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FROM ZWAMMERDAM TO TEHERAN, PAPERS PRESENTED TO
JAN STRONK AND MAARTEN DE WEERD

Edited by:

J.G. de Boer, J. Kelder and F. Woudhuizen †

2021

PROCEEDINGS OF THE
DUTCH ARCHAEOLOGICAL AND HISTORICAL SOCIETY

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INTRODUCTION TO THE “FESTSCHRIFT” FOR
DR. JAN STRONK AND DR. MAARTEN DE WEERD

During the last 25 years, Jan Stronk and Maarten de Weerd have served *Talanta, Proceedings of the Dutch Archaeological and Historical Society* in their function as editors, although Jan Stronk’s term of office even began several years earlier. In this period, they edited hundreds of articles, while *Talanta* thrived and we have seen Jan and Maarten managing increasing numbers of pages for each volume, the largest being 386 pages.

In the last edition, volume 52 (2020), Jan and Maarten have indicated that, giving their progressive age (Maarten is already 80 years old, Jan a little younger), to end their function as the editorial board. They think it has been a nice adventure, but that it is time for the younger generation to take over.

We fully understand their choice, and thank them for their decades of service. Now, out of gratitude, the late Fred Woudhuizen (treasurer of the Dutch Archaeological-Historical Society and Jan de Boer (secretary of the same Society) came with the idea of a special volume of *Talanta* with contributions of friends and colleagues of Jan and Maarten during the last decades as a tribute to them.

All contributions are concerned with their specific fields of interest, for Jan Thrace, the Black Sea and ancient Persian history and for Maarten the Romans on the Dutch coasts and their ships on the rivers.

After the sad premature passing away of Fred Woudhuizen on September 28, 2021, the project was halted for some time. However Fred asked, just before he died, Jorrit Kelder to take his place.

In the end, we are happy to offer you this volume with 6 contributions in honour of 25 years of hard labour.

Jan de Boer and Jorrit Kelder.

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A ROMAN TRANSPORT AND SUPPLY ROUTE
ALONG THE RIVER UTRECHTSE VECHT ?

Jan G. de Boer

During the last hundred years, the theory was developed that the river Utrechtse Vecht was the so-called Drusus channel, used by Drusus and Germanicus during their campaigns in Germania, to supply the castellum Flevum (probably the Roman harbors Velsen 1 and Velsen 2, which were inhabited between 15 and 70 AD) and a trade route with Frisia. Recently the existence of a settlement during this period at the site of the later city of Amsterdam was proposed. This whole theory however is based on an extremely small, or sometimes even non-existing, amount of epigraphical and archaeological evidence. Other routes along the coast are hardly studied. An overview of all archaeological evidence and the results of recent research and some conclusions are discussed in this paper.

My first acquaintance with Maarten de Weerd was during my time as student at the Institute of Pre- and Proto-history, where I assisted the late Ben van Beek with the preparation of his thesis. Later we met again at the Dutch Archaeological-Historical Society where Maarten acted as chairman, later as editor of its proceedings “Talanta” and I as the DAHS secretary. Jan Stronk I mostly met during the time that he acted as director of the Dutch-Bulgarian excavations at Dyadovo while I worked at the Centre of Underwater Archaeology at Sozopol, both in Bulgaria. I have worked with both Maarten and Jan now for more than 38 years, sometimes with different opinions but always as good colleagues and what is more important, good friends. This article is my contribution to this volume of Talanta, in honour of their long lasting contribution as editors to this journal.

The relation between history and geography began with H.B. George’s first sentence “History is not intelligible without geography” (George 1901,1). A part of the geography are the rivers which run through every human landscape and are an essential part of every civilization. Rivers have always been ambivalent, being both a threat (disastrous floods, attacks of foreigners), a blessing (much needed water), a geo-political-military barrier, a zone of interaction between regions and an inexpensive way of short- and long-distance transportation of

persons and goods (Roth 1997, 20-21; Breeze 2015, 17). So settling along a river was always both a risk and a chance (Waldus/van Breda 2011, 14). River archaeology and considering rivers as archaeological contexts in their own right is rather a new but expanding field of interdisciplinary research, both in Eastern and Western Europe, Asia and America¹. It started on a small scale in France in the 1960's and is now practised all over the world, and more recently also in the Netherlands (Waldus *et al.* 2010, 34-39.). It consists not only of underwater research on the rivers themselves but also the archaeology of the environment, so a separation between underwater and land archaeology is untenable within a riverine context (Tóth 2006, 61; Waldus/Breda 2011, 15).

The Roman emperors tried to create an empire's productive landscape in which they could control order, stability, a remedy of the problems of élite competition and control the urban administrative chaos (Purcell 2014, 276). As the Roman empire covered three continents, it embraced thousands of rivers and there was definitely a relationship between urban settlements and these rivers (Rogers 2013). Roman connectivity required a complex and interlinked network, and rivers were a key part of the military and commercial transport network. For instance, climatic change during the Roman period in the Rhine region had obvious and important repercussions on hydrology and riverine transport as climatic and hydrological downturns had a negative impact on many elements that were critical to the smooth functioning of riverine trade, as a result of which riverine transport and trade suffered during the Late Roman period (Franconi 2016, 38). The choice in the location of fortresses and trade emporia was, to a large degree, influenced by this fluvial infrastructure. Ancient writers have claimed affinities between rivers and the communities living near them, like those near the Rhine or the Danube, both also functioning as the *limes* of the Roman empire in Europe.

The Dutch river system (mostly the Rhine-Meuse delta), characterised in the past by a relatively high flooding frequency, can be considered as the most important landscape reference framework of the past and it had an important role in the topography in defining the limits of the Roman Empire². The river Rhine formed the frontier, although Augustus tried to make the river Elbe the northern border.

The field of river combined with Roman archaeology was till recently an almost uncultivated area in Dutch archaeology. However in recent years, several plans for, large scale, water management projects which were undertaken for many, both large and smaller, Dutch rivers (due to ecological and climatological devel-

¹ See among many others Bonnamour 2000; Gaspari 2003, 42-52; Taelman 2006-2007; Tóth 2006, 61-66; 2008, 1-8; Nyman 2008, 3-16; Kröger 2009, 173-178; McNeary 2011, 62-170 and, especially regarding the Roman *limes*, Karović 1996, 265-268.

² See Waldus *et al.* 2010, 34; Waldus/Breda 2011; Toonen *et al.* 2013; Breeze 2015, 17.

opments) have given a fresh impulse to this field³.

More than one hundred years ago, a Dutch vicar and historian J.W. Verburgt published an article in Dutch named “De Romeinse Vecht” (The Roman Vecht) (Verburgt 1916, 78-97). He referred to the small river Utrechtse Vecht, which is a branch of the river Rhine in the Dutch province of Utrecht. It flows nowadays between a place south of the city of Utrecht, where the Rhine forks into two branches: the Old Rhine to the west and the Vecht to the north, and the old town of Muiden, nowadays situated on the southern border lake, the IJ meer.



It is circa 41 km long and called the Utrechtse Vecht to avoid confusion with another small river in the eastern part of the Netherlands named the Overijselsche Vecht. The area along the river is called the Vechtstreek. Originally the Vecht branched off south of the city of Utrecht, flowing eastwards around it, but in the 12th century, a northern shortcut was dug out.

Fig.1. The river Utrechtse Vecht

Till 5000 BC, the area around the later Utrechtse Vecht was a cover-sand landscape till the tidal basins of the Oer-Vecht basin reached their maximum inland positions around 3850 BC, due to the sea-level rise in the first half of the Holocene (Vos 2015, 14). Peat now covered the entire west of the Vecht region and a peat river in this area arose around 3500 BC. The Utrechtse Vecht, together with, the older river Angstel, came into being as a branch of the river Rhine around 825 and 790 BC (Törnqvist 1993; Berendsen/Stouthamer 2001; Weerts *et al.* 2002, 66) or slightly earlier (Bos 2010) while the Leidse/Oud Rijn (Old Rhine), probably more to the south than today, continued to the place of present-day Katwijk on the sea. According to another theory, the river arose as an independ-

³ See for instance for the river Maas: de Bont/Maas 2003; de Bont/Maas 2005; Stassen 2006, for the river the Rhine: Waldus/Breda 2011 and for the Utrechtse Vecht: van den Brenk *et al.* 2008; van den Brenk/Waldus 2008a; van den Brenk/Waldus 2008b; Campenhout/van den Brenk 2008; van den Brenk/de Boer 2009; van den Brenk/Mierlo 2011; Waldus/Langelaar 2013 and Waldus/Langelaar 2017.

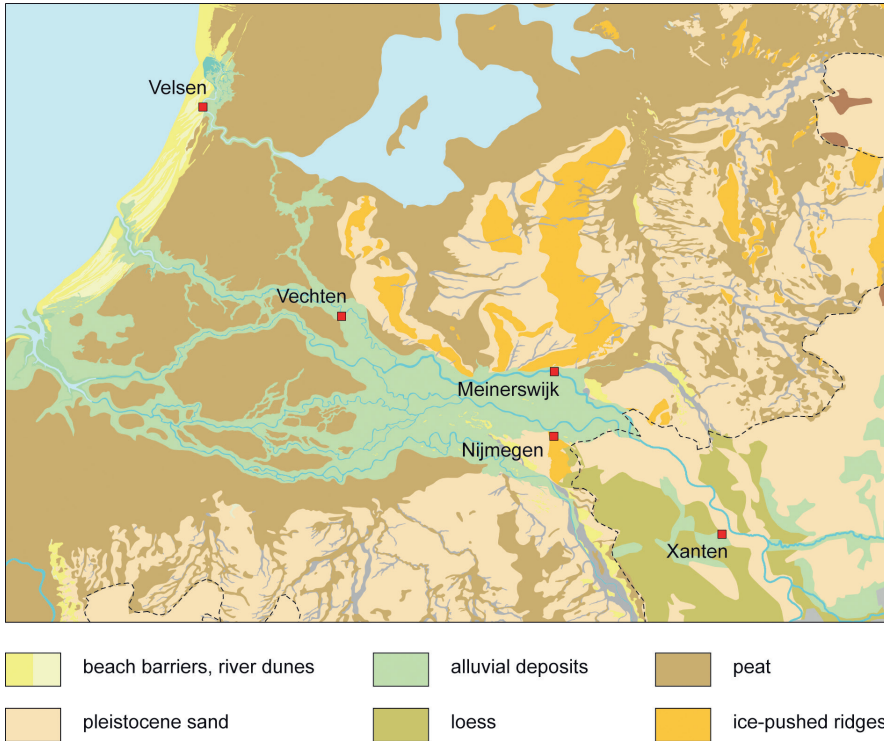


Fig. 2. The *castella Fectio* (Vechten), *Flevum* (Velsen), Hunerberg (Nijmegen) and *Vetera* (Xanthen), (Thanks to Rien Polak for the custom artwork, after Polak 2014).

ent river and merged either around 1500 BC or after the Roman period with the river Rhine (Winter 1975, 50) and its course did not change from 200 BC till now (Tuuk/Cruysheer 2013, 102). The river Vecht was probably a combination of marshy lakes and shallow streams, as it originated from a row of crevasses when the river broke through its own levee, and clay and sand, which was carried along, was disposed on the lower parts still in the Roman period (Bos 2010, 74). There are traces of Iron Age settlements along the “Utrechtse Vecht” from around 750-600 BC (Cruysheer 2011, 8) and the remains of an Early Iron Age tree canoe from 700 BC at Nigtevecht-Klein Muiden shows that some shipping was done on the river during this period (Tent 1992, 37; Feiken 2008, 107). It is possible that the name of the river Utrechtse Vecht was Flevo/Vlie in Roman times and that Lake Flevo was considered a localised widening of the river (Lanting/van der Plicht 2009/2010, 56; Buitelaar/Borger 2015, 377).

According to the common opinion of most Dutch archaeologists, the Utrechtse Vecht became an important and much used sailing route from the main Rhine to the Flevo lakes and the North Sea. It is even suggested that the Utrechtse Vecht was for some time a part of the Limes. In his already mentioned article, J.W. Verburgt regarded the Utrechtse Vecht as a waterway used by the Roman army to conquer the more northern part of Germania and also a trade route with the German tribes in the north. This idea was based on the following five assumptions.

- The *Castellum Fectio* at the site of modern Vechten was founded as a naval base exactly at the place where the river Utrechtse Vecht should have branched off the river Rhine in the early Roman period, while its importance was underlined by the fact that it was mentioned on the *Tabula Peutingeriana* and the *Ravennalis Anonymi Cosmographia*.
- The Utrechtse Vecht is (one of) the so-called *fossa Drusiana* or Drusus channel(s), mentioned by several Roman authors and used during the military expeditions of Drusus, Germanicus and Tiberius into the lands of the German tribes.
- *Castellum Fectio* was used to supply *castellum Flevum* (Velsen 1 and 2) between 15 and 70 AD, along the Utrechtse Vecht.
- The Utrechtse Vecht was used by traders with “free Germany” and the location of the city of Amsterdam was already used during the Roman period.
- The Utrechtse Vecht was for some time a part of the *limes*.

This article is meant as a critical review of these assumptions, taken for granted for decades, or even centuries. This also regarding the results of a large dredging operation of the Utrechtse Vecht between 2007 and 2015.

The *castellum Fectio*

The assumption that the Utrechtse Vecht was used by the Romans as a waterway for the start of Drusus, Germanicus and Tiberius expeditions to conquer the area between the Rhine and the Elbe, was mainly based on the discovery of Roman material connected to the Roman *castellum Fectio* situated at present-day Vechten, east of the modern town of Utrecht (ancient *Traiectum*) (Verburgt, 1916, 88; Remouchamps 1924, 4,6).

Finds from this site are already known from the 17th century AD, while a definite identification came with the discovery of a votive stone, translated by C. Lee-mans from the University of Leiden in 1869, which mentions the name Fectione (Verburgt 1916, 91). The site of *castellum Fectio* is nowadays mostly covered by a fortress of the Dutch “waterlinie”, one of a string of fortresses which were built in the 19th century AD to defend the city of Amsterdam. The remaining site of Fectio was excavated for a long period, at 1828 by Cornelis Reuvens, the first professor in the archaeology at the University of Leiden, during the building of the 19th century AD fortress (when the above mentioned inscription with the

name Fectione was found) and between 1892-94 (Muller 1895, 122-142). In 1914 and between 1921-26, the site was excavated by J. Holwerda of the University of Leiden, between 1931-39, from 1946 to 1947 by A. van Giffen from the University of Groningen (final publication of the material in 2012, Zandstra/Polak 2012), in 1970 and between 1981-1989 (see Wijnia 1990, 11-37). Between 1995 and 1996 a small part of the *vicus* was excavated, although the larger part is under a 19th century AD fortification.

Fectio was several times destroyed and rebuilt and was finally deserted around 270 AD and remains of the fortress were used to build the early medieval churches at the town of Utrecht. According to the many inscriptions found at the site and the excavations during the last few hundred years, *castellum Fectio* was built as one of the early border fortresses (especially after 47 AD when the river Rhine became the northern *Limes*) and marine base for the Roman Rhine fleet, along the *Limes of Germania Inferior* (Polak 2014, 76).

Originally it was supposed that *castellum Fectio* was founded during the German operations of Drusus between 12-9 BC (Hazewinkel 1927, 276) but later evidence, surfacing after the publication of the 1946-47 excavations in 2012, favours a post-Drusus building date, around 4 or 5 AD (Tijmann 1996, 149 fig. 1; Zandstra/Polak 2012, 243,249, 250; Zandstra 2013, 8; Polak/Kooistra 2013, 401-404; Polak 2014, 70-75, 81), possibly connected to the uprisings in Germania around 5 AD when Tiberius subjected the *Chauci* around the Weser and met a Roman supply fleet at the Elbe (*Velleius Paterculus* II, 106). The *vicus* near *castellum Fectio* was dated much later to 47 AD (Tuuk 1997, 114). Based on toponymical arguments, it is believed that *castellum Fectio* was built near the bifurcation node of Rhine and Vecht. However, now it is clear that the river bifurcation could not be located within 3 kilometres distance up stream or downstream of the fort. It is more likely that the bifurcation of Rhine and Vecht in the Early Roman period was located in the central part of the present-day city of Utrecht (van Dinter 2017, 34). Military installations in the early first century AD, like *castellum Fectio*, were mainly build to protect shipping on the Rhine (Langeveld *et al.* 2010, 31). It seems that the military alignment along the western Lower Rhine was primarily a river based system, at first functioning as a fortified transport corridor and later as a part of the *limes*. The location of the forts was chosen deliberately as strategic and logistic motives determined the location of all military complexes. The river was guarded by forts, while smaller military structures in-between the forts secured a complete overview. The watchtowers in-between the *castella* could not only detect problems (on the river), but also transfer messages between the forts (van Dinter 2013, 26). The name Feht or Fehtna for the river Utrechtse Vecht was for the first time attested in a Frankish gift charter from the 8th century AD (Tuuk/Cruysheer 2013, 106).

Castellum Fectio is said to have been mentioned on the 8th century AD *Ravennalis Anonymi Cosmographia* where it is called *Fictione*, situated between *Matelionem* (the quarter Roomburg of the city of Leiden) and *Evitano* (near Wijk bij Duurstede), and also as *Fletio* on the *Tabula Peutingeriana*, an identification general accepted since 1909 (Huizinga 1909, 364-365).

However there are several problems with these two identifications. The so-called *Tabula Peutingeriana* (or Peutinger's map) is a Latin map, of which 12th-early 13th century AD copy was inherited by the German Konrad Peutinger in 1508 and which is now kept in the Austrian National Library in Vienna. It is the only cartographical relic of antiquity that represents the territory of the Roman empire and probably the only surviving Roman *itinerary picta* (of the graphic type) (Salway 2005, 122). The map is painted on 11 pieces of parchment and contains the entire world, known in late antiquity. One or two sheets of parchment that show the west with the Iberian Peninsula, a part of Britain and West Africa, have been lost. Many settlements are marked by pictures of towers, houses, harbors, altars, temples, etc. and it is assumed that a vignette was assigned to places with a great or at least special significance. It bears more than 2700 place names and includes a huge road network with cities, stations, junction points, river crossings and the distances between them. It was probably compiled between 335 and 366 AD (Drakoulis 2007, 163), but was possibly based on a prototype of the world map of Marcus Vipsanius Agrippa in or around 12 BC but also includes elements up to the 5th century AD and even later medieval intrusions (Podossinov 2012, 204). It is highly likely that the map was several times copied and that the original had already disappeared when the last copy was made (Albu 2005, 136-137, 142).

The current Dutch part of the Peutinger map has only twenty place names of which three were awarded with a vignette, namely *Noviomagi* (*Ulpia Noviomagus*, Nijmegen), *Pretoria Agrippine* (Valkenburg) (but the vignette belonged possibly to the place under *Pretoria Agrippine*, *Forum Hadriani*, the only settlement in our area besides *Noviomagus* that was granted city rights in Roman times) and *Lugduno* (Brittenburg) which had probably great significance as a seaport.

The 8th century AD *Ravennalis Anonymi Cosmographia* was written around 700 AD by an unknown author from Ravenna. It was probably a list of place names collected by an amateur without any official status.

There is a place called *Fictione* mentioned on the *Ravennalis Anonymi Cosmographia* and one called *Fletio* on the *Tabula Peutingeriana*. However it is possible that here the nearby *castellum* at Vleuten, more to the west, is meant as *Fletio* on the *Tabula Peutingeriana*, as the *castellum* at Vechten was in decline during the 3rd century AD while Vleuten and *Lugduno* ("Brittenburg") were still



Fig.3 The Dutch part of the *Tabula Peutingeriana*.

in existence (Joosten,1997, 39-42). Anyway, the distances on both maps do not fit those between *castellum Fectio* and De Meern but much more those between Vleuten and Utrecht (Verhagen 2014, 544). If the data on the *Tabula Peutingeriana* comes from the 3rd century AD, an identification for the Roman castellum at Vleuten is more likely as *Fectio*. It is also suggested that *Fectio* was a corruption of the name *Elinio/Helinium*, another Roman *castellum* on the mouth of the river Meuse (Heijden 1997, 6) as the *Tabula Peutingeriana* was notorious for the many corruptions of its names and it is always risky to take it as the base of an identification (Willems 1981, 169; Podossinov 2012, 204). Interesting enough, the 3rd-4th century AD *Itinerarium Antonini* (the only large collection of Roman itineraries to have come down to us in written form, mentioning 2740 settlements) doesn't mention either *Fletio* or *Fictione*.

Concluding, we can say that *castellum Fectio* was not founded during the invasion of Germany by Drusus, nor was it founded exactly at the place where the river Utrechtse Vecht branched from the Rhine. The new chain of forts from the time of Claudius was intended as a strict dividing line between the Roman left bank and the German right bank of the Rhine (Kooistra *et al.* 2013, 5). It is also uncertain if *Fictione* in the *Ravennalis Anonymi Cosmographia* and *Fletio* on the *Tabula Peuteriana* were important enough to be mentioned on both maps.

The river Utrechtse Vecht as the *fossa Drusiana* ?

The exact position of the *fossa Drusiana* or Drusus canal has been a subject of much debate among archaeologists and historians, with the Vecht and the Gelderse IJssel as some of the alternatives (Polak/Kooistra 2013, 402-404).

The *fossa Drusiana* is supposed to be a channel, commissioned by the Roman general Nero Claudius Drusus (38-39 BC, a stepson of the emperor Augustus) who was ordered in 12 BC to conquer the area between the rivers Rhine and Elbe. In the second half of the 1st century BC, Germanic tribes regularly raided Roman ruled Northern Gaul (*Gallia Belgica*), crossing the Rhine. However, Roman punitive expeditions in return had little effect. Emperor Augustus (63 BC -14 AD) therefore prepared a major invasion and the conquest of all of Germany up to the Elbe. In 12 BC 5 to 6 legions (of 6000 men each) and Gallic and Germanic auxiliary troops were drawn together on the Northern Rhine border. Drusus aimed to conquer the invading tribe of the *Chauci* and to make the river Elbe the *limes* (Bogaers 1981, 17). He reached the Elbe but died in 9 BC as the result of an accident (Dio LIV, 32; Suet, *Claudius* 1).

During the short period that he campaigned in this area, Drusus commissioned hydraulic works located in present-day the Netherlands (mentioned by Tacitus, *Annales*, XIII, 53 and *Historiae*, V, 19): a groyne (*agger, moles*) and one or more canals (*fossa, fossae*), all connected to make it possible to sail to the Ems, Weser and Elbe over the Flevo lakes, the North Sea and the Wadden Sea (Lendering/Bosman 2012, 37; Polak/Kooistra 2013,401-4). However, according to Tacitus, the groyne was finished by the legate Paulinus 63 years after the construction was started around 9 BC. Is it possible in this context that Tacitus mentions a start by Drusus and a completion by Paulinus (Polak/Kooistra 2013, 402-404). The groyne was situated near the bifurcation of the Waal and the Old Rhine-Pannerden near *castellum Carvium* (built around 10 BC between present-day Herwen and Lobith) (Lendering/Bosman 2012, 37). The situation of this groyne is confirmed by the text on a pre-Claudian gravestone from De Bijland in which M. Mallius, a soldier of the First Legion, is commemorated. He was buried *Carvio ad molem* (in *Carvium*)⁴. The text refers to a structure some 2-3 km upstream. It was intended to shift the distribution of a large part of the water from the river Waal to the river Lower Rhine, making it wider and deeper. It created a more or less natural line of defence against Germanic attacks from the east, and enhanced the navigability of the transport and trade route to west and north (Nienhuis 2008,

⁴ Nesselhauf/Lieb 1959, no. 258: *M(arcus) Mallius / M(arci) f(ilius) Galer(ia) Genua / mille(s) leg(ionis) I / (centuria) Rusonis/anno(rum) XXXV stip(endiorum) XVI / Carvio ad molem / sepultus est ex test(amento) / heredes duo f(aciendum) c(uraverunt)*, Bechert/ van Enkevort/Willems 1995, 71

34-35). It also meant that more water was available for the Drusus canal, which connected the Lower Rhine with the Flevo lake.

Besides the groyne, Drusus commissioned the digging of one or several canals, probably be interpreted as improvements of existing natural rivers rather than new completely artificial channels (Bogaers 1981, 17; Nienhuis 2008, 34). These channels should have been between the Rhine and the Flevo Lake, today's IJsselmeer, and possibly also between the Flevo Lake and the North Sea. These *fossae Drusiana* are mentioned by Suetonius (*Vita Caesarum, Claudius* I.2) and Tacitus (*Annales* II.8). They were later used by Drusus' son Germanicus (Plinius N.H. II, 24.2; 67, 167), by his stepbrother Tiberius Claudius Nero and later on (in 47 AD) by the Roman general Corbulo during his expedition against the *Chauci* to the river Amisia, probably the river Eems. According to Suetonius, Drusus commissioned channels in the plural, while Tacitus mentioned only one Drusus channel, used by Germanicus when returning from the north.

Suetonius, *Vita Caesarum, Claudius*, 1.2:

This Drusus had as quaestor and praetor first a command in the Rhaetian area, then a command in the Germanic war; in this capacity he sailed as the first Roman general across the northern ocean, and built canals beyond the Rhine; he tackled this work energetically, it was an enormous undertaking. These channels still bear his name to this day.

(Suetonius is likely to have visited the German provinces in AD 121-122, and he may be describing his personal experiences here)

Tacitus, *Annales*, II, 8:

The Caesar (Germanicus) had forwarded the logistically supported allies, divided the legions and allies among the ships, and had entered the channel named after Drusus, praying to his father, since he now undertook the same venture, gracious and merciful with his example and willing to stand by in remembrance of his measures and buildings.

In 1907, E. Ritterling proposed that the river Utrechtse Vecht was the so-called *fossa Drusiana* or Drusus canal. This was repeated by Holwerda (1918, 125), Remouchamps (1924, 4), Bijvanck (1944: 67), Glasbergen (1966, 14-16), Bogaers (1981), Poelman (1981) and this idea is now more or less considered as a fact⁵. Drusus should have started his expedition in the Vecht area as this should be friendly Batavian territory. However, the Batavians were settled south of the Rhine, not in the Vecht area (Roymans/Aarts 2009, 19) and the Vecht area was in hostile Frisian territory.

⁵ See for instance Zeiler 1996, 66 and Syvanne 2011. It is also repeated in almost every report of the commercial archaeological companies, working in this area.

Various new Drusus canal hypotheses have been formulated in recent decades, the Utrechtse Vecht is an improbable location for the *fossa*. It is more than 60 km west of the groyne, where the favourable effects of the increased Rhine discharge has long been lifted (Neefjes 2005, 17; Nienhuis 2008, 34-35). It is also far away from the assembly points of the Roman legions in the time of Drusus campaign, as *castellum Fectio* could never have housed 30000 men. This assembly point was probably either near Xanten or Nijmegen. The first building activities of the Roman army in the Netherlands date from the time of the Augustan military campaigns, when between 19 and 16 BC an army camp, large enough to house two legions, was built near Nijmegen at the Hunerberg. With its estimated 42 ha the Augustan legionary fortress on the Hunerberg is large enough to have housed 15,000 soldiers (Kemmers 2008, 165, 169). Anyway, the use of the *fossa Drusiana* may have been restricted to the transfer of relatively light military ships and is likely to have been risky (Polak/Kooistra 2013, 402-404). It is unlikely that the full Roman army of five legions could be transported this way and a parallel land road through the Utrechtse Vecht area was impossible because of its marshy environment. A Drusus canal in the Utrechtse Vecht is also not visible in the form of new deposits in the soil archive.

A possible location of the *fossa Drusiana* was the upper course of the IJssel (its name initially Isala, later Hysla, or Salle for the Oude IJssel, is just like Salland associated with the Salians, a group of Franks who lived here until the 4th century AD), as a connection between the Rhine at Loowaard and the Oude IJssel which should be much more in accordance with the above mentioned sources. This connection between the Rhine and the northern part of the North Sea through the IJssel and the Flevo Lake was already indicated as the Drusus canal on a map from Abraham Ortelius in 1527. At Tolkamer was the *castellum Carvium* (Herwen) while approximately 9 km downstream was another *castellum*, about 1 km south of Loo (Duiven), and from there about 9 km further downstream a fortification in Arnhem-Meinerswijk, possibly the *castellum Herculis*, discovered in 1979 and associated with the presence of the delta river branch of the IJssel (situated 3-4 km downstream), also assumed of being the *fossa Drusiana* (Mulder/Harbers 1980; Willems 1981, 169; Bechert *et al.* 1995, 71; Heijden 1997, 9; Mulder *et al.* 2004, 22-23). However, the earliest finds at *castellum Herculis* are dated to the second decade AD and, like those from Vechten, are not consistent with a camp from the times of Drusus (Polak/Kooistra 2013, 402-404). However, it became clear that the Drusus channel was probably not the river Gelderse IJssel, as based on new samples, sedimentation along the lower course proves that the river arose as late as 950 AD and along the upper course around 600 AD (Makaske *et al.* 2008, 323-37). It also cannot be ruled out that Drusus may have dug a canal through the watershed at Zutphen in order to reach the Salland basin system via the Berkel that flows into the Rhine as these brooks were connected with Lake Flevo.

During the Roman period brook systems were functioning in opposite directions in the southern and northern IJssel valley, separated by a watershed. This watershed was broken around 300 AD by a peak discharge of Rhine water and from that point on a meandering river developed, flowing from the Rhine to the Flevo lakes. Drusus' canal or canals could possibly have been built to connect the separate brook systems in the IJssel valley, whether by digging an artificial connection or by creating some kind of portage (Polak/Kooistra 2013, 402-404). If there was a Drusus channel in the IJssel valley, then without maintenance, the traverse across the watershed would not remain an open connection for a long time (Cohen *et al.* 2009, 103). A *fossa Drusiana* was possibly dug between the villages of Elden and Driel where the distance between Rhine and IJssel was the shortest (Mulder *et al.* 2004, 23). A sand track to Driel and the parallel Roman road is also proposed as a *fossa Drusiana* in form of stone watchtowers near Wageningen, Rhenen, the Amerongse Berg and Oud-Leusden as a road along a channel. However, to the west of Arnhem, where the Rhine now flows between Driel and Elden, there was no river in Roman times as there was a basin area that can only arise far from a river (Neeffjes 2005, 17).

Traditions in Germany situate a Drusus canal between Wesel and Hamminkeln, which thus formed a connection between the Rhine and Oude IJssel and it is now thought that the Lange Renne, just over the border in Germany, was part of this canal system.

Other possible locations of the *fossa Drusiana* were the river Linge, between (what is now called) the Pannerdensch Kanaal and Tiel (Hetteema 1938, 56). This idea is possibly supported by the discovery of two first century AD Roman settlements near Huissen which could indicate an early Limes road (Schurmans 2008, 129).

Recently it has been suggested the *fossa Drusiana* as an inroad in the hinterland at Marsdiep in form of a canal could also have been constructed between Lake Flevo and the North Sea, which would make sense given the purpose of this exercise, the safe transport of troops to the Dutch north coast (Huisman 1995, 188-194, 2006, 18-22).

Concluding, one can say that the exact geographical location of the Drusus canal is still unknown (de Kort/Yannick-Raczynski 2014, 52; Polak/Kooistra 2013, 401-4) as its exact position cannot be reconstructed anymore, due to the fact that the present course of the Lower Rhine has wiped out most traces (Nienhuis 2008, 34-35). There are also a large number of possibilities.

On present evidence neither Vechten nor Meinerswijk was founded by Drusus (Polak/Kooistra 2013, 402-404).

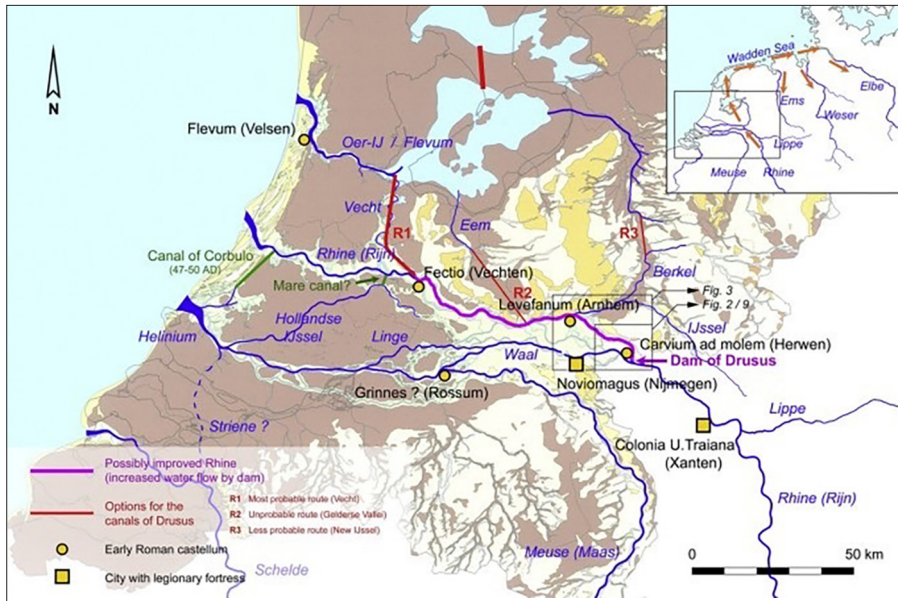


Fig.4 Possible locations of the *fossa Drusiana* (Thanks to Jan Verhagen for the custom artwork, after Verhagen et al. 2017).

The Utrechtse Vecht as a part of the Limes ?

This idea was suggested by J-B Wijfels in 2006 during a presentation at the Reuwendagen 9 & 10 november 2006 and based on an interpretation of the *Tabula Peutingeriana* and the *Itinerarium Antonini* (Wijfels 2006). This idea is however not in any way supported, neither by the sources, nor by the archaeological material.

A Roman supply route through the Utrechtse Vecht to *castellum Flevum* ?

In 1939, E. Janssens speculated about the geographical position of *castellum Flevum* in the territory of the *Frisii* (Janssens 1939, 108). According to the archaeological finds, the *Frisii* were, during the Early Roman period, settled north of the Rhine, the Vecht area, the North Sea coast north of the mouth of the Old Rhine, the island of Texel, parts of the vanished peat area between the head of North Holland and Frisia, the mound area of Westergo and Oostergo, the Groningen mounds area and the northern part of present day Drenthe (Lanting/van der Plicht 2009/2010, 59). It was mentioned by Tacitus (*Annales* IV, 2 although this is sometimes disputed⁶).

⁶ See for instance Zijlstra 2010, 11.

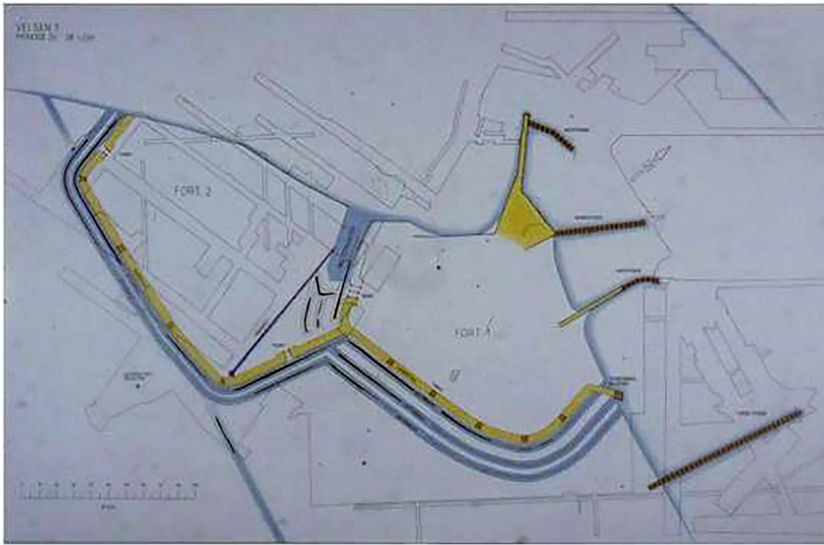


Fig.5. A reconstruction of the castellum Flevum, Velsen-1-phase-3 (After Morel 1988).

The exact position of *castellum Flevum* was discovered during the building of the “Atlantic wall” during the Second World War near present-day Velsen on the North Sea coast. It has two phases. Velsen 1 (with 5 sub-phases) was used between 15 and 30 AD while Velsen 2 was used between 39 and 70 AD (Bosman, 1997, 25; Lange *et al.* 2004, 45), after which the site was finally abandoned when Corbulo was ordered to retreat to the southern Rhine shore (Tacitus, *Annales* XI, 20). It is striking that the limes was located behind the Old Rhine and not behind the Oer-IJ as it was common opinion that in the Early Roman period the Oer-IJ still had an open connection to the North Sea. Between 15 and 50 AD Roman ships could supposedly still navigate from the port of *castellum Flevum* to the open sea. However, geological and archaeological evidence argues against such a late open connection (Vos *et al.* 2015, 327) and the strategic value of the Oer-IJ was probably already diminished before the Roman period, as the estuary near present-day Castricum was silted up (Bosman 2012b, 363). On the other hand, this early closure in 350 BC (Vos *et al.* 2015) is in its turn contradicted by the fact that, according to others, the river Amstel was still draining into the North Sea through the Oer-IJ until 220–400 AD (de Gans, 2015).

Velsen 1 has been almost completely excavated while only small part of Velsen 2 is excavated (Bosman 2012a: 6). Both fortresses were located in the territory of the Frisian tribes and situated on the left bank of the Oer-IJ near the shoreline

and the old dunes (Bosman 2016, 20). The location was probably chosen for its strategic importance along the sailing route to the OerIJ (Konen, 2000, 281; Bosman 2012b, 358). Both Velsen 1 and 2 were established as a supply points for campaigns to Germania and Britian to prevent the invasions of the *Chauci*. They probably also played a role in the (military) reorientation after the Varus disaster, and the set-up of a new logistical organisation for the coastal delta in the Tiberian-Claudian period (Driesen 2014, 225).

Velsen 1 has a triangular construction with a wood-earth embankment and a canal (Bosman 2012b, 359).

Its harbor had ship sheds for small galleys like the *Liburnae* which will be later discussed, for patrolling the North Sea coast (Morel 1988, 204-211). Its start date can be linked to the second Germania campaign of Germanicus, in which he used a northern (sea) route for the first time. The final date is linked to the Revolt of the Frisians in 28 AD (Bosman 2012b, 360).

Velsen 2 was mainly constructed to ensure that the northern flank of the *limes* was protected against the *Chauci* attacks but with a smaller harbor (Bosman 2012b, 361). Its foundation was probably also connected with the Britannia campaigns of Caligula and Claudius (Bosman 2012a, 11). The German *Chauci* tribes raided the North Sea coast and probably attacked in the same way as the Vikings in the early medieval period, following the coast and using the inland inlets while themselves living in the area between the Ems and the Weser.

Historical and archaeological evidence show that the attacks of the *Chauci* were a serious nuisance that penetrated deep into the interior and wreaked havoc. There is no evidence to suggest that *Chaucian* societies drifted on raids at the expense of their neighbors as they mostly lived of trading and fishing as facilitated by the harbor's in their territory (Kegler 2020). The campaigns of the Romans



Fig. 6 *Frisii* and *Chauci*.

probably disrupted that pattern as parts of the coast that belonged to the social network of the coastal inhabitants became prohibited areas and the possibilities for maintaining contacts were severely limited. It is quite possible that the raids of the *Chauci* tribes were directed especially against the Romans and stemmed from resistance, rather than from a cultural tradition of piracy (Nieuwhof, 2017, 33).

It was suggested that *castellum Fectio* should have been used to supply *castellum Flevum* (and possibly even a castellum at Winsum in Groningen) through the Utrechtse Vecht, an idea often repeated till today⁷. Supply of the army along the frontiers of the Roman Empire is a subject of interest of many historians. The main foodstuffs of the Roman soldiers were grain, olive oil (for those troops coming from Mediterranean area) or its substitute, fish and meat. Most of these products (if available in its surrounding) arrived by way of taxes and requisitions during military actions or were bought from inhabitants at fixed prices during peacetime (Klenina 2005, 403; Kooistra *et al.* 2013, 19). A large amount of indigenous pottery at the site of the fortresses shows that there were contacts with the local population. Local farmers probably provided livestock and salt in exchange for Roman goods (bowls and plates, glassware, wine jugs, cooking pots, amphorae, which will be later discussed in this article). Birds (mostly male domestic fowl, also used for cock fighting) were reared at the *castellum* and consumed at Velsen 1 while peacock was also kept. At least 36 wild bird species at the site have been demonstrated, of which mallard, greylag goose and crane were the most numerous (Prummel 1987, 197). Some food was undoubtedly imported, as indicated by the written sources as well as the bio archaeological research (Kooistra *et al.* 2013, 19) but the question is how much. There are strong indications that Velsen 1 was supplied with these imported wares from the south (Bosman 1997), but not necessarily through the Utrechtse Vecht and the OerIJ.

The Utrechtse Vecht as a transport road during the Roman period

The river Utrechtse Vecht was during the Early Roman period a shallow river in a marshy area and consisted of many parallel streams and which floated through a further inaccessible area (van der Tuuk/Cruysheer 2013, 103). The Roman period was probably not only a dry period but simultaneously a period when dry and wet conditions occurred and natural levers formed branches of the river, making the area unattractive for habitation and the river hardly navigable

⁷ It was most recent repeated in 2012 by M.J.M. Zandstra en M. Polak on page 17 in the final publication of the excavation of *castellum Fectio* by A.E. van Giffen during 1946-1947. This final publication was undertaken during the program Odysee by the Dutch Organisation for Scientific Research (NOW) being aimed at the publication of (almost)unpublished archaeological research in the Netherlands during the period between 1900-2000, see Zandstra/Polak 2012, van der Tuuk/Cruysheer in 2013 and also Vos/de Koning en van Eerden in 2015. It is also repeated in every report of commercial archaeological organisations, working or researching this area .

(Berendsen 1992, 243-4). The river Utrechtse Vecht was even in Middle Ages unsuitable for larger ships (Barendsen 1975, 382) and it seems that commercial settlements which were clearly river orientated along the Utrechtse Vecht were not founded before the Late Middle Ages (van Heteren 2015, 14). Roman material found in the Vecht/Angstel/Gooi area which consisted of pottery (Early or Middle Roman terra-nigra, terra sigillata shards, a neck of pre-Flavian jug amphora, a Roman jar of “Gauloise type 4”, a Roman pottery shard from the 3rd/4th AD century with an inscription, probably the initials of its owner) and coins (a copper as of Emperor Claudius, a coin of Nero, one of Galba, a sestertius of Emperor Nerva, an as or dupondius from Hadrian, a silver one of Antoninus Pius, the only one in the Vecht area from precious metal and a solidus of Honorius) from the 1st, 2nd and 4th centuries AD in Vleuten, Maartensdijk, Hollandsche Rading, Maarssenbroek, Maarsen, Maarsseveensepolder, Maarsseveensevaart, Eemnes, Oud-Zuilen, Breukelen, Nieuwersluis, Mijnden, Loenen, Vreeland, Nederhorst den Berg, Abcoude, Naarden, Huizen, Hilversum and Muiderberg. The National Museum of Antiquities in Leiden owns a bronze pendant from the second century AD, obtained through the antiques trade, that is said to have been found in Breukelen. These were loose finds (sometimes from the 19th-century AD) without a clear context and all were made by private individuals or amateur archaeologists, picked up from the surface. None of them was found by professional archaeologists, and the commercial archaeological research as a result of the Malta Treaty, still did not gain any knowledge in the Vecht region. A possible exception is a tombstone of a young girl from Roman times, found in Loenersloot in the 19th century AD (Bijvanck 1944, 437) but the location, conditions of discovery and current whereabouts of the stone are unknown. It possible that at least a part of these finds from the Roman period came with the urban waste (fertilization from the city of Utrecht) or from the Pleistocene sandy soils, which were used as compost in the area in the post-Middle Age from south of the limes (van Duinen 1994, 22). A denarius of Caesar Octavianus found under a house at Nieuwersluis in 1914 could even be the lost property of a 17th century coin collector. Some Roman pottery shards found near Maarssen were collected between pottery and clay pipes from the 18th and 19th centuries AD but they may well have been *in situ* and therefore indicate habitation on the spot (Witte 1987; van Duinen 1994, 9; Kok, 2009, 45). A possible local harbor was discovered in the Horstermeerpolder (Cruysheer 2018, 9) but further occupation layers or other (settlement) traces have not been demonstrated in the Vecht region. Verburgt wrote in 1916 regarding the grave at Loenersloot: “*This grave in Loenersloot, in the Vecht region, also bears witness to the Roman road along the Vecht*” (Verburgt 1916, p. 88) but after more than a century after Verburgt’s remark, one has to conclude that the finds from this area are too few in number to have any probative value. The relative emptiness of the Vecht area and the

Gooi sharply contrasts with the countless finds that have been made along and south of the Limes⁸.

Dredging of the river Utrechtse Vecht

During a period of eight years (between 2007 and 2015), the river Utrechtse Vecht was dredged over a distance of 41 km between the city of Utrecht and the old city of Muiden on the IJmeer. This was the first large scale dredging operation in the history of this river and it was executed in the frame of the European Water Framework Directive in order to remove the contaminated sediments of the last thousand years. The project was commissioned by “Amstel, Gooiland en Vecht”, the water Authority of the area between the city of Amsterdam and that of Utrecht. In accordance with the Malta treaty, the dredging operation was preceded and guided by archaeological research under the direction of the author of this article and executed by two commercial archaeology companies, Periplus Archeomare and ADC Maritiem. The results of this archaeological research between 2008 and 2015 were revealed in several publications⁹. During the whole project, the only find from the Roman period was a single wire fibula (Langelaar/Abelskamp-Boos 2017, 57). So the expectation from R. Kok that during the dredging of the Vecht Roman finds and ships should be encountered is in vain (Kok 2009, 48).

The Oer-IJ

In the first century, the Oer-IJ formed the connection between the Vecht to the estuary between Heemskerk and Uitgeest. Opinions as to whether the Oer-IJ was a narrow peat stream or a broader water during and after the Roman period differ between specialists. Habitation on the Oer-IJ is known from Assendelft, where there were farms on the banks of the creeks (Versloot 2011, 2).

Four separate landscape zones can be designated in the Oer-IJ estuary: the beach walls in the west, upland moor in the east, reed peat to the west and the Oer-IJ catchment area with salt marsh deposits, river ridges, residual channels and basin areas. About 500 BC, the swamp area had expanded over the entire IJsselmeer area and far beyond and two large inland lakes were located near the current lake. In the west this swamp area was shielded from the sea by a row of dunes, in the north it drained through a few channels into what is now the Wadden Sea.

⁸ See a.o. de Boone 1959; Tent 1992, 37; van Renswoude 2002, 8; Visser *et al.* 2005, 40; Cruysheer 2006, 36; Kok 2009, 43-49; de Boer *et al.* 2010, 30-31; Cruysheer 2010; *De Archeologische Kroniek van Noord Holland* 2012, 124; 2013, 119; 2014, 122-123; Koopman 2017, 74-5; Cruysheer 2018, 8-9.

⁹ van den Brenk *et al.* 2008; van den Brenk/Waldus 2008a; van den Brenk/Waldus 2008b; Campenhout/van den Brenk 2008; van den Brenk/de Boer 2009; van den Brenk/Mierlo 2011; Waldus/Langelaar 2013; Esser *et al.* 2013; Waldus/Langelaar 2017; Langelaar/Abelskamp-Boos 2017.

The complex of lakes was called *Flevus Lacum* by Tacitus and Suetonius. The lakes were in contact with the sea by a northern connection: the Vlie.

Since the Romans on their route to Velsen through Utrechtse Vecht and the Oer-IJ should have passed through present-day Amsterdam, finds from there has to be considered. The Northern IJ bank was hardly inhabited during the Iron Age, Roman period and early Middle Ages but it is possible that the wider environs of the river Amstel were sparsely inhabited although the site of the later city of Amsterdam was probably an uninhabitable swamp in Roman times.

The Roman finds from the area of present-day Amsterdam (some coins, fibulae and ceramics) suggest transients travelling on the River Amstel (Gawronski/Kranendonk 2018, 29). They encompass nineteen coins, a.o. discovered during the construction of the IJ tunnel and the underground to the Bijlmermeer in the 1970s, a.o. a *sestertius* from the time of the emperor Vespasian (69 to 79 AD), *ashes* of Emperor Domitian (81-96) and a *folles* of Constantinus I from the 4th century (308-337). Other finds were a bronze *fibula* and a white marble emperor's bust from the 3rd century AD, found during dredging of the Amstel (Baart 1991). During the last years, there are no longer any Roman finds encountered during archaeological research in Amsterdam, not even during the construction of the new underground, the North-South line. It is suggested that the Roman coins in Amsterdam "*may as well have originated from the collection of a 19th century antique lover*" (Kok 2009, 48). Amsterdam's town archaeologist Jerzy Grawonski states "*Amsterdam did not exist at all during Roman time. At the place where Amsterdam was created at the end of the 11th and early 12th century, the landscape looked completely different in Roman times. There was a completely different water system at the time, with different rivers and creeks. The Amstelland - the area between Utrecht and Alphen - was mainly wet*"

Former city archaeologist J. Baart had already concluded about the few Roman finds in the city of Amsterdam: "*All these sites have nothing to do with activities from the Roman period and all objects which were found ended up here indirectly. It is not too risky to say that none of the excavated objects ended up here through activities in Roman time*"(Baart 1991,106).

Further to the north in the Oer-IJ, mapping of the soil layers has since shown that the former islands Urk and Schokland in Roman times formed one large island. A sailing route over the Flevo lake was possibly used by the Roman armies and traders (van Heteren 2015, 2). In 1977, in the Urk forest, near Urk, 11 Roman Denarii were found. A loose basalt stone was deposited between 60 and 100 AD at the archaeological site in Kotterbos (near the modern city of Lelystad). It is a basanite that hails from Rolandsbogen on the west bank of the Rhine, 12 km upstream from Bonn (Germany). The Kotterbos basalt is the first and so far only basalt stone in

an archaeological site of Roman age that has been found beyond the Limes in the Netherlands and at a distance of 40 km north of it (Linthout 2015, 396).

Concluding, one can say that the amount of Roman material, found in the Vecht area, the Gooi and the more northern situated OerIJ is very small and can be explained through contacts of the small population groups, living along the marshy Vecht/Angstel/Amstel area, the Gooi and the Oer-IJ, who were in contact with the 'trading centers' in or near the Roman fortresses on the Rhine (Cruysheer 2010, 237; Kok 2009, 49). The situation in the Vecht area is comparable with the situation everywhere on the *limes*. Inside the Roman empire, Roman life was pulsating while the other side was a buffer zone, thinly populated (Suharoschi *et al.* 2020, 63).

A Roman road through the old dunes ?

Compared to the Roman material from the Vecht area, that from the region along the North Sea coast (north of the mouth of the Old Rhine) is much more abundant. There was a road from *castellum Fectio* along the Old Rhine till present-day Katwijk at the North Sea coast (Luksen-IJtsma 2010).

The North Sea coast is now covered by the sand of the young dunes but, in the Roman period, the coastline looked completely different as the dunes along the coast were low, a few meters above Normal Amsterdam Level (NAP) and geologically called the old dunes (Kooistra *et al.* 2013, 16).

After a long period of rest, a high dune massif began to blow up here in the Middle Ages, which is called the young dunes. A relatively slow rise in sea level, in combination with more frequent occurrence of storms, caused the coastal erosion in the western Netherlands, which started between the 5th and 1st centuries BC. The coast was a landscape of sandbanks, small dunes, wadden and marshes (Bloemers/Therkorn 2003, 7), densely populated by Frisian tribes during the Early Roman period with a ritual center at the site of Velsbroek B6 (van Heeringen/van der Velde 2017, 129-141; Lange *et al.* 2004, 44). This center was probably a part of a road along the old dunes on the beach wall to the north which existed from prehistoric times and fits in a general pattern of later connecting roads from the Roman era and the Middle Ages along the coast of North Holland (Bloemers/Therkorn 2003, 11; Bosman 2012b, 366). The amount of metal finds of Roman origin along this possible road is exceptional concerning clothing such as cloak pins and a belt, pieces of bronze tin, coins and a Roman iron throwing spear (Bloemers/Therkorn 2003, 30-31).

A short and incomplete overview of the Roman material, found north of the mouth of the Old Rhine, contains the following sites in present-day geographical order: Roman coins and bronze objects were found near Noordwijk (Groot/Wilbers 2010, 17), Roman ceramics, like a rim fragment of a Roman wine jug of the Stuart 84



Fig.7. A reconstruction of the old dunes during the Roman period (Courtesy of the artist Ulco Glimmerveen, after Roos 2009).

type (Stuart 1977; Vader 2006, 7) and two fragments of bowls, similar to a type 40 plate found in *castellum* Niederbieber in Germany (Numan 2007, 4; Vossen 2007, 12) in the area of the dunes, used by the city of Amsterdam for its drinking water supply. A number of terra sigillata shards in a ‘drift chill’ at the town of Zandvoort (ARCHIS observation number 40138 and 45506). Roman amphora shards were found in the town of Haarlem (Anonymus 2011, 39) and a fragment of a Roman terra sigillata bowl from the Early Roman Period, at Uitgeest (Verboom-Jansen 2011, 8). Five sites with imported Roman ceramics were discovered at the village of Bloemendaal (Anonymus 2011, 38) while a Roman fibula was found at Kennemerland (*De Archeologische Kroniek van Noord Holland* 2010, 86).

At a site from the early Roman period, discovered at Zaanstad/Krommenie/Het Hain in 1964, a pentagonal wooden stockade was discovered which enclosed some small wooden structures. This was an exact parallel of a Roman watchtower at the Leiden Rhine (Lange *et al.* 2004, 44; de Koning 2017, 7-9, 59). The site also contained a striking amount of Roman import pottery, Roman coins from 1st century AD and an iron adze, indicating a Roman trade centre (*De Archeologische Kroniek van Noord Holland* 2014, 106; *De Archeologische Kroniek van Noord Holland* 2018, 101; *De Archeologische Kroniek van Noord Holland* 2019, 176).

A shard of terra sigilata from the 1st century AD came from the town of Beverwijk (Medard 2011, 11) and at the village of Uitgeest, a house was discovered which resembles a wooden imitation of a stone Roman cult building, with Roman imports and parts of Roman military equipment, Roman fibulae and coins (Lange *et al.* 2004, 45; *De Archeologische Kroniek van Noord Holland* 2015, 133; *De Archeologische Kroniek van Noord Holland* 2018, 149). Roman coins from Antoninus Pius were found near the village of Castricum (Langeveld/Sterk 2012, 1; *De Archeologische Kroniek van Noord Holland* 2016, 44). The name Castricum is possibly derived from the word *castris*, meaning army camp. At the place where the Oer-IJ was connected to the North Sea. Roman coins were found near the village of Bakkum (*De Archeologische Kroniek van Noord Holland* 2018, 147) and large amounts of Roman ceramics come from the city of Alkmaar (Haalebos 1969-1971, 33-39). Terra sigillata and smooth-walled pottery was found at area of Brederode (Anonymus 2011, 39). A Roman fibula was discovered at the village of Limmen (*De Archeologische Kroniek van Noord Holland* 2000, 46) and a Roman coin came from the nearby town of Heiloo (*De Archeologische Kroniek van Noord Holland* 2012, 86). From the village Bergen aan Zee came a 1st century rosette fibula, a wire fibula, a very small bronze T-shaped pin and three Roman coins (De Archeologische Kroniek van Noord Holland 2016, 42; *De Archeologische Kroniek van Noord Holland* 2019, 25-28). At the village of Schagen, very large quantities of pottery from the Roman era, Roman glass and coins from the reign of Hadrian were found (*De Archeologische Kroniek van Noord Holland* 2018, 88, 99-101) and from the harbor of Enkhuizen, situated at the IJsselmeer came a statue of Mercur (*De Archeologische Kroniek van Noord Holland* 2018, 170). Seven sites from the Roman period from the mid-2nd till 4th century AD were discovered in the territory of the northern town of Wieringen (Dütting 2018, 14) while the island of Texel delivered 358 sherds of Roman ceramics a.o. terra sigilata and terra nigra from the 2nd till the 4th centuries AD, Romano-British ceramics from the 3th till the 5th centuries AD and metal objects (Woltering 2017, 240-260).

Some Roman material along the North Sea coast was probably collected by the Frisians from the abandoned fort sites of Velsen 1 and 2 as some fragments of terra sigillata, found at respectively Velsen-Hoogovens, Krommenie-’t Hain and Santpoort ruins of Brederode, appear to fit with fragments from the Velsen 1 site (Bosman 2012b, 365). But on the basis of the large amount, the later material, the coins and ceramics, the remains of Roman buildings and a watchtower, a south-north route over the zone of the beach walls with a crossing point over the Oer-IJ near Uitgeest can be postulated, possibly used by the Roman army and for trade.

Romans on the open sea

It is supposed that the Romans in northern Europe, and especially its army, stayed away from the open sea, especially after the fleet of Germanicus was

destroyed by a storm at the Wadden coast (Huisman 2006,21). So most maritime transport should have gone by river. This idea is strengthened by the fact that almost all Roman ships discovered in the Netherland are flat-bottomed river boats. However there are several facts which contradict this thesis.

The Roman empire relied on an active coastal defence in the open sea as active and passive defence were combined. The development of a system of coastal defense during the Early Empire can be regarded as the best form of protection which was achieved in the ancient world (Starr 1943, 68-69). The very first Roman military activities on the open sea from along the Channel coasts are from the time of Caesar during his invasion of Britain in 55 BC and 54 BC, starting from two ports located near modern Calais, but regular German and British Roman fleets probably operated from the time of Augustus (Saddington 1990, 224). Significant naval activity started again halfway through the 1st century AD when there were new invasion plans under Augustus in 34, 28 and 27 BC and Caligula in 40 AD. The actual conquest of Britannia began in 43 AD under Claudius, and was probably carried out from the same harbors as those used by Caesar. The invasion of Britain involved a large-scale transport of troops and supplies and was most likely largely realised over the river Rhine. The Romans aimed to guard and secure this supply line with forts and watchtowers. Only in the late 1st century AD the river became the real frontier zone of the Roman Empire. The control of the bifurcations of the Rhine between Nijmegen and Cologne were regarded important for transporting troops and material from or to hostile terrain and protection against German attacks (Driesen 2014). After 16 AD, a special navy was built to protect the new Rhine border, the Germanic Fleet (*classis Germanica*) with its central base in Cologne-Altenburg and which existed until the later 3rd century AD. In Britain, the *classis Britannica* was in full operation, with its own prefect in the 80's AD as it was used for transport and exploration, as well as offensive purposes. The fleet is already mentioned as *classis Britannica* in the Year of the Four Emperors, so it was probably already in existence during the reign of Nero (Saddington 1990, 229). Archaeological evidence for naval activity in Britain reflects the view that naval bases must have been situated around the coasts of the British mainland (Rummel 2008, 282-283). The results of the excavations of the Crandon Bridge site confirms that rivers, estuaries and the coast played a major role in the trade networks of south-west Roman Britain (Rippon 2008, 137). It is probable that much of the fine tableware on Romano-British sites was imported from the Rhineland, since vessel glass was manufactured on a large scale in this area, from the middle of the 1st century AD onwards (Orengo/Livara 2016, 26). Cross-Channel traffic between the Rhine Delta and the Thames Estuary is proven by the Blackfriars and the Guernsey wrecks and coastal transport by open sea was quite normal along the coast of Britain (Cleere 1978, 36; Shotter/White 1990, 18; Rippon 2008, 86; Livarda/Orengo 2015, 251), so why should this have been different in the area of present-day Netherlands ?

The hand of the central Roman authorities can be felt all around the coastal delta area of the Low Countries. This varies from infrastructural adjustments, the construction and maintenance of the frontier line and the construction of newly planned fortresses and towns. Several examples of larger infrastructural complexes constructed for supra-regional aims are the harbors near Katwijk (*Lugdunum*) and Velsen (*Flevum*) and that at Voorburg-Arentsburg. There are indications that Caligula's expedition against Britian ended near Katwijk on the North Sea (Haalebos/Willems 1999, 253) and a Roman castellum was founded at the mouth of the river Rhine near present-day Katwijk (*Lugdunum* or the so-called "Brittenburg", mentioned with a vignette on the *Tabula Peutingeriana*) along the Roman road on the southern bank of the mouth of the Old Rhine (Bloemers/de Weerd 1983, 250). Probably (although an early date, even from the reign of Caligula, is possible) later then *Fectio* and *Flevium*, it is another indication of Roman interest in the North Sea (Buijtendorp 2018, 186)

Drusus defeated the Bructeri in a naval battle on the river Ems (Strabo 7.1.3), probably using *liburnae*. The *liburna* was a relatively small warship that originated in the 3rd century BC. Its name comes from the Liburni, a tribe in Illyrium, who used these fast ships for pirate activities in the Adriatic Sea. Due to its speed and maneuverability, the type of ship was soon adopted by the Romans, mainly as a reconnaissance vessel. There is no doubt that such ships have sailed in the Netherlands and it was this type that was probably used at *castellum Flevum*. A votive monument dedicated to Jupiter has been found at Vechten (*castellum Fectio*) which was erected by a combat vessel captain; the *trierarchus* Caius Iulius Bio.

A graffiti on a *terra sigillata* shard also excavated at *castellum Fectio* clearly depicts a Roman sea-going warship (Wijnia, 1990, 23; Brouwers *et al.* 2013, 14).

Remains of a Mediterranean type of galley were found during the excavations between 1892 and 1894 at *Fectio* (Brouwers *et al.* 2013, 21).

The Romans used a fleet to transport troops and supplies over rivers and sea while the cavalry and possible also a part of the infantry moved over land during their campaigns against the German tribes. The campaigns by sea were usually carried out in the summer, because sailing the North Sea in the winter involved too many risks.

According to Tacitus (*Annales* 2.8.1-3 and 2.23.1) Germanicus in 15 and 16 AD. transported his army with ships to the region of the *Chauci* on the German North Sea coast. Among the thousand ships that were built by Germanicus and which were used to conquer the Germanic tribes in the area between the Ems and the Weser, some transports were adapted to the conditions of the Wadden Sea area in the Netherlands and northern Germany. These were flat bottoms fitted with sails, oars and steering belts at the front and rear (Tacitus, *Annales* 2, 6). These



Fig.8. Votive monument, dedicated to Jupiter and erected by the trierarchus Caius Iulius Bio from *castellum Fectio* (Courtesy of “PUG-collectie, gemeente Utrecht”).

flat-bottomed boats were probably also used to sail up the rivers and tidal channels, while the larger ships anchored in the estuary of the Ems. At Bentumersiel on the Ems was probably a depot (fragments of equipment belonging to Roman legionaries, as well as shards of amphorae and other large jars for the storage of wine and oil have been found here, dating to the 1st century AD), while at Bremen-Seehausen on the Weser existed a Roman naval station, both in an already pacified area (Anonymus 2014, 37). The mound village of Winsum-Bruggeburen, which was located in present-day Dutch Frisia may have been used for a while as a temporary guard post or depot for the Romans as hundreds of objects from the Roman era were discovered, including a late Roman silver treasure in 1861 and early Roman pottery such as remains of different types of amphorae. In addition, Roman coins have been found that are considered typical soldier money. The residents of Winsum-Bruggeburen probably played a role in supplying the Roman fleet (Bos *et al.* 1997).

The Romans (both army and traders) regularly sailed to Roman Britain, not only cross-Chanel but also from the south-western part of the present-day Netherlands as proven by the remains of the *Nehalennia* temple at the Roman harbor

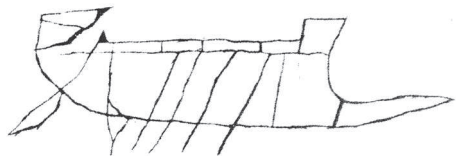


Fig.9. Graffiti of a warship on a *terra sigillata*, found at the site of *castellum Fectio* (After Muller 1895).

of *Ganuenta* near present-day Colijnsplaat and the other temple near the modern city of Domburg, both at the southern shore of the river Schelde (Lendering 2000, 164-168; Enzmann 2013, 34; Kropf 2016, 192). This harbor played an important role in the export of trade goods from the Schelde area like salt, preserved meat, wool, woolen coats and other textiles. The dating of the *Nehalennia* altars is placed in a period between approximately 150 to 250 AD, indicated by the names of two consuls who were in office in Rome in a given year (Tuinman 2012, 20). At Goedereede-Oude Oostdijk, there was a Roman harbor (de Bruin *et al.* 2012, 141-145, 152). In fact, the Roman army and traders were able to maintain a shipping route from the Rhine Delta towards the Thames-Estuary with strong currents, extreme tides and dangerous weather conditions (Enzmann 2013, 32-4), so it would not be too difficult to supply the Velsen fortress by sea from a place near the mouth of the Old Rhine. For instance the Mainz B type ships could be used for this purpose (Brouwers 2011,17).

Concluding, one can say that there is enough evidence that both the Roman army and traders sailed the North Sea. It is unlikely that complete armies, like those of Drusus and Germanicus, numbering four legions (between 25.000 to 33.000 man were transported on a 1000 ships, Germanicus himself should have used a trireme (Plinius *N.H.* I, 60.2; II, 24.2; II, 67, 167). It is unlikely that such an army, combined with a fleet should have sailed through the shallow marshes which formed rivers like the Utrechtse Vecht. A route along the Rhine to the North Sea coast and further along the coast, with cavalry using the existing road through the old dunes is much more likely.

Conclusion

Castellum Fectio did not exist during the time of Drusus' campaigns and was neither founded exactly at the place where the river Utrechtse Vecht branched from the Rhine. It is also not certain that it was mentioned in both the *Ravennalis Anonymi Cosmographia* and on the *Tabula Peuteringeriana*. Anyway, it was even not large enough to host the armies of Germanicus and Tiberius.

The river Utrechtse Vecht is an unlikely candidate for the *fossa Drusiana*. The river was probably unsuitable for the movement to the north of a large army by larger ships as it was shallow and ran through mostly still hostile territory. Its use may have been restricted to the transfer of relatively light local ships.

Contrary to the Vecht, the river channel of the Rhine seems to have been around 40 to 80 meters wide, around 4-6 meters deep and probably contained few sand-banks (van Dinter 2017, 34), making it suitable to transport large flat bottom ships escorted by *liburnae* and maybe even *triremes*.

It is much more likely that the expeditions of Drusus, Germanicus and Tiberius started from the harbors of Xanthen (*Castra Vetera* and later *Colonia Ulpia Traiana*) (Hetteema 1938, 86; Bogaers 1981, 17; Heimberg/Rieche 1998, 27; Enckevort/Vos 2006, 14) or with the construction of the oldest camp with harbor on the Nijmeegse Hunerberg, around 19-12 BC (Daniel 2016, 41). These *castra* should be regarded as a troop depot that housed about three legions, which could be deployed against the Germans.

There is no proof that either *castellum Fectio* or the Utrechtse Vecht were used to supply *castellum Flevum* as most foodstuffs came from the surrounding area (Klenina 2005, 403).

Neither is there much evidence that the Utrechtse Vecht was used as a trade route during the Roman period. The sparse finds near the river from which even a part is questionable, as they could have been the result of the disposal of city compost from the south in this area during the middle ages. The near absence of habitation and the sparse population of the banks of the river Vecht mirrors the limited means of existence along this peat-embedded river (Polak/Kooistra 2013, 377). Also, the dredging operations of the last decade did not discover any proof of use of the river before the late Middle Ages.

There is not a shred of evidence that the Utrechtse Vecht ever was a part of the *limes*. There are however more indications (a large amount of Roman material and even the remains of a watchtower) that there was a road along the North Sea coast from the mouth of the Old Rhine to the north which was probably used by the Romans. It is also likely that the Romans sailed along the North Sea coast as they did in Britain and the northern European coasts more to the south.

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