

New Discoveries along the Limes in the Dutch Eastern River Area

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The eastern part of the Dutch river area is the region around Nijmegen-Noviomagus (fig.1). This is the ancient Batavian heartland that has attracted archaeological interest for a very long time. With a few exceptions, however, this interest has been limited to investigations of the major sites, in particular those in Nijmegen. When the Dutch State Archaeological Service (ROB) resumed the excavations in Nijmegen on a very large scale in 1972, modern theoretical perspectives led to a new set of goals. These were no longer conceived as the investigation of the local (and in particular the military) manifestations of the Roman empire. Instead, research was aimed at placing individual sites in their regional context, thereby establishing an intermediate level of analysis between that of the site and the province or empire as a whole.

This led to the formation of the Eastern River Area (ERA) project, which aims at studying the regional subsistence and settlement system and all the varied consequences of the Roman conquest in what was essentially a frontier area for several centuries.¹ The chronological and spatial co-ordinates delimiting the range of the project are determined by its goals. In order to understand what happened during the Roman Period it is necessary to know what went before and what came after, and thus the project spans approximately a millennium, from c. 250 B.C. to A.D. 750, and encompasses the Late-Iron Age and Merovingian Period.

In spatial terms, the project is primarily concerned with an area of 1650 km² around Nijmegen. This allows a study of the civitas capital Ulpia Noviomagus in relation to its immediate hinterland, an area covering at least the central part of the entire civitas whose precise extent is unknown. An attempt to determine its boundaries by the analytical limits of Thiessen polygons that indicate the theoretical service areas of various civitas capitals along the Rhine and in the hinterland, is presented in fig.2. The indicated borders conform quite well to probable natural boundaries. To the north this is, of course, the Rhine. To the east, it roughly coincides with the large peat area of the Peel west of the Meuse that has now largely disappeared, and to the west with the large Dutch peat areas ("Holland peat"). The southern border is nearly identical with the watershed between the drainage basins of Meuse and Scheldt: it reaches at least as far south as the small

tributaries of the Meuse are still navigable, which is even more appropriate for a service area.

It thus seems that the civitas Batavorum may have been larger than is often assumed, encompassing a sizeable part of the sandy soils of the province of Brabant.² Nevertheless, there are considerable geological and possibly other differences between this region and the eastern river area, which undoubtedly remains the core of the Batavian civitas.³

Research in this central area has revealed the existence of 542 sites, most of which are located in the river area proper, on the Holocene clay deposits of Rhine, Waal and Meuse.⁴ These deposits are particularly favourable for the discovery of settlement sites, because former habitation on river clays has resulted in a distinctive soil type known as "ancient settlement soil". It is very fertile, and as a result of extremely detailed geological surveys perhaps as much as 85-90% of all former settlements have been located, at least as far as they still exist. Erosion is, of course, a less favourable characteristic of the river area, which has a constantly changing surface compared to areas of Pleistocene deposits. It was

Fig. 1 Location of the eastern river area.



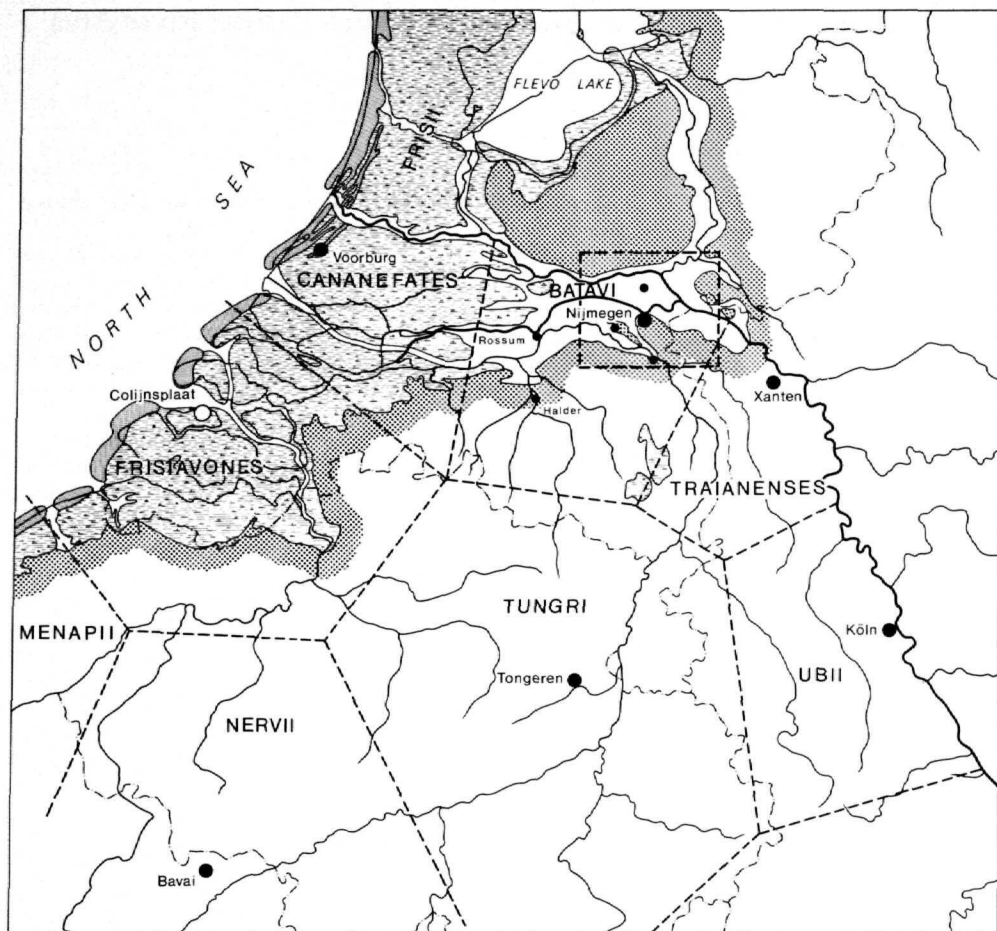


Fig. 2 The geological and administrative context of the eastern river area in the second century AD: 1 coastal dunes, 2 marine clay deposits and peat, 3 Holocene fluvial deposits,

4 Pleistocene deposits, 5 theoretical boundaries of the civitates, 6 the eastern river area, 7 civitas capital, 8 probable civitas capital.

necessary, therefore, to reconstruct the surface of the river area during the Roman Period. Fig. 3 is an abstraction from a detailed geoarchaeological map used a.o. to plot the different types of sites during the successive chronological phases between 250 B.C. and A.D. 750.⁵ Later deposits have not been indicated and the resulting picture gives a reliable insight into the habitability of the area. All the high-lying stream-ridges were habitable, being composed of the sandy clay of pre-Roman channel zone deposits. In addition, the banks or natural levees of the rivers functioning during the investigated period⁶ were largely habitable. No habitation was ever possible in the flood-basins until very

recently, after World War II. Until then, the heavy clays could only be used as grassland, for which they undoubtedly also served during the Roman Period when some parts may still have had their natural cover of river forest and others were definitely covered by peat. The Pleistocene deposits consist mainly of coversands and ice-pushed ridges, the latter being rather unfertile, probably wooded, and only sparingly settled until recently.

The analysis of the settlements against the background of this landscape has provided various new insights into the social and economic structure of the region. It appears, for example, that from the late 1st to the late

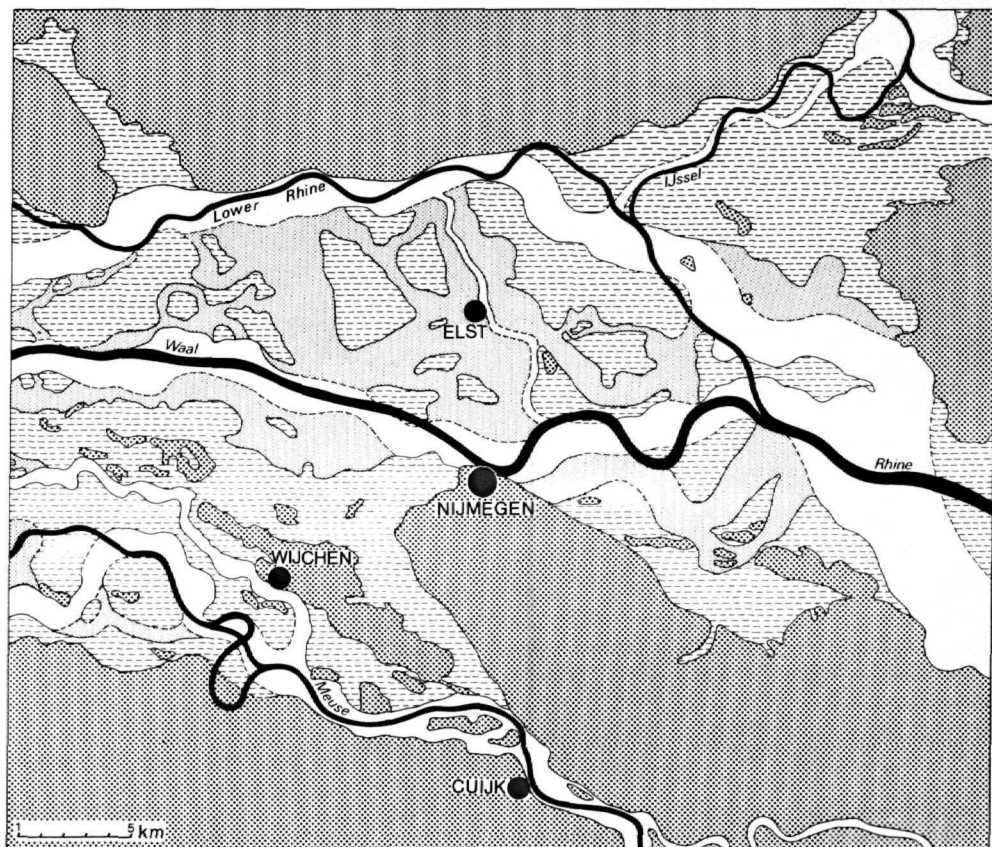


Fig. 3 The geological situation and administrative organization in the eastern river area in the second century AD: 1 Pleistocene deposits, 2 floodbasin deposits and peat, 3 pre-Roman channel zone deposits (streamridges), 4 Roman

Period channel zone (meander-belt), 5 present-day river-channels, 6 boundaries of deposits, 7 reconstructed boundaries of deposits, 8 civitas capital (*municipium*), 9 secondary centres (*vici*).

3rd centuries there were three settlements of more than local significance in Elst, Wijchen, and Cuijk. Indications such as their size, the presence of a temple, workshops, or other characteristics point to their function as secondary centres. They were *vici*, located in a half circle around Nijmegen and servicing their respective hinterlands separated by the Waal and Meuse. These areas may well be identified as *pagi*, each with its own centre subjected to the civitas capital in Nijmegen. Possible centres for the remaining parts of the civitas as indicated on fig. 2, are not lacking.⁷ Even in the absence of written evidence,⁸ it is thus possible to gain a better understanding of the econo-

mic and administrative organization of the civitas. In addition to the above example and other detailed information about the occupation history of the area, the ERA project will hopefully also contribute to theoretical issues which are relevant to the general field of frontier studies.⁹ The present paper, however, is only intended to introduce the project, and to review some new discoveries and ideas concerning the structure of the military apparatus in the frontier zone. This implies that the Late-Roman Period falls outside the scope of the discussion. Even though it can now be demonstrated that there was still a direct Roman military presence up to the Rhine at that time, the late-

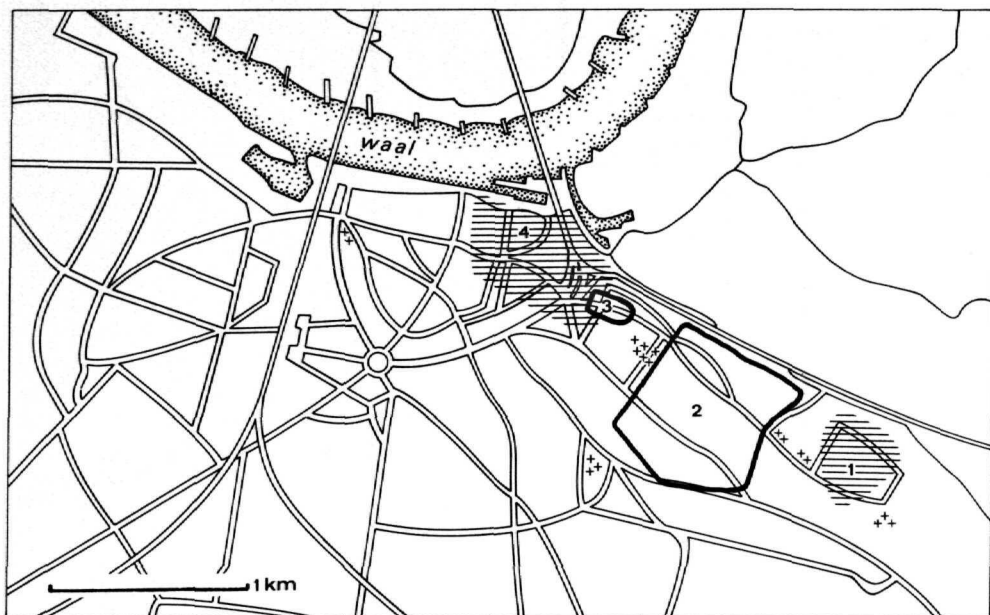


Fig. 4 Early-Roman sites in Nijmegen: 1 military settlement on the Kops Plateau, 2 legionary fortress on the Hunerberg,

3 small camp on the Trajanusplein, 4 settlement (*canabae*) around the Valkhof (= Batavodurum?), ++ burials.

Roman system of defence-in-depth extended too far south to justify a profitable discussion limited to the river area^{9a}.

Early-Roman camps

In his recent study on the "Anfänge des Niedergermanischen Limes", GECHTER (1979) could only refer to one pre-Claudian site in the entire eastern river area, namely, Nijmegen. An overview of the earliest Nijmegen sites has been provided by BLOEMERS, BOGAERS ET AL. (1979), but the ROB excavations from 1979–1982 have yielded some additional evidence.¹⁰ The small camp west of the legionary camp on the Hunerberg (fig. 4) was shown to be somewhat larger and more irregular than was hitherto assumed. Very important are the results of an excavation in the early settlement around the Valkhof, which showed that it may have started as a *canabae legionis*. All traces dating from Augustus to Nero point to trade and industry, and characteristic strip-houses are also present.¹¹ This conclusion does not necessarily conflict with the currently accepted identification of the site with Batavodurum, although it is remarkable how utterly non-native the "Batavian capital" appears to be.

On the other hand, this situation confirms conclusions reached for the river area as a whole. It has been

demonstrated (WILLEMS 1981) that the area was densely and continuously settled from the Late-Iron Age into the Roman Period. It was neither *vacua cultoribus* (Tac., Hist. IV 12), nor is there evidence for a major immigration. Instead, the people we know as Batavians are likely to have been a comparatively small group of dissident Chatti. They may have even been sent to the river area as auxiliaries by Augustus or Agrippa, to prepare the ground for the planned campaigns into Germany. In this respect, it is important to point to a recent study on late-La Tène material from Rossum (see fig. 5). On the basis of silver Celtic coinage with links to the territory of the Chatti and other finds, including weapons, the authors have proposed Rossum as an early Batavian centre (ROYMANS/VAN DER SANDEN 1980). Although most or all of this strategically located site is eroded, it is not inconceivable that it will in fact turn out to be a pre-Drusian auxiliary camp.¹²

Although this proposal does not as yet go far beyond the level of wishful thinking, it is clear that the Valkhof site in Nijmegen does not need to have *native* characteristics in order to be a *Batavian* centre. All early Nijmegen sites must have been newly founded as a direct result of a strategic choice of location by Drusus and his generals in A. D. 12. There is no evidence for a late-Iron Age native centre anywhere and, moreover,

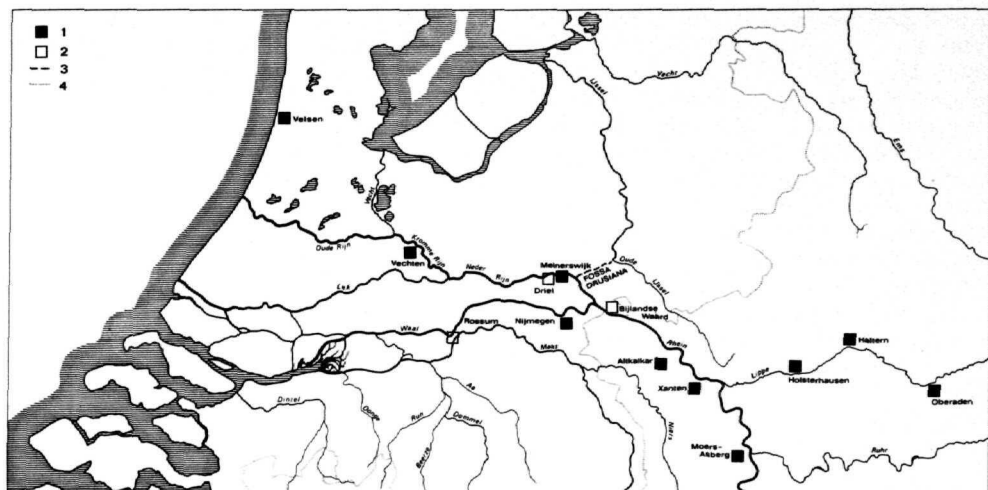


Fig. 5 Early-Roman camps: 1 camp, 2 possible camp, 3 canal, 4 present-day frontier.

every reason to assume that the late-Iron Age socio-economic organization in this area could never even have generated such a centre (WILLEMS 1984; ROYMANS 1983).

Outside Nijmegen, the two known camps in the Rhine delta, in Vechten and Velsen, and a suspected camp close to the Bijlandse Waard, have been augmented by a new camp in Meinerswijk (see fig. 5). A small excavation at this newly discovered frontier fort (see below) produced evidence of a first occupation phase, approximately dating to the second decade A.D. and thus presumably related to the campaign of Germanicus in A.D. 15–16. An oxbow lake to the south of this site may have provided a natural harbour. The pottery includes Arretine sigillata with stamps of VTILIS and CLA(rus), and a flagon with a graffito possibly indicating the *legio V (Alaudae)*.¹³

At a depth of almost 3 m below the present-day surface, traces of what could be a double ditch belonging to this phase were discovered. Due to the close proximity to the Rhine these features could, unfortunately, not be examined further because the groundwater level by then defeated all pumping. For the same reason, virgin soil was reached nowhere and it is possible that there is a still older occupation present. A direct relation to the Drusian campaigns can therefore not be completely excluded. In any case, the close proximity to the point where the IJssel branched off the Rhine is an indication for the strategic position of the camp. The IJssel, which did not exist before the Roman Period, provided a water-route to the north, to the Flevo lake, and there are now a variety of indications

which allow it to be identified once again with the famous Drusian fosse.¹⁴

In addition to Meinerswijk, there are also early-Roman finds known from the two adjoining and also newly discovered limes forts in Driel and the Loowaard (see below). The limited material from the latter site only allows a dating of the earliest occupation to no later than c. A.D. 40. In Driel, however, there are enough surface finds to date the start of the Roman occupation with certainty to at least the second decade A.D. Definite conclusions have to be postponed until an excavation can be carried out. Until that time, the general interpretation of the site as outlined below, and the nearly complete absence of such early surface finds anywhere else in the river area, render an early-Roman camp in Driel a serious possibility.

Limes forts

The limes, as a closed system of forward defence, functioned from Claudius until c. A.D. 270. The picture presented for this period by BOGAERS and RÜGER (1974), of the various elements in the limes system, showed a large gap. No frontier fort between Altkalkar-Burginatum and Vechten-Fectio had been excavated and, even worse, there were only a few forts which could at all be located in the eastern river area. Although the erosion of forts by the constantly shifting channel of the Lower Rhine was an acceptable explanation for this state of affairs, the ERA project has shown that most and probably all of the missing forts can be

located: some precisely and some at least approximately.

The structure of the limes system, together with the most important parts of the network of routes, is indicated in fig. 6. It should be noted that only minute traces of actual roads have been found, but their general course can easily be determined because of the structure of the landscape and the arrangement of sites. As far as forts are concerned, there is little information on their precise nature and size. Especially in view of the short distances between some, not all are necessarily auxiliary forts. On the other hand, evidence from the western river area shows that forts may indeed be very close together, such as those in Vleuten-De Meern, Utrecht, and Vechten.

Following the route along the Rhine (the limes road) from east to west, the following sites are indicated:

Qualburg (Quadriburgium?). This site, which, incidentally, is located exactly at the theoretical border between the civitates of the Batavi and Traianenses, has already been considered as a small military station (cf. HORN, in BOGAERS/RÜGER 1974, 96: Benefiziariestation?)

Rindern (Harenatium?). For a discussion of the evidence see BOGAERS/RÜGER 1974, 93-95. The presumable auxiliary fort is located upstream of the Roman Rhine-Waal fork and connected by a direct route to Nijmegen.

Herwen-Bijlandse Waard (Carvium). See BOGAERS/RÜGER 1974, 90-92. The fort has been eroded by a post-Roman branch of the Waal and the well-known finds were discovered as a result of dredging. It is located just downstream of the Rhine-Waal fork, and part of its function must have been to control traffic on and along the Waal, as well as the point where the limes road must have crossed the Waal. This crossing was probably built as part of the necessary supporting infrastructure for the limes system in A.D. 55, as can be deduced from an often misinterpreted passage in Tacitus' Annals (XIII, 53). There can be no doubt that the *moles* (a groyne or jetty, a structure built out into the water) was constructed here by Drusus' troops to divert more water to the Rhine. Tacitus refers to its completion under Paulinus Pompeius in A.D. 55, but this time as an *agger*, a dam or dike built on land. Even though this was ostensibly done to give the troops something to do, the timing of the enterprise and the vital military importance of a safe Waal-crossing during all seasons, indicate its real significance. The *agger* can thus be seen as an extension of the Drusian mole to a dam or a series of dams, interrupted by a bridge or ferry, across the high-water bed of the Waal at the fork, and as part of the limes road. Its destruction by Civilis in A.D. 70 thus becomes even more significant, in

addition to the more dramatic effect on the water discharged by the Rhine and Waal described by Tacitus (Hist. V 19).

Duiven-Loowaard. Like the Bijlandse Waard, this newly discovered fort has been eroded and finds were discovered as a result of dredging operations. They were rediscovered in various amateur-collections during the inventarizations for the ERA project. The pottery assemblage is composed in a way that can be recognized as typical for military sites in the river area, such as a very high percentage of terra sigillata and near absence of native wares, and which does not occur on other sites. In addition, there are military graffiti, military metalware, stone building fragments, and tiles with stamps of the *legio XXII primigenia* and, presumably, the *legio XXX A (?) C (?)*.¹⁵ From the geological situation it is clear that the fort was located in a strategic position, at the only point on this stretch of the Lower Rhine where a high-lying stream-ridge provided access to the hinterland.

Huissen. The Roman finds from Huissen are discussed in BOGAERS/RÜGER 1974, 73. They were discovered in a clearly secondary context in a medieval *château à motte*, across the (present-day) Rhine from Duiven-Loowaard. It is very likely, therefore, that they were transported to Huissen from that site or from the fort in Arnhem-Meinerswijk which is less than 7 km downstream. Thus, an auxiliary fort in Huissen presumably never existed.

Arnhem-Meinerswijk (Castrum Herculis ?). This site, just as that in Driel, was located as a result of detailed geological studies. The finds from both sites included clear evidence for stone buildings, which occurs fairly often more inland but is not normally present on sites along the Rhine. Together with the characteristic military composition of the pottery assemblages, it was concluded that both sites were probably forts. In Meinerswijk, this conclusion could be verified by a small trial excavation in 1979, of which the principal results have recently been published.¹⁶ They included traces of stone buildings and revealed a stratigraphy reaching from the second decade A.D. into the 5th or even 6th centuries. Six different phases have been differentiated, four or five of which are represented by V-shaped ditches. During the fifth (3rd-century) phase, the fort may have been built completely in stone, presumably by a detachment of the *legio I Minervia* as is testified by a building inscription (fig. 7) and a tile stamp LEG I M ANT from the double ditch belonging to this phase.

The location of the fort is peculiar in the sense that it is the only one which does not have a direct connection with the hinterland. It is, however, located at a point where the Rhine turns westwards and therefore at the

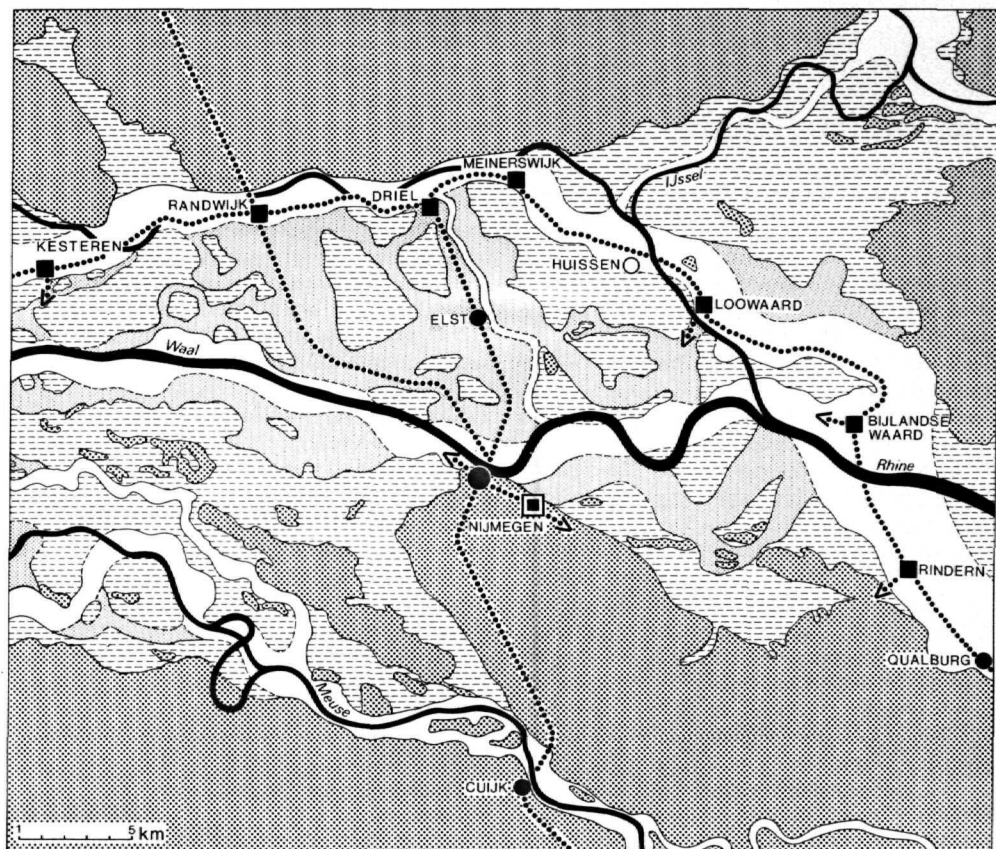


Fig. 6 The limes system from Claudius until c. AD 270 in a geological context. 1-7 see fig. 3; 8 fort and legionary fortress,

9 civitas capital, other settlement possibly with a military station, and non-site, 10 approximate course of major route.

easternmost point where the river could be crossed to go north over land. Even more important may be its proximity to the IJssel. The tentative identification of this fort as *Castra Herculis* is inspired, among others, by its 4th-century phase, its location on the Rhine, and the fact that the distances from the *Tabula Peutingeriana* fit fairly well.¹⁷ Borings around the excavation and a number of radiocarbon dates have recently shown that the site was still used and expanded until well into the Middle Ages. Its identification with the early-medieval emporium *Meginhardiswich* (= Meinerswijk), which was destroyed by Vikings in A.D. 814, is therefore also possible.

Driel. As mentioned above, the finds from Driel indicate the presence of another previously unknown limes

fort. Although this interpretation has not yet been checked by excavation, the results in Meinerswijk have shown that the assumptions which led to it are valid. Driel is situated at a point with a direct connection to the south over a stream-ridge. Although clear evidence for a route into the area north of the Rhine is only available for the Middle Ages, the old ford across the Rhine here, the *Drielsche Veer*, may have existed in Roman times. In any case, the Roman metalware dredged up here in 1895 is certainly military and belonged to a cavalry unit (HOLWERDA 1931). With the additional evidence of a jug with a graffito by Sallios, of the turma of Caius (BOGAERS 1966), found in the immediate vicinity of the site in Driel, it is tempting to consider it as a cavalry fort (Alenlager).



Fig. 7 Building inscription LEG(ia) IM(inervia) P(ia) F(ide)lis from Arnhem-Meinerswijk. The tuff block measures 57 × 14 × 26 cm.

Randwijk. With the exception of some insignificant finds north of the Rhine, there is no material evidence in Randwijk indicating a fort. Randwijk is situated approximately midway between Driel and Kesteren (Carvo?), but that is in itself no reason to assume the presence of a fort there. The major argument is provided by the geological situation, which shows a very broad stream-ridge reaching the Rhine at this point. This ridge was the main Rhine channel during the Neolithic and there is ample evidence that its high elevation provided an important land route from the Bronze Age onwards, when the main channel of the Rhine had moved further to the east.¹⁸ This evidence, which is even more clearly observable for the Iron Age, Roman Period, and Middle Ages, shows that the stream-ridge was part of a very old south-north connection, crossing the Rhine at the ford (*Lexkensveer*) between the villages of Randwijk and Wageningen and continuing to the north from there. It may, therefore, almost be taken for granted that the intersection of this route with the limes road at the ford would not have been left unguarded: if

not by a fort then at least by a smaller structure. That it has not been found is probably due to the extremely extensive post-Roman erosion here. The remains may lie deeply buried under younger sediments, just as those in the Loowaard and Bijlandse Waard.

Although its significance is limited, it is also worthwhile to point out that Randwijk belongs to a small group of early-Medieval place-names with *-wijk* (= *vicus*) suffixes. The early-Medieval meaning of *vicus* is primarily trading centre (*emporium*), but it is remarkable that for two similar settlements a relation to a Roman fort has been demonstrated: in Meinerswijk and also in Rijswijk, which is the probable location of *Levefanum*.¹⁹

Kesteren (Carvo?). The evidence for a fort near Kesteren is summarized in BOGAERS/RÜGER 1974, 70. Recent excavations (HULST 1978) have shown that the fort cannot have been located on the site where it was formerly supposed to be. That particular site may have been a village associated with the fort, just as an – at least partially – military cemetery in the immediate vicinity (HULST 1975; WIGCHERINK 1979); the northern part of the cemetery extended north of the old Rhine dike and has been eroded. In the absence of any other site which could be the fort, it is probable that it was also situated north of the dike and was also eroded. Whatever the precise location of the fort may have been, it is surely no coincidence that Kesteren is again a place with a connection into the hinterland over a stream-ridge.

Notes

- 1 For an introduction to the project and the research program, see BLOEMERS ET AL. 1980 and WILLEMS 1981, chapter 1.
- 2 As already noted by RÜGER (1968, 34), additional support for this proposal is provided by an altar (CIL XIII, 8771) dedicated to *Magusanus Herculis* by Fla(v)us, supreme magistrate of the *civitas Batavorum*, in Ruimel-St. Michielsgestel, which is centrally located in this area.
- 3 Cf. also Tacitus (Germ. 29, 1): *Batavi non multum ex ripa, sed insulam Rheni amnis colunt*, which should not, however, be taken too literally (Sprey 1953, 20) and is in agreement with the proposed nature of the Batavian immigration (see below).
- 4 The initial stage of this research was made possible by a grant (no. 28-141) from the Netherlands Organization for the Advancement of Pure Research (ZWO).
- 5 WILLEMS 1981, Appendices 1-5, which are also part of the Archaeological Map of the Netherlands 1:100,000.
- 6 On fig. 3, only the meander-belts are indicated because the precise location of the channels is, of course, largely indeterminable.
- 7 For the western part of the river area, Rossum (see fig. 2) is the most likely centre (further data summarized in BOGAERS/RÜGER 1974, 74). For the southern coversand area in Brabant, the *vicus* in Halder-St. Michielsgestel (compare note 2) is a central place. For data on Halder, see BOGAERS 1974 and WILLEMS 1977.

- 8 There are only two instances where *pagi* are mentioned for the entire province of *Germania Inferior* (RÜGER 1968, 101-102).
- 9 See e.g. the contributions by WARMINGTON (1974); DYSON (1974) and GROENMANN-VAN WAATERINGE (1980) on this subject during previous meetings of this congress. For some preliminary generalizations, see WILLEMS (1983), further substantiated in WILLEMS 1984.
- 9a A discussion is provided in WILLEMS 1984, chapter 12.
- 10 Until 1981, the excavations were carried out under the direction of Professor J. H. F. BLOEMERS. See further WILLEMS 1984.
- 11 See WILLEMS 1984, 232-243, with further references.
- 12 On early auxiliaries, see ALFÖLDI 1968, 81-104, and WIGHTMAN 1977.
- 13 The graffito is difficult to read. The most likely interpretation is *L//CV: centurio leg(ionis) V [Alaudae]*. It was provided by J. E. BOGAERS together, however, with an alternative reading as *L//CY: leg(ionis) III Cy(renaicae)* and the remark *credat qui potest*. See WILLEMS 1984, 334 fig. 98.
- 14 Although the question of the location of the *fossa Drusiana* is still debated, the combined geological, archaeological, radiocarbon, and pollenanalytical data clearly point to the IJssel. A full discussion is provided in WILLEMS 1981, chapter 3.3.3. The Vecht, as the traditional alternative option, has recently been shown to

- have been an important river already during the 2nd millennium BC (BERENDSEN 1982, 169), while the IJssel can only have originated after c. 2000 BP.
- 15 It should be noted that military tile-stamps in the river area are by no means restricted to military sites. It has been demonstrated that tiles with military stamps were used in a primary context in native settlements (WILLEMS 1981, chapter 6.5.1), although the quantities are lower than those on definite or presumed military sites. The conclusion must be that WOLFF's thesis on the exclusive use of military brick for military buildings (cf. RÜGER 1968, 56ff.) does not hold for frontier regions. In any case, it is not valid for the entire area north of the Meuse in the Dutch river area, which surely cannot be declared military territory (if that concept is at all realistic, cf. VITTINGHOFF 1974), for it would occupy most of the entire civitas.
- 16 WILLEMS 1980. A full report is provided in WILLEMS (1984), chapter 9.

- 17 Just like most forts, the identification of Meinerswijk is not completely certain as long as direct epigraphical evidence is lacking. Of the numerous other proposals for the location of Castra Herculis (summarized and added to by BOGAERS 1968), not one was based on any real evidence.
- 18 Approximately during the Bronze Age, the Rhine followed the trajectory which resulted in the stream-ridge from Elst to Driel, while the main channel during the Roman Period, from the Loowaard to Driel, originated during the Iron Age, its natural levees becoming habitable – and thus suitable to build forts on! – during the last centuries B. C.
- 19 The ROB research project in and around Early-Medieval Dorestad has shown that the suspected fort (Levefanum?) there was not located in Wijk bij Duurstede but across the Rhine in Rijswijk (VAN ES 1981, 101–103; for a detailed reconstruction see VAN ES/VERWERS 1983, fig. 4).

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