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FESTSCHRIFT FÜR BARBARA PFERDEHIRT

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AN EARLY ROMAN NAVAL BASE AT VECHTEN (PROV. UTRECHT / NL): FACTS AND FICTION

It was probably only in the first years of the 20th century that a wider international audience became aware of the significance of Vechten (prov. Utrecht/NL) as a Roman settlement, by the publication of parts III 1 and II 2 of volume XIII of *Corpus Inscriptionum Latinarum* in 1901 and 1906. Stone altars dedicated to deities including Oceanus, Neptune and Rhenus, and countless stamps on bricks and terra sigillata led to the conviction voiced by Déchelette (1904), Ritterling (1906) and Willers (1907), amongst others, that *Fectio*¹ had been an important harbour, be it military or civilian (fig. 1)².

Thus, when in 1914 the prominent Dutch archaeologist Holwerda initiated the first of a long series of excavations at Vechten, he had no doubts about the character of the uncovered remains, as the title of the first excavation report demonstrates: »Vechten. Früh Römisches Kastell und Flottenstation«³. The identification of Vechten as an early station of the fleet was corroborated by the discovery in 1915 of an inscription recording a *trierarchus* – captain of a warship – by the name of C. Iulius Bio⁴.

It has long been overlooked that decades before Holwerda's first excavation remains had come to light of **two ships** and of what appear to have been **revetments along the Rhine bank**⁵. These earlier finds only resurfaced when new examples were discovered of constructions considered as quays and landing stages.

It seems to have taken until 1972 before the evidence accumulated during the excavations carried out from 1914 to 1947 received the attention it deserved, in Wells' influential study on the German policy of Augustus⁶. Although he was critical about the excavators' interpretations of some of the uncovered features, Wells supported the hypothesis that Vechten was a naval base. In his view it may have been founded during the German operations of Drusus in 12-9 BC.

When Wynia and the present author published an overview of all the excavations at Vechten in 1991, they stated that »the role of Vechten as a naval base is anything but proven«⁷. This sceptical view was contended in 2000 by Konen in his study on the German fleet⁸, partly with good arguments. In this paper the debate is resumed, with a review of the key finds and new evidence.

1 The Roman name of the site occurs on a dedicatory altar (CIL XIII 8815). It is mentioned as »*Fictione*« by the Anonymus Ravennas and is identified with »*Fletione*« on the *Tabula Peutingeriana*, which is generally considered as a writing error of a medieval copyist.

2 The palaeogeographical map of the Netherlands is adapted from Vos et al. 2011 (map AD 100). The generalised soil map of Germany is based on the Bodenübersichtskarte der Bundesrepublik Deutschland 1:1,000,000 and was made by the present author and L. I. Kooistra. Due to erosion and extraction peat will have been more widespread in the Roman period than the actual situation indicates.

3 Holwerda 1915.

4 CIL XIII 12086a.

5 Nahuys 1868, 147-150, almost certainly relating to an excavation carried out in 1834; Muller 1895.

6 Wells 1972, 101-116.

7 Polak/Wynia 1991, 143-145.

8 Konen 2000, 274-280, concluding (p. 280): »Die von Polak und Wynia vertretene Sicht, das frühkaiserzeitliche *Fectio* [sei ein] reines Auxiliarlager gewesen [...] ist sicher nicht stichhaltig. Vielmehr scheint das Lager in der iulisch-claudischen Zeit zumindest ein *auch* von der Flotte genutzter militärischer Komplex gewesen zu sein«.

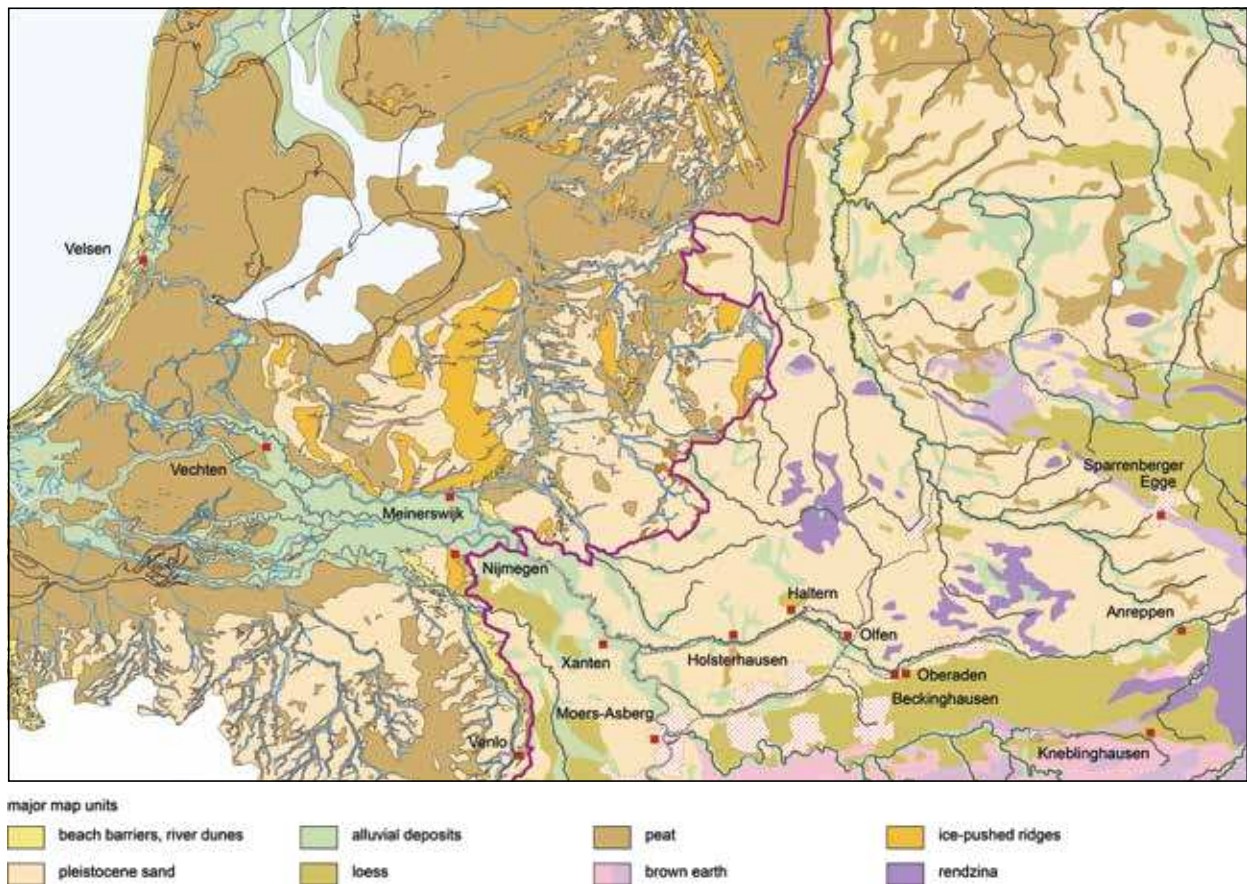


Fig. 1 Military settlements from the Augustan and early Tiberian period plotted on a palaeogeographical map of the Netherlands (c. AD 100) and a generalised modern soil map of Germany. – (Map M. Polak / L. I. Kooistra, adaptation of existing maps [cf. note 2]).

CHRONOLOGY

The foundation date of the military settlement at Vechten has always been a controversial issue. The opinions of the successive excavators varied from Drusus' campaigns in 12-9 BC to those of Germanicus in AD 14-16⁹. As their conclusions generally rested on unpublished finds¹⁰, it was for a long time impossible to evaluate their plausibility. However, by the publication of 1283 dateable coins¹¹ and of 776 potters' stamps on »Arretine« terra sigillata¹² the key sources for this debate have meanwhile become available¹³.

⁹ e.g. Holwerda 1925, 185; Remouchamps 1924, 6; Braat 1939, 62; van Giffen 1949, 32. Cf. Polak/Wynia 1991, 143 for further details.

¹⁰ Only Muller's report of the 1892-1894 excavations includes an overview of the finds (Muller 1895).

¹¹ Tymann 1996, based on an unpublished master thesis (University of Leiden, 1994) which includes a full catalogue. In 1950

Jongkees already discussed 836 coins, all of which were probably incorporated in Tymann's study.

¹² Oxé/Comfort 1968. – Oxé/Comfort/Kenrick 2000 (with some additions).

¹³ The finds from the 1946-1947 campaign by van Giffen have recently been published (Zandstra/Polak 2012).

Coins

A considerable part of the Vechten coins has survived in antiquarian collections, which are characterised by a heavy predominance of silver specimens, explaining the high amount of Republican coins (**tab. 1**). Since Republican silver coinage circulated in large quantities at least until the end of the 1st century AD, this group is hardly relevant to the discussion, which will therefore focus on the bronze coinage.

In order to assess the foundation date of Vechten, the major issues from the Augustan period may be compared to those from Oberaden (Kr. Unna), Haltern (Kr. Recklinghausen) and Velsen 1 (prov. Noord-Holland/NL) (**tab. 2**)¹⁴. Such a comparison is complicated by the circumstance that both Oberaden and Haltern have been evacuated during the period under consideration¹⁵, whereas occupation at Vechten seems to have continued interruptedly into the 3rd century¹⁶. As a consequence, using relative numbers (percentages) may be misleading in some cases.

The coin assemblage of Oberaden, with its foundation securely fixed to 11 BC by dendrochronology, almost entirely consists of Nemausus I coins, usually dated to c. 20/16-10 BC¹⁷. Their rarity at Vechten therefore strongly favours a post-Drusus building date. The same accounts for the presence so far of only a single Celtic coin at Vechten¹⁸, apart from 16 specimens of the Aduatuci/Avaucia group Scheers 217¹⁹. With the exception of a few series including these Avaucia coins Celtic issues are relatively rare at military sites founded after Drusus' campaigns. However, since Celtic coins from the Augustan era are often smaller than Roman coins and of a totally different character, it cannot be excluded that the collection history of the Vechten coins has had a negative influence on their frequency, but there may have been other factors at work.

Felling dates in the winter of 8/7 BC of trees used for the construction of a well provide a *terminus post quem* for the evacuation of the base at Oberaden²⁰. Since Tiberius celebrated a triumph for his German campaigns in 7 BC Oberaden may actually have been given up in that year. It is generally assumed that the »Hauptlager« at Haltern was established soon thereafter, but the lapse of time still cannot be stated more precisely²¹. The coin assemblage of Haltern is dominated by the first series of coins struck at Lugdunum with an image of the *ara Romae et Augusti* on their reverse²². Although this altar was probably dedicated as early as 12 BC²³, the absence of these coins at Oberaden has been an important argument to date their issue from 7 BC onwards²⁴. Avaucia coins constitute the next frequent group at Haltern, which together with their near absence at Oberaden has led to the supposition that they were struck from c. 10 BC onwards, somewhere in the Lower Rhine area²⁵.

Although the coin assemblage of Vechten is much smaller than that of Haltern, the number of Lugdunum I coins is considerable. Vechten, however, has a much lower number of Avaucia coins. As remarked above,

¹⁴ Oberaden: Ilisch 1992; Haltern: FMRD VI, 4057; Velsen 1: Bosman 1997, 247-267 (the number of Lugdunum altar II coins in the table on p. 262 [4 exx.] does not correspond with the catalogue [11 exx.: nos 39, 45-48, 122-125 and 171-172]).

¹⁵ The commonly accepted evacuation date of AD 9 for Haltern is not uncontested, however (cf. e. g. Kehne 2000; Wolters 2000).

¹⁶ The continuous character of the occupation of the military fortifications in the western Netherlands has been challenged by de Weerd (2006). Even if he is correct, the breaks in the occupation will have been too short to be recognisable, due to the limited chronological »resolution« of the relevant find groups.

¹⁷ RPC 523; RIC I(2) 155-157.

¹⁸ Not further specified in Tyman's list.

¹⁹ Scheers 1977.

²⁰ The trees in question have been felled after the late summer of 8 BC and before the spring of 7 BC (Kühlborn 1992, 130).

²¹ von Schnurbein 1981, 39-41; 1982, 137-139; 2011, esp. 79.

²² RIC I(2) 230.

²³ Liv. Periocha 139; Cass. Dio 54, 32, 1. Suetonius (Claud. 2) dates it to the year 10 BC, but this barely affects the argument.

²⁴ van Heesch 1993. At that time the striking of gold and silver coins at Lyon (départ. Rhône/F) was interrupted, to be resumed in 2 BC with mention of Augustus' new title *pater patriae*. As this honorary title does not occur on the first altar series, van Heesch is of the opinion that the production of this bronze coinage did not surpass 3 BC.

²⁵ Wigg 1996, 420. This accounts for the so-called anepigraphic series II and III represented at Vechten.

	AV	AR	AE	total	%
Republic	0	139	2	141	19.6
Augustus	1	23	211	235	32.6
Tiberius	0	0	34	34	4.7
Caligula	0	1	162	163	22.6
Claudius	1	2	71	74	10.3
Nero	11	9	54	74	10.3
total	13	174	534	721	100.0

Tab. 1 Overview of the pre-Flavian coins from Vechten (prov. Utrecht/NL) presented by Tymann (1996), supplemented with 72 coins from the 1946-1947 excavations.

coin group	Oberaden	Haltern	Vechten	Velsen	% Oberaden	% Haltern	% Vechten	% Velsen
Nemausus I	302	108	5	5	98.4	5.0	2.9	5.6
Scheers 217	2	764	16	1	0.7	35.6	9.1	1.1
Lugdunum I	0	1098	53	18	0.0	51.1	30.3	20.0
moneysers	3	177	57	55	1.0	8.2	32.6	61.1
Lugdunum II	0	0	44	11	0.0	0.0	25.1	12.2
total	307	2147	175	90	100.0	100.0	100.0	100.0

Tab. 2 Numbers and percentages of the major Augustan issues from Oberaden (Kr. Unna), Haltern (Kr. Recklinghausen), Vechten (prov. Utrecht/NL) and Velsen 1 (prov. Noord-Holland/NL).

the rarity of Celtic coins at Vechten may have been influenced by the character of the coin collection, but it seems unwise to reject any chronological significance. Yet it is evident that the Vechten coin series has more in common with that of Haltern than with that of Oberaden.

The military base of Velsen 1 is believed to have been laid out during Germanicus' campaigns, in AD 15 or 16²⁶. This hypothesis rests exclusively on the coin series and the terra sigillata, but it is to a certain extent corroborated by felling dates of AD 21 for timbers from a repair phase of a pier²⁷. Among the coins from Velsen 1 the so-called moneysers' issues²⁸ from the senatorial mint at Rome are by far the most frequent. These coins are supposed to have been struck in c. 23-4 BC, but it is assumed that the fourth series, minted c. 7-6 BC, reached the Rhineland mainly after the Varian disaster of AD 9, because of their rarity at Haltern, their often heavy wear and the occurrence of Tiberian countermarks²⁹. Velsen has also produced coins of the second altar series of Lugdunum³⁰, although in smaller numbers than those of the first. The mention of Tiberius as Caesar on most of its variants, with the imperial salutations V-VII, allows for a date of c. AD 9-14 for the second series³¹. The predominance of altar series I over series II is a general phenomenon at Rhenish sites occupied throughout the Augustan-Tiberian period and seems to be primarily due to differences in the amounts struck³².

Since both Vechten and Velsen 1 continued to be occupied under Tiberius, a comparison of coin percentages is possible here. Whereas at Vechten Lugdunum I and Scheers 217 account for 39% and moneysers' issues and Lugdunum II for 58% of the Augustan aes, the corresponding percentages for Velsen are 21% and 73%. In other words, Vechten has produced nearly twice as many coins pre-dating the defeat of Varus.

²⁶ Bosman 1997, 24.

²⁷ Ibidem 27.

²⁸ RIC I(2), 323-442.

²⁹ Wigg-Wolf 2007, 126-129.

³⁰ RIC I(2), 233-245.

³¹ van Heesch 2000, 154-156.

³² Ibidem 157-163.

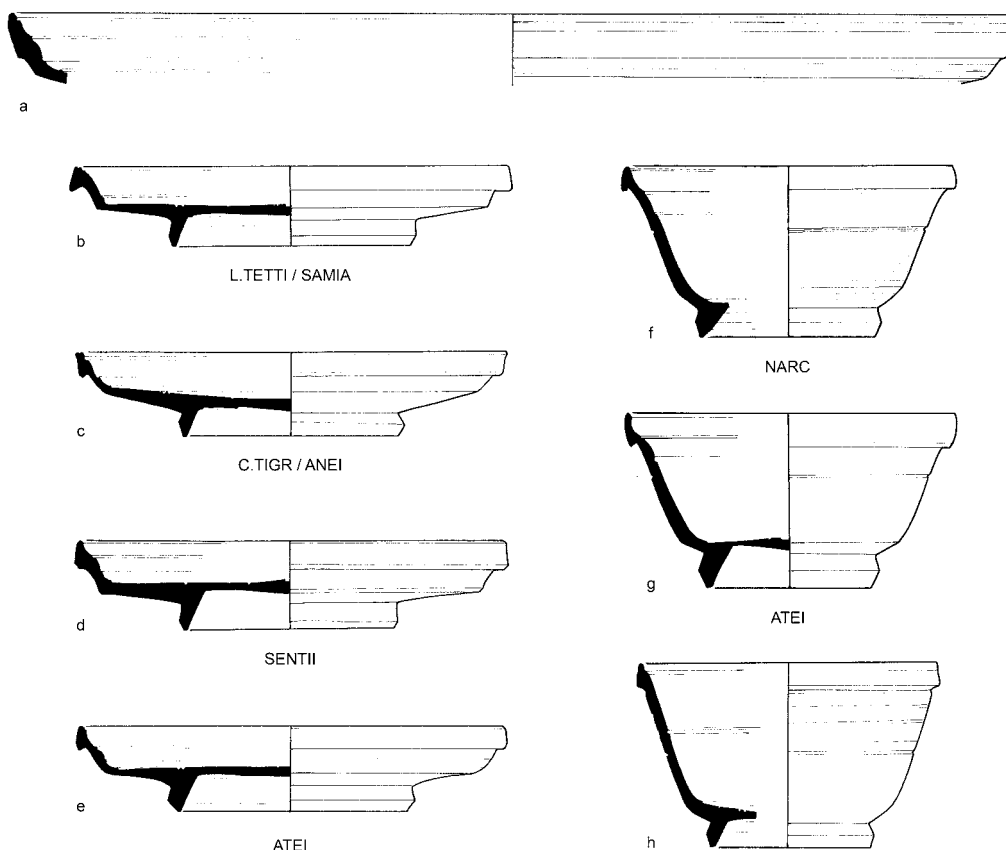


Fig. 2 Selection of Arretine terra sigillata from the 1946-1947 excavation at Vechten (prov. Utrecht/NL): **a** plate service Ic. – **b** dish service Ib. – **c-e** dishes service Ic. – **f-h** cups service Ic. – (Drawings R. P. Reijnen, Radboud Universiteit Nijmegen). – Scale 1:3.

Furthermore, Vechten has much more Lugdunum II asses minted in AD 9-14 compared to the moneyers' issues, part of which did not reach the Rhineland before AD 14. The observed differences constitute a strong argument against a building date during Germanicus' campaigns for Vechten³³.

To sum up, the coin series of Vechten has more in common with that of Haltern than with those of Oberaden and Velsen 1. Yet it cannot be denied that there are also differences between the assemblages of Haltern and Vechten; at present, however, their chronological relevance cannot be estimated. Recent building activities have doubled the Vechten coin collection, and although most of the new coins were recovered from a secondary context³⁴ their analysis will certainly contribute to our understanding of the chronology of the site.

³³ De Weerd is of a different opinion, based on a comparison of the series of Augustan coins from Kalkriese (Lkr. Osnabrück), Vechten and Velsen: »Die Untersuchung der Prägeorte und Gegenstempel zeigt, dass die Serien in Velsen und Vechten praktisch identisch sind« (de Weerd 2003, 181). The presence in datasets of equal size (204 coins from Vechten, 212 from Velsen) of 63 Lugdunum I coins in Vechten and 17 in Velsen (de Weerd 2003, tab. 1 sub I; absolute numbers reconstructed by the present author) may suffice to invalidate his view. De Weerd is correct in so far as the assemblages of Vechten and Velsen

both deviate from that of Kalkriese. Since the former two sites are military bases with a resident garrison and the latter is the scene of a brief event involving a field army campaigning in hostile territory, the observed differences may be due to anything but chronology.

³⁴ Some 1300 coins were recovered in 2012 from soil relocated during the building of a fortification of the so-called Nieuwe Hollandse Waterlinie in 1867-1870. Tens of thousands of Roman objects were found at that occasion, but most of the coins and other small metal artefacts have obviously been overseen.

		Oberaden	Haltern	Vechten	Velsen 1
% of all	Arezzo	58.2	5.0	3.0	2.7
	Lyon	5.1	48.3	32.1	2.7
	Pisa	1.0	31.2	33.9	62.2
% of all	Ateii Arezzo			0.9	
	Ateii Lyon		10.8	7.5	
	Ateii Pisa		27.4	27.9	59.5
% of Ateii	Ateii Arezzo		0.2	1.8	
	Ateii Lyon		24.9	14.5	
	Ateii Pisa		63.3	54.1	84.6
	Ateii unknown		11.1	29.6	15.4
(stamps)		(98)	(1000)	(776)	(37)

Tab. 3 Composition of the assemblages of potters' stamps on Arretine terra sigillata from Oberaden (Kr. Unna), Haltern (Kr. Recklinghausen), Vechten (prov. Utrecht/NL) and Velsen 1 (prov. Noord-Holland/NL). – (Adapted from Rudnick 2006, tab. 4).

Terra sigillata

The potters' stamps on »Arretine« terra sigillata from Vechten figure in recent discussions of the stamp assemblages from Oberaden and Haltern³⁵. For the sake of comparability with the previous paragraph, the stamps from Velsen 1 have also been taken into consideration below³⁶.

In her comments on the stamp series of Oberaden Roth-Rubi does not explicitly refer to Vechten, obviously because only a single »stempelgleiches Stück« has been found here³⁷; Velsen has none. The numbers of stamps involved are large enough to justify the conclusion that the Vechten collection differs considerably from that of Oberaden. This is also apparent from a comparison of the data presented by Rudnick in the context of his assessment of the potters' stamps from Haltern (**tab. 3**). The percentage of stamps from Arezzo alone suffices to make the point. The near absence at Velsen of stamps from potters working at Lyon demonstrates that there is a substantial discrepancy between Vechten and Velsen, too. Since both sites were supplied along the same lines, a difference in chronology is the only likely explanation. Just as in the case of the coin assemblages, the stamp lists from Haltern and Vechten have the most in common, from which Rudnick concluded³⁸: »Das Vechtener Lager und das Hauptlager von Haltern werden über einen langen Zeitraum im 1. Jahrzehnt n. Chr. parallel gelaufen sein. Ihre Gründungsdaten liegen wahrscheinlich relativ nahe zusammen«.

The analysis of the 1946-1947 excavations at Vechten has recently provided us with an overview of a few hundred Arretine sigillata vessels (**fig. 2**). And although the ratios between the Arretine services Ia/b/c and II are today no longer considered as a secure chronological indicator, the absence at Vechten of service Ia and the rarity of service Ib conform well with the previously mentioned lack of overlap between the assemblages from Oberaden and Vechten (**tab. 4**)³⁹. At Velsen only 5 % of the vessels belong to service I, which is represented with 22 % at Vechten, so there is a considerable discrepancy between the assemblages from these sites. Again, Haltern offers the closest parallel; that service II is more frequent at Vechten is understandable from the earlier evacuation of Haltern.

³⁵ Roth-Rubi 2006. – Rudnick 2006.

³⁶ In Oxé/Comfort/Kenrick 2000, on which Rudnick based his survey (2006), only 37 stamps from Velsen occur. The addition of another 37 stamps (van Lith et al. in prep.) does not alter the conclusions based on the previous collection.

³⁷ Roth-Rubi 2006, Übersicht 2.

³⁸ Rudnick 2006, 61.

³⁹ Haltern: von Schnurbein 1982, 26. 29. 41; Vechten: Zandstra/Polak 2012, 104 tab. 5; Velsen 1: Bosman 1997, 174. There is no quantitative data available for Oberaden.

		Haltern	Vechten	Velsen 1	% Haltern	% Vechten	% Velsen 1
service Ib	plates	7	1		0.6	0.5	
	dishes	28	1		2.5	0.5	
	cups	45	7		4.0	3.2	
service Ic	plates	51	2		4.5	0.9	
	dishes	236	24	28	20.7	10.9	5.2
	cups	84	14		7.4	6.3	
service II	plates	38	17		3.3	7.7	
	dishes	193	35	233	17.0	15.8	43.2
	cups	456	120	278	40.1	54.3	51.6
total		1138	221	539	100.0	100.0	100.0

Tab. 4 Numbers and percentages of vessels of the Arretine services I and II from Haltern (Kr. Recklinghausen), Vechten (prov. Utrecht/NL) and Velsen 1 (prov. Noord-Holland/NL).

Conclusion

The evidence presented above clearly demonstrates that Vechten was not an early Tiberian foundation. On the other hand the finds from Vechten have so little in common with those from Oberaden that a starting date during the campaigns of Drusus appears unlikely. As far as the terra sigillata is concerned Vechten has the closest parallels with Haltern; this applies perhaps to a slightly lesser degree to its coin series.

The currently available data seems to justify the conclusion that Vechten was first occupied at the same time as or slightly later than the Hauptlager at Haltern, dated by von Schnurbein »frühestens etwa 7 v. Chr.«, whereas »man wohl um 5 v. Chr. mit der Gründung Halterns rechnen können [wird]«⁴⁰.

However, it is important to keep in mind that the Hauptlager was not the earliest camp at Haltern. It was preceded by the so-called Feldlager, which cannot be dated accurately in the absence of relevant finds. It cannot be excluded that the Feldlager was laid out during Drusus' operations and that the lack or rarity of diagnostic finds is due to the short stay or the very basic equipment of the troops, or to both⁴¹. For the same reasons the possibility of a short-lived military presence at Vechten under Drusus cannot be ruled out entirely.

STRUCTURES

Traditionally, the remains of the Roman fortifications at Vechten have been assigned to three building periods, the first of which was supposed to have ended either by the middle of the 1st century AD or during the Batavian revolt of AD 69/70⁴². In 1991 Wynia and the present author distinguished four phases (a-d) within period I⁴³, and in 2000 the present author suggested that it might not have ended before c. AD 125⁴⁴. The recent analysis of the finds and features of the 1946-1947 excavations has led to a revision of the subdivision of period I (phases I.1-5), which is still supposed to have lasted until c. AD 120/130 at the earliest (**tab. 5**). It is impossible to elaborate here on all the structures of the successive building phases, but the elements relevant to the debate on the character of early Roman Vechten will pass in review.

⁴⁰ von Schnurbein 1982, 139; 1981, 43.

⁴¹ Cf. von Schnurbein 1981, 43.

⁴² Polak/Wynia 1991, 141, with relevant references.

⁴³ Ibidem 141 fig. 15 (Zandstra/Polak 2012, fig. 4).

⁴⁴ Polak 2000, 12.

period / phase	previously	dating
III	III	until after AD 225
burnt layer B5		
II	II	until after AD 170
burnt layer B4		
I.5	(I)	until after AD 120/130
I.4	I a	until after AD 100?
burnt layer B3		
I.3	(I)	until AD 69/70
burnt layer B2		
I.2	cf. I b-d	until after AD 37/38
burnt layer B1		
I.1	cf. I b-d	until after AD 10

Tab. 5 Revised chronology of the military installations at Vechten (prov. Utrecht/NL). – (After Zandstra/Polak 2012, 260 tab. 32).

Bank revetments and other timber structures related to the Rhine

It is beyond doubt that the choice of Vechten as the site for the first military base in the western Netherlands was motivated by its situation on the south bank of a now silted up Rhine channel, just upstream from the point where the river Vecht forked off northward (fig. 3). Its position in an outward bend of the Rhine had the advantage that ships could easily moor in front of the military installations, as the channel was at its deepest there; at the same time it made the southern bank prone to erosion.

There is evidence that the river bank actually suffered from erosion in the pre-Flavian period. One of the sections drawn in 1947 shows the transition of the bank to the channel (fig. 4). The southernmost timber post marks the spot where the earliest levels have been eroded by the river channel, which was entirely filled with debris at a later stage. The thick layer which is cut by the top of the post is almost certainly related to the Batavian revolt. The deepest level on the bank has produced an Italian or very early South Gaulish sigillata sherd, and the first post-erosion filling a fragment of an Augustan or Tiberian jug⁴⁵.

More than 1 km to the east a well has been discovered which was lined with a wine barrel. To judge by its contents the well was filled with clay during a flooding. One of the barrel's staves was branded with the text C CAE AVG GER (fig. 5)⁴⁶, the abbreviated name of the emperor Caligula. On account of this well it is tempting to believe that the settlement suffered from exceptionally high water at some point in the 40s AD, washing away the northern edge of the military installations.

The ¹⁴C date of a peat sample taken from the silted up Rhine channel a few kilometres downstream demonstrates that the meander on the northern edge of the settlement was cut off by a new river branch in the 1st or 2nd century AD⁴⁷. The precise moment cannot be determined, but recent drillings have produced tuff fragments from the base of the peat formed during the final phase of the process of silting up⁴⁸. If construction in stone at Vechten did not occur before period III, that is by AD 170 at the earliest⁴⁹, the cut-off channel may have been navigable until the late 2nd or early 3rd century. This might explain the presence

⁴⁵ For the latter cf. Zandstra/Polak 2012, 154 fig. 93, d (group C).

⁴⁶ The same brand was found on a wooden cask at Valkenburg (prov. Zuid-Holland/NL), attributed to period 1 (c. AD 40-42) (Glasbergen/Groenman-van Waateringe 1974, 37 pl. 11).

⁴⁷ The sample was taken from the base of the peat layers in the residual channel and dated to 1915 ± 50 BP (GrN-7960). Calibration with OxCal and the IntCal13 dataset resulted in cali-

brated date ranges of AD 20-135 (1 sigma) or 36-31 BC/21-11 BC/2 BC-AD 224 (2 sigma). The date ranges mentioned in Zandstra/Polak 2012, 21, are incorrect, due to an error in the standard deviation of the ¹⁴C date (Zandstra/Polak 2012, note 21: ± 15 instead of ± 50).

⁴⁸ Jansen/Briels/Tol 2014.

⁴⁹ Zandstra/Polak 2012, 63. 259.

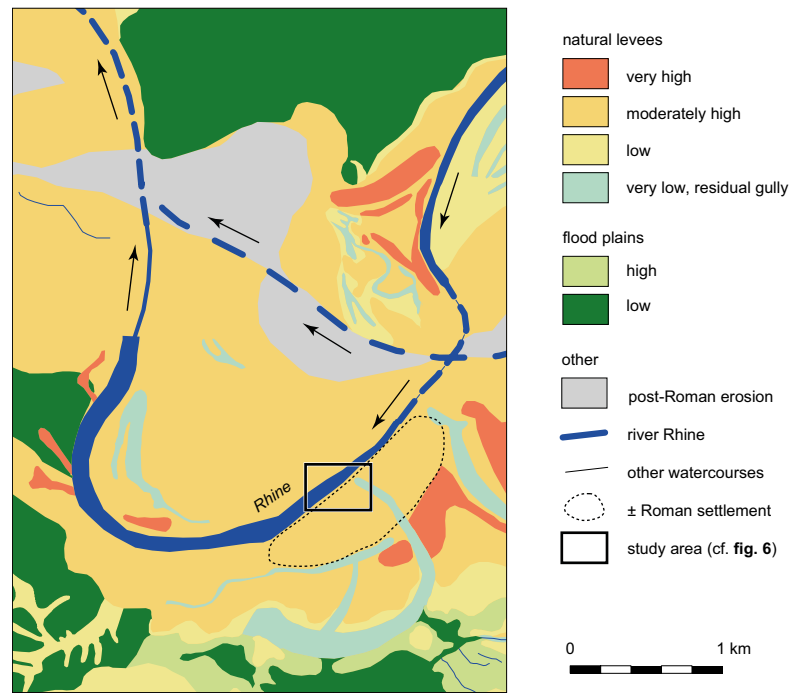


Fig. 3 Geomorphological map of the area around Vechten (prov. Utrecht/NL). – (After van Dinter 2013, appendix 1). – Scale 1:50,000.

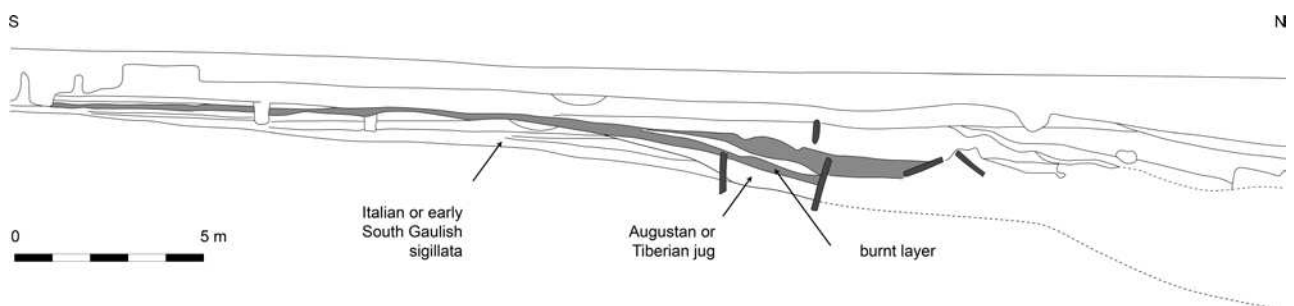


Fig. 4 Vechten (prov. Utrecht/NL). Section showing the transition of the southern bank of the Rhine to the river channel, from the 1946-1947 excavation. – (After field drawing Biologisch-Archaeologisch Instituut, Rijksuniversiteit Groningen). – Scale 1:200.



Fig. 5 Vechten (prov. Utrecht/NL). Stave of a wine barrel branded with the abbreviated name of Caligula, unearthed in 1995. – (Photo M. Polak).

of *nautae qui Fectione consistunt* after the middle of the 2nd century and dedications to Rhenus, amongst other deities, as late as c. AD 220⁵⁰.

⁵⁰ CIL XIII 8815 (*nautae*), 8810 and 8811 (*Rhenus*). For the date of the latter two cf. Alföldy 1967, 54f. nos 67-68.

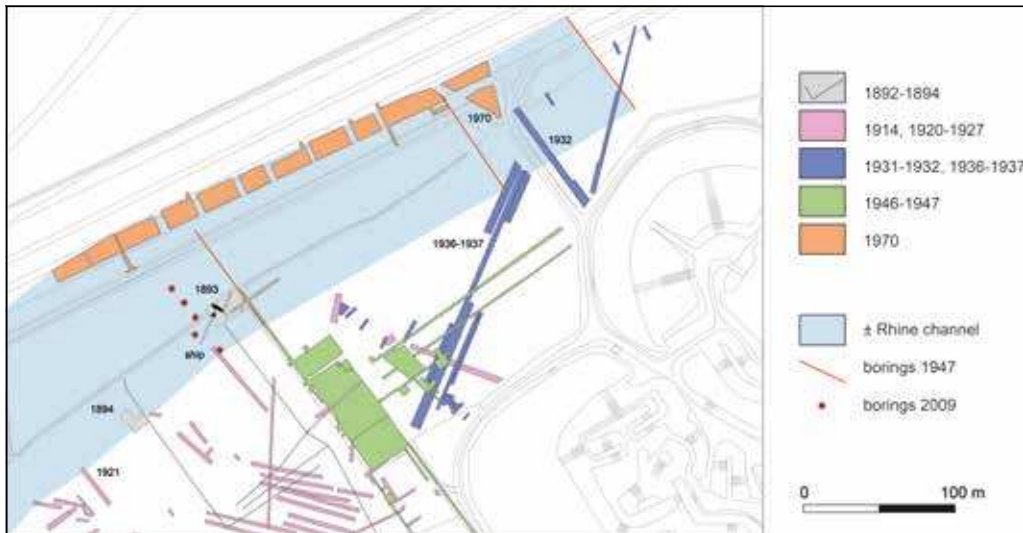


Fig. 6 Vechten (prov. Utrecht/NL). Overview of the excavations on and near the bank of the Rhine. – (Illustration R. P. J. Kloosterman / M. Polak). – Scale 1:5000.

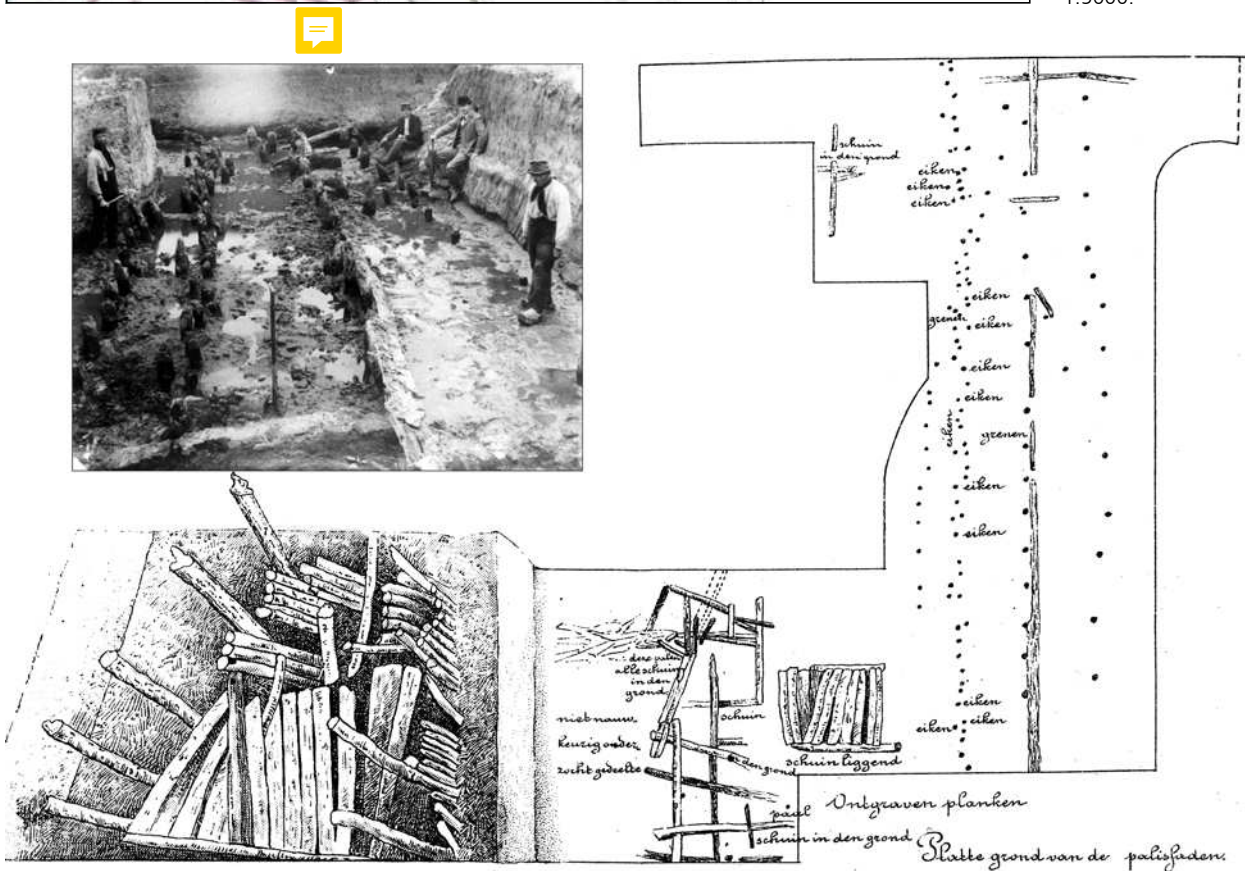


Fig. 7 Vechten (prov. Utrecht/NL). Timber constructions discovered in 1894, viewed from the southwest. – (Plan after Muller 1895, pl. V; photo PUG).

Description of the uncovered features

At the southern edge of the channel several excavations have revealed timbers interpreted as the remains of bank revetments, quays or landing stages, extending over more than 500 m (fig. 6). They will be discussed in the order of their discovery.

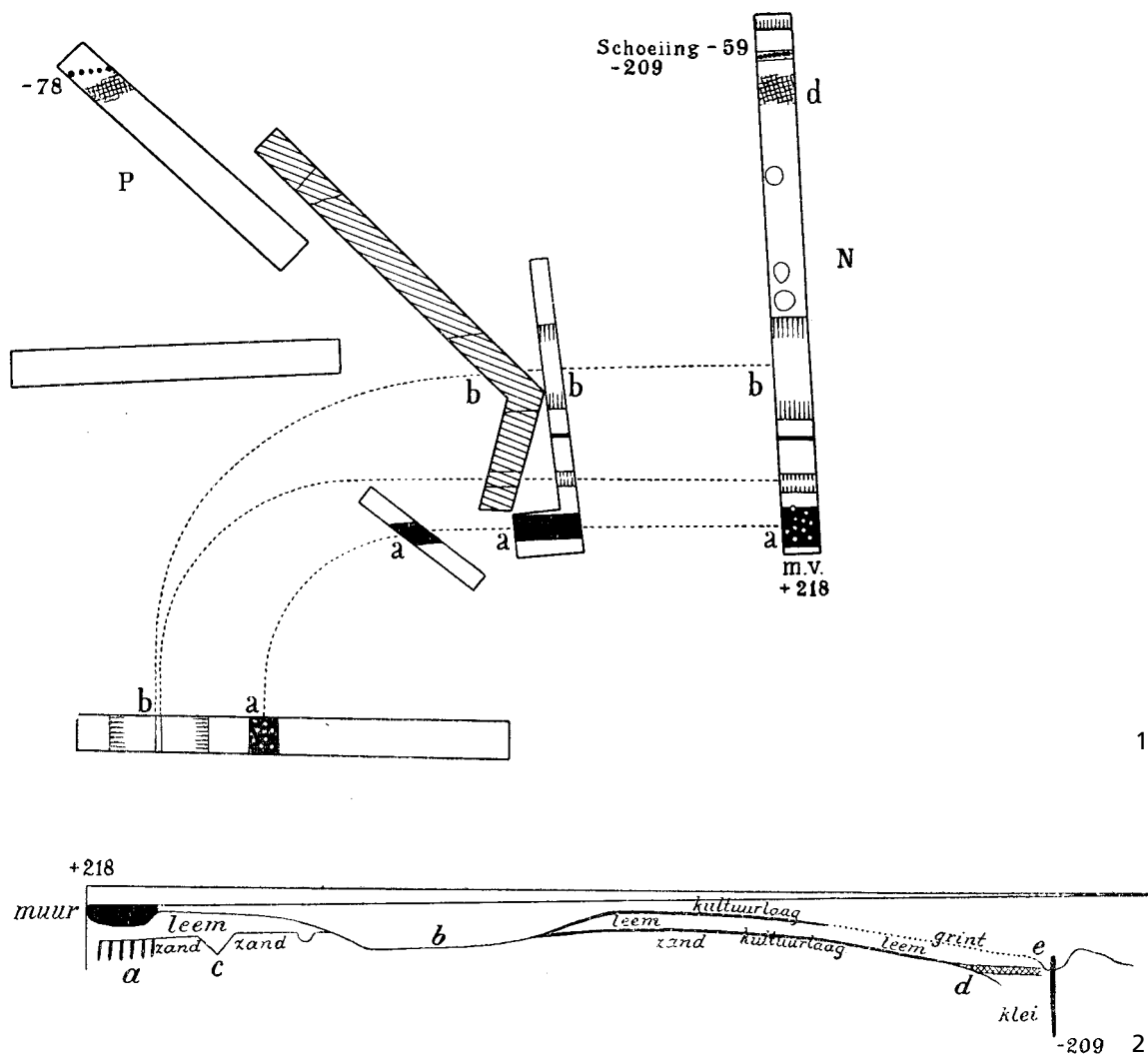


Fig. 8 Vechten (prov. Utrecht/NL): **1** plan of several trenches from the 1921 excavation near the northwestern corner of the fort of period III. – **2** the section of trench N. – (After Holwerda 1922, figs 2-3).

As early as 1834 remains were found of a palisade, considered as the northern defensive wall of a fortification⁵¹. From its description it seems evident that it was a revetment of the Rhine bank: the posts were lined with horizontal planks to their south, and the whole was leaning over to the north. Some 10 m northwards a mass of timber beams was found at a depth of c. 2 m, lying and standing with various orientations; these were considered as the remains of a bridge. The palisade and the »bridge« were connected by a horizontal row of massive oak beams. The location of these finds is unknown, but it may have been close to the trenches of 1936-1937⁵².

During the final campaign of the 1892-1894 excavations a mass of timber came to light just north of the stone fort of period III recognised only later (fig. 7)⁵³. At more than 2.5 m below the surface four parallel rows of posts were revealed over a distance of c. 12 m. One of these rows was lined with two joining hori-

⁵¹ Nahuys 1868, 147-149; the text almost certainly refers to an excavation undertaken in 1834 by a committee appointed by the governor of the province of Utrecht for the exploration of Roman antiquities.

⁵² Polak/Wynia 1991, 126 pl. 1, D.

⁵³ Muller 1895, 137f. In retrospect this excavation report confirms that one of the trenches actually cut the robbed-out foundation of the *principia*.



Fig. 9 Vechten (prov. Utrecht/NL). Heavy posts and horizontal planks or beams on and near the bank of the Rhine, viewed from the south. – (Photo RMO).

zontal planks, c. 40 cm high in all. It somewhat resembled a revetment⁵⁴, but this seemed to be contradicted by the discovery to its north of a mass of horizontal and vertical timbers and posts, partly without obvious coherence. A series of eight or nine planks was held by two beams; another ten or eleven planks and an adjacent beam were interpreted as the remains of a staircase. Most of this timber was situated at an average depth of 3-4 m.

In 1921 several trenches were dug both to the east and to the west of these constructions. Near the north-western corner of the stone fort remains were found of what was interpreted as a landing stage (**fig. 8**, trench N)⁵⁵. At c. 14 m to the north of the stone wall (a) and the flat-bottomed ditch (b) of this fort a layer of brushwood was unearthed (hatched level near d), belonging to an occupation level situated directly on top of the natural, sandy subsoil. The brushwood was considered as a consolidation of the river bank, dating to a phase preceding period III, possibly even the earliest occupation phase. It was covered by clay and a layer of gravel, which stopped at a row of heavy posts (e) reaching until 4 m below the surface. »Here, an unbroken row of heavy posts had protected the bank against the water, during the period in which the site was raised for the last fort«⁵⁶. Both the brushwood and the row of posts reappeared in another trench (**fig. 8**, trench P) 40 m to the west, and (only) the posts in a third trench 60 m to the east. »It was therefore beyond doubt that we had found here, all along the northern front of the fort, the landing stage to which it undoubtedly owed its importance«⁵⁷. In 1922 the heavy posts were once more uncovered, c. 60 m to the west⁵⁸. To their north several horizontal planks or beams came to light, interpreted as the remains of a platform (**fig. 9**). The finds in this area »were mainly from the first period of the Roman settlement; accordingly we may presume that revetment, platform etc. had been built and used at the time of Augustus. It is also

⁵⁴ Muller 1895, 137: »geleek enigszins op eene schoeiing«.

⁵⁵ Holwerda 1922, 76-79.

⁵⁶ Ibidem 78: »Een schoeiing van aaneengesloten zware palen had hier in den tijd, waarin ten behoeve van het laatste castellum het terrein was opgehoogd, den oever tegen het water beschermd«.

⁵⁷ Ibidem 79: »Het leed dus geen twijfel, of we hadden hier langs de geheele N.zijde van het castellum de aanlegplaats weergevonden, waaraan ongetwijfeld het castellum zelf zijn beteekenis dankte«.

⁵⁸ Remouchamps 1928, fig. II, A.

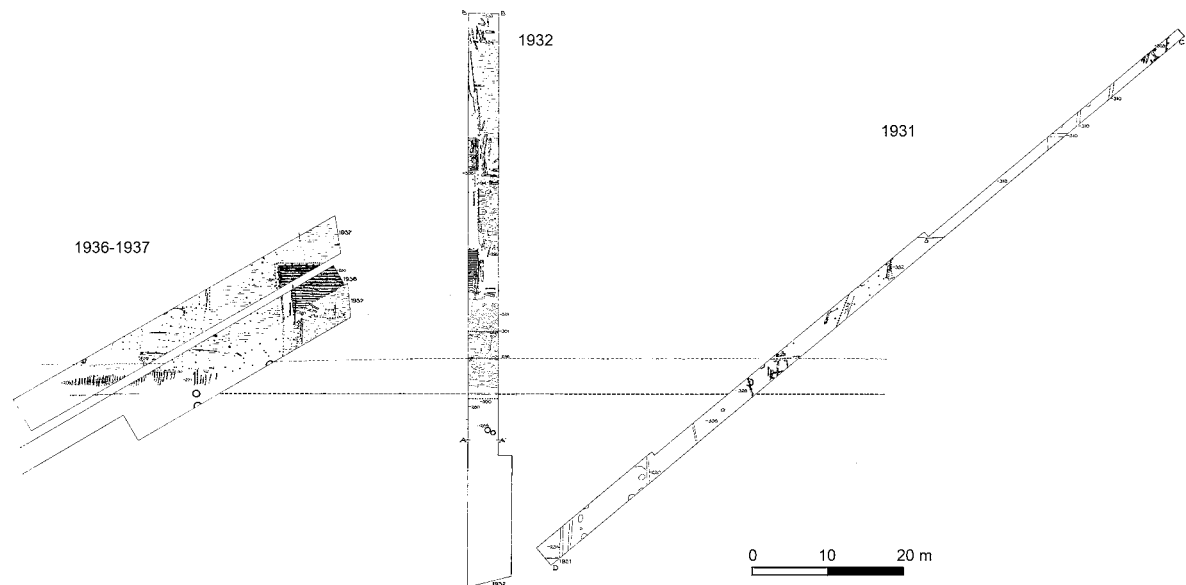


Fig. 10 Vechten (prov. Utrecht/NL). Plan of the trenches from the excavations of 1931-1932 and 1936-1937 at and near the bank of the Rhine. – (After Braat 1939, fig. 38). – Scale 1:1000.

very likely that the Romans continued to use the same bank as a landing stage and that the revetment had to be repaired or rebuilt repeatedly»⁵⁹.

In 1931-1932 and 1936-1937 the attention shifted to the area east of the stone fort. Here further timber structures were discovered alongside the river channel as well as in its filling (**fig. 10**)⁶⁰. The various elements recall those previously unearthed: stretches of brushwood, parallel rows of posts stretching over long distances and clusters of horizontal tree trunks kept together by beams and vertical posts. A new element is the presence of post rows at right angles to the bank. Several of these perpendicular rows were lined with planks, some to the east and others to the west of the posts. »Therefore, this enormous dam construction has been built in sections. Initially a strip was made along the bank, then another, and another; subsequently they started to extend into the river, linking one section to another, until the deeper channel was reached. [...] Its purpose is obvious: it is a landing stage«⁶¹.

Part of the construction was covered by a layer of clay which was supposed to have been applied in or from the final quarter of the 1st century AD. »Judging by the pottery fragments unearthed in the depth between the posts the construction must date from the age of Tiberius. That it must be connected with the expedition of Germanicus in AD 16 [...] is therefore as good as certain«⁶².

In 1946-1947 only a very narrow trench was dug into the Rhine channel, just wide enough to study the section already discussed (**fig. 4**).

⁵⁹ Remouchamps 1928, 5: »Ook de cultuurresten die hier voor den dag kwamen waren in hoofdzaak uit de eerste periode van de Romeinsche nederzetting, zoodat wij mogen aannemen dat schoeiing, vlonder, enz. ook ten tijde van Augustus is gebouwd geworden en gebruikt. Het is tevens zeer waarschijnlijk dat ook in later tijd de Romeinen denzelfden oever als aanlegplaats zijn blijven gebruiken en dat de schoeiing in verloop van tijd herhaaldelijk is moeten worden hersteld of vernieuwd«.

⁶⁰ Braat 1939, 50-57.

⁶¹ Ibidem 57: »Dit geweldige damwerk is dus in perceelen gemaakt. Eerst heeft men langs den oever een strook gemaakt,

toen weer een, toen nog een; vervolgens is men in perceelen, het eene tegen het andere aansluitend, verder de rivier in gaan uitbouwen, tot tenslotte het diepere stroombed bereikt werd. [...] Het doel ervan is duidelijk: het is een aanlegplaats«.

⁶² Ibidem 62: »Blijkens de aardewerkscherven, daar in de diepte tusschen de palen gevonden, moet die aanleg dateeren uit den tijd van Tiberius. Dat hij met de expeditie van Germanicus in 16 n. Chr. in verband gebracht moet worden, [...] is dus wel zoo goed als zeker«.



Fig. 11 Vechten (prov. Utrecht/NL). Timber constructions discovered in 1970, viewed from the north. – (Photo ROB).

Finally, in 1970 a long series of trenches was dug in the filling of the channel, in advance of an extension of the motorway. Only the most southeastern trench revealed timber constructions (**fig. 11**), bearing a close resemblance to those unearthed in 1894, 1932 and 1936-1937:

»It was found to be filled partly with alternating layers of sand and clay, deposited in the course of natural sedimentation, and partly with layers of very dirty, peaty soil sloping down northwards. The latter was clearly refuse and debris from the settlement deliberately dumped into the river. It was especially this dirty soil which yielded a wealth of finds from the second century A. D. [...] All this was overlain by a practically horizontal layer of debris and rubble, which among other things contained pottery sherds from the first half of the third century. Though it was not possible for the river-bed to be investigated in its entirety, it must be assumed, on the basis of the above data, that the Rhine arm on which ›Fectio‹ was situated was completely filled up about or just after A. D. 200, on account both of natural causes and human activities. As was expected, many upright and horizontal posts and stakes were found in association with the layers of debris. They were arranged in rows bending at right angles, running perpendicular to and parallel with the bank. Since the configuration of the various strata in the sections showed clearly that the river was barely navigable when the posts were put in position, the structures formed by them cannot have served as landing-stages or quays for the mooring of ships. This would seem to conflict with Braat's views, expressed in 1939, but then he referred to timber structures situated closer to the south bank and dating from an earlier period. The structures discovered in 1970 probably had the function of revetments containing the soil used for filling up the river-bed. They represent a much later stage in the filling-up operations than Braat's. These later operations should be regarded as an intentional extension of the south bank, carried out systematically and possibly parcel by parcel, which eventually resulted in the river being dammed completely. [...] At some later period the water must have forced its way again through the original bed, partly eroding the layers of refuse and debris dating from Roman times. What is left of this ›dam-burst‹ is a winding gully, running approximately east-west, which could be followed along the entire excavation area. The gully was about 20m wide and at least 2 m deep. At the bottom, the sediment filling the gully consisted of gravel and coarse sand, higher up of clayey sand gradually changing to heavy clay. From this it follows that the water must have flowed very fast during and for some time after the ›dam-burst‹. Fairly soon, however, the gully must have silted up to such a level that all that remained was a marshy, low-lying area. [...] Great difficulties are encountered in dating the gully resulting from the ›dam-burst‹. It is stratigraphically later than all the Roman

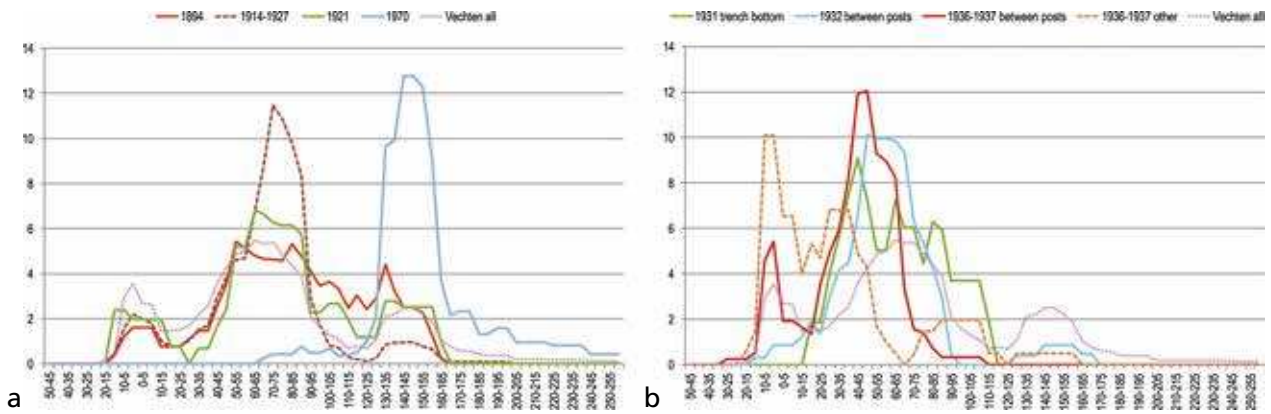


Fig. 12 Vechten (prov. Utrecht/NL). Dating curves (a-b) of potters' stamps on terra sigillata from various campaigns and contexts. – (Illustrations M. Polak).

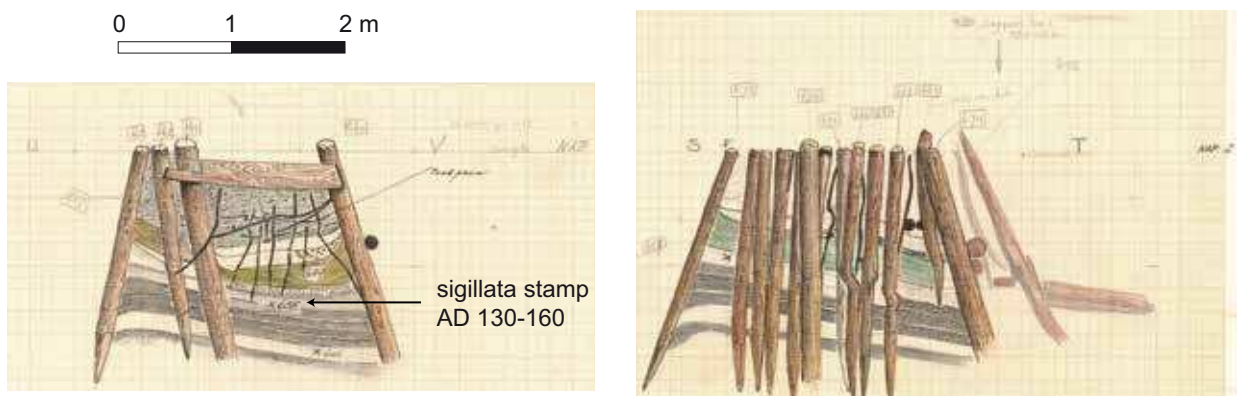


Fig. 13 Vechten (prov. Utrecht/NL). Side-view of two post rows from the 1970 trench. – (Field drawings ROB).

remains on the site, including the layers of debris from the first half of the third century (see above). A date of c. A.D. 250 can therefore be regarded as terminus post quem for the gully⁶³.

Chronology of the features

According to Holwerda, Remouchamps and Braat the timber structures alongside the channel and in its filling can be dated in or from the Augustan or early Tiberian period. Van Tent dated the structures from his excavation to the 2nd century. Thanks to the publication of nearly all the potters' stamps on terra sigillata found at Vechten it is now possible to verify the proposed dates – at least to a certain extent, the limiting factor being that for most campaigns the stamps cannot be associated with individual features⁶⁴. The late date of the structures unearthed in 1970 is confirmed by the dating curve of the 76 stamps from this campaign (fig. 12a). It represents all the stamps from the excavation, but eleven stamps which can be associated with the timber constructions have dates ranging from AD 130-155 to 160-200. Detailed sections indicate that the posts were driven through the layers which yielded these stamps (fig. 13).

⁶³ van Tent 1973, 128f.

⁶⁴ The data has been extracted from Oxé/Comfort/Kenrick 2000 and Hartley/Dickinson 2008-2012 (for the latter dataset the author is much indebted to A. W. Mees).

The dating curve of 60 stamps from the 1894 campaign represents all the finds from that year, but the trench with the timber structures was by far the largest excavated area and two thirds of the time was spent there. Thus, there is reason to believe that the curve largely reflects the finds amongst the timber⁶⁵. The curve more or less matches that of all the stamps from Vechten, but it shows a marked overrepresentation in the first quarter of the 2nd century. The number of pre-Claudian stamps is not above average and does not corroborate an Augustan or early Tiberian date for the structures.

Unfortunately it is practically impossible to assess the date of the timbers recovered in 1921-1922. The stamps found in these years can only rarely be associated with individual trenches, and the campaigns under consideration covered nearly the entire area occupied by the forts⁶⁶. The curve of the 21 stamps from the 1921 campaign resembles that of 1894.

The excavations in 1931-1932 and 1936-1937 stand out positively in the sense that the finds have been kept together in broad context groups. For the structures in and alongside the Rhine three groups are relevant: the stamps from the lower levels of the 1931 trench (9 exx.) and those from between the timber in the trenches of 1932 and 1936-1937 (36 and 43 exx.) (**fig. 12b**). A conspicuous feature is the near absence of stamps from the 2nd century. For the 1936-1937 trenches this may be the result of their situation in an area which has been levelled in the 19th century, but this does not apply to the trenches of 1931-1932. Considering the fact that the northern end of the 1932 trench nearly reaches the timber-rich trench of 1970 with its predominance of stamps from AD 130-160 the rarity of 2nd-century stamps is difficult to understand⁶⁷.

The three groups from the lower levels of the trenches share a high proportion of stamps from c. AD 30-70, with maxima at AD 40-50. Yet they show slightly shifting patterns, with the 1936-1937 group as the earliest and the 1931 group as the latest. The 1936-1937 group is the only one with a considerable number of Arretine stamps⁶⁸. However, in comparison to the number of South Gaulish stamps there are less Arretine stamps in this group than for Vechten as a whole; the extreme height of the Arretine peak is a result of the absence of 2nd-century stamps.

In view of the similar number of stamps and the proximity to the trenches of 1936-1937 it is unexpected that the 1932 trench has not produced more Arretine stamps⁶⁹. The South Gaulish part of its curve is slightly later than that of the other group. Its longer »tail« is probably due to the fact that the trench extends further into the channel; this may also explain the curve of the 1931 group.

The relatively large early component of the 1936-1937 group from between the timber may be a reflection of the find assemblage higher on the bank. The dating curve of the stamps from the remainder of the 1936-1937 trenches (28 exx.) shows a pronounced inclination to the first half of the 1st century AD, with twice as many Arretine stamps.

As a whole the stamps from the lower levels of the trenches from the 1930s do not support an Augustan or early Tiberian date for the timber constructions. Arretine stamps occur nearly exclusively in the westernmost

⁶⁵ Although the excavation in this year stretched far southward the number of finds notably decreased in that direction (unpublished report, RMO Leiden, Pleyte archive f II 29-33 esp. 30f.; less explicit Muller 1895, 135f.).

⁶⁶ The overrepresentation of stamps from c. AD 60-90 and the low numbers for the 2nd century are puzzling, since the trenches of Holwerda and Remouchamps were situated in the most elevated part of the site, where the younger levels were better preserved than elsewhere. A recent systematical field survey of an area directly south of the stone fort produced large quantities of finds from the 2nd and 3rd centuries and even some from the 4th century (van den Berg/Polak/Alders 2012). It might be an indication that in the 1920s the disturbed topsoil was not thoroughly searched for finds.

⁶⁷ There is only a single stamp post-dating AD 120 amongst the 49 examples recovered from the topsoil of the trenches of 1931 and 1932. It is interesting to note that the majority of the stamps from these groups is pre-Flavian: no less than 73 % for the 1932 trench; this is difficult to reconcile with Braat's assertion that the timber constructions were covered by clay applied in the last quarter or the second half of the 1st century AD (Braat 1939, 52: »veel Romeinsche scherven, voornamelijk uit het laatste kwart van de eerste eeuw«; 57: »de ophooging in de tweede helft der eerste eeuw«).

⁶⁸ Nine stamps (out of 43), against two (out of 39) and none (out of 9) for the 1932 and 1931 groups.

⁶⁹ Statistically the difference is highly significant.

trench. As yet not a single fragment of Arretine sigillata has been noted from the area to the east of the 1932 trench⁷⁰, so the military installations from this early period may not have extended beyond that point. This is not to say that there has not been a landing stage or other facility of that kind during the earliest phases of the settlement. A post-Germanicus erosion of the bank may well explain the absence of such features from this early period. In view of the maxima of the stamp curves in AD 40-50 a date for this event in or shortly after the reign of Caligula, consistent with the filling of the wine barrel with his brand, seems less than certain.

Conclusion

There appear to be no valid reasons to reject the interpretation of the southernmost, **long rows of posts parallel to the Rhine as revetments serving to protect the bank while the channel was still active**. The rarity of Arretine sigillata in this context indicates that these consolidating measures followed erosion in the Tiberian period or – perhaps less likely – slightly later. The flooding of the settlement probably meant the end of building phase I.2 and may explain the change of orientation visible in phase I.3.

Some time later the channel was cut off from the active river system, perhaps less than 1 km upstream from the military installations. **The channel gradually silted up**, a process accelerated by the constant dumping of refuse. In order to maintain access to the shrinking current the bank was gradually built out by applying brushwood and platforms, ramming rows of posts at right angles and filling the resulting frames with rubbish and soil. By the middle of the 2nd century these constructions extended at least 60 m from the bank, so it is likely that the meander had been cut off decades before.

The supposition that the channel was entirely dammed by AD 200 cannot be verified at present, as less and less terra sigillata was stamped by that time and other dateable find groups are not available. Dedications to Rhenus in the early 3rd century might indicate that it was still navigable, but since the newly formed channel must have passed Vechten at close distance this is not a decisive argument.

Ships

There is slight evidence for the discovery of a ship in 1834, but the concise description is not a great help: »They also found objects indicating a river, like a fragment of an anchor and parts of a sunken ship«⁷¹. In the final days of the 1892 excavation campaign the workers reached the northern edge of the elevated part of the site. Just below the surface they struck peat, which continued until a depth of 5.5 m. Below the peat they found sundry Roman artefacts⁷² and several connected planks which reminded them of a ship. The investigation of this object had to be postponed until the next year⁷³.

⁷⁰ This observation is based on the finds from the excavation in 1938 (inventory RMO Leiden) and from five trenches from the 1995-1996 excavation (unpublished data); the remainder of the finds from the latter has not been studied. The earliest sigillata stamps in both groups are Claudio-Neronian (1938: 24 stamps in Hartley/Dickinson 2008-2012; 1995-1996: 103 stamps recorded by the author).

⁷¹ Nahuys 1868, 150: »Ook heeft men voorwerpen gevonden die eene rivier aanduiden; als een stuk van een anker en gedeelten van een gezonken schip«.

⁷² The same situation is sketched for 1834: »Onder de moer, op de bedding, lagen verscheidene scherven van romeinsch vaatwerk, van samische aarde of terra sigillata, alsmede veel gebroken glaswerk vermengd met beenderen en horens van rundvee en herten, een kakebeen van zwijn en eenige koperen penningen« (Nahuys 1868, 149).

⁷³ Muller 1895, 131-135, and unpublished reports RMO Leiden, Pleyte archive f II 14 20-28 esp. 20-25.

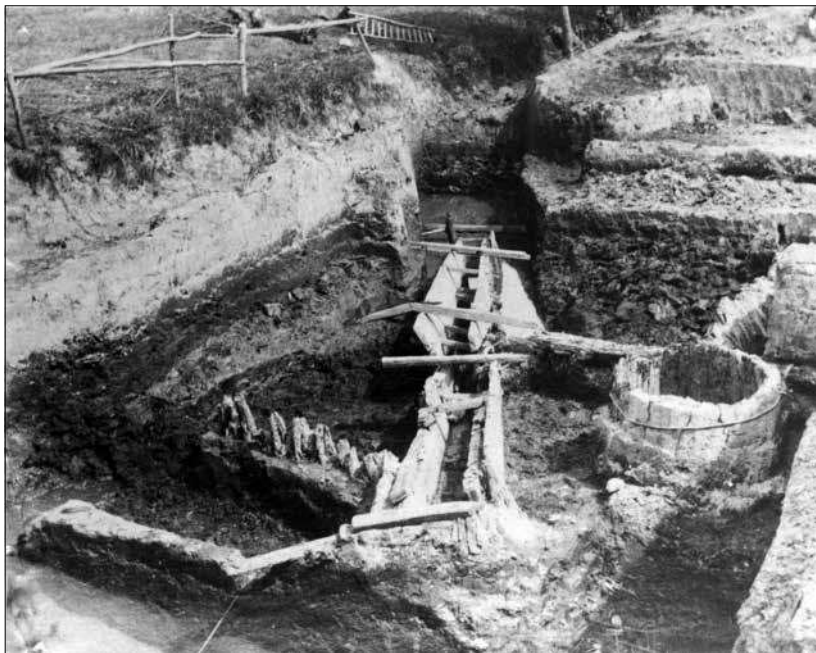


Fig. 14 Vechten (prov. Utrecht/NL). Gutter and wine barrel found in 1893. – (Photo PUG).

Before the remains of the supposed ship could be uncovered in 1893, other timber constructions had to be removed, starting at 2 m below the surface with the remains of the lining of a well: a still 1.5 m high wine barrel resting on a funnel-shaped cask of 2.5 m high. Other finds consisted of a 12 m long wooden gutter and a 40 m long and 2 m wide path of tuff blocks (fig. 14). Only when most of these remains had been removed the ship came within reach. The investigation was hindered by the proximity of a well, which necessitated the use of a steam pump. As work continued, it was found that the ship could not be completely uncovered due to the position of the steam engine. To add to the misfortune the pump failed when the ship had been prepared for registration by a draughtsman and a photographer, who had been ordered for that day. However, the former was unable to attend and the latter arrived only after a timber partition separating the well from the ship had broken down. The intruding water had destroyed one of the sides of the vessel, »which was reduced to a desperate state«. It was provisionally restored for the photographer (fig. 15). Only the detached planks and beams were retained, and the remainder of the vessel was left undisturbed. The sketched setbacks may explain several uncertainties concerning the design of the vessel – drawings were only made afterwards, based on the preserved timbers⁷⁴. As the technical details have been comprehensively treated elsewhere⁷⁵, they will not be repeated here. Suffice it to say that even the vessel's basic form and dimensions are disputed. **The ship appears to have been rowed, in view of its length of c. 12 m probably by no more than 16-18 men, with the possible assistance of a sail.**

The ship was found at 6.5 m below the surface, the level of which can be estimated at 1.6-2.6 m +NAP⁷⁶. The vessel was covered by a massive peat layer of 5.5 m thick. The description of the find circumstances matches relatively well with a recent geological reconstruction based on several borings nearby (fig. 16)⁷⁷. Just below the surface grey clay occurs, rich in phosphate and with much anthropogenic material. At a depth of 1.4-1.8 m this turns into peat, with anthropogenic material demonstrating that it developed dur-

⁷⁴ Muller 1895, 160: »Met behulp van de planken en balken, die naar het Rijks-museum van oudheden te Leiden vervoerd zijn, was het mogelijk de hierachter geplaatste afbeeldingen te vervaardigen.«

⁷⁵ de Weerd 1988, 184-194 (with references to previous literature). – Bockius 2002, 105-118.

⁷⁶ NAP: Normaal Amsterdams Peil (Amsterdam Ordnance Datum).

⁷⁷ Jansen/Briels/Tol 2014.



Fig. 15 Vechten (prov. Utrecht/NL). Remains of the Roman ship found in 1893. – (Photo PUG).

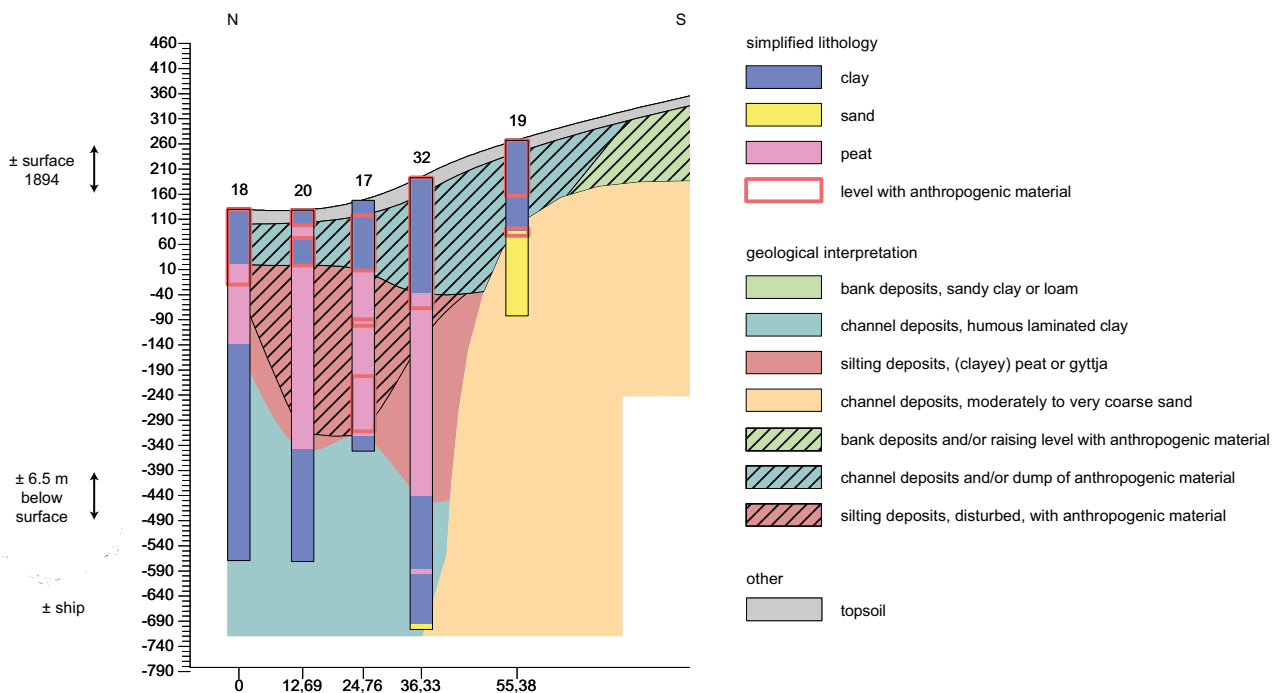


Fig. 16 Vechten (prov. Utrecht/NL). Reconstruction of the geological situation near the trench of 1893, with the estimated position of the ship. – (After Jansen/Briels/Tol 2014, map 1, B-B').

ing the Roman occupation of the site. Further downwards the peat turns into *gyttja* and very humous clay, deposited in relatively deep but nearly stagnant waters.

If the first planks of the ship were recorded at 6.5 m below the surface, it is likely to have been situated below 3.9-4.9 m –NAP. The base of the peat layer is located halfway, around 4.4 m –NAP, which matches well with the excavation record. As the borings have produced tuff fragments from the base of the peat, it may be assumed that the peat started to develop only when this stone material was available in Vechten. As mentioned before, the stone fort of period III was built at some time after AD 170, and for the auxiliary

forts in the western Netherlands construction in stone has not been attested before AD 160⁷⁸. On the other hand the legionary fortress at Nijmegen (prov. Gelderland/NL) was rebuilt in stone before the Tenth Legion was marched off to the Danube in or around AD 104, and tuff may well have been available for building purposes elsewhere before AD 160. Even if the peat did not start to develop before the middle of the 2nd century, this provides only a *terminus ante quem* for the sinking of the ship.

Fortunately several constructive elements of the vessel have been preserved⁷⁹, and in 1994 a sample was submitted to ¹⁴C analysis, which provided a date of 1997 ± 20 BP, corresponding with a calendar date between 44 BC and AD 54⁸⁰. It is important to remember that this date is only a *terminus post quem* for the building of the ship: if the plank and/or the sample originated from the interior of the tree, it may have been felled years or even decades afterwards. In this context it is not irrelevant that the closest parallels for this vessel, two ships from Oberstimm (Lkr. Pfaffenhofen an der Ilm), were built from timbers cut in AD 90 ± 10 and AD 102 ± 10, respectively⁸¹.

Granaries

According to Konen the presence of **three horrea** during period I corroborates the hypothesis that Vechten was an early naval base⁸². As a matter of fact only the two largest, adjacent, *horrea* are contemporary. They have recently been assigned to building phase I.2 (fig. 17). With a starting date after c. AD 10, derived from pottery found in preceding contexts⁸³, this is not the earliest phase of the military base. It lasted until AD 37/38 at the earliest, the *terminus post quem* provided by a coin in honour of Germanicus, the issue of which is usually dated to the reign of Caligula⁸⁴. In view of this evidence the fortification of phase I.2 may have been in use during the campaigns of Germanicus or those of Caligula, or both. The two *horrea* have not been excavated completely – their western fronts were not unearthed. If they were used for storing grain, their joint capacity may have been sufficient to feed 500 soldiers during a year⁸⁵. In the course of phase I.2 the granaries were rebuilt, probably into a single construction.

The third granary is much smaller and belongs to building phase I.3, which is characterised by a different orientation of the buildings. The features from phase I.3 were covered by massive fire deposits, and the defensive ditch, cellars and wells have yielded numerous pottery sherds, on average considerably larger than those from other building phases⁸⁶. Strictly speaking the finds provide only a *terminus post quem* of AD 50 for the end of phase I.3, but it may be safely assumed that this fort was burnt down during the Batavian revolt of AD 69/70. In view of the evidence for the previous phase it can be excluded that the camp of phase I.3 was used during the Augustan-Tiberian campaigns. The small *horreum* only had a modest capacity, enough to provide the grain for 500 man for slightly longer than a month⁸⁷.

Although the size of the granaries from phase I.2 does not exceed the needs of a modest garrison, it is not impossible that these buildings were part of a supply base for the army of Germanicus. There may have

⁷⁸ Cf. Zandstra/Polak 2012, 63 f.

⁷⁹ Besides the parts stored in the Nationaal Depot voor Scheepsarcheologie (RCE) and recorded by Bockius (2002, 105-118), two large and several very small fragments of side planks have been preserved in the archaeological collection of the PUG.

⁸⁰ 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).

⁸¹ Mees/Pferdehirt 2002, 104. Both ships were pierced by rows of oak posts cut in AD 118.

⁸² Konen 2000, 277 f.

⁸³ Zandstra/Polak 2012, 249 f.

⁸⁴ RIC I(2) 35; Zandstra/Polak 2012, 251. The proposed date is supported by the pottery from this phase.

⁸⁵ Zandstra/Polak 2012, 71, estimation based on data kindly provided by L. I. Kooistra.

⁸⁶ Ibidem 252-255.

⁸⁷ Ibidem 185, based on data from L. I. Kooistra.



Fig. 17 Vechten (prov. Utrecht/NL). Overview of the main structures belonging to building phases I.2 and I.3. The eastern wall and ditch of the stone fort of period III have been added as an orientation. – (After Zandstra/Polak 2012, figs 37. 39). – Scale 1:500.

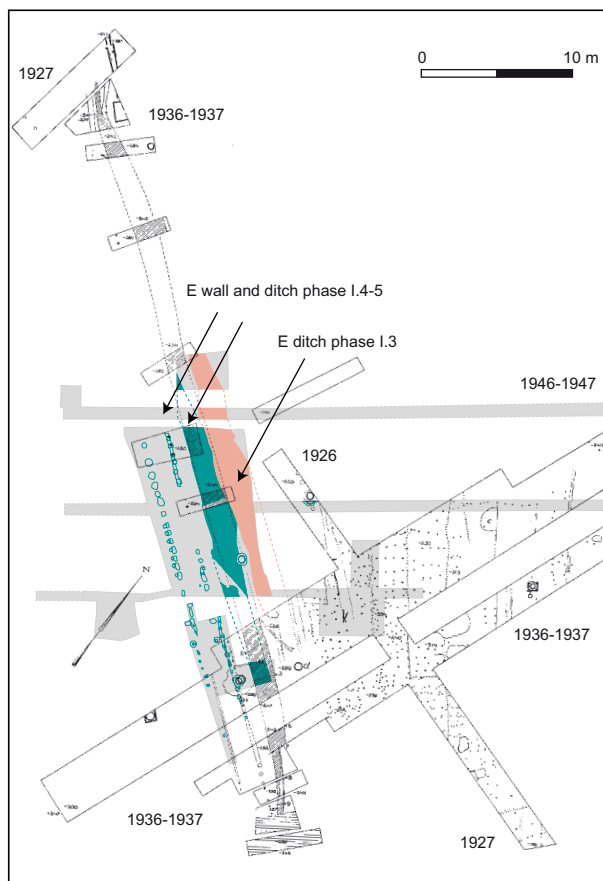


Fig. 18 Vechten (prov. Utrecht/NL). Timber structures probably belonging to phase I.2 or I.1, outside the ditches of phases I.3 and I.4-5. – (After Zandstra/Polak 2012, fig. 25). – Scale 1:500.

been more *horrea*⁸⁸ and moreover intriguing remains of timber constructions have been unearthed somewhat further to the northeast, just outside the ditch of phase I.3 (**fig. 18**). They partly represent regular structures with the same orientation as the buildings from phase I.2. These may have been granaries⁸⁹, other storage buildings or substructures of assembly points for horses or other livestock. These structures so far occur only in this area, where the subsoil was relatively wet, probably due to the presence of a pre-Roman gully.

As yet these constructions can only be dated indirectly, on account of the overrepresentation of Arretine sigillata stamps in this zone (**fig. 12b**). As far as the date range of these stamps is concerned the structures could just as well belong to phase I.1. To date no coherent features of that period have been recognised. It is represented by a thin burnt layer covering pointed posts scattered in an apparently random way, possibly indicative of a temporary camp⁹⁰. On the other hand, Arretine stamps cannot be dated with a satisfactory precision⁹¹, and the near absence of stamps dated to the Tiberian period is a general phenomenon not necessarily reflecting the historical reality.

FINDS

As the ships have been considered as features rather than finds, there remain only two discoveries to be discussed here: the inscription of a *trierarchus* and the famous graffito of a warship.

Dedicatory inscription

»En 1915, en creusant des tranchées sur l'emplacement de l'ancien fort romain de Vechten, j'ai été assez heureux pour mettre à jour de curieuses fortifications du même genre que celles dont parle Holwerda. A 1 m de profondeur environ, sous la partie la plus élevée du fort, j'ai trouvé un petit autel portant l'inscrip-

⁸⁸ In 1894 »a rather extended layer of carbonized grain« was discovered 1.25m below the surface, at an unknown distance to the north of the timber constructions (Muller 1895, 136f.). A sample of this grain was subjected to a ¹⁴C analysis, resulting 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).

⁸⁹ Somewhere nearby a layer of burnt grain had been found in the 19th century (recorded in Muller 1895, 136, as a parallel for the similar discovery in 1894).

⁹⁰ Zandstra/Polak 2012, 36 f.

⁹¹ Cf. Oxé/Comfort/Kenrick 2000, 8: »in the vast majority of cases the dates suggested are extremely tentative«.



Fig. 19 Vechten (prov. Utrecht/NL). Votive monument for Jupiter, dedicated by the *trierarchus* C. Iulius Bio. – (Photos H. Lagers / J. Hees, mun. Utrecht / PUG). – Scale c. 1:5.

tion suivante: J(ovi) O(ptimo) M(aximo) v(otum) / s(olvit) l(ibens) m(erito) / C. Julius Bio / Tria(r)chus. Cette découverte me permet de conclure que le capitaine d'un vaisseau de guerre romain (Trierarchus) avait fait élever un autel à Vechten, pour remercier Jupiter de l'avoir protégé pendant sa traversée de l'Océan». With these words the accidental discovery of this interesting monument was sketched by its finder⁹².

The monument is made of a white limestone and measures c. 42 cm × 30 cm × 22 cm (fig. 19)⁹³. Apparently it was broken in four pieces, as demonstrated by restored breaks at two base corners and just above the text. The undecorated shaft is bordered above and below by a slightly protruding concave band. The lower band is separated by a groove from a simple rectangular base. The top is damaged, but appears to have been undecorated as well. The monument is generally considered as an altar, but the absence of characteristics as *abacus*, *pulvini* and *patera* and the approximately square section suggest that it was rather a pedestal, presumably for a statue⁹⁴.

The asymmetrical sides of the shaft and the skewed cornice demonstrate that it was not a very sophisticated piece of work. The odd distribution of the formula *votum solvit libens merito* over the first two lines conveys the same impression, as does the omission of an R in *triera<r>chus*. The shape of the letters is somewhat unusual, but narrow letters with curved details as in the M's and R's cannot be considered as rare, nor as limited to a specific period.

The first two names of the consecrator, Caius Iulius, may indicate that he received his name from Augustus, Tiberius or Caligula. In 1991 Wynia and the present author expressed their reservations towards accepting this as proof of an early date, since there are many later Caii Iulii, of course⁹⁵. Konen, however, has provided additional arguments for an early date⁹⁶. In his view the omission of filiation and *tribus* may have been intended to conceal that Bio was a freedman. For the pre-Flavian period several imperial freedmen are known

⁹² Hazewinkel 1927, 275f.

⁹³ PUG collection, inv. no. 7614.

⁹⁴ The author is much obliged to T. A. S. M. Panhuysen for his comments on this monument.

⁹⁵ e.g. on four altars dedicated to Nehalennia, one of them with a consular date of AD 223 (Stuart/Bogaers 2001, A5, A26, A49 and A52).

⁹⁶ Konen 2000, 279 note 138.

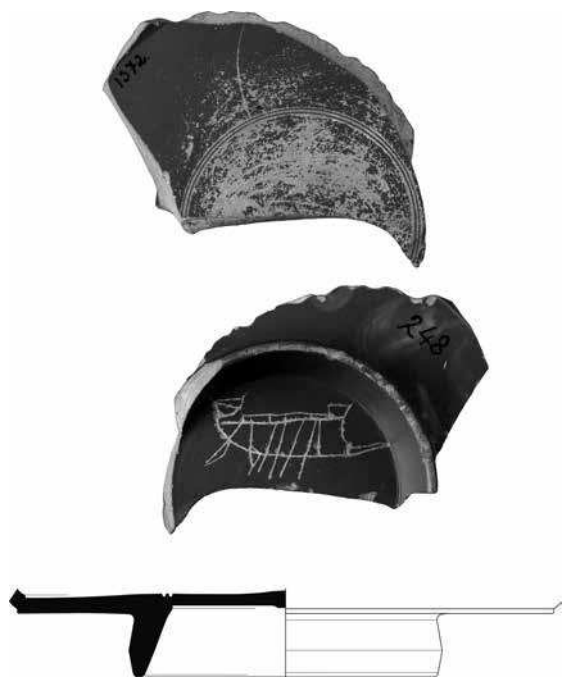


Fig. 20 Vechten (prov. Utrecht/NL). South Gaulish terra sigillata dish Drag. 18 or Hofheim 1 with a graffito of a warship. – (Photos H. Lagers / J. Hees, mun. Utrecht / PUG; drawing M. Polak). – Scale 1:2.

as captains of the fleet. To this may be added that Bio is a Greek cognomen, possibly indicating that the captain originated from the East, which was customary for such positions in the pre-Flavian fleet⁹⁷.

If a pre-Flavian, perhaps even pre-Claudian, date is justified this is one of the earliest inscriptions preserved in the Netherlands⁹⁸. The dedication of this monument to Jupiter may have followed on Bio's safe return from a hazardous undertaking. Such a gesture would certainly have been appropriate after the disastrous return voyages of Germanicus' fleet in AD 15 and 16, but there is no way of proving such a relationship.

Graffito of a warship

The precise excavation context of this extraordinary graffito is unknown (**fig. 20**)⁹⁹. It was found in 1894, when most of the digging took place near the bank of the Rhine, so it may well have been recovered there. The scratched figure clearly represents a rowed warship. It was applied to the base of a dish of terra sigillata. The

high footring and flat base characterise it as an early example. While fingerprints surrounding the footring may occur more often on Arretine sigillata, both the fabric and the shape indicate that it is a South Gaulish product. Arretine examples generally have broader grooves in the internal base and frequently an additional groove close to the centre, although narrow double grooves do occur on some vessels. The curved wall, of which a tiny fragment remains, and the off-set separating it from the base are characteristic of dishes Drag. 18 and Hofheim 1.

The shape of the vessel favours a date in the second quarter of the 1st century AD. Of the potters' stamp little more than the edge of the frame remains, but the first letter may have been an M. In view of the date it is unlikely that the owner of this dish participated in the German campaigns of Germanicus. However, the reproduction of the ship seems to imply a familiarity with such vessels. It is tempting to assume that the owner of the dish was a crew member of a military ship. Whether or not it was made by a crew member, it cannot be denied that this graffito is a strong indication for the presence of a military ship at Vechten in the Tiberio-Claudian period – stationary or transitory, that is a different and unsolvable question.

⁹⁷ Starr 1941, 38-45. 108.

⁹⁸ Other early monuments are an altar for Magusanus Hercules from Ruimel (prov. Noord-Brabant/NL; CIL XIII 8771) and the

gravestone of M. Manlius from Herwen (prov. Gelderland/NL; AE 1939, 0107 = 0130).

⁹⁹ PUG collection inv. no. 1572.

FACTS AND FICTION

On the evidence of the finds discussed above it may be stated that it is certain that Vechten was in use as a military camp during the naval operations of Germanicus in AD 15 and 16. Further, it is as good as certain that it already existed when Tiberius sailed to the Elbe in AD 5, and it is likely that it was built before that time, possibly during the *immensum bellum* started a few years earlier by M. Vinicius, or under his predecessor L. Domitius Ahenobarbus, builder of the *pontes longi* which later saved the lives of part of Germanicus' army¹⁰⁰. Finally, it is improbable, though not entirely impossible, that the establishment of a camp at Vechten goes back to the expeditions of Drusus.

Situated at the last elevated point before the treacherous peat area¹⁰¹ Vechten may have been a vital logistical node in any expedition heading for the Ems, Weser or Elbe (**fig. 1**). It was a rational place to gather supplies, be it stackable goods or livestock, and transport these further according to the marching army's needs. Thus, from a historical and strategical point of view it is entirely plausible that Vechten was built in the context of a naval operation during one of the successive German wars in the reign of Augustus.

The archaeological record corroborates such a function, but the evidence remains thin. The camp of phase I.2 with its two adjacent *horrea* may be understood as the remains of a logistical facility, and may well have served as such during the expeditions of Germanicus. The excavated granaries only have a modest capacity, but there may have been more than two of such storehouses. The timber structures further to the east, which display the same orientation, may have been part of the same supply base. Yet it cannot be excluded that they belong to the previous building phase, of which no further coherent features are known.

Judging by the rarity of contemporary finds along the river bank the mooring facilities of the Augustan and early Tiberian bases have been eroded. Since the channel was at its deepest in front of the military installations only simple revetments were needed there, consisting either of rows of densely spaced posts, or of wider spaced uprights lined with planks. The bank may have been further consolidated with brushwood and platforms of horizontal trunks or beams.

Constructions of this kind have actually been unearthed, but these appear to be posterior to AD 16. A wine barrel with the brand of Caligula (**fig. 5**) and the striking frequency of coins from his reign (**tab. 1**) strongly suggest that Vechten played an important role in the events of the early 40s AD. It may well have served then as the logistical base for the establishment of a chain of small military installations downstream to the North Sea, designed to safeguard military transports to Britain from Chaucian pirates.

Whereas a strong case can be made for a function of Vechten as a supply base for naval operations, this does not imply the stationary presence of warships. According to Konen the *classis Germanica* was established between the Varian disaster and the death of Augustus¹⁰². The Hofestatt site at Haltern¹⁰³ with its multiple boathouse demonstrates that stationary bases for several warships already existed before the German fleet was formally constituted, and for this detached post situated on a river penetrating recently subdued territory a permanent station for warships is a logical facility. Since Haltern and Vechten appear to have similar foundation dates, they may have had a similar function, and the presence of a fleet detachment at Haltern might thus be taken as an argument for the presence of a similar military arrangement at Vechten. As long as Vechten was the westernmost detached post of the Rhine army this appears a justifiable view, although it was situated in the comparatively secure area of Rome's Batavian and Frisian allies.

¹⁰⁰ Vell. II 104 (Vinicius); Tac. ann. I 63 (Domitius).

¹⁰² Konen 2000, 154-175.

¹⁰¹ Compare its vivid description by the elder Pliny's in *Naturalis Historia* XVI 5.

¹⁰³ Ibidem 288-293, with further references.

From AD 15 or 16 onwards Velsen succeeded Vechten for about three decades as the bridgehead of the Rhine army, unless Tacitus' »*castellum cui nomen Flevum*« is to be identified with an unknown fort further to the north¹⁰⁴. The military installations at Velsen 1 included a boathouse, though apparently only for a single ship¹⁰⁵. By this time the *classis Germanica* had been established, with its headquarters set up at Cologne. It is up to debate whether the foundation of a fleet base at Cologne and of a new outpost at Velsen made the hypothetical stationing of warships at Vechten redundant.

In the 40s AD the military infrastructure in the Rhine delta underwent a thorough modification, with the building of a range of small forts and watchtowers stretching downstream from Vechten to the North Sea, and with the evacuation of Velsen, which lost its function as a consequence of the silting up of the Oer-IJ estuary. The new fortlets in the Rhine delta may have taken over the surveillance of this vulnerable stretch of the logistical infrastructure, from Velsen and, possibly, from Vechten.

Again, from a historical and strategical point of view it is conceivable that Vechten was the home base of a fleet detachment in the pre-Flavian period. But the archaeological record has little to offer in support of this assumption. Of course, the vessel discovered in 1893 can only be understood as a small »Mannschafts-transporter, Patrouillenfahrzeug oder Kurierschiff«¹⁰⁶, lacking a significant capacity for passengers or cargo. But its calibrated ¹⁴C date of 44 BC-AD 54 provides only a *terminus post quem* for its construction, and the dendrochronological dates of the similar ships from Oberstimm in the Domitianic-Trajanic period constitute a warning that the Vechten ship may have been built quite some time after this *terminus*. The graffito of a warship, however, certainly dates before the middle of the 1st century AD, and for the monument of Iulius Bio a similar date seems possible, though far from certain.

In a very minimalistic interpretation, these three finds may be reduced to a single event: the wreckage of the warship (ship) commanded by Iulius Bio (pedestal) at some point in the second quarter of the 1st century AD (graffito; ship and pedestal could be from the same period). In this scenario the ship went down for reasons unknown to us, and the captain expressed his gratitude to Jupiter that he had not perished with his ship, as opposed to the sigillata dish of one of the crew, marked with a drawing of a more martial warship. Of course it is extremely unlikely that these finds all relate to a single ship incidentally calling in at Vechten, but the point to be taken is that neither is conclusive evidence for the stationary presence of warships at Vechten. As yet **there is no single archaeological feature indicative of a fleet detachment. Post rows along the Rhine channel have been discovered at nearly every military site downstream of Vechten¹⁰⁷. They merely served to prevent erosion and to facilitate the mooring of ships, and have never been interpreted at those sites as remains of a fleet base.** The timber frames built out into the Rhine were primarily a haphazard way to consolidate the bank once the channel had started to silt up, possibly already before the middle of the 1st century AD and accelerated by the dumping of debris.

The hypothesis of an early Roman base for a fleet detachment at Vechten would gain much from the discovery of boathouses, more warships or traces of fleet personnel. Considering that the northeastward continuation of the Rhine channel and its southern bank are buried under – and may have been destroyed by – a motorway and that inscriptions on stone are rare finds in the Netherlands, chances are slim that we will ever be certain. And although the present author may be less sceptical today about the plausibility of the presence of a fleet detachment, he still upholds that **the role of Vechten as a naval base remains to be proven.**

¹⁰⁴ Tac. ann. IV 72. Pliny the Elder mentions a camp of Germanicus built across the Rhine in Frisian territory (nat. XXV 20-21). Since he knew that area from his own observation, he will not have situated Velsen to the north of the Rhine.

¹⁰⁵ Konen 2000, 280-288, with further references.

¹⁰⁶ Mees/Pferdehirt 2002, 104, relating to one of the similar ships from Oberstimm.

¹⁰⁷ e.g. Haalebos 1996, 475-479 (Woerden; prov. Utrecht/NL); Haalebos 1977, 41-46 (Zwammerdam; prov. Zuid-Holland/NL); Polak/Kloosterman/Niemeijer 2004, 114-120 (Alphen aan den Rijn; prov. Zuid-Holland/NL).

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Abbreviations

PUG	Provinciaal Utrechts Genootschap van Kunsten en Wetenschappen (the archaeological collection of this learned society is now administered by the municipality of Utrecht/NL)	RIC I(2)	Sutherland 1984
RCE	Rijksdienst voor het Cultureel Erfgoed, Amersfoort/NL	RMO	Rijksmuseum van Oudheden, Leiden/NL
		RPC	Burnett/Amandry/Pau Ripollès 1992

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ZUSAMMENFASSUNG / ABSTRACT / RÉSUMÉ

Eine frührömische Flottenstation in Vechten (prov. Utrecht/NL): Tatsachen und Fiktion

Spätestens seit dem Anfang des 20. Jahrhunderts hielt man Vechten für eine frührömische Marinebasis bzw. »Flottenstation«. Als S. L. Wynia und der Autor dieses Beitrags 1991 die Quellenlage revidierten, stellten wir fest, dass es keinen Beweis für Vechten als Marinebasis gibt. Dies war wiederum von H. C. Konen in seiner Studie zur *classis Germanica* angefochten worden. In diesem Beitrag werden die relevanten Quellen diskutiert und um neue Beweise ergänzt. Starke Argumente gibt es für die Deutung Vechtens als Nachschubbasis für Flottenoperationen in den ersten beiden Jahrzehnten des 1. Jahrhunderts n. Chr., doch fehlen schlüssige Hinweise auf eine dauerhafte Stationierung eines römischen Geschwaders.

Übersetzung: M. Scholz

An early Roman naval base at Vechten (prov. Utrecht/NL): facts and fiction

At least since the beginning of the 20th century Vechten (prov. Utrecht/NL) has been considered to be an early Roman naval base, a »Flottenstation«. When Wynia and the present author reviewed the evidence in 1991 we stated that the naval character of Vechten was anything but proven. This was contested by Konen in 2000 in his study of the *classis Germanica*. In the present paper the relevant sources are discussed and supplemented with new evidence. A strong case can be made for a function of Vechten as a supply base for naval operations in the first two decades of our era, but there is no conclusive evidence for the permanent presence of a detachment of the Roman fleet.

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Une base navale romaine précoce à Vechten (prov. Utrecht/NL): faits et fiction

Dès les premières années du 20^e siècle au moins, Vechten (prov. Utrecht/NL) a été considérée comme une base navale romaine précoce, une »Flottenstation«. Lors d'un réexamen des arguments en 1991, Wynia et l'auteur constatèrent que le caractère naval de Vechten était loin d'être prouvé, ce qui fut contredit par Konen en 2000 dans son étude de la *classis Germanica*. Dans cet exposé, les sources pertinentes sont discutées et complétées par de nouvelles preuves. On dispose de sérieux arguments pour voir dans Vechten une base d'approvisionnement pour des opérations navales durant les deux premières décennies de notre ère, mais il n'y a pas de preuve définitive de la présence stationnaire d'un détachement de la flotte romaine.

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