obtenir un succès militaire rapide, en vue de s'assurer le trône impérial, n'est peut-être pas une coïncidence.

Traduction: Y. Gautier





Generalised soil map of Western Europe, with projection of a palaeogeographical reconstruction of the Netherlands c. AD 100. – (Cf. appendix p. 456).