

ANALECTA PRAEHISTORICA LEIDENSIA

43/44

PUBLICATION OF THE FACULTY OF ARCHAEOLOGY
LEIDEN UNIVERSITY

THE END OF OUR FIFTH DECADE

EDITED BY
CORRIE BAKELS AND HANS KAMERMANS



LEIDEN UNIVERSITY 2012

Series editors: Corrie Bakels / Hans Kamermans

Editor of illustrations: Joanne Porck

Copy and language editor: Kelly Fennema

ISSN 0169-7447

ISBN 978-90-000000-0-0

Subscriptions to the series *Analecta Praehistorica Leidensia*
and single volumes can be ordered at:

<http://archaeology.leiden.edu/organisation/publications/analecta-praehistorica-leidensia/>

or

P.J.R. Modderman Stichting
Faculty of Archaeology
P.O. Box 9515
NL-2300 RA Leiden
The Netherlands

Connectivity in the south-western part of the Netherlands during the Roman period (AD 0-350)

Jasper de Bruin

On January 1st 2012 a new department, that of Provincial Roman and Medieval Archaeology, was added to the Faculty of Archaeology at Leiden University. Even though Provincial Roman archaeology was not an official specialization before 2012, the Faculty conducted research on two Roman period settlements in the coastal area of south-western Holland. These two sites produced evidence of the existence of a supra-regional exchange network, of which traces can be found on other sites in the region. It can be concluded that Roman State or Military investments resulted in processes leading to increasing connectivity in coastal areas of the Roman Empire, but that the expansion and sustainability of the connections varied over time.

1 INTRODUCTION

On April 14th 1970, a local fisherman found pieces of two Roman altars in his fishing nets in the estuary of the Oosterschelde near the village of Colijnsplaat in the south-western part of the Netherlands (Stuart 2003, 38-41; fig. 1).¹ Throughout the years 1970-1972, staff of the National Museum of Antiquities in Leiden started ‘fishing’ in the same location, yielding around 330 altars, all dedicated to the goddess Nehalennia (Stuart 2003, 44; fig. 2). The name of the goddess was not unfamiliar; already in 1647 the remains of a Roman temple had been found at the beach in Domburg, yielding 27 altars dedicated to the same goddess (Hondius-Crone 1955).

Origin dedicant	Number
Cologne (German Rhineland)	4
Trier/Treves (Germany, Moselle region)	3
Nijmegen (Netherlands)	1
Dormagen (Germany)	1
Area around Besançon (Eastern France)	1
Area around Rouen (Normandy, France)	1
Area around Augst (Switzerland)	1

Table 1 Origin of people who dedicated altars at Colijnsplaat (after Stuart en Bogaers 2001, 32-33 and 47-48).

The inscriptions on the altars found at Colijnsplaat make clear they had been erected by merchants and boatmen, involved in shipping between Britain, France and the Rhineland.² The goods they shipped were *allec* (fish sauce), pottery, salt and wine (fig. 3). Some of the people who dedicated altars originated from the Rhine/Moselle region, but also more distant regions are mentioned (table 1, derived from Stuart and Bogaers 2001, 32-33 and 47-48). The altars date between AD 188 and 227 (Stuart and Bogaers 2001, 40-41) and represent evidence of the existence of an extensive exchange system in the south-western part of the Netherlands, that connected communities in various regions in north-western Europe with each other.

2 CONNECTIVITY

Recently, a study was published about North Sea and Channel connectivity during the Late Iron Age and the Roman Period (Morris 2010). The concept of connectivity, that was introduced by Horden and Purcell in 2000, can be defined as “...the various ways in which microregions cohere, both internally and also one with another – in aggregates that may range in size from small clusters to...” much wider areas, as, for example “... something approaching the whole Mediterranean.” (Horden and Purcell 2000, 123). Based on an extensive research of archaeological and written sources, Morris concludes that the degree of connectivity varied over time and was “... vulnerable to wider political and economic changes.” (Morris 2010, 155). Morris emphasizes the importance of “...short- and medium-term changes into the bigger *longue durée* picture...” of connectivity between Britain and other regions in northwestern Europe (Morris 2010, 156). Fact is that connectivity in the Roman period increased, but the question is whether this was felt in all places and at the same time. Another question is who the driving forces were behind this increasing connectivity.

Morris (2010) uses the spread of specific groups of material culture to detect four periods in which the scale of connectivity increased. The same approach, using archaeological data to gain insight in the expansion of connectivity in the Roman period, is used in this article. The focus lies on two sites that were subject of research, carried out by the Faculty of Archaeology in the coastal area of south-western



Figure 1 Relevant place names mentioned in the text. 1. Katwijk, 2. Leiden, 3. Woerden, 4. Utrecht, 5. The Hague-Scheveningseweg, 6. The Hague-Ockenburgh, 7. Voorburg, 8. Naaldwijk, 9. Goedereede, 10. Colijnsplaat, 11. Veere, 12. Domburg, 13. Nijmegen, 14. Xanten, 15. Neuss, 16. Dormagen, 17. Cologne, 18. Trier/Treves, 19. Rouen, 20. Augst, 21. Besançon.

Holland from 2007 onwards. In Roman times this area was characterized by sandy ridges along the coast, clay areas along the rivers and a large peat bog in the interior (fig. 4). The majority of the area can be characterized as wetland, in which transport over water was obviously important. In the Roman period the region was part of the province of *Germania Inferior*.

Before we take a closer look at the results of the investigation into the two sites, it is important determine which communities were the main players in exchange and connectivity in this area.

3 THE MILITARY

Earlier work on exchange in north-western Europe suggested that the Roman military played a key role in the development of networks of exchange (Carroll 2001, 95-97; Mattingly 2006, 511-513). The large numbers of Roman soldiers that were stationed along the Rhine Frontier required substantial amounts of supplies. Evidence of the active part of military officials in collecting basic needs for the garrisons can be found in the Rimini inscriptions (CIL XI, 390-391), that mention a *centurio* from the *Legio VI Victrix* (stationed at Neuss, Germany), who was probably responsible for the purchase of salt or even



Figure 2 Altar found at Colijnsplaat. The text reads *Deae / Nehaleniae / M(arcus) Exgingius / Agricola / cives Trever / negotiator / salaries / C(oloniae) A(rae) A(grippinensium) v(orur) s(olvit) l(ibens) m(erito)* (Stuart and Bogaers 2001, 51). This can be translated as: 'To the goddess Nehalenia, Marcus Exgingius Agricola, citizen of Trier (Treves), merchant of salt in Cologne, has redeemed his vow, willingly and with reason'. Height of the altar is 91 centimetres. Photo © National Museum of Antiquities (Rijksmuseum van Oudheden), Leiden.

supervised the production thereof in the *civitas Menapiorum* and *Morinorum*, areas located to the south of the river Scheldt in Belgium and Northern France (Trimpe Burger 1999, 17; Carroll 2001, 97; De Clercq 2009, 475). Another example is an officer (*sesquiplicarius*) named on an altar from Colijnsplaat who was part of the *Ala I Noricum*, stationed at Dormagen (Germany) and who was probably involved in collecting or shipping supplies for his comrades in the German Rhineland (Stuart and Bogaers 2001, 38 and 121-122).³



Figure 3 Vessel with wine barrels, depicted on one of the altars found at Colijnsplaat. Width of the fragment is approximately 40 centimetres. Photo © National Museum of Antiquities (Rijksmuseum van Oudheden), Leiden.

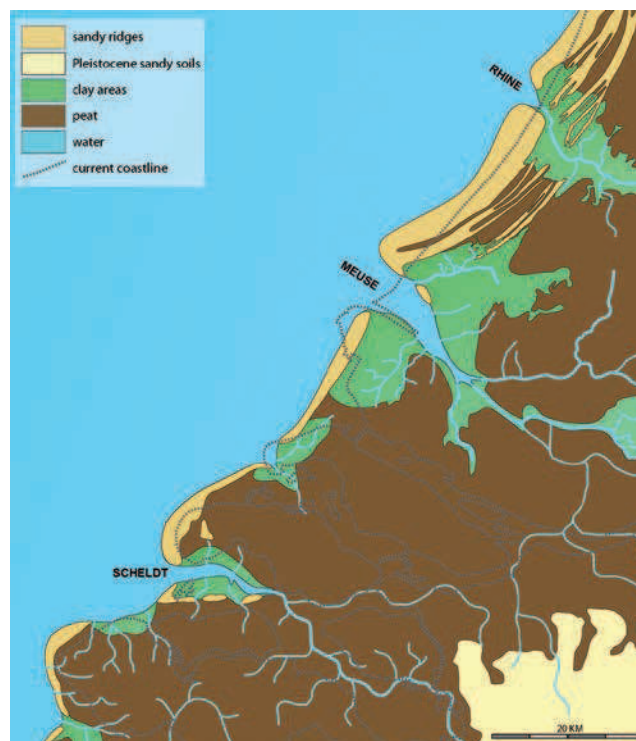


Figure 4 Palaeogeographic reconstruction of the coastal area of south-western Holland during the Roman period. Indicated are the three river mouths that discharged into the North Sea: the Rhine, the Meuse and the Scheldt.

Infrastructure, that was needed for supply, was very important for the Roman Army. A good example is the creation of the so-called Corbulo channel or *Fossa Corbulonis* by the Roman military around AD 50 (De Kort and Raczynski-Henk 2008a, 26), that linked the rivers Rhine and Meuse with each other. This channel has been found at several excavations. Military sites, especially watchtowers, excavated at the Lower Rhine Frontier near Utrecht, were probably built for guarding the "... vulnerable infrastructure..." (Graafstal 2002, 19). It is clear that the Roman military was keen on protecting their supply lines and that soldiers were active not only along the Frontier, but also in the hinterland. A number of settlements with a clear military link or even actual military structures and finds along the North Sea coast in the Netherlands, Belgium and Northern France might indicate another important supply line that needed to be guarded.

4 CIVILIANS

Besides army officials, civilians were also involved in the exchange of goods in the western part of the Netherlands. This is attested by epigraphical information on the altars from Colijnsplaat which record professions like *negotiator* (trader), *nauta* (shipowner) and *actor navis* (skipper) (Stuart and Bogaers 2001, 34-38). Also the *sevirii augustales* (freedmen who were responsible for the Imperial Cult), of whom two altars were found, can be linked to trading activities (Morris 2010, 55). Another inscription of a *sevir augustales* is known from the Roman town in Voorburg (Hees 2006, 343-344). Shipping goods for the military was lucrative because goods that were transported under military contracts were excluded from customs that had to be paid at provincial borders (Carroll 2001, 97). Merchants frequently added supplementary goods to their military cargoes in order to sell these products for themselves, even though this was illegal (Mattingly 2006, 513).

5 TWO SITES ALONG THE DUTCH COAST

Until recently, archaeological evidence of harbours or harbour settlements was relatively scarce. Excavated settlements in the south-western part of the Netherlands indicated that society was largely rural in character and was, at least until the second half of the second century AD, to a limited level connected with a supra-regional exchange of goods. From 2007 onwards, two research projects, directed by the department of Provincial Roman and Medieval Archaeology of the Faculty of Archaeology, gained important insight in the organization and functioning of this exchange system. The first project, Goedereede, focused upon the post-excavation analysis of old excavations. The second project, Naaldwijk, consisted of a two-year excavation, followed by an analysis of features and finds.

5.1 Goedereede

In the early seventeenth century AD, "the foundations of large houses and large streets" (Twisch 1620) appeared on the beach north of the town of Goedereede. Besides these structures, Roman coins and seal rings were found, accompanied by "stones and a lot of red and blue pottery" (Jongejan 1830). Unfortunately, no drawings of the remains were made, making it impossible to establish the character of the remains. The find spot was named 'The Old World' by local inhabitants. The remains of the site were later washed away by the sea.

Ditch digging in the 1950s exposed Roman finds and features on a location about 1.5 to 3 kilometres away from The Old World. This discovery led to the idea that by researching this settlement, more insight could be gained in the character of the long lost Old World. Excavations were carried out in 1958-1959 and 1983-1983. Yet, a published synthesis of the research was lacking, so for years it was not clear what the extent and character of the settlement was. In 2010-2011, a grant by NWO (the Netherlands Organisation for Scientific Research) was assigned to the Faculty of Archaeology, in order to unlock the data of the site. This was done by analysing the excavated features and a selection of the find material. The site was published in 2012 (De Bruin *et al.* 2012).

The settlement was located on a small levee of a relatively wide gully (16 metres), which, based on botanical evidence, carried brackish water. The natural environment can be characterized as brackish marshland, intersected by watercourses. Because the levee offered only space for small structures, the settlers raised the surface with clay sods, fixed with rows of wooden posts. On these elevations the first houses were built. In later phases of the settlement, these elevations were extended to the surrounding area, using refuse in addition to clay sods. Long, narrow and mostly shallow ditches, in which sometimes remains of wooden posts were observed, probably retained the soil, creating a raised platform on which the enlargement of the settlement could be realized.

An important question was why this settlement was built in this wet, brackish environment. The answer lies in the presence of the gully, which was, based on its dimensions, navigable. This assumption is confirmed by revetments and quay works, that were built alongside the bank of the gully (fig. 5). The revetments were made of closely juxtaposed wooden posts. A more elaborate quay work was also constructed, indicated by a bedding trench, dug out just behind the revetments, probably forming the base for a quay.

In the settlement, no less than six locations with remains of houses were found. In most cases, these houses were rebuilt several times on the same location, complicating the analysis of the different ground plans of the houses.



Figure 5 Revetments along the gully at Goedereede. To the right closely juxtaposed wooden posts, to the left a bedding trench, probably forming the base for a quay.



Figure 6 House plans from Goedereede, dating before AD 150.

Interestingly, the oldest houses, dating from around AD 85 to the middle of the second century AD, were relatively large, with dimensions of approximately 30 metres long and seven metres wide (fig. 6). One of these houses, located close by the gully, yielded a large amount of burnt barley (*Hordeum vulgare*) and also some spelt (*Triticum spelta*). This house probably had a (partial) storage function. Interestingly, spelt was mostly grown in the loess area where the Roman *villae* flourished, indicating that these stored crops could have been waiting for transport to a (military or civil) market (De Bruin *et al.* 2012, 116).

After AD 150 new buildings were erected at the site. These structures were built according to Roman principles of construction (fig. 7) and can be interpreted as warehouses, although they probably also had a residential function. Storage seems to be an important function of the site and also, in combination with the harbour remains, transshipment and distribution. The warehouse, shown in figure 7, upper house plan, burnt down probably around the end of the second century AD. In this warehouse, large amounts of burnt bread wheat (*Triticum aestivum* s.l.) were found. This kind of wheat is only found in Roman forts, towns and villae, indicating that the settlement played an important role in supplying these kinds of settlements. This is also attested by the presence of corncockle (*Agrostemma githago* L.), a non-local arable weed that grows among grain and which has a similar distribution (Bakels 2010, 13-20), indicating that wheat was imported to Goedereede.

Based on the provenance of the pottery, people in Goedereede were connected with trading networks between Britain, France and Germany. Overall, very few sherds of locally manufactured hand-shaped pottery were found. Instead, the find complex is characterized by large amounts

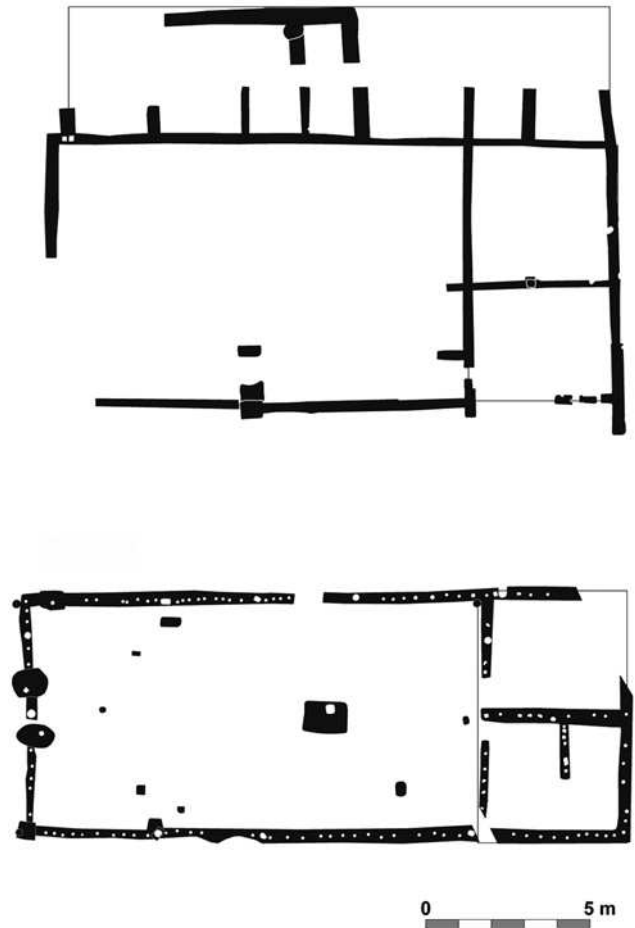


Figure 7 Structures from Goedereede, built according to Roman principles of construction.

of imported, wheel-thrown pottery. Especially the amounts of terra sigillata are not equalled on other sites in the wider region. The relatively large quantities of terra sigillata from La Graufesenque and Lezoux (both in France), dating between AD 85 and the first half of the second century AD, indicate relatively early connections with shipping routes



Figure 8 Location of the possible dug-out channel between the Goedereede gully and the northern streams that flowed into the Meuse. The Corbulo channel that connected the Meuse with the river Rhine lies further to the north.

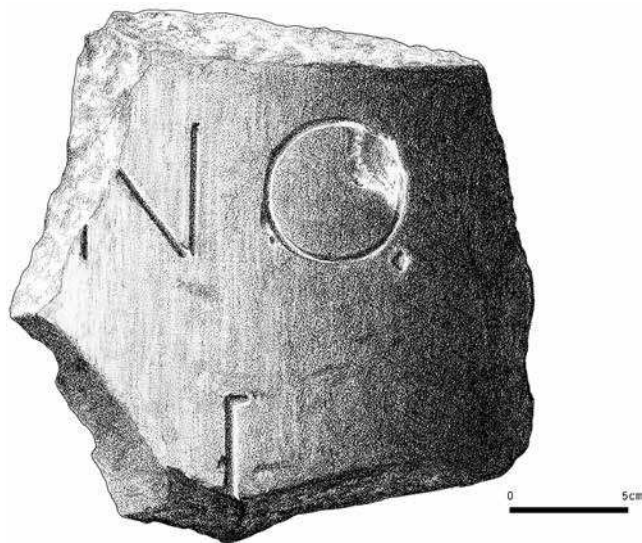


Figure 9 Fragment of a Roman milestone, discovered during excavations in Naaldwijk in 2007. There are three letters visible on the fragment, above are visible the letters NO, below is probably an L. Unfortunately it is impossible to identify the emperor in whose honour the milestone was erected. After Goossens (ed.) in prep. The drawing was made by R. Timmermans.

along the western Atlantic coast of France. It seems that from the outset the settlement is part of a supra-local exchange network.

Combining the presence of a navigable gully with revetments and quay works, non-local crops that were probably stored to be distributed to Roman towns and forts, and the broad range and amounts of imported pottery, the settlement at Goedereede can be characterized as a harbour settlement. The settlement yielded no military equipment or other finds that could be related to the army. Only two stamped bricks were found, one of which could be attributed to the *Classis Germanica*, the Roman fleet. An important discussion concentrates on the question which routes were used to get all these commodities in (and along) the settlement at Goedereede. Large parts of the landscape around Goedereede were eroded after the Roman period. A paleogeographical reconstruction, based on archaeological data, points to a possible connection via the Goedereede gully to more northern streams that connected to the mouth of the river Meuse. Although a peat area probably separated both streams, it is possible that a connection was dug, as was done by the creation of the Corbulo channel (fig. 8).

The research did not provide any more information about the character of the settlement at 'The Old World', but the presence of a harbour and storage facilities at Goedereede might indicate that the latter provided goods for the site at 'The Old World'. This could mean that 'The Old World' was a Roman fort or even the long-lost civitas capital of the Frisiavones, who lived in this area (Bogaers 1971, 231).⁴

5.2 Naaldwijk

The find of a hand of a life-size Roman bronze statue in the 1930s led between 2004 and 2011 to several excavations on this site, partly conducted by Leiden University.⁵ The site is situated on a sandy soil, as part of a raised beach, in an area that is dominated by marine clay and peat sediments. There are indications that in Roman times the site overlooked the mouth of the river Meuse. It is assumed that not only the Corbulo channel reached the Meuse estuary near the settlement, but that also one or more Roman roads were passing this strategic point. The latter is attested by the discovery of a part of a Roman milestone at the excavation (fig. 9).

The features that were excavated in Naaldwijk are hard to interpret. This is due to the fact that from the 6th century AD (the Early Middle Ages) onwards the site was reoccupied for about thousand years, resulting in a lot of disturbances of the Roman period features. After the medieval period, sand extraction and levelling for the purpose of greenhouse horticulture did further damage to the archaeological remains. Still, the excavations yielded important data about the development of the settlement. Traces of ploughing were

found on the site, probably dating around the beginning of our era. After a period of dune formation, resulting in a layer of sand on the former farmland, houses were built on the terrain. The features and finds point to an ‘average’ rural settlement that can be dated from the middle of the first century to the early third century AD. From around AD 150 onwards, locally manufactured hand-shaped pottery was rapidly replaced by imported wheel-thrown pottery. This impression is consistent with a broader development that can be archaeologically attested in the wider region. Based on the coin finds, little activity took place on the site in the early years of the third century.

Around AD 240 the site was reoccupied again, though the features that can be ascribed to this period suffered a lot from the post-Roman activities on the site, and no clear house plans could be unravelled. Finds from a large well, that was probably filled up after AD 259-268, based on a coin find at the bottom of the well, show that the material culture of the settlement could fit into urban or military contexts. This also applies to a ditch in which a large amount of third-century AD pottery was found, together with two seal stones. The activities on the site probably ended around 275/300.

In the fourth century AD, the site was once again occupied. No house plans or other distinct features could be attributed to this period, with the exception of the remains of a blacksmith’s hearth. Based on the collected hand-shaped pottery, the inhabitants’ cultural background was largely influenced by that of the area north of the Lower Rhine Frontier. The inhabitants were mainly engaged in smelting large quantities of Roman metal objects. Scattered over the site pieces of large Roman bronze statues, bronze plaques with inscriptions, pieces of furniture, brooches and coins were found, that escaped the kiln. Although the metal objects could have been collected from the Roman town some 30 kilometres away, the quantities and the careless handling of the sometimes relatively large pieces imply a nearby source. This is attested by the well-known Naaldwijk plaque which bears an inscription dedicated by the Roman fleet, the *Classis (Augusta) Germanica Pia Fidelis*, that most likely can be dated in AD 130/131, under the reign of emperor Hadrian (Derks 2010, 287; fig. 10). The presence of no fewer than eighteen *Classis* stamps on brick from the settlement, probably show that a naval base was located in the vicinity of the site. It is tempting to assume that the metal objects that were collected during the fourth century AD came from this base, so that we get a glimpse of the role metal played in the monumentality of such fortifications.

Summarizing the data collected in Naaldwijk shows that probably from the period around 130/131 AD, based on the Naaldwijk plaque, the Roman navy was active in the vicinity of the site. After the (partial) abandonment of the rural site



Figure 10 The Naaldwijk plaque, showing a Hadrianic inscription by the *Classis Au(gusta) Germanica*. Photo by ADC Archeoprojecten, Amersfoort.

around 200 AD, new activities from 235-240 AD show a settlement that was probably more closely connected with the nearby located navy base. When this base was abandoned around 300 AD, metal pieces from the fort’s interior were melted on the site.

6 RESULTS

The results from the analysis of the two excavated settlements can be combined with information concerning the surrounding area, showing the extent and diachronic development of connectivity in the coastal area of Germania Inferior. The starting date of Goedereede roughly coincides with the first building phase of the *via miliaris* along the Lower Rhine Frontier in Utrecht between AD 85 and 89 (Luksen-IJtsma 2010, 125). It can be assumed that the establishment of the Roman province of Germania Inferior around AD 85 was the occasion for the construction of (military) infrastructure along the Lower Rhine. Possibly, Goedereede may have been founded as logistic support centre for supplies for the army. This is indicated by the relatively large quantities of terra sigillata from especially La Graufesenque, that were collected on the site. Terra sigillata sherds from this production centre are scarce at rural settlements in the wider

region, but abundant in military sites. Storage of spelt in the first period of the settlement at Goedereede also points to a linkage with the military. The construction of a quay also fits into the image of a transshipment point for goods.

From AD 130/131 (based on the dating of the Naaldwijk plaque) to the end of the second century AD, tile stamps from the *Classis* point to an increasing importance of the fleet in this coastal area (table 2 and fig. 11). The largest concentrations of stamps were found in Katwijk, Voorburg, Naaldwijk and Veere. These were probably the locations for naval bases. They are situated at strategic locations near the estuaries of the Rhine, Meuse and Scheldt, though it is not certain that all river mouths were navigable (De Bruin *et al.* 2012, 140-141). The discovery of an important harbour at Voorburg (Driessen and Besselsen (eds) in prep.) explains the frequency of fleet stamps here. Above all, it emphasizes the varying roles of the fleet. For example, epigraphical evidence points to their involvement in quarrying and supplying building stones for the forum in Xanten in AD 160 (Precht 2008, 352, CIL XIII 8036). Unfortunately, the *Classis* stamps in Voorburg were found all over the site (Buijtendorp 2010, 609), so it is not possible to link involvement of the fleet in specific building activities.

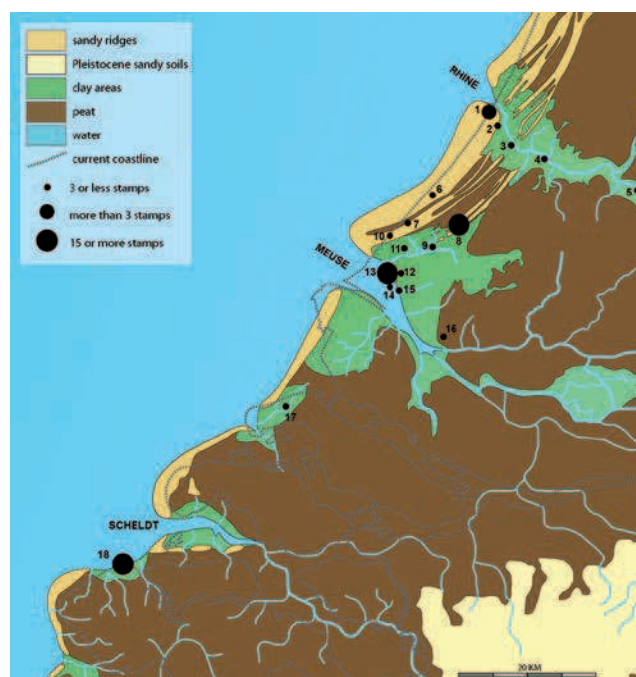


Figure 11 Distribution of C(lassis) G(ermanica) P(ia) F(idelis) stamps. The numbers refer to table 2.

Site number	Site name	Number	Reference
1	Katwijk-Brittenburg (incl. Uitwateringssluisen)	9	Bloemers and De Weerd 1984, 45
2	Katwijk-Klein Duin	1	Holwerda 1912, 52 OMROL 1912, 54-62
3	Valkenburg-De Woerd	1	Beunder 1987, 210
4	Leiden-Roomburg	1	Bogaers 1962, 194
5	Zwammerdam	1	Beunder 1987, 210
6	Den Haag-Scheveningseweg	1	Beunder 1987, 210; Waasdorp 1986, 311-312
7	Den Haag-Ockenburgh	1	Waasdorp and Zee 1988, 54
8	Voorburg-Forum Hadriani	26	Beunder 1987, 210; Driessen pers. comm.
9	Den Haag-Hoge Veld	2	Siemons and Lanzing 2009, 291
10	Monsterse Geestje	3	Beunder 1987, 210
11	Poeldijk-Westhof B	1	Van Pruissen and Kars 2007, 73
12	Naaldwijk-'t Zand Heultje	1	Stray find P. van Giesen
13	Naaldwijk-Hoogwerf	18	Van der Feijst 2007, 75; Brakman and Van Pruissen 2008, 168-169; Goossens 2012 in prep.
14	Maasdijk-Honderdland	1	De Kort and Raczynski Henk 2008b, 46
15	De Lier-Leehove	3	Bult and Groen 2009, 44; Bakx pers. comm. and pers. observ.
16	Vlaardingen Alkeet-Binnenpolder	1	Beunder 1987, 210
17	Goedereede	1	De Bruin 2012, 109
18	Walcheren-Noordstrand	15	Beunder 1987, 210; Van Heeringen 1988, 7

Table 2 C(lassis) G(ermanica) P(ia) F(idelis) stamps, found at sites along the coast in south-western Holland.

The question why the fleet from the 130s AD became increasingly active in the coastal area of the western Netherlands has recently been debated by Wouter Dhaeze (Dhaeze 2011). He states that the main reason for the construction of military installations along the coast was a response to increasing raids by Germanic pirates, apart from the function these forts had in supporting logistics for the military and civilian administration (Dhaeze 2011, 225). However, despite the historically attested acts of piracy, there is no archaeological evidence for raids or destructions of sites in the research area.⁶ The increasing interest of the Roman military for this area can also be explained by the growing importance of the present waterways as supply lines to the Lower Rhine Frontier. A discovery that sheds light on the importance of the ‘western supply route’ is the find of the Woerden 1 barge.

In 1978, during excavations nearby the Roman fort of Laur(i)um on the Lower Rhine frontier at Woerden, a Roman cargo ship was found and which is today known as the Woerden 1 barge. This ship was sunk after AD 175 (Haalebos 1996, 482) with the ship inventory and cargo of grain still on board. This grain had apparently been stored for at least a year before it was shipped (Pals and Hakbijl 1992, 295). On the basis of the weeds found among the wheat it was assumed that this corn came from a loess area (Pals and Hakbijl 1992, 294). This soil type occurs from the German Rhineland into northern France and the South of Belgium. The ship’s inventory, however, offers a possible clue to the origin of this grain. In the accommodation of the crew, beside the fireplace, a set of pottery was found. Of the five forms present there are four from the Flemish coastal plain. This is remarkable because this pottery category is relatively scarce in the frontier zone (Haalebos 1996, 485). Possibly the pots were purchased during the trip. This could mean that the Woerden 1 sailed via the Scheldt to the Rhine (Haalebos 1996, 490).⁷ This means that a (substantial?) part of the army’s supply was shipped through the south-western part of the Netherlands. As the evidence from Goedereede suggests, vegetable crops were even stored in warehouses along the supply line.

In the period between AD 150 and 200 archaeological evidence points to other major changes that took place in the research area. First, the area between Rhine and Meuse was parcelled, which meant that the rural sites were incorporated in a designed landscape, in which possession of land probably plays a significant role. This landscape is accessed by a Roman road, the first phase of which is dated AD 151 (Waasdorp 2003, 21). These developments may be caused by the fact that probably around the same time the Roman town in Voorburg was granted the *Municipium* status, transforming it into the civic centre for the region. The city’s first harbour quay was constructed around AD 160 (Driessen and

Besselsen (eds) in prep.), showing that there might be a connection between the granting of the municipal status to a relatively unimportant small town (with no more than approximately 2000 inhabitants) and the development of an important shipping route. The altars found at Colijnsplaat demonstrate the intensity of shipping at the end of the second and the first quarter of the third century.

From 150 until 180 AD a Roman fortlet was in use at the site of Ockenburgh in The Hague (Waasdorp 2012, 133). Another military settlement in The Hague, called the Scheveningseweg, can be dated between 190 and 240 AD (Waasdorp 1999, 171, Waasdorp 2012, 142). The construction of these military sites seems to be a response to the increasing importance of the region for supply routes of the Roman army. A side effect was economic prosperity in the rural settlements in the area, that were flooded with imported wheel-thrown pottery and other Roman bric-a-brac, including Romano-British brooches (fig. 12), although these might be interpreted as indicators of Britons in the area, notably as auxiliaries at the fort of Ockenburgh (Waasdorp 2012, 131-132).⁸

From around AD 240 till around AD 275/300, most settlements in the area are abandoned. The Roman forts along the Lower Rhine Frontier show a radical drop in the amount of coinage after the Severan period (AD 193-238, Kemmers 2008, 96 Fig. 2). The military settlement at the Scheveningseweg in The Hague fell into disuse. Most rural sites did not survive very long after AD 225. The harbour at Voorburg silted up from AD 230 onwards (Driessen and Besselsen (eds) in prep.). Interestingly, the Roman road that



Figure 12 Romano-British brooch from Naaldwijk. Photo by Restaura, Haelen.

ran through the area was maintained until at least AD 250. This is attested by three milestones, of which one can be ascribed to Gordianus III and the two other to Decius. The first was dated to AD 242-244 (Waasdorp 2003, 33) the latter can be dated to AD 250 (Waasdorp 2003, 37).

It is remarkable that the number of Roman coins at Naaldwijk increases after AD 240. The diagram (fig. 13) shows that the settlement is occupied again in this period until AD 275-300. Naaldwijk might have been in use as a military settlement in the vicinity of a Roman fleet base, based on the large numbers of *Classis* stamps on brick. Some

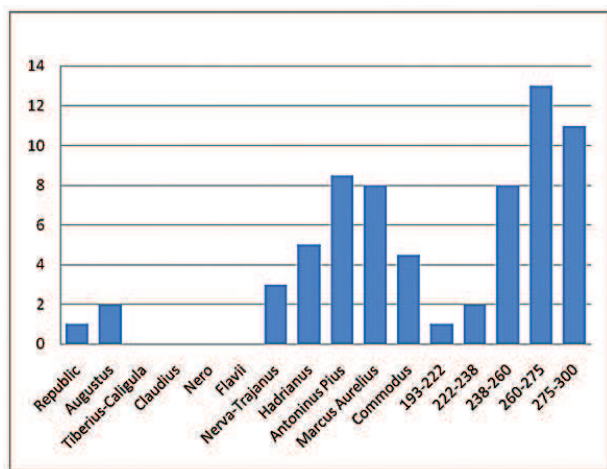


Figure 13 Number of coin finds per period at the settlement in Naaldwijk. The total number of coins is 65.

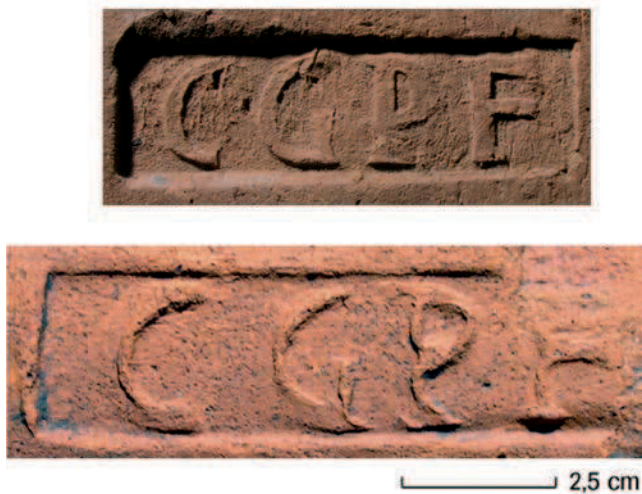


Figure 14 Two stamps of the *C(lassis) G(ermanica) P(ia) F(idelis)*. Note the difference between the two; the one below can probably be dated in the third century. The stamp at the top was photographed by ADC Archeoprojecten, Amerfoort, the one below by the author.

of these stamps are poorly impressed, as if the stamp was old, leading to the impression that these stamps are of later date than those of the second century, which are relatively tidy (fig. 14). Another function of the site at Naaldwijk could have been as the transshipment point for the Roman town at Voorburg, following the obsolescence of the harbour basin there. The diversity of the pottery in features from this period in Naaldwijk is an indication of the growing importance of the settlement in supra-regional exchange.

Most coins in Naaldwijk can be dated between 260 and 275 AD. This is the period of the so-called Gallic Empire, a breakaway realm of the Roman Empire, that included amongst others the Roman province of Germania Inferior. During this time an increasing reuse of military sites can be observed, based on an inventory of archaeological finds from this period in the Dutch part of Germania Inferior (Kemmers 2000). It seems that the site in Naaldwijk is also part of this activity, although the site was already in use from the 240s AD onwards. If Naaldwijk was a fleet base from AD 240 onwards, it is possible that the *Classis Germanica* became increasingly important in the surveillance of the coastal area of Germania Inferior. The fleet might even have been taking over the monitoring of the Frontier zone of the Roman land army, creating a more mobile way of guarding the Frontier and its hinterland. Around AD 300 the habitation that can be linked with the fleet seems to end in Naaldwijk. This is consistent with the last activities in the Roman town in Voorburg (Driessen and Besselsen (eds) in prep.).

7

CONCLUSIONS

Before AD 150, traces of exchange of goods can only be found in the settlement at Goedereede and along the Lower Rhine Frontier. The surrounding region was not incorporated into a larger exchange system, although the creation of the Corbulo channel around AD 50 opened opportunities for the development of shipping between the Rhine and the Meuse. The Naaldwijk plaque from AD 130/131 might indicate the presence of a fleet base near the settlement at Naaldwijk, but can also point to a specific action of the fleet in this area. The fleet is, by its nature, a logical vehicle for connectivity. From AD 150 the region surrounding Goedereede and Naaldwijk shows various changes that indicate that the rural areas were included in a large-scale exchange network, that increased connections between the coastal area of Germania Inferior and surrounding regions, probably as far as Britain, France, Belgium and the German Rhineland. The altars found at Colijnsplaat confirm this picture. At the same time there is evidence for a military build-up along the coast. The Roman fleet, the *Classis Germanica*, played an important role here.

Although the exchange of goods by means of shipping continued until at least AD 230/240, most settlements,

whether they had a military character or not, were abandoned. Only the Roman town in Voorburg and Naaldwijk still appeared to be part of a supra-regional network of exchange. It is possible that Naaldwijk overtook the harbour function of Voorburg, although it is also plausible that an important fleet base was located in Naaldwijk. The end of both Voorburg and Naaldwijk marks the end of a period of increasing connectivity along the coast of *Germania Inferior*, although the fourth-century AD habitation in Naaldwijk points to new connections, this time towards areas north of the Lower Rhine Frontier.

For the Roman period along the coast of *Germania Inferior* can be stated that connectivity increased, but it is clear that this development did not touch every settlement at the same time. Apparently, State or Military investments resulted in processes leading to increasing connectivity in coastal areas of the Roman Empire, but the expansion and sustainability of the connections varied over time.

Acknowledgements

Writing about exchange is not possible without engaging in exchange. I would like to thank Mark Driessen for his information about the important discovery of the Roman harbour at Voorburg and the number of military brick stamps that was collected during his excavations there in 2008. Jean Paul Bakx of the Archaeological Service of the Municipality of Delft helped me with collecting some of the *Classis* stamps from the region around Delft. The drawings in figures 4, 6, 7, 8 and 11 were created by Jeroen van Zoolingen; I modified some of them to fit into this article. Carol van Driel-Murray and Jeroen van Zoolingen read and corrected the initial draft of this paper. Any errors are my own.

Notes

1 For place names, see fig. 1.

2 It is remarkable that the altars found at Domburg do not mention profession or provenance of the people who dedicated the altars there, probably indicating that the sanctuary in Domburg had a more local significance.

3 The inscription on the altar (B30) does not mention the reason why it was dedicated.

4 In his article Bogaers mentions the settlement at Goedereede as one of the possible locations of the capital of the *civitas* of the *Frisiavones* (Bogaers 1971, 230, Fig. 1).

5 The excavation was conducted in cooperation with the Faculty's excavation company Archol in 2007 and 2008.

6 Dhaze 2011, 75-83. Outside the research area, burnt layers in several Roman towns and sanctuaries, dating from the 170s AD

onwards, are traditionally related to raids by Germanic pirates. It is, however, hard to imagine that relatively small groups of pirates were able to siege and destroy large Roman towns that are far away from the sea (Erdrich 2004, 159-161).

7 In contradiction of the suggestion that the Woerden 1 barge sailed via the Scheldt is a Roman shoe, which bore the stamp PS CATATS/M. It is possible that the characters CAT mean Colonia Augusta Treverorum (Trier/Treves) or Civitas Atuatua Tungrorum, although the last option does not seem plausible (Van Driel-Murray 1996, 496, footnote 70). It is therefore possible that one of the crewmembers of the ship bought his shoes in Germany, indicating that the Woerden I barge might also have been sailing through the Moselle/Rhine.

8 For a further discussion concerning the occurrence of Romano-British brooches outside Britain, see Ivleva 2010.

References

- Bakels, C. 2010. De vroegste vondsten van Bolderik (*Agrostemma Githago* L.) in Nederland / The earliest finds of corncockle (*Agrostemma Githago* L.) in the Netherlands. In: C. Bakels, K. Fennema, W.A. Out and C. Vermeeren (eds), *Van planten en slakken / Of Plants and Snails. A collection of papers presented to Wim Kuijper in gratitude for forty years of teaching and identifying*, Leiden (Festschrift), 13-20.
- Beunder, P.C. 1987. Vlootschouw. Enkele opmerkingen over de Romeinse vloot (Classis Germanica) in Nederland of het westen van de provincie *Germania Inferior*. *Westerheem* 36, 207-212.
- Bloemers, J.H.F. and M.D. de Weerd 1984. Van Brittenburg naar Lugdunum. Opgravingen in de bouwput van de nieuwe uitwateringssluuis in Katwijk. In: *De uitwateringssluizen van Katwijk 1404-1984*, Leiden, 41-51.
- Bogaers, J.E. 1962. Meerburgerpolder. *Nieuwsbulletin Koninklijke Nederlandse Oudheidkundige Bond jaargang 16*, 191-195.
- Bogaers, J.E. 1971, *Germania Inferior, Gallia Belgica en de civitates van de Frisiavones en de Tungri. Helinium 11*, 228-237.
- Brakman, A. and C. van Pruissen 2008. Keramisch bouw-materiaal. In: L. van der Feijst, J. de Bruin and E. Blom (eds), *De nederzetting te Naaldwijk II. Terug naar de sporen van Holwerda*, Amersfoort (ADC Monografie 4, Rapport 1271), 167-170.
- Bruin, J. de, G.P.A. Besuijen, H.A.R. Siemons and R.J. van Zoolingen 2012. *Goedereede-Oude Oostdijk. Een havenplaats uit de Romeinse tijd*, Leiden.
- Buijtendorp, T. 2010. *Forum Hadriani. De vergeten stad van Hadrianus. Ontwikkeling, uiterlijk en betekenis van het*

- "*Nederlands Pompeji*", Amsterdam (Ph.D. thesis Free University Amsterdam).
- Bult, E.J. and J.-M. Groen 2009. *Leehove I. Een Aanvullende Archeologische Inventarisatie en tracébegeleiding op bedrijventerrein Leehove in De Lier (Gemeente Westland)*, Delft/Leiden, (Delftse Archeologische Rapporten 27).
- Carroll, M. 2001. *Romans, Celts & Germans. The German Provinces of Rome*, Stroud.
- De Clercq, W. 2009. *Lokale gemeenschappen in het Imperium Romanum. Transformaties in rurale bewoningsstructuur en materiële cultuur in de landschappen van het noordelijk deel van de civitas Menapiorum (provincie Gallia-Belgica, ca. 100 v.Chr-400 n.Chr.)*, Ghent (Ph.D. thesis Ghent University).
- Derks, T. 2010. Vier neue Bronzeneinschriften aus Naaldwijk (Niederlande). *Zeitschrift für Papyrologie und Epigraphik*, 283-193.
- Dhaeze, W. 2011. *De Romeinse kustverdediging langs de Noordzee en het Kanaal van 120 tot 140 na Chr. Een onderzoek naar de rol van de militaire sites in de kustverdediging en drie casestudies over de militaire versterkingen van Maldegem-Vake, Aardenburg en Boulogne-sur-Mer*, Ghent (Ph.D. thesis Ghent University).
- Driel-Murray, C. van 1996. Die Schuhe aus Schiff I und ein lederner Schildüberzug. *Jahrbuch Römisch Germanisches Zentralmuseum Mainz* 43, 2. Teil, 493-498.
- Driessen, M.J. and E. Besselsen (eds) in prep. *Voorburg-Arentsburg: Een Romeinse havenstad tussen Rijn en Maas*, Amsterdam (Themata 5).
- Erdrich, M. 2004. Anmerkungen zum historischen Hintergrund des Truppenlagers von Maldegem-Vake. In: F. Vermeulen, K. Sas and W. Dhaeze (eds), *Archaeology in Confrontation. Aspects of Roman Military Presence in the Northwest. Studies in Honour of Prof. Em. Hugo Thoen*, Ghent (Archaeological Reports Ghent University 2), 155-164.
- Feijst, L. van der 2007. *De vicus van Naaldwijk*, Amsterdam (unpublished MA thesis Free University Amsterdam).
- Goossens, T.A. (ed) 2012. *Van akker tot Hoogherf. Onderzoek naar de bewoning in de ijzertijd, inheems-Romeinse tijd, de middeleeuwen en de nieuwe tijd op de haakwal van Naaldwijk (plangebied Hoogeland, gemeente Westland)*, Leiden (Archol-rapport 167).
- Graafstal, E.P. 2002. Logistiek, communicatie en watermanagement. Over de uitrusting van de Romeinse rijksgrens in Nederland. *Westerheem* 51, 2-27.
- Haalebos, J.K. (mit Beiträgen von C. van Driel-Murray u. M. Neyses) 1996. Ein römisches Getreideschiff in Woerden (NL). *Jahrbuch Römisch Germanisches Zentralmuseum Mainz* 43, 2. Teil, 475-509.
- Heeringen, R.M. van (ed) 1988. *Archeologische kroniek van Zeeland over 1987*, Amersfoort (ROB overdruk 360), 7.
- Hees, J. 2006. Altaren en inscripties. In: W. de Jonge, J. Bazelmans and D. de Jager (eds), *Forum Hadriani. Van Romeinse stad tot monument*, Utrecht, 343-347.
- Holwerda, J.H. 1912. Opgravingen in het Klein Duin te Katwijk-Binnen, Leiden (Oudheidkundige Mededeelingen uit het Rijksmuseum van Oudheden te Leiden VI), 48-53.
- Hondius-Crone, A. 1955. *The temple of Nehalennia at Domburg*, Amsterdam.
- Horden, P. and N. Purcell 2000. *The Corrupting Sea: a study of Mediterranean History*, Oxford.
- Ivleva, T. 2010. British Emigrants in the Roman Empire: Complexities and Symbols of Ethnic Identities. *TRAC 2010. Proceedings of the Twentieth Annual Theoretical Roman Archaeology Conference Oxford 2010*, 132-153.
- Jongejan, G. 1823. *Beschrijving van het Westvoorn, meest bekend onder den naam van: eiland Goedereede*, Sommeldijk.
- Kemmers, F. 2000. *Het Nederlandse Limesgebied tussen 250 en 275. Een inventarisatie van archeologica uit een intrigerende periode*, Amsterdam (unpublished MA thesis Amsterdam University).
- Kemmers, F. 2008. Interaction or indifference? The Roman coin finds from the Lower Rhine delta. In: A. Bursche, R. Ciolek and R. Wolters (eds), *Roman coins outside the empire. Ways and phases, contexts and functions*, Wetteren (Collection Moneta 82), 93-103.
- Kort, J.W. de and Y. Raczynski-Henk 2008a. *Plangebied Rietvinklaan 5, gemeente Leidschendam-Voorburg. Archeologisch vooronderzoek: een bureau- en inventariserend veldonderzoek (proefsleuven)*, Weesp (RAAP-Rapport 1428).
- De Kort, J.W. and Raczynski Henk 2008b. *Plangebied Honderdland, vindplaats 1: een ontginningsboerderij uit de 10e eeuw te Maasdijk, gemeente Westland; een definitief archeologisch onderzoek (opgraving)*, Weesp (RAAP-rapport 1465).
- Luksen-IJtsma, A. 2010. *De limesweg in West-Nederland. Inventarisatie, analyse en synthese van archeologisch onderzoek naar de Romeinse weg tussen Vechten en Katwijk*, Utrecht (Basisrapportage Archeologie 40).

- Mattingly, D. 2006. *An Imperial Possession. Britain in the Roman Empire, 54 BC-AD 409*, London.
- Morris, F.M. 2010. *North Sea and Channel Connectivity during the Late Iron Age and Roman Period (175/150 BC-AD 409)*, Oxford (BAR International Series 2157).
- Pals, J.P. and T. Hakbijl 1992. Weed and insect infestation of a grain cargo in a ship at the Roman fort of Laurium in Woerden (Prov. of Zuid-Holland). *Review of Palaeobotany and Palynology* 73, 287-300.
- Precht, G. 2008. Das Forum. In: M. Müller, H.-J. Schalles and N. Zieling (eds), *Colonia Ulpia Traiana. Xanten und sein Umland in römischer Zeit*, Mainz am Rhein (Xantener Berichte Sonderband. Geschichte der Stadt Xanten, Band 1), 341-353.
- Pruissen, C. van and E.A.K. Kars 2007. Keramisch bouw-materiaal. In: E. Blom and L. van der Feijst (eds), *Poeldijk Westhof, vindplaats B. Een inheems-Romeinse nederzetting uit de 1^e tot de 3^e eeuw*, Amersfoort, (ADC Rapport 909), 69-74.
- Siemons, H. and J.J. Lanzing (eds.) 2009. *Bewoningssporen uit de Romeinse tijd in het Wateringse Veld, Den Haag*, The Hague (Haagse Oudheidkundige Publicaties nummer 11).
- Stuart, P. 2003. *Nehalennia. Documenten in steen*, Zierikzee.
- Stuart, P. and J.E. Bogaers 2001. *Nehalennia. Römische Steindenkmäler aus der Oosterschelde bei Colijnsplaat*, Leiden (Collections of the National Museum of Antiquities at Leiden XI).
- Trimpe Burger, J.A. 1999. *De Romeinen in Zeeland. Onder de hoede van Nehalennia*, Goes.
- Twisch, P.J. 1620. *Chronyck van den ondergang der tyrannen, ofte jaerlijksche geschiedenissen in wereldlijke ende kerkelijke saecken van Christi geboorte of tot desen tijd toe*, Deel 2, 1617-1620.
- Waasdorp, J.A. 1986. 's-Gravenhage: Scheveningseweg 62-64. In: D.P. Hallewas (ed.), *Archeologische kroniek van Holland over 1985 II Zuid-Holland*, 308-312.
- Waasdorp, J.A. 1999. *Van Romeinse soldaten en Cananefaten. Gebruiksvoorwerpen van de Scheveningseweg*, The Hague (VOM-reeks 1999, nr. 2).
- Waasdorp, J.A. 2003. *III M.P. naar M.A.C. Romeinse mijlpalen en wegen*, The Hague (Haagse Oudheidkundige Publicaties – nummer 8).
- Waasdorp, J.A. (ed) 2012. *Den Haag Ockenburgh. Een fortificatie als onderdeel van de Romeinse kustverdediging*, The Hague (Haagse Oudheidkundige Publicaties 13).
- Waasdorp, J.A. and K. Zee 1988. *De vergeten verzamelingen van Ockenburgh. Romeinse vondsten uit 's-Gravenhage*, The Hague (VOM-reeks 1988 nummer 4).

J. de Bruin
 Faculty of Archaeology
 Leiden University
 P.O. Box 9515
 2300 RA Leiden
 The Netherlands
 j.de.bruin@arch.leidenuniv.nl