Guus Besuijen

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A STUDY OF THE ROMAN SETTLEMENT AT AARDENBURG AND ITS METAL FINDS

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A STUDY OF THE ROMAN SETTLEMENT AT AARDENBURG AND ITS METAL FINDS

G.P.A. Besuijen

MA-thesis Classical Archaeology
Faculty of Archaeology, Leiden University

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PREFACE

This study of Aardenburg in the Roman period originates from my personal interest in the Roman period of the Dutch coastal areas. Within the broad program of classical archaeology, this interest remained somewhat dormant for years. The bachelor thesis finally gave me some space to explore the subject of interest and resulted in a pilot study of this master thesis.

Roman Aardenburg seemed and proved to be an ideal subject of study. Its position within the Roman Netherlands is both elusive and exceptional, as it is not classified as clearly as the *limes*-settlements along the Rhine and the regional centres in the hinterland of Germania Inferior and Gallia Belgica. Aardenburg is one of the older Dutch excavations that were never fully published. It therefore provided an opportunity for a material study that could provide new data to the debate of Aardenburg in the Roman period.

The Roman settlement of Aardenburg was partly excavated in several campaigns from the 1950's to the 1980's. The most notable work was carried out by former provincial archaeologist, the late Jan Trimpe Burger, who unfortunately did not live to see the completion of this thesis. My first meeting with him was in early 2007, with the purpose to hear about his excavations in Aardenburg. He gladly informed me of his past excavation work and material studies and was so kind to provide me with all the documentation needed for the study of the metal finds of this thesis. I would have been unable to study the metal finds so thoroughly without his help. Therefore, I owe my sincere gratitude to Jan Trimpe Burger, excavator of Roman Aardenburg.

The basic material study of this thesis was carried out in the Provincial Archaeological Depot in Middelburg, where most of the finds are stored. With the renovation of the Municipal Archaeological Museum in Aardenburg, all finds were temporarily moved to the depot. This provided me with a unique opportunity to examine almost all the metal finds in one location. This work could not have been done without the support and assistance of Henk Hendrikse, custodian of the depot, for which I owe him many thanks. Henk provided me with all the photographs included in the catalogue. My thanks also go to Leida Goldschmitz-Wielinga, volunteer at the depot, who, although some decades ago, made many of the object drawings used in the catalogue. Arco Willeboordse, curator of the Municipal Archaeological Museum in Aardenburg, and Robert van Dierendonck, provincial archaeologist of Zeeland, provided me with practical information on the subject of my thesis, for which I thank them. My supervisor Jasper de Bruin is thanked for the support in the process of writing and the discussions we had, which gave me fresh insights and broader views of the subject. I also wish to thank my second supervisor, Willem Willems, professor of provincial Roman archaeology, for finding the time to give comments the last draft of the thesis. John Bintliff, professor of classical archaeology, is thanked for keeping me on track, as is my boss Tom Hazenberg, who supported me in the final stages. I also would like to thank Fleur Kemmers and Ester van der Linden, who provided me with hard-to-get literature, Johan Nicolay for sending me the find database of his dissertation, and Wouter Dhaeze, for sending me an unpublished article that is forestalling his dissertation. I am grateful to Rinse Willet for improving the quality of the text. I also thank my fellow-students with whom I spend hours, days, and months in the library of the Faculty of Archaeology, and who gave me the necessary diversion and relief needed at times. Finally, I thank my family and friends who supported me during the time of writing this thesis.

Leiden, September 2008.

CONTENTS

1 INTRODUCTION

The town of Aardenburg in Zeeuws-Vlaanderen, located in the south-western part of the Netherlands, has been subject to extensive archaeological excavations from 1955 until the late 1980's. Particularly during the sixties and seventies, notable research was carried out by the former provincial archaeologist Ir. J.A. Trimpe Burger. His work resulted in the discovery a Roman settlement, which was already suspected from stray finds collected earlier. Along the current streets named Sint Bavostraat and Burchtstraat the walls of a fortification with ditches were found. Based on the excavated areas, the total size of the fort was estimated to have been three hectares. Based on pottery and coin finds, the settlement existed from the end of the second century AD to around AD 275.

The first part of this thesis is a literature study of Aardenburg in the Roman period. This contains as much publications as could be found within the time available for the study. It provides an overview of Aardenburg in the Roman period set in a chronological and regional context. It starts with a description of the geological situations and processes in the region of study, followed by the occupation history in the prehistoric periods. Next is a discussion of the Roman period in the south-western Netherlands and the Flemish coastal region, after which the Roman military in the north-western provinces in general is discussed. The following chapter is about the Roman archaeology of Aardenburg, the material culture from this site, and the other Roman fortifications in the region. After this, the metal finds are discussed. The full material study of the metal finds is included in the catalogue, which is added to this thesis in the appendix. Finally, the conclusion gives a summary of the subjects discussed, after which the research questions that follow in this introduction are addressed.

For the material study of this thesis, 351 metal objects were studied, most of which have not been published. The catalogue is arranged into several categories of objects and is illustrated by photographs and drawings (see appendix II). The descriptions are accompanied by the relevant measures of the object. References to literature with relevant parallels have been added whenever available.

It has been the consensus that Aardenburg was (together with Oudenburg, located about 30 km to the south-west) a military stronghold that was part of the defence of the coastline running from the mouth of the river Rhine to Boulogne in the south. This defensive line was set up in the last quarter of the second century as a response to attacks by hostile Germanic tribes that attacked by ship from the North Sea. The excavations could never clarify whether the settlement can be regarded as a purely military site, and thus as a typical Roman *castellum*, or as a fortified civilian settlement with perhaps a garrison. Uncertainties haves risen from the fact that the archaeological research has resulted in the reconstruction of a peculiar ground plan for the walls of the fortress. These walls include round towers only, a feature that is unknown from military fortifications built in the second and third centuries. This type of military architecture was applied in military auxiliary fortresses only from the fourth century onwards, as can be noticed at Oudenburg. This raised the question whether it is justified to regard the Roman presence at Aardenburg as purely military. In contrast with the military architecture of the second century *castella*, internal round towers were indeed applied in the walls of cities and towns in the northern parts of the Roman Empire in the second century AD. An example of such a town not too far from Aardenburg is the capital of the civitas Tungrorum, present day Tongeren in northern Belgium.

Due to the lack of research on the finds of the excavated parts of the Roman settlement in Aardenburg, no new solutions to the problem described above can be obtained from the data that is currently available. To acquire new archaeological data on the Roman site of Aardenburg, I have devoted the practical part of thesis to the study of the metal finds. The aim of this study is to provide new insights on the character and the dating of the settlement. Since certain metal finds can be regarded as military or civilian, it may be possible that these objects can provide information on the occupants of Aardenburg in the Roman period.

For this thesis, I have formulated the following research questions:

- What information have the past excavations provided thus far?
- What was the nature of the Roman settlement at Aardenburg?
- Can the metal finds provide a more narrow date for the occupation in the Roman period?
- Was the settlement a purely military fort or was it a civilian town?
- Can the metal finds provide additional information on the nature of the settlement?
- What role would the Roman settlement have had in the region?

2 EVOLUTION OF THE LANDSCAPE

Understanding the geological features and dynamics of landscapes is essential when trying to reconstruct its occupational history. The Dutch and Flemish coastal areas have been subject to comprehensive changes in the past. Floods, sedimentations, divergence of rivers, and emergence of beaches and dunes have occurred throughout history, constantly influencing human occupation along the coast line and in the hinterland.[1]

The Pleistocene is the period in which the basic character of the current landscape of present day Zeeuws-Vlaanderen was shaped. It covers the period of 2.3 million years to 10,000 years ago, and is characterized by a series of cold and warm periods, the so-called glacials and interglacials. During the last Ice Age, the Weichselian, which covers the period of 70,000 to 11,000 years ago, the Pleistocene formations were formed. These consist of aeolian cover-sand ridges that are scattered out through the landscape and were formed only locally due to sporadic presence of vegetation. During the Pleniglacial, the climate was cooling down, resulting in the disappearance of vegetation and the cover-sands becoming more extensive due to large-scale sand-drifts. These sand deposits are known as the Older Cover-sands, and classified as the Formation of Boxtel.[2]

In the late glacial period, the Younger Cover-sands were formed and shaped into parabolic elongated dunes.[3] During the interstadials, the warmer periods of the Ice Age, layers of loam, and in lesser quantities peat, were formed, of which the Usselo layer is an example. This peat layer from the Allerød-interstadial interrupts the Younger Cover-sands layer. In Zeeuws-Vlaanderen the cover-sands can be found surfacing, while in the northern parts of Zeeland, these deposits are found much lower, sometimes at 16 m below ground level (see figure 2).

At the end of the Ice Age, large parts of the ice caps situated on land melted causing the sea level to rise and rivers to grow in size. As a direct consequence, the groundwater level rose which subsequently slowed the drainage of the hinterland. In these wet conditions, large marshlands developed in the areas where peat was growing unchallenged. This peat, classified as Basal Peat, did not develop in all areas at the same time and is therefore found in layers of different thickness in different geographical areas.[4] The level of the Pleistocene cover-sands is the main variable factor of the thickness of the Basal Peat in a certain area. The consequence is that in lower lying areas the peat is present in thicker layers than in higher situated grounds.

At the start of the Holocene period, 11,000 years ago, the sea level was approximately 45 m lower than in modern days. Because of the rapid rise of the sea level of more than 75 cm per century, gradual inundation of the area of the modern day North Sea occurred. The coast line slowly moved inwards, and at around 7000 BC marine influences became present in the area. In the early Atlantic period (7000 to 6000 BC) the sea level continued to rise, however not as rapidly as before, as it rate slowed from over 75 cm to about 30 cm per century. In the Late Atlanticum, ranging from ca. 5000 to 3800 BC, the rise of the sea level continued to slow down and the coastal line reached approximately the same position it has today. Around 3800 BC large parts of Zeeland had been inundated, creating a tidal environment. The higher sea level had a strong effect on rivers. These stagnated as the water could not be transported into the sea as easily as before, causing increasingly wet conditions of the landscape in the whole western Netherlands. In the northern areas of present day Zeeland floods left a layer of clay on the eroding Basal Peat. This layer is known as the Wormer Layer Group and consists of clayey and sandy sediments deposited by an open tidal basin with several tidal inlets.[5]

[1] This chapter is based on Vos/Van Heeringen 1997b.
[2] This is according to the new lithostraticgraphic classification of The Netherlands, see Weerts 2000 et al. The term 'Older Cover-sands' is the translation of the Dutch term 'Oude Dekzanden'.
[3] The term Younger Cover-sands is the translation of the Dutch term 'Jonge Dekzanden'.
[4] Basal Peat is the translation of the Dutch term 'Basisveen'.
[5] In the currently obsolete, but still widely used chronostratigraphic classification (Zagwijn/Van Staalduinen 1975) these deposits are known as Calais Deposits. In Dutch, the Wormer Layer Group is known as 'Laagpakket van Wormer'.

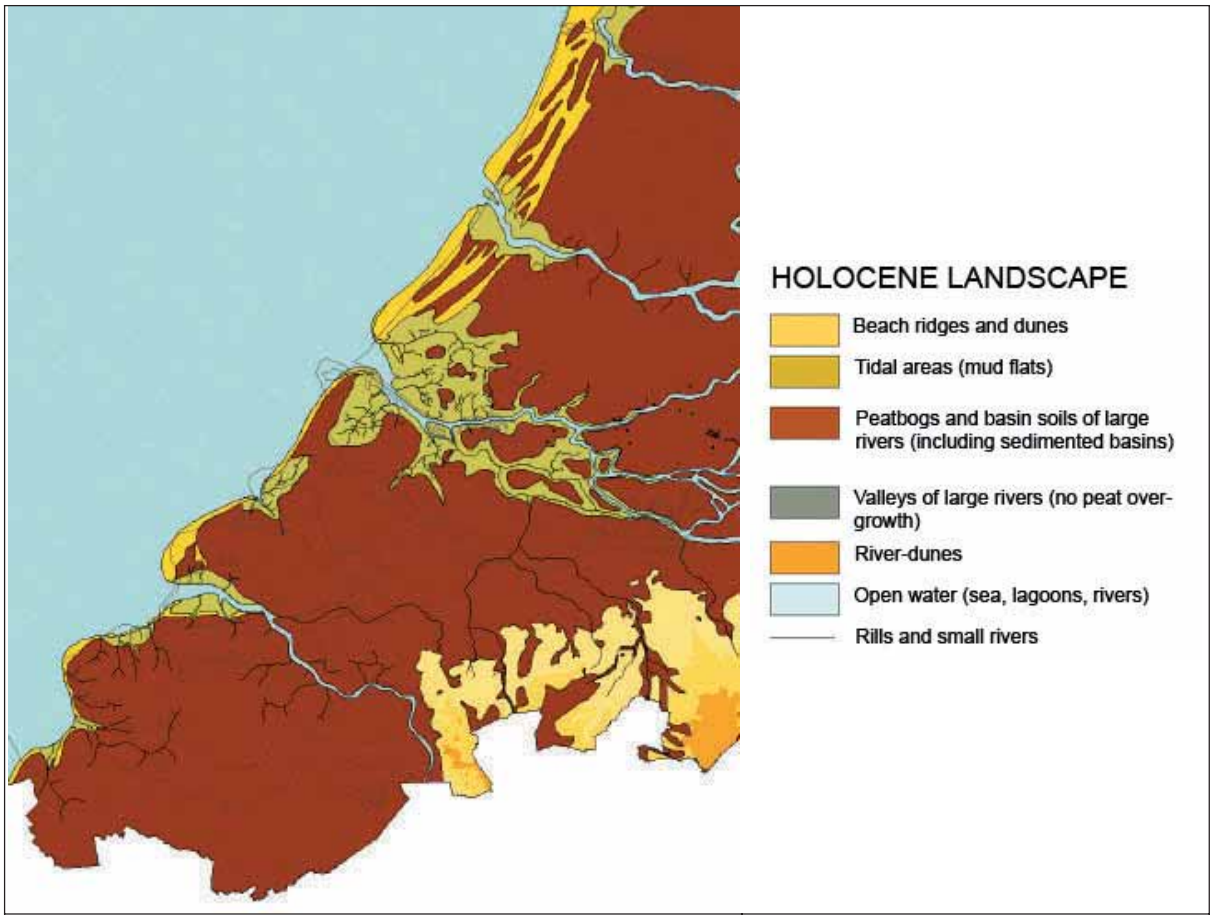

Figure 1: Palaeographic map of the Holocene landscape of the south-western Netherlands in AD 50 (source: RACM).

The periods of flooding are known as transgressions. During the transgressive phases however, there were also periods in which the influence of the sea on the hinterland was almost absent. These so-called regressive phases are recognised geologically as thin layers of peat. The slow decrease of the rise of the sea level made an increase in the deposition of sediments possible, characterising these periods also as sedimentation-formation phases.

After 3,100 BC, large-scale formation of beach-ridges and dunes take place along the coast of Zeeland and Flanders. These deposits are known as the Older Dunes, a natural barrier that was only interrupted in Zeeland by the Scheldt River, which flowed into the sea roughly along the path of the present day Oosterschelde.[6] Marine clay deposits ceased to develop behind the beach-ridges during this period, and tidal influence on the hinterland stopped due to the silting up of tidal inlets. This restricted the draining of the areas behind the beach-ridges, causing the extensive growth of peat bogs. This peat, which was formed from 3100 BC onwards, is called Holland Peat.[7] On the higher grounds of southern Zeeuws-Vlaanderen, the formation of this peat started only at around 1000 BC, during the Late Bronze Age. Consequently, the layer of Holland Peat is much thinner in this area. While the formation of Holland Peat lasted until around AD 250 in some areas, in other areas the influence of the sea on the hinterland already became stronger from 600 BC onwards. The beach ridges were interrupted on some spots and small tidal embayments with an open connection to the sea, known in Dutch as 'Slufters', formed there between the dune belts. This development is known as the Duinkerke I-transgression.[8] The increasing numbers of inlets along the beach ridges allowed the peat bogs to become more and more drained. The high grown peat areas that had now become dryer were thus more suitable for habitation from the Middle Iron Age onwards. The

[6] This is translated from the Dutch term 'Oude Duinen'.
[7] Holland Peat is the translation of the Dutch term 'Hollandveen'.
[8] In recent years, is has become clear that the classification of the Duinkerke-transgressive phases is questionable, since the deposits that are recognised as physical results of these phases are not synchronous in different geographical areas. From an archaeological point of view, it is now known that the transgressions are inaccurate a as method used for dating sites. See Berendsen 2004, 243 ff.; Vos/Van Heeringen 1997b, 34-36; De Boer 2005, 49-50.

inhabitants improved the conditions with the construction of ditches for further drainage.[9] The mudflats at the tidal inlets became higher because of the continuous sedimentation and eventually salt marshes with enclosed pools and ponds developed that gradually became filled with fresh water. These lay beyond the tidal influence of the sea and thus formed the best situated areas for habitation.[10]

During the Roman period, the peat continued to grow in the area of present day Zeeland (see figure 1). Due to natural and anthropogenic drainage of the area, the peat layers began to compact. This partly caused the influence of the sea on the landscape to increase again in the late Roman period. Large parts of Zeeland and of the Flemish coastal area were flooded, and only the higher grounds remained dry, such as the cover-sand ridges at Aardenburg (see figure 2). These events are mentioned in an eulogy to Constantius Chlorus dating from AD 297, in which the estuary of the rivers Rhine and Scheldt are described as an area "that can hardly be called land".[11] The most profound reason for wetter conditions of the landscape was the Duinkerke II-transgression that seems to have started around the end of the third century AD.[12] The floods of this transgressive phase took place in the early medieval period from AD 400 to 700 and destroyed much of the Roman and earlier archaeological records. Many of the traces of Roman and Iron Age occupation were after all located on the top of the peat. These peat layers have often been eroded by later floods and by the formation of creeks. Excavation of the peat in the Middle Ages for industrial purposes has also disturbed archaeological remains from the Roman period and earlier. Directly at the coast, it is coastal erosion that is threatening the archaeological record situated on the Older Dunes. Nowadays the sea has claimed large parts of the formation of former dunes.[13]

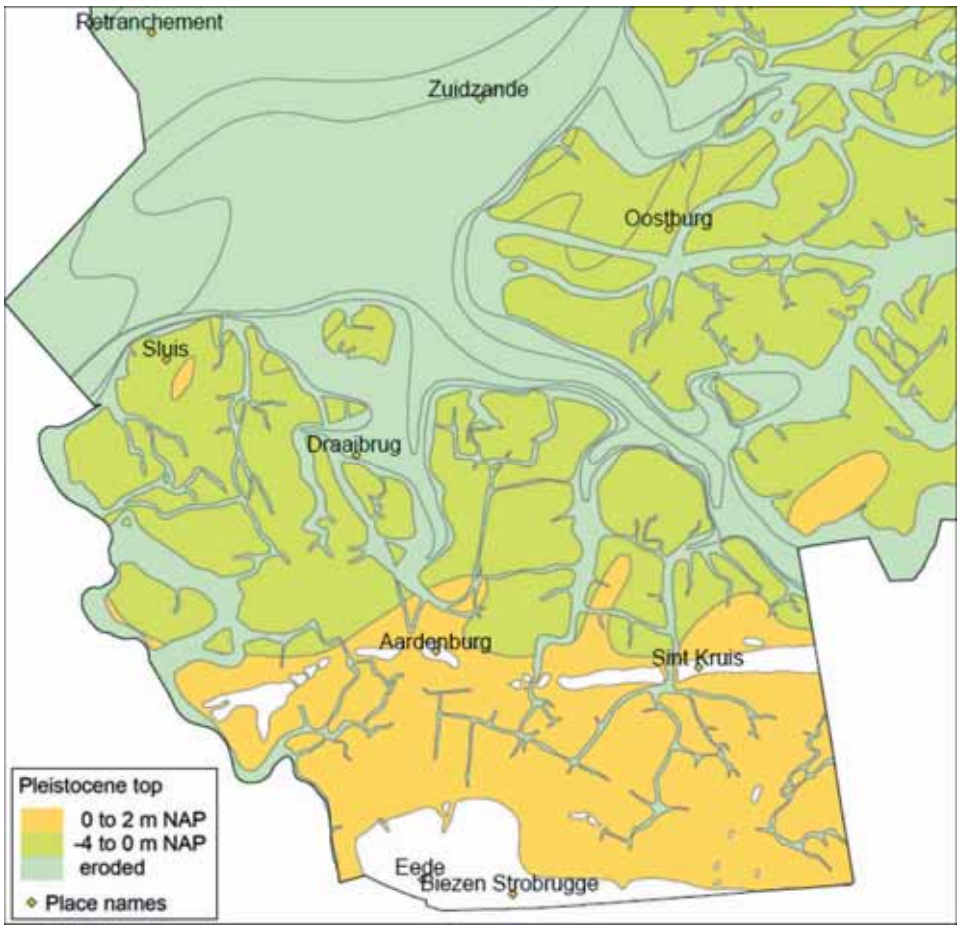

Figure 2: Level of the Pleistocene sand layers in the Aardenburg region (source: Archis, RACM).

[9] Vos/Van Heeringen 1997b, 65.
[10] Baeteman 1987, 22.
[11] Thoen 1987, 14.
[12] Again it must be noted that the assumption of one homogenious transgressional phase lasting for several centuries is a simplification of actual developments.
[13] De Ceunynck 1987, 28-29.

3 OCCUPATION IN PREHISTORY

The dynamics of the landscape in the area of present day Zeeland have been of great influence on its occupational history. The area of focus in this study is Zeeuws-Vlaanderen in the south of Zeeland, to the north of Flanders (see figure 5). The oldest indications for human presence in this area date from the Palaeolithic. Flint flakes and tools dating from the Middle Palaeolithic have been found on the beach of Cadzand, at the western coast of Zeeuws-Vlaanderen. These finds have probably been flushed out of layers of the Eem formation, which was formed during the Eemian, meaning that they date from the penultimate Ice Age, the Saalian. This can be concluded from the fact that during the Eemian interglacial period, the area of Cadzand was uninhabitable due to the high sea level. Also, the typology of the finds is consistent with this proposition. The flint used is from local origin and is today still found on the beaches in this region. In Nieuw-Namen, located in eastern Zeeuws-Vlaanderen close to the Belgian border, flint artefacts that also date from the Middle Palaeolithic have been found as well as specimens dating from the Late Palaeolithic. These are all stray finds that have come out of their archaeological context as a result of sand-drift processes of the cover-sands. From these finds, it can however be concluded that the cover-sand ridges had become a suitable location for small, temporary camps of hunters.[14]

The earliest traces of human occupation in Aardenburg date from the early Mesolithic period (ca. 8000 to 7100 BC) and the Middle Mesolithic period (ca. 7100 to 6450 BC). These find spots contained concentrations of flints and remains of fireplaces originating from semi-permanent camps of nomadic hunter-gatherers, and were located underneath the Roman layer in the centre of Aardenburg. Mesolithic artefacts have also been found in Nieuw-Namen and Koewacht, in eastern Zeeuws-Vlaanderen, at sites where flint was processed.[15] Contrary to Zeeuws-Vlaanderen, in the northern part of Zeeland Mesolithic finds are absent since the cover-sand ridges in these areas have been flooded in later periods and subsequently covered with a thick layer of sediments leaving them inaccessible for archaeological research (see figure 2).

Traces of occupation during the Neolithic (ca. 4900 to 2000 BC) are less frequent in Zeeuws-Vlaanderen. Only stray finds that have flushed out of cover-sand layers are known from this area, while in Haamstede, on the peninsula of Schouwen-Duiveland, traces of occupation from this period have been found. The stray finds from Aardenburg concern several flint objects, ceramic fragments, sharpened axes, and arrowheads. A settlement context is missing at this site, however, the artefacts do hint towards Neolithic occupation in the area.[16]

From the Bronze Age (ca. 2000 to 800 BC), no finds are known in Zeeuws-Vlaanderen. It is assumed that the conditions of the landscape had become too wet for permanent habitation. This assumption seems to fit for large parts of Bronze Age Zeeland, where peat bogs and mudflats that were situated behind the beach-ridges could easily become inundated. It is however not clear why the higher cover-sands in Zeeuws-Vlaanderen contain no traces of Bronze Age activity, while on the Older Dunes in other parts of Zeeland finds dating from this period have been recovered, although these are stray finds in small numbers.[17]

In the Iron Age, there seems to have been an increase in human activity in Zeeland, judging from the large amounts of finds dating from this period. Zeeuws-Vlaanderen however, seems to be an exception since no Iron Age finds are known from this area. During this period agriculture was the basis for the self-subsistence economy in the whole Dutch coastal area. Several find spots containing concentrations of ceramic sherds have been uncovered on Walcheren, Schouwen-Duiveland, and Tholen. Near the town of Arnemuiden on Walcheren a two-aisled ground plan of a house has been found, as well as a kiln used for the production of ceramics judging from the misfires that were present on the spot. In general, it seems that Zeeland was inhabited in the Early and Middle Iron Age (800 to 250 BC) mainly on the beach-ridges and Older Dune formations. The site in Arnemuiden has shown however, that houses were also built directly on the peat. The same phenomenon was found in Ellewoutsdijk, Zuid-Beveland, where the remains of several indigenous farmhouses were excavated, dating from the early Roman period, which

[14] Jongepier 1995, 30-32.
[15] *ibidem*, 34-40
[16] *ibidem*, 48.
[17] *ibidem*, 55.

were also directly built on top of the peat.[18] Because of the Duinkerke I-transgression, creaks developed by which the hinterland was drained, making at least some of the peat zones inhabitable from 400 BC onwards.[19] The inhabitants also constructed artificial drainage systems. Ditches were dug to further improve the conditions of the landscape for habitation, agriculture, and stock-breeding.[20]

The influence of the sea was much less extensive in Zeeuws-Vlaanderen. It is therefore remarkable that there are no traces of occupation of this part of Zeeland in the Iron Age, since the area had high grounds that provided suitable living conditions.

The Older Dunes and the peat zones remained inhabited until around 50 BC. After this date the whole area of Zeeland seems to be uninhabited, as were almost all of other parts the Dutch coastal area. It is unclear what the reason was of this depopulation. There is no evidence for worsening conditions of the landscape, since no sediment layers from this period have been demonstrated. The peat areas were not flooded until after AD 300. Therefore it is most likely that anthropogenic factors are responsible for this gap in the occupational history of Zeeland.[21] It must however be taken into account that the relevant archaeological record, if ever present, would have been located on the beach-ridges along the coast and on the bank-ridges along the former course of the river Scheldt. These formations that have since then been swallowed by the sea.[22]

[18] Sier 2003.
[19] Jongepier 1995, 59-62.
[20] Vos/van Heeringen 1997b, 64-66.
[21] *ibidem*, 64.
[22] Jongepier 1995, 63.

4 THE ROMAN PERIOD

To fully comprehend the Roman presence in Aardenburg, it is essential to study the region it is situated in, namely Zeeland and the Flemish coastal region. While communities were relatively isolated during the Iron Age, this chapter will show that in the Roman period the situation had changed due to increased economic activity.

As discussed above, in the early Roman period Zeeland was not inhabited and the first traces of occupation date from about AD 50. In the Flemish coastal region, the higher grounds behind the coast line were better suitable for habitation than the wetland areas in the north.

The whole region around the river Scheldt was inhabited by the tribe of the Menapii, according to Roman historical sources. Their territory stretched from the river Aa in northern France to, presumably, the so-called Helinium in southern South Holland, or the former river Scheldt in the north. The exact position of the northern border remains unclear, but a cultural frontier can be extracted from the archaeological record, since south of the Helinium, which is the estuary of the river Meuse, ground plans of houses are two-aisled, while to the north houses were generally three-aisled.[23] Also, the typically Frisian-indigenous ceramics are found numerously in the north, while only one sherd is known from the south, namely from Goeree. In the areas to the south, Zeeuws-Vlaanderen and western Flanders, the so-called 'Flemish-Roman' ware, sometimes also named 'Coastal ware' or 'Menapian ware', is much more common. This type of ware is also found on the islands in the north, but the numbers are somewhat subdued by the influx of imported Roman ceramics.[24]

In the Commentarii de Bello Gallico, Caesar's report on his conquests in Gaul, it is mentioned that the Menapii put 9000 warriors into battle against the Romans. From this it has been estimated that the total population of this tribe would have been some 28,000. Compared to the neighbouring tribes, the Menapii were small in numbers, for the Morini in the south had 25,000 warriors at their disposal and the Nervii in the east 50,000. Despite their small size as a tribe in northern Gaul, the Menapii together with the Morini offered stiff resistance against Caesar's legions at the time the rest of Gaul was already conquered in 56 BC. Both tribes seem to have been forced into submission by the Roman forces in 53 BC. However, during the reign of Emperor Augustus in 30 or 29 BC, the Morini and some neighbouring tribes once again rebelled against the Roman rule. This revolt was then subdued by Carrinas, the Roman governor of Gaul. From this time the territory of the Menapii is permanently embodied into the administrative structure of the Roman province of Gallia Belgica. It was named civitas Menapiorum and had Castellum Menapiorum as its capital, which is the current city of Cassel in French Flanders.[25] In the late Roman period, the capital was moved to Turnacum, present-day Doornik (Belgium), by which the territory received a new name, civitas Turnacensium.

From Pliny it is known that some other tribes or sub-tribes were possibly living in the territory of the Menapii.[26] He tells of the Marsaci and the Sturii, tribes that may have been located on the islands of Zeeland.[27] Occupation is however only shown in the archaeological record from the middle of the first century AD onwards, at the time the very low population density of Zeeland and the Flemish coastal area increases. Although the areas south of the river Rhine were formally under Roman control after the conquering of Gaul by Julius Caesar in the middle of the first century BC, no real Roman rule was felt until Drusus consolidated Caesar's conquests at the end of the first century AD.[28] Drusus' campaigns resulted in the whole area of present day the Netherlands becoming part of the Roman Empire in 12 BC. The revolt of the Frisians in 28 BC and the end of the Roman ambition to expand the empire to the river Elbe – indirectly as a result to the crushing defeat of three Roman legions by the Germanic tribes in the Teutoburgerwald in 9 BC – lead to the retreat of the Roman army to the south of the Rhine by their commander Corbulo under Emperor Claudius at around AD 50.[29] From this point in time, this river was

[23] Kodde 2007, 41.
[24] Trimpe Burger 2002, 16.
[25] Thoen 1987, 12-13.
[26] Pliny, *Hist. Nat.* IV 29: "In Rheno ipso prope centum millium passuum in longitudinem nobilissima Batavorum insula et Cannenufatum, et aliae Frisiorum, Chaucorum, Frisiavonum, Sturiorum, Marsaciorum, quae sternuntur inter Helium et Flevum".
[27] The Marsaci are further mentioned by Tactitus: *Historiae* IV 56.
[28] Van Es 1981, 25.
[29] *ibidem*, 36-37.

the frontier of the Roman Empire in northern Europe. At the end of the first century AD both Germania Inferior and Germania Superior were converted from military districts into independent provinces. These stood under the control of military governors who had a vast amount of troops at their disposal. At this time, the province of Gallia Belgica, to the south of Germania Inferior, was a senatorial province where hardly any troops were present.

4.1 Occupation from the first century onwards

As discussed above, Roman presence in the area of present day Zeeland is not evident from the time around the middle of the first century AD. It is plausible that some favourably locations were inhabited, but these were certainly not under Roman influence. Habitation of the areas of Zeeland and the Flemish coastal region is only evident from the time of Claudius onwards, as can be concluded from the numerous finds of dateable Roman ceramics, mostly from the second half of the first century. Studies of numismatic data have lead to the same conclusion.[30] This fairly late start of Roman presence, compared to neighbouring regions, leads to the conclusion that the whole area must have been of little interest to the Romans. The hinterland of the *limes* along the river Rhine can be regarded as more of a military zone than a real Roman province during the reign of Augustus. His cultural revolution that was set in motion in Gaul seems not to have affected the coastal region of Zeeland and Flanders. Roman historians have described a distinct relation between the spread of civilisation and the economic prosperity in Gaul. Strabo focuses on economic factors such as fertility of the lands, agricultural production, and imports and exports. In his view, the Romans are the ones able to acknowledge and exploits these potentials. Heavy dependence on stock-breeding, as was the case in the areas Zeeland and western Flanders, was seen as primitive.[31] The areas were clearly of low economic and military importance to the Romans during the early imperial period, as they did not require intensive governmental control.

Figure 3: Tribes in the Netherlands and Belgium in the first century AD (after: Hiddink 1999).

[30] Van Heesch 1998, 184.
[31] Woolf 1998, 13-14.

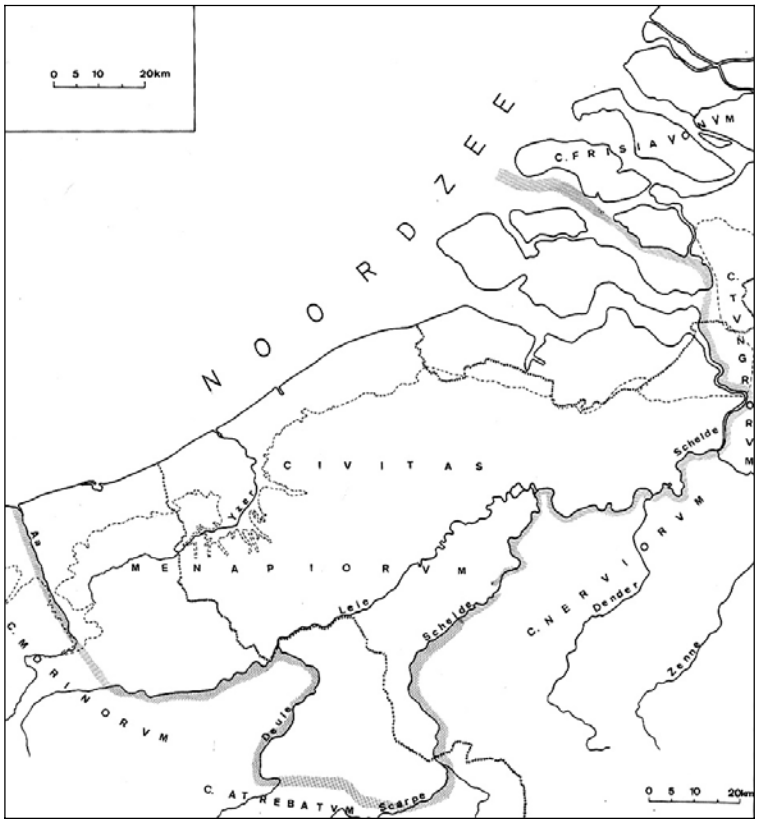

Figure 4: Tribal districts (*civitates*) in the Roman period in north-western Gaul (after: Thoen 1987).

When the Batavians revolted against the Romans in AD 69/70, the Menapii and the Morini only joined the effort under constraint of the Batavian leader Julius Civilis. They thus may have preferred the benefits of Roman rule above a free Germania and Gallia.[32] The Marsaci, who may have had their territory in the area of Zeeland, were possibly among the core units that initialised the rebellion.[33] After the revolt was subdued, the tribes of Germania Inferior and Gallia Belgica profited from the *Pax Romana*, the period of peace under Roman provision that lasted two centuries. From historical sources it can be concluded that the Menapii and the Morini applied intensive agriculture and stock breeding during this period. Julius Caesar had already mentioned in his Commentarii de Bello Gallico that, during his campaign against the Menapii, he seized large amounts of grain and livestock. Varro states that for the agricultural use of the soil they used "white mineral lime" for manuring. According to Strabo and Martialis the coastal peoples were specialised in the breeding of pigs, something that is also evident from a decree on prices by Diocletian in the year 301, by which a maximum price for the 'Menapian hams' was fixed. Pliny reports that the Morini, the tribe to the south of the Menapii, were well-known for their export of goose to Rome. Both tribes also produced large amounts of wool. According to Strabo wool from northern Gaul was highly regarded in Rome, while Pliny reports the production of flax and linen by the Morini. Caesar tells of the excellent seafaring skills of the coastal peoples. Peat was dug up and used as fuel according to Pliny, while Varro reports that salt was won from the peat, which was another important trade product of this region.[34]

The estuary of the river Scheldt, which is named Scaldis in Latin, probably belonged to two distinct Roman provinces. The territory north of the Scheldt was part of Germania Inferior, while that south of the river was part of Gallia Belgica. North of present day Voorne lay the Helinium, the estuary of the river Meuse, in which also the western branch of the Rhine flowed, which nowadays is known as the Waal. This estuary must have been of great importance to the shipping from and to the Rhineland via the lower

[32] Van Es 1981, 40.
[33] *ibidem*, 38. See also note 26.
[34] Thoen 1987, 13-14.

Meuse and the Waal, as can also be concluded from the fact that the Romans under Corbulo dug a canal as a connection between the Meuse and the Rhine.[35] This canal, known as the Fossa Corbulonis, the canal of Corbulo, provided a safe passage between the rivers, avoiding a dangerous course via the North Sea, where bad weather, treacherous waters and piracy were common threats.[36] The Scheldt could also have had a branch that was connected to the river Meuse, making shipping between the two rivers possible without the necessity to go out at sea. This natural watercourse might have been the Striene, a small river that flowed in the Middle Ages eastwards of the island of Tholen and was presumably silted up after the so-called Saint-Elisabeth flood of 1421, in which the courses of the Meuse and Rhine estuaries changed drastically. It is however unsure whether the Striene already existed in the Roman period. Geological research has only made clear that this watercourse could not have situated at Tholen. A more probable location is Voorne-Putten, the most southern part of the present-day province of South Holland. The there situated Bernisse Canal could date from the Roman period, as is concluded from research on the pollen content of its deposits, and might consequently have functioned as a connection between the Meuse and Scheldt via a north and south bearing canal on the eastern part of Goeree-Overflakkee to the Striene on Tholen, as is suggested by Zagwijn.[37] However, as the existence of the Striene is not geologically evident on Tholen during the Roman period, it is more likely that the Striene was connected to this Bernisse Canal following a path more to the east of Tholen, through Volkerak and Hoekse Waard.[38]

The infrastructure via watercourses that the Romans put in place behind the shore, created good conditions for economic prosperity and intensive trade. The placement of troops along the *limes*, and the foundation of buffer states on the opposite of the Rhine and Danube, created a period of enduring peace, military stability and economic wealth. The areas south of the *limes* profited to a great extent of this, subsequently marking the second century the 'golden age' of northern Gaul.

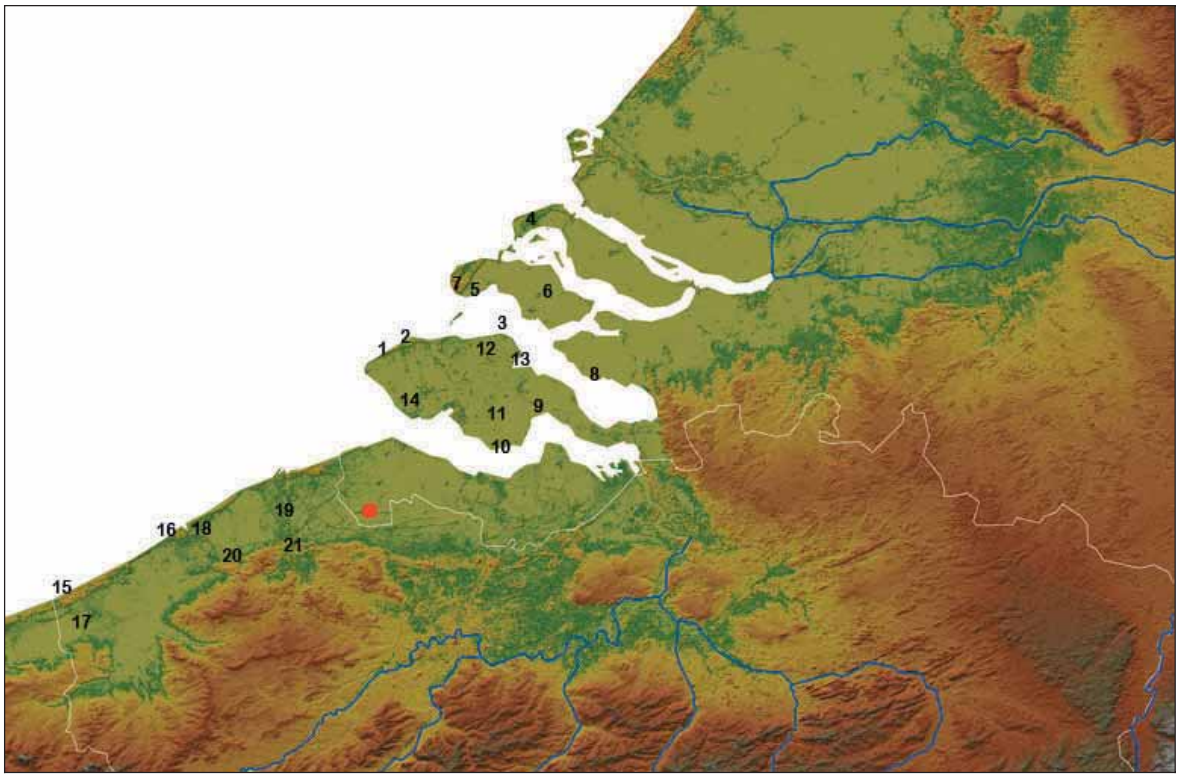

Figure 5: The location of Aardenburg (●) and the other Roman find spots mentioned in the text:
1: Domburg, 2: Oranjezon, 3: Colijnsplaat, 4: Ouddorp (Goeree), 5: Brabers (Haamstede), 6: Oud-Duivendijke,
7: Westenschouwen, 8: Poortvliet, 9: Kapelle-Biezelinge, 10: Ellewoutsdijk, 11: 's-Heer Abtskerke,
12: Noordhoeksenol, 13: Kats, 14: Oude-Vlissingseweg & Meinersweg Koudekerke, 15: De Panne, 16: Raversijde, 17: Veurne,
18: Bredene, 19: Dudzele, 20: Oudenburg, 21: Bruges, 22: Wenduine, 23: Wulpen (DEM provided by Archol).

[35] The Rhine mentioned here is nowadays known as the 'Old Rhine' and flowed in a more northerly course than it does today.
[36] Trimpe Burger 2002, 9-10.
[37] Zagwijn 1986.
[38] Vos/van Heeringen 1997b, 66-67.

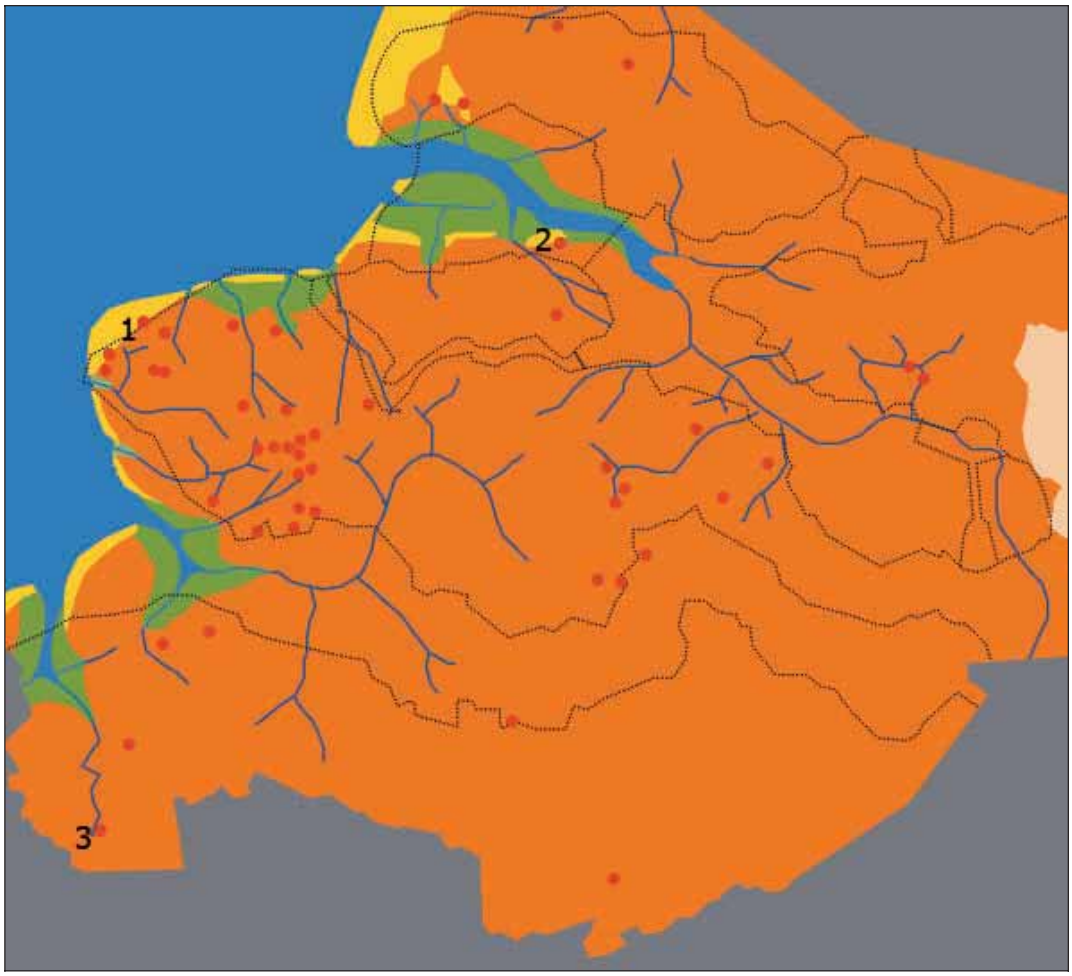

Figure 6: The landscape of Zeeland in AD 200 (after: Vos/Van Heeringen 1997a).
Legend: ● Traces of human occupation. ■ Older Dune formations. ■ Mudflats. ■ Peat and clay-soils
Larger Roman settlements: 1: Domburg 2: Colijnsplaat 3: Aardenburg.

4.2 Domburg, Colijnsplaat & Nehalennia

During the second century AD the south-west part of the Netherlands comes under increasing Roman influence. This reaches its height from about AD 170 to 275. During this period, the occupation is mostly situated directly at the coast. In the hinterland most settlements are tied with the courses of water ways.[39] From the archaeological record settlements are known to have lied along the Scheldt and at the adjacent coast. A spectacular discovery was done in 1647 when the remains of a Roman sanctuary, devoted to the indigenous Roman goddess Nehalennia, were found in the dunes at Domburg (figure 5, no.1). Dozens of votive altar stones and two large sculptures, of approximately 1.6 m in height, representing the Roman goddess Victory were uncovered after a storm struck the coast. In the 17th century reports of the discovery of this sanctuary, remains of buildings with stone-made floors are mentioned that would have belonged to a temple complex. There is however no direct archaeological evidence for a Roman settlement located at Domburg or its surroundings. Stray finds from the beach do suggest that a settlement may have existed at a spot that is nowadays at the bottom of the sea. In the late 1970's and the 1980's, retired medievalist dr. M.I. Gerhardt collected hundreds of Roman ceramics on the beach of Domburg. 29 percent of these sherds is terra sigillata. This high percentage indicates the special character of the presumed settlement. The whole set of Roman ceramics dates from AD 100 to 250.[40]

Taking into account the favourable geographic location of Domburg for trade between the regions of the Rhine and Scheldt and England, a plausible notion is that here a place for trans-shipment for the

[39] Trimpe Burger 2002, 10.
[40] Van de Vrie 1987.

'international' trade was present.[41] Domburg could have been a last safe port preceding the dangerous trip across the North Sea.

More certain is that north of Colijnsplaat, which on island of Noord-Beveland, a substantial Roman settlement was located at a spot that is currently in the Oosterschelde (figure 5, no. 2). In 1970 a votive altar stone was unintentionally fished up in the Oosterschelde. The altar was, just as the ones from Domburg, devoted to Nehalennia. Subsequent fishing by archaeologists of the National Museum of Antiquities in Leiden resulted in the discovery of more than 300 altars and fragments next to a small number of sculptures representing Nehalennia of which the largest is 85 cm in height. In the Roman period, the temple to which the votive altars belonged, was, together with a presumed settlement, located on the southern bank of the Scheldt. The remains of the temple structure are currently lying at a depth of about 25 m, because the old Scheldt, which is the current Oosterschelde in this area, has become both wider and deeper from the third century onwards. While the total size of the settlement cannot be determined due to layers of sand and silt that are now on top of it, large quantities of roof tiles and paving-tiles have been observed together with lower quantities of ceramic sherds.[42]

Interestingly, the temple was originally not located directly at the Scheldt, but on the bank of a small tributary to it. It was built to the south of the Scheldt and thus belonged to Gallia Belgica, if indeed this river was the border of territories of this province and of Germania Inferior to the north. It is also likely that the temple itself was located outside of the urban centre of the settlement it belonged to.[43] This notion is supported by the observations of settlements traces in the southern bank of the Oosterschelde. A relatively large share of the sherds found here were Roman import types.[44]

The goddess Nehalennia was worshipped in Zeeland from around AD 180 to 230. There are no places of worship known outside of this region. It is assumed that Nehalennia was originally an indigenous goddess that was later on also worshipped by outsiders. She was a deity of fortune that functioned as a guardian of shippers and merchants that were active across the North Sea. The altar stones found in Domburg and near Colijnsplaat bear Latin inscriptions that give unique information on the region in the Roman period as well as the trading relations with other areas. On about two thirds of these, three names of the donor involved are mentioned in accordance with the Roman custom, namely the first name (*praenomen*), the family name (*nomen gentile*) and the surname or nickname (*cognomen*). Most names mentioned are of Roman origin, but Celtic and Germanic names are also common. One altar may have been erected by a local resident. It mentions the place name Ganuenta that could have been of the settlement at Colijnsplaat. The votive altars are made of natural stone originating from northern France, the area of Namur in southern Belgium, and the German Rhineland. It is not clear where the altars were finished off themselves, the inscriptions were however most likely put up in a workshop close to the sanctuaries themselves. Three votive altars dedicated to Nehalennia were found in Cologne in 1776, of which only one has a preserved upper part. The design of this altar differs somewhat from the altars from Zeeland, leading to the assumption that the particular workshop in Cologne was not aware of the exact conventions for the depiction of Nehalennia.[45]

[41] Because of coastal erosion the remains of such a settlement would currently be located in the sea, as is the sanctuary that was discovered on the beach in 1647. This was probably located on the Older Dunes deposits. Trimpe Burger has put forward the hypothesis that the old Roman settlement might also be located beneath the current town of Domburg, based on the layout of the streets. Trimpe Burger 2002, 40.
[42] Stuart 2003, 43.
[43] Van den Berg/Hendrikse 1981.
[44] Trimpe Burger 2002, 13.
[45] Stuart/Bogaers 2001, 46.

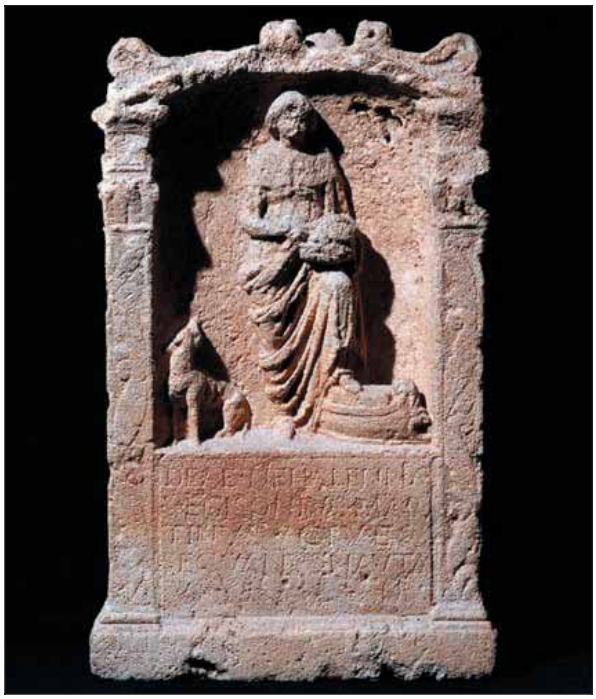

Figure 7: Votive altar dedicated to Nehalennia by Vegisonius Martinus, a shipper of the Sequani tribe from the Besançon region in France (source: National Museum of Antiquities, Leiden).

Figure 8: Upper part of an incomplete votive altar to Nehalennia, found in Cologne, Germany. (Collection of the Römisch-Germanischen Museum in Cologne, photograph by the author.)

The clients who set up of the votive altars were merchants, shippers, soldiers and magistrates from Cologne, Trier, Tongeren, Nijmegen, north-west France and even Switzerland. The merchants dealt in salt, fish sauce, ceramics and wine. On some altars it is mentioned that their donors traded goods in England. These are described as *negotiator Britannicianus*, trader to Britannia. From some of the inscriptions from Colijnsplaat it has become clear that the crossing of the sea to Britain was a specialist's job as was the trade over rivers, which was done by other shippers. This leads to the plausible hypothesis that Ganuenta may have been a transhipment port with accessory facilities for the shipping of freights, and with warehouses and a shipping-exchange where river-shippers and seafarers met. Next to the trading of goods, the merchants also made an offering to Nehalennia for the good ending of their coming or past journey.[46] Van Heeringen has stated that the settlement at Colijnsplaat may have been in direct connection with the salt-making industry located to the south, on the former island of Zuid-Beveland. The salt produced in the area could have been exported via Ganuenta, and was subsequently an important source of income for the regional population.[47]

In relation to the Romanization issue, some observations can be made about the settlements at Domburg and Colijnsplaat. Assuming that the local deity Nehalennia was already worshipped in pre-Roman times, it is possible that her role changed due to the economic developments in the second and third centuries. The question raised here is whether this deity was originally already a patroness of shippers or that this role was given to her in later, Roman times. The fact that the native name of the deity remained more or less unaltered does not have to mean that the cult also remained the same as in the period preceding the Roman occupation, according to Derks.[48] Cults in the Gallo-Germanic provinces of which inscriptions are found relatively far from the specific place of worship should be identified as provincial Roman cults rather than indigenous cults. This is also the case in the instance of Nehalennia, a cult of which votive altars were found as Cologne. Taking this into account, it is remarkable that the name of the goddess is not of hybrid form using a Roman and an indigenous component – a practise quite common in Germania Inferior, like with Hercules Magasanus and Mercury Gebrinus. Derks indicates that cults of deities with indigenous names could originate from pre-Roman and Roman times, while cults with

[46] Stuart 2003, 100.
[47] Van Heeringen 1993, 29.
[48] Derks 1997, 91.

deities that bear double names as combination of indigenous and Roman elements must have emerged under Roman influence. This phenomenon seems however dependant on the gender of the deity. Female deities more often bear indigenous names than Roman names, while male deities more often bear names of Roman origin in the inscriptions that have been devoted to them. Goddesses, especially the Matronae, the Mother Goddesses, seem not to have been altered in terms of denomination with the increasing Roman influence. Concerning the representation, some alterations do generally occur. The female deities have often become equivalents of the Roman goddesses Fortuna or Diana. With the Romanization of the Nehalennia cult, the name of the deity remained more or less unaltered, but was Latinised in the Roman inscriptions, while the whole representation was changed to fit Roman standards. Of most originally indigenous female deities, very few inscriptions are known, therefore very little information on the nature and context of the cults involved is available. Because of the large numbers of votive inscriptions to Nehalennia that have been recovered, much more information is available on this particular deity and her cult. From the altars it is clear that by the application of typically Roman religious elements such as the *cornucopia*, the fruit and the dog, this originally indigenous deity was a goddess of prosperity, especially intended for the protection of shippers. The combination of representations of Nehalennia with Mercury and Fortuna on some altar stones leaves no doubt to this interpretation.[49] It must however be emphasized here that, despite the assumed alteration of the representation of Nehalennia in Roman times as a result of the adding of Roman religious elements, it is impossible to reconstruct the indigenous pre-Roman form, if such an image even ever existed. The indigenous component is however clearly present in the Roman representation of the deity. The dress is clearly non-Roman with its typical upper part that covers the shoulders. This small mantle is present in all representation on the altars and must be of local origin since no such dress is known from other images.

The local residents could also have taken part in the religious as well as the economic activities around the temples devoted to Nehalennia. They could have joined in the facilities of the religious life and also may have erected votive altars themselves, of which one instance is known, namely from Gimio who lived in Ganuenta, the presumed name of the settlement at Colijnsplaat.[50] The establishment of Gallo-Roman temples in Gaul was generally the initiative of the local elites. The discussion on the level of Romanization at Domburg and Colijnsplaat remains purely hypothetical, due to the lack of archaeological data of both settlements.

From an economic point of view, it is sensible that both settlements must have had a significant attraction on the population of the region. It is for instance plausible that the production of salt was stimulated by these trading posts. Merchants may also have sold their goods, such as ceramics, to the local people. This seems visible from the archaeological records at the bottom of the Oosterschelde, where terra sigillata from Trier has been found. There is possibly also a Roman military site located in the vicinity. This site is currently engulfed by the sea and was originally situated a few kilometres to the north of Domburg, off the natural reserve Oranjezon, between Oostkapelle and Vrouwenpolder (figure 5, no. 2). Roof tiles that have been found here on the beach bear the stamp CGPF, an abbreviation of Classis Germanica Pia Fidelis, meaning "loyal fleet of Germania". It is very plausible that this fleet had a base in the immediate area, since close-by the important trading posts of Domburg and Colijnsplaat were located that were presumably essential to the trading network of the rivers Rhine and Scheldt and were therefore under the protection of this fleet.[51]

4.3 Goeree

Another important archaeological site from the Roman period that is essential to be mentioned in this overview is located on the island of Goeree, the southernmost island of the province of South Holland. Historical records from 1618 tell of the discovery of artefacts near the village of Ouddorp (figure 5, no. 4). The site was called 'Oude Wereld' meaning 'Old World' by the local residents, who describe foundations of large houses and streets. This site is currently located in the sea, rendering its exact location unknown. Excavations carried out between 1958 and 1959 and in 1982, about 2 km to the south of the location of 'Oude Wereld', revealed a Roman settlement (*vicus*). Finds included roof tiles with stamps and graffiti from

[49] Derks 1997, 91-94, 119.
[50] Stuart 2003, 74, 101.
[51] *ibidem*, 101. The two sculptures representing the Roman goddess Victoria that were found near the sanctuary of Nehalennia at Domburg are probably not of military context, since the donors of the votive altars found there were all non-military persons. Bogaers 1980, 91.

the army of lower Germania, the Exercitus Germanici Inferioris, and of the Rhine fleet of the same province, the Classis Germanica. These finds indicate that nearby, possibly at 'Oude Wereld', a military settlement could have been present. This is further supported by the descriptions of the site from the 17th century that do resemble the features of a Roman *castellum*. The excavated *vicus* had a channelled waterway that was campshed with wooden posts. Large amounts of imported ceramics were found, including typically British specimen that may point to the presence of a warehouse of a merchant in pottery or something similar. The site dates from the whole range of the middle Roman period, namely AD 70 to 275. The houses found here were three-aisled, more than 20 m in length and ca. 7 m wide. Initially, these had thatched roofs, but in a later phase tiled roofs were applied.[52] This can be explained with the increasing Roman influence and economic prosperity in the region. 55 coins were found on the site, dating from the first century to the end of the second century AD. Most coins were however struck at the time of Emperor Hadrian (117-138) and the Antonine Emperors (138-192). The absence of coins from the Gallic Empire, leads to the conclusion that this settlement was not intensively occupied anymore from the second half of the third century onwards. It was therefore probably not part of the defensive system put in place by Postumus, and Goeree might thus even be beyond the border of the Gallic Empire. However, it must be noted that the numismatic data contradicts the dating of the *vicus* of 'Oude Wereld' by Trimpe Burger that was based on the ceramic finds.[53]

4.4 Schouwen-Duiveland

During the re-allotment of land in 1956/1957, as a result of the flood of 1953, excavations were carried out on the peninsula of Schouwen-Duiveland, at Brabers near Haamstede (figure 5, no. 5). The largest indigenous-Roman settlement of Zeeland was found here, but the site was especially interesting since it contained traces from the Neolithic to the late medieval period. All settlements were built on the same sand ridge that rose above the peat bogs. The sand ridge was completely dug off in the re-allotment process and extraction of sand for the construction of roads. The remains of four houses dating from the second century AD were observed, which were either one-aisled or two-aisled. Also, a structure that may have been used as a stable for small stock our poultry was found, next to the remains of a well in which fragments of Roman roof tiles and utility ceramics were deposited. On the eastern side of the sand ridge, the excavators found *tubuli* that presumably belonged to a stone building there, of which the foundations had been removed thoroughly in the Middle Ages. Other finds from Brabers dating from the Roman period concerned bone material from cows, sheep (or goat), pigs, and dogs. Particularly interesting was the indication of the usage of a mouldboard, a type of plough that turns the sods over. The ceramic finds point to a starting date of around AD 70 for the Roman settlement; while the types of ceramic show that there were trade contacts with areas in present-day Germany, France, Spain, and Belgium.[54] The absence of coins has lead to the conclusion that the local inhabitants did not participate in the monetary economy, but relied on bartering for their transactions – also for the imported products –, but it has to be emphasized that at the excavations in the 1950's no metal detectors were available.[55]

A 'mysterious graveyard' and additional settlement traces dating from the Roman period, are supposed to have been located a few kilometres to the south-west of to the town of Brouwershaven, at Oud-Duivendijke (figure 5, no. 6). The re-allotment of land after the flood of 1953 has regretfully destroyed this site, as was the fate of many other archaeological sites on Schouwen-Duiveland.[56]

At the beach of Westenschouwen (figure 5, no. 7), some 120 coins have been found through the ages by private individuals. No archaeological traces are known from this area however.[57] The relatively large amount of coins dating after AD 300 is remarkable. It seems that this area was still inhabited in the late Roman period. Even more remarkable is that in the area behind the coastal dunes, the coins from this same period are also present in relatively large number, when compared to the number of coins from earlier times. Van Eert notices a normal pattern of coin loss for this area. This numismatic data clearly defies the hypothesis of depopulation of the region from the last quarter of the third century onwards.[58]

[52] Trimpe Burger 2002, 13-16.
[53] Van Eert 2003, 27-28.
[54] Trimpe Burger 1977, 42-45.
[55] Van Eert 2003, 28-29.
[56] Trimpe Burger 1977, 40.
[57] Boersma 1967, 70.
[58] Van Eert 2003, 83.

4.5 Other sites in Zeeland

Several other sites in Zeeland have shown traces of occupation in the Roman period. Although these are not as considerable as those discussed above, some are worth mentioning here shortly to complete the general picture.

On the former island of Tholen, in the east of Zeeland, a burned down house dating from the Roman period was excavated somewhat to the east of Poortvliet (figure 5, no. 8). The archaeological traces consisted of oak-wooden posts set in a row with distances of 1 and 2 m between them, all with an average section of 8 by 15 cm, of which the tops were charred. The occupational layer contained charred wood as well, and also salt-making material among other ceramics that were dated in the second century AD. Additionally, an intaglio of carnelian was found here, depicting a goat that pushes over a pillar.[59]

On the peninsula of Zuid-Beveland, traces of Roman presence have been found at Kapelle-Biezelinge, at the site of Smokkelhoek (figure 5, no. 9). Due to the disturbance of the area by peat digging in the Medieval period, no settlement traces remain here. Ceramic finds suggest presence in the second and third century AD.[60]

A more significant archaeological site on Zuid-Beveland is that at Ellewoutsdijk (figure 5, no. 10), which has been briefly mentioned before. Preceding the construction of the tunnel below the Westerschelde firth, extensive excavations in 1999 revealed an indigenous Roman settlement. One of the houses found here was about 25 m long, had an east-west orientation, and was probably divided in two spaces, one for living and the other for keeping livestock. This structure was made up of two building phases. Additionally, traces of a granary and a place for threshing were found. Botanical remains have shown that the occupants may have grown oats and species of wheat, but these can also have been imported. It is however indisputable that barley and horse bean were grown on site, as were false flax and linseed for the extraction of oil. The site also revealed that samphire and dill, which was introduced into the indigenous cuisine by the Romans, was used for consumption. The bone material found here, showed that small indigenous species of cow was bred, as well as goat or sheep, and pigs, and also dogs. The remains of a fish trap and an iron fish-hook show that fish was also consumed here, while salt-making ceramics show that salt-making was also done on site. The ceramic material and the coins point to exchange of goods between this largely self-supporting farmhouse and the Romanized outside world. The most significant phase of occupation is placed in the middle of the first century AD to the last quarter of the first century AD, based on the ceramic finds. It is not clear whether the building was still inhabited in the second century, or that it was used exclusively as a cowshed. Remarkably, the wooden poles used in the structure appeared to be 3500 years old and have thus been dug up from the peat somewhere in the surrounding area.[61]

To the south of the city of Goes, also on Zuid-Beveland, traces of one or more settlements from the Roman period were found, of which the most remarkable find was a piece of a Roman theatrical mask.[62] It was also noted that peat was dug here in the late Roman period. Near the village of 's-Heer Abtskerke, located to the south of Goes (figure 5, no. 11), a series of kilns dating from the Roman period was found in 1972. Initially, the excavators thought that these were used in the salt-making process, but since no typical salt-making ceramics were found on the spot, it is now thought that the kilns were in fact limekilns used in the production of mortar and lime for manuring (see § 4.1). It is worth mentioning that in the Roman period, the area in the south of Zuid-Beveland was connected to the famous site at Colijnsplaat via a system of natural watercourses.[63]

At Noordhoeksenol on the former island of Noord-Beveland, some 5 km to the south-west of the lost temple and the Roman settlement Colijnsplaat in the Oosterschelde (figure 5, no.12), another settlement was found that dated to the first century AD. The traces consisted of an east-west oriented three-aisled farmhouse that was partly surrounded by an enclosure. Among the metal finds were three fibulae and fragments of leather fittings. Of the ca. 2500 ceramic sherds found, 13 percent were import types dating from the middle of the first century. The remaining ceramics were indigenous types that resembled Flemish and North French wares. The bone material showed that most numerous animals of the livestock were cows, and in second place sheep. Cows were presumably kept for their meat and hide,

[59] Van Heeringen 1988, 136-137.
[60] *idem* 1990, 107; Sier 2004.
[61] Sier 2003, 138.
[62] Swiers 2002, 8.
[63] Lodewijckx 1996, 259-260.

as they were slaughtered at young age. No bones of pigs were found, which is probably due to the fact that no sufficient feeding grounds for these animals, namely broad-leaved forests, were present in the area. The excavated farmhouse was probably part of a larger indigenous settlement, since similar archaeological traces were found several hundreds of meters to the east of Noordhoeksnol.[64]

Near the village of Kats, on the eastern part of Noord-Beveland (figure 5, no. 13), traces of another indigenous settlement were found, but this time of a later date, namely around AD 100. Similar to Noordhoeksnol, the bones of cows were of young animals, while sheep were slaughtered both young and old, indicating that they were kept not only for the meat but also for wool and manure production. Again, pigs were represented in very few in numbers.[65]

On the former island of Walcheren, Domburg was without much doubt the largest Roman settlement. It is however useful to note some other sites from this period that have been discovered on Walcheren. At the Oude Vlissingseweg, to the southwest of the city of Middelburg (figure 5, no. 14), a site was discovered in 1967 that, after new research in 1988, yielded Flemish-Roman ceramics as well as imported Roman ceramics, on a spot that was untouched by the peat diggings that had disturbed much of the surrounding area in the Middle Ages. The finds dated from the second century AD. The ceramics were found a layer of grey ash that was known from similar sites, which contained kilns for the salt-making process. No kilns were found at this site however.[66] Not far away, at Koudekerke Meinersweg, another site did reveal traces of a kiln, but this one was used in the production of shell-lime by burning shells. Among the finds were sherds of storing vessels and a fragment of a grinding stone. Based on the ceramic material, the site was dated from AD 70 to 100.[67]

Numismatic finds from Walcheren show the same unexpected image as those from Westenschouwen. The relatively large amount of coins dating from AD 300 onwards is difficult to explain, since the generally accepted hypothesis states that the whole region was virtually depopulated at the end of the third century. These coins are especially found at Middelburg in the centre of Walcheren, and to a lesser extent at Domburg, and on the north-east of the island at Zanddijk and Veere. Therefore, it is plausible at least part of this area was still fairly free of floods in this period. The numismatic data from the hinterland of Walcheren also shows that the circulation period of Gallic coins must have been short, since no coins of the Gallic Emperors were found here, contrary to other Roman coins dating from after AD 275. It may thus be possible that the area of Walcheren remained populated well into the fourth century.[68]

4.6 The Flemish coastal area

In the region of the Flemish coast, several archaeological sites dating from the Roman period have been uncovered. This region is essential to this study, while Aardenburg itself lies directly to the north, or can even be considered part of it. The occupation during the Roman period stretched along the whole coast. Presumably, the Older Dune formations were relatively densely occupied. Important Roman sites are located at De Panne near Koksijde (figure 5, no. 15), close to the border of France, and at Raversijde (figure 5, no. 16), close to Westende. Both sites have yielded an abundance of finds, but again coastal erosion has swept away large amounts of archaeological remains. The finds uncovered in situ at Raversijde showed that the former coastline is currently located in the sea, as it has moved several kilometres to the east from Roman times onwards. This process has destroyed or buried much of the archaeological record.[69]

Further inland, sites have been discovered in much more favourable geological conditions, which are thus more easily researched. These are sites with traces of settlements, graves, or both combined. In the hinterland however, the Duinkerke II transgression has left it traces in the archaeological sites. The ones that are not situated on natural or anthropogenic heights are subsequently covered by a layer of sand and clay with a thickness of about 1 m. Also, the archaeological record is damaged or destroyed in certain places due to the scouring out by creeks and gullies.[70]

[64] Van Heeringen 1993; Trimpe Burger 1993.
[65] Lauweriers/Mensch 1993.
[66] Van Heeringen 1989, 141.
[67] Van den Berg/Hendrikse, 1980.
[68] Van Eert 2003, 82-83.
[69] De Ceunynck 1987, 28-29.
[70] Thoen 1987, 58-62.

The earliest occupation of the Flemish coastal area in the Roman period dates from around AD 70. This is concluded from the settlements that were found at Veurne, Bredene and Dudzele (figure 5, no. 17, 18 & 19). The inhabitants were clearly still living in the Iron Age tradition, in which salt-making was an imported source of income. The population was mainly living on the Older Dunes and along the gullies in the mudflat zones. From AD 100 to 170 the nature and the size of the populated area remained unchanged. After this, a period of prosperity followed, which is also present in the area of Zeeland at the same time. Because of raids by the Chauci, a tribe originating in northern Germany, military bases were set up and a long period of stability and economic prosperity followed. The construction of roads further boosted this development and salt-making was also during this period an economic activity of major importance.

At Oudenburg a stone building was constructed in this period (figure 5, no. 20). From the excavations it was concluded that this was probably a bath building. The first phase of the structure was made out of wood, as were structures found at the Roman sites of Bruges, Wenduine and Wulpen (figure 5, no. 21, 22 & 23). At the latter, a small settlement was excavated containing five huts with a diameter of 1 to 3 m. Loam and fragments of roof tiles indicate that the structures were made out of wood with walls of wicker-work and beams spread over with clay, covered by thatched or tiled roofs.[71] Bruges was an imported trading settlement in the region, as is shown from the large amount of imported pottery that has been found there. Its florescence was around AD 200 and coincides with that of the settlements at Domburg and Colijnsplaat. The settlement at Bruges was built on a favourable location, on the transition of the coastal plain to the raised cover-sands, with a connection to the sea through a system of natural watercourses. It was also linked up to the Roman road-system that connected the settlement to Oudenburg, Ypres, Cassel and Boulogne to the south. The discovery of a seaworthy ship dating from the Roman period has further marked its significance as a trading post.

At Wenduine, three occupation centres from the Roman period have been found, of which one was inhabited as early as around AD 70. Presumably, this was a settlement of fishermen that gradually expanded into a larger agglomeration with other settlements during the second century. The numerous finds of imported goods have lead to the conclusion that in this period the settlement had developed into a trading post.

Worth mentioning in this short overview of the Flemish coastal area, are the finds from the city of Antwerp. A Roman settlement was located close to the river Scheldt and probably at a junction of roads running from east to west and from north to south. It was situated in the borderland of the *civitas* of the Menapii, the Eburones, and the Nervii. Excavations from the 1950's to the 1970's in the city centre of Antwerp, revealed 35 waste pits, six wooden wells and an occupation layer dating from the Roman period. The ceramics point to a habitation of the area from around AD 150 to 250/270. No traces of houses were found, but large numbers of roof tiles, *tegulae* and *imbrices* indicate that structures with tiled roofs must have been present here. The settlement was located on an elevation that came down gradually in all directions. Botanical research of the soil has shown that the occupants cultivated cereals here. The bone material showed cows were bred here, as well as sheep, and possibly also pigs. A remarkable find from the northern border of the modern city, dredge from the river Scheldt, is a bronze wine-jug with silver decorations. This object dates from the first century AD and was made in Italy, and is thus most probably not related to the Roman settlement in the centre of Antwerp.[72] Recent archaeological research has shown that in the second and third century, the settlement probably extended over a larger area than thought before and may have included a graveyard. Ceramics from the fourth and fifth century AD indicate that the city might even have been inhabited continuously from Roman period to the Middle Ages.[73]

4.6.1 Agriculture, stock-breeding and fishery

The landscape of the Flemish coastal area was less suitable for agriculture in the Roman period than it is today. The salty mudflats were much more suitable for stock-breeding. Research on pollen has shown however that some higher situated shoals were already put to use for the cultivation of corn at the end of the first century AD. Wheat, barley and oats were the primary food source for the local residents, next to beans. The submerged peat bogs became more suitable for agriculture due to drainage of the soil. It is

[71] Thoen 1987, 62-65.
[72] Oost 1986, 151-153.
[73] Veeckman 2003.

unclear whether crops were also grown on the Older Dunes in the Roman period, as was done during the Iron Age.

A great deal is known of stock-breeding, due to the large numbers of animal bones that have been found at sites along the coast and inland. Sheep, or goat, were the most numerous, while cows and pigs were also kept. An exception to this is the site at De Panne where cows were the most numerous. Horses seem to have been a minority in all settlements. The dominance of the sheep can be explained by the nature of the landscape. The conditions of the mudflats were ideal feeding grounds for these animals. De Panne was situated in a dune area, a landscape that was more suited for grazing by cows. The limited number of pigs, an animal that was still popular for export, can be explained by the limited amount of food that was available for this type of animal. The remains of horses that have been found at Oudenburg seem to belong to the Roman breed that differs clearly from the smaller indigenous breed that was native to the region. The intensive sheep-breeding was intended for the production of wool, cloth and hide, as is concluded from the numerous finds of spools.[74]

Fishing activities are difficult to indicate from the archaeological record as remains from fish are generally not well preserved. It is however very probable that fishery at sea and at the inland waterways was an important source of income in the region. The limited finds of fish bones have been determined as cod-fish and ray. It is also known that fish was made into fish sauce. Shellfish were consumed in large amounts, as can be concluded from the waste of various sites. Cockles and mussels were preferred as were to a lesser extent peppery furrow shells, whelks, Spisula subtruncata and oysters.[75] The low consumption of oysters is remarkable and can be explained by the fact that this was a luxury food that was intended for export. The intensive trade of mussels and oysters is indicated by the large amounts of shells that are found in the waste from Roman *villae* in southern Belgium.

From bone material it has become evident that dogs were popular in civilian living areas. They were employed as watch-dogs and sheepdogs, and may have been used for hunting foxes, hares, deer and roe. The finds of bones of birds or poultry point to poultry-farming and also to the breeding of geese in the late Roman phase of Oudenburg.[76]

4.6.2 Salt-making

Three sites in the Flemish coastal region are known to have been of significance in the salt-making industry in the Roman period. These are De Panne, Brugge-Haven and Veurne, and were already important salt-making centres in the Iron Age. After the area fell under Roman authority, the traditional industry was stimulated and supervised by the new rule. In Rome, the production of salt had always been a state monopoly. In newly annexed areas the Roman state therefore quickly controlled the salt-making and the trading of salt. The traditional salt-making sites were discontinued and new methods of production were introduced. At the coast large artificial salt-pans were constructed, in which sea-water was evaporated. New salt-making centres were constructed at carefully chosen spots, within the reach of sea-water supply, and close to stocks of peat, which was used as fuel for kilns used in the evaporation process, as well as close means of transport by land or water.

The salt was produced by evaporating salt water in salt-pans after which the residue was boiled in specials kilns. A salt-pan was excavated at Zeebrugge that originally covered about 1500 m² and was made of a framework of horizontal wooden beams that divided the whole area in basins of 12 m long and 3 m wide. The whole structure was tied to the peat by wooden poles. The basins could be further divided in smaller compartments of 6 to 3 m. The site at Raversijde has shown that the salt-pans were supplied with salt-water via a channel system that was filled by the flood-tide from the sea.

Near Leffinge, a salt-making centre was uncovered in the 1970's, yielding all kinds of waste from the production process, such as layers of ash, kiln materials, and technical materials, namely briquetage, slag and kitchen waste. It is clear that at this site a salt-making settlement was located, of which, by modern standards, the production process had an almost industrial character. This is concluded from the double row of fifteen kilns each that have been excavated. The kilns were made of clay, oval shaped, and 1.2 m long and 0.6 m wide. As would be expected from a logistic point of view, until now no sites have been found in which both the salt-pans and the kilns are inhibited.[77]

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[74] Thoen 1987, 76.
[75] The Spisula subtruncata has no common English name and is known in Dutch as 'strandschelp' ('beach shell').
[76] Thoen 1987, 66-67.
[77] *ibidem*, 69-74.

4.6.3 Ceramics production

The largest part of the ordinary utility ceramics found in the Flemish coastal region is of local or regional origin. In Zeeland there is a comparable distribution in the ceramic assemblages of the sites outside of the larger trading centres. In the presumed relatively large settlements at the coast, more imported ceramics were present due to intensive medium and long distance trade. The ceramics of local and regional origin in the Flemish coastal area were produced in vast numbers due to the abundance of shoal-clay and organic clay from the peat zones that was present there. This type of ceramic has received several appellations in Dutch and Flemish scientific publications, namely 'Coastal ceramics', 'Menapian ceramics' and 'Flemish-Roman' ceramics.[78] The typically grey to greyish-black colour is caused by the reducing firing process. For tempering the clay, sand, organic material, namely plant remains, gravel, grit and ceramic dust was used. The forms produced were mainly cooking pots and to a lesser extent bowls, plates, cups and lids, which were hand-made as well as wheel-thrown. The decorations are often excessive on the sides, using comb-strokes, grooves, wavy lines, polishing, and spatula and finger imprints. The Flemish-Roman ceramics were produced in the region during nearly the whole Roman period. The crisis that visited the regions from AD 270 onwards, seems to have ended the production of these local ceramics.[79]

A very common ceramic in many contexts in the Dutch coastal area is the Lowlands Ware, which was produced in the vicinity of present-day Bergen op Zoom.[80] The core of the distribution is found is this area as well, and it is thus very common in Zeeland. Its forms consist mainly of household types, and were in use in the middle Roman period.

Another important type of ceramic that was produced in this region is the so-called Scheldt-valley amphora. These red amphorae have an area of distribution ranging from the extreme north-west of Gallia Belgica to the whole of Germania Inferior. While the exact site of production is not known, the dense distribution pattern in the region around the Scheldt points to the place of origin lying somewhere in this area. It may however also have been located in northern France, because of the high concentrations of sherds of the amphorae found there together with materials coming from kilns.[81] The amphorae most probably contained beer, which was made of barley, oats or wheat, but fish sauce is also a possibility. In the case of beer, the amphorae would have been an export good from the Flemish region that was intended for buyers that could not afford the expensive and exotic wine products.[82]

Figure 9: A typical example of Flemish Roman pottery. This so-called knobbed pot is decorated with smooth lines on the shoulder in a triangle pattern with horizontal grooves below it. Height: 20.3 cm; diameter (max.): 17.5 cm (after: Thoen 1987).

4.6.4 Metalworking

Due to the lack of ore, there was no intensive production of metals in the Flemish coastal region during the Roman period. There are however traces of local iron extraction and bronze working, namely iron slag, remains of kilns, lumps of wrought iron and burned Doornik limestone that was used for reducing the melting-point in the melting process. In the sandy ground that bordered the coastal areas, iron ore was present in the form of bog iron ore. This was melted into pig-iron in small kilns using charcoal, after which it was delivered to the smiths. The sandstone containing iron coming from tertiary formations may

[78] Although there is no standard term for this type of ceramic, the name Coastal ceramics is most used in Flemish literature. Since this term is also used in Dutch literature to refer to Iron Age ceramics, I prefer to use the term Flemish-Roman ceramics in this thesis.
[79] Thoen 1987, 74.
[80] This ceramic is also often designated as "Waaslands grijs", but this term is now considered obsolete since it refers to an incorrect place of origin for this ware.
[81] De Clercq 2004.
[82] Van der Werff *et al.* 1997.

have also been used as raw material. Traces of bronze working are only known from Oudenburg. The casting of bronze was most likely done by specialists that were associated with the Roman army units stationed there.[83]

4.6.5 Cemeteries

In the Flemish coastal area, 27 sites have been found containing burial goods. The contexts were often destroyed as most sites were uncovered during peat extraction in the 18th and 19th century. The Roman cemetery at Oudenburg is the only one of these sites that has been thoroughly researched. While historical data points to cremation and burial of the cremation remains in urns, the archaeological record of Oudenburg shows that cremation without the use of urns was also practised, as is concluded on the basis of finds of remains of funeral piles deposited in a pit. The site of Oudenburg has also made evident that inhumation was only practised in this region from the late Roman period onwards.[84]

4.7 Trade

From the topics discussed above, it can be concluded that the Romanization process that occurred in the Scheldt region from the first century onwards, mainly had an economic cause. The region functioned as a vital connection in the 'international' trade between the Rhineland, with its commercial centres Cologne and Trier, the coast of the European mainland and England.[85] The nature of the products involved gives an idea of the nature of the trade, its producers and consumers.

4.7.1 Exports

Salt was an important trading good with a clear indigenous aspect in the French, Flemish and Dutch coastal areas, as it was extracted already in prehistoric times. In north-east France and England, salt was dug from natural salt deposits. In the coastal areas it was presumably extracted from salt-water by heating using ovens or hearths.[86] As discussed before, during the Iron Age there was already production and trade of salt in the Dutch coastal areas. In the Roman period however, its intensity had grown significantly.

The territory of the Menapii was bounded on the south with the *civitas* of the Morini of which Thérouanne (Teruanna) was the capital. Both areas were renowned for their salt-making, which is testified by two inscriptions on memorial stones from Rimini on the Adriatic coast in northern Italy.[87] These inscriptions mention wholesale dealers from these territories, namely salinatores civitatis Menapiorum and salinatores civitatis Morinorum. The importance of trade of salt and salted products is also evident from the votive altars devoted to Nehalennia. Several of the clients are described as *negotiatores salarii*, trader in salt, and *negotiatores allecari*, trader in fish sauce. This product, which was named *garum* by the Romans, was used as flavouring for meals. It was made by marinating fresh fish with salt-water and spices until the fish had completely dissolved. The sea-salt was also used for the conservation of meat and fish products, making it altogether a good that was in great demand and subsequently an important factor in the 'international' trade.

Salt was not the biggest export product of the coastal region. Next to salt and fish sauce, the trade in fish and shellfish must have been equally intensive. In Aardenburg large amounts of remains of oysters, mussels, and cockles were found in the excavated Roman layers.[88] Meat was also exported, as has been discussed before. The exporters in these areas had a competitive advantage, because the sea-salt that was available for the conservation of their fish and meat products. The Roman troops along the Rhine seem to have been regular customers. Secondary products from cattle, such as wool, textiles and hides were also intended for the 'international' market.

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[83] Thoen 1987, 76.
[84] *ibdidem*, 80-81.
[85] Naturally, 'international' is a modern term that can only be applied on ancient contexts in a wider sense.
[86] Van den Broeke 2005.
[87] *CIL* XI.390 and 391.
[88] Trimpe Burger 2002, 17-18.

4.7.2 Imports

The range of products that were imported in the area of study, give a notion of the extent of Romanization through time. New and exotic products became more or less common in the indigenous cuisine. New utilities such as the *mortarium* were used for the preparation of dishes and cheeses. The new eating habits of the local population caused the introduction of new crops, trees and fruits. Finds of fragments of amphorae, for example at Aardenburg, show that olive oil from southern Spain was exported to the north. Wine was also traded from southern Europe, as is evident from reused wine-casks found in Aardenburg and Harelbeke (Belgium).The wood of these casks originated from two types of conifers that only grow in the Alps. The fully loaded barrels weighed some 800 kilo's and were transported by ship. Presumably wine and olive oil were luxury products that were not available to the indigenous people at first, but only intended for soldiers and magistrates.[89] It is not clear to what extent these goods eventually found their way to the indigenous cuisine of the inhabitants of the coast as their economy flourished from the end of the second century onwards.

From research on botanical remains, such as pollen, on the food supply of the Romanized areas in central and north-west Europe, it is known that military sites played a significant role in the spread of new, luxury food products. At the start of the Roman rule, at the first half of the first century AD, luxury food products were only available to senior military officers. These products were rice, chickpea, pistachio nut, pomegranate, black pepper, almond, fir-cone – of which the seeds were roasted – gourd, melon, date, olive, fig, garlic, peach, pear, plum, cherry, apple, walnut and grape. All had to be imported. These foods are only sporadically found in *vici* in this period. In the second half of the first century AD, some luxury foods have penetrated civilian-urban settlements, namely garlic, fir-cone, olive and date. These remained only available to inhabitants of the villae due to their increasing economic prosperity. During the second century and the first half of the third century, all of the foods that could not be cultivated locally, namely black pepper, rice, chickpea, pistachio nut, pomegranate, almond, fir-cone, gourd, and melon, remain scarce in the northern parts of the Roman Empire. These are all still available only to military and urban settlements, vici and the wealthier villae. Other products were however introduced in the indigenous cuisine, namely peach, plum, pear, cherry, grape, walnut, and apple – which was of a Mediterranean breed that was preferred to the smaller specimen of local origin. The extensive distribution of these crops that reached far beyond the strongly Romanized urban centres, shows that elements of the Roman cuisine had been adopted by the indigenous population. From this, it can be concluded that at least some of the crops were grown locally, resulting in the change of status attached to these foods. Because of the large availability of the products, they could no longer be regarded as luxury goods. Other crops that could not be grown in northern Europe because of the climatological conditions, such as olives and figs, still had to be imported over long distances, and thus retained their exclusive character.[90]

Stone had to be imported for the construction of stone buildings, since no natural stone formations are found in the coastal areas of Flanders and the Netherlands. The closest formations are found in the Tertiary layers located on the edge of the cover-sands beyond the Flemish coastal plain, about 10 to 20 km inland. The greenish rock found here is rich in glauconite and is known as 'iron stone' and was used in the foundations of Roman roads and as building material.[91] For the stratum of roads, ferruginous and limonite-rich rock was imported from northern France and the Flemish Ardennes. Presumably, iron ore was also won from this rock and the residual products were possibly used for the roads. The most widely used natural stone was limestone from Doornik.[92] This bluish rock was used as building material as well as a supplement in the iron extraction process, where it functioned as a melting point reducer. It was also burned to produce lime as an ingredient for mortar. To a lesser extent, limestone from northern France was used, as was tuff from the Eifel in Germany. Remarkably, roof tiles found in the Flemish coastal region have also been imported from the interior territories, whereas clay is not a rare raw material here.

As was mentioned before, ceramics were produced locally. Luxury ceramics however, of which the clay was not available in the region, were imported in vast numbers. The largest category of this is terra sigillata, a high quality product from southern, central and eastern Gaul. Black cups of painted ware originate from the Rhine region.[93] These include specimen with barbotine images of hunting scenes and

[89] Frison 1963; Trimpe Burger 2002, 24.
[90] Bakels/Jacomet 2003.
[91] In Dutch, this rock is known as 'veldsteen' (field stone).
[92] In Dutch: 'Doornikse kalksteen'.
[93] In Dutch: 'geverfd aardewerk'.

are subsequently named 'hunting-cups'.[94] Next to this, there are imports of ceramics from northern France, the German Eifel area, Britain and the Iberian peninsula. Grinding stones of basalt, conglomerate and arcose (sandstone) were also imported respectively from the Eifel, the Ardennes, and the region between the Sambre and the Meuse.[95]

4.7.3 'International' trade

From the subjects of trade discussed above, it can be concluded that the south-west Dutch and the Flemish coastal areas were heavily involved in trade with the whole of western Europe. The intensity of the trade activity can however not be compared to that in the Mediterranean, where vast metropolitan centres dominated the economy. The trade in terra sigillata ceramics was characterized by monopolies of different production centres through the ages. The market was in the first century AD dominated by production centres from southern Gaul (La Graufesenque), which were thereupon eclipsed by industries from central Gaul (Les Martres-de-Veyre and Lezoux). From about AD 200 onwards, most terra sigillata was coming from eastern Gaul (Trier, Rheinzabern, and Argonne). For other products, monopolies may also have been a major factor in directing the commerce. The Rhine and Moselle regions seem to have been the most important areas of trade for the coastal regions, since the Rhine, combined the Rhône (Saône) and the Moselle, formed a vital connection from north to south between northern Europe and the Mediterranean. The estuary of the former river Scheldt, currently the Oosterschelde, was probably connected, via the Waal – the lower course of the Meuse – and a watercourse or channel, to the Rhine region and was subsequently an important junction in the 'international' trade network between Germania, Gaul and Britannia.[96]

4.7.4 A business elite?

Both the subjects of Romanization and trade have lead to the discussion on what group of people were active in the 'international' trade. The merchants and traders from the north-west provinces have been characterized as a business elite. They arranged their own activities with personal investments and can thus be characterized as independent entrepreneurs. The Roman military presence had provided stable conditions in which the demand for goods from the urban centres became unprecedented. The army itself also had a great demand on goods that were provided through the civilian networks. This situation created the right conditions for the emergence of a business elite. Wherever the Roman army settled, a group of merchants, contractors, and other businessmen followed. The army provided itself with sufficient food and other primary resources, but for secondary products the troops were dependant on private businessmen. As supply routes became longer, secondary products became more expensive. In the first century AD, economic immigrants were settling close to their clients in the camp settlements around military fortifications. These settlements became a characteristic aspect of the provincial-Roman civilization. The integration of the inhabitants of these towns and the local population was a slow process. Until the end of the first century, typically Roman products are only found in and around military sites. An example of this is terra sigillata originating from Italy and southern France, which is in this period only common in military contexts.

Epigraphical data points to a significant change at the beginning of the second century. Traders and merchants of the north-west provinces seems to have adopted the tradition of using epigraphical references to enhance their status. From the 326 known inscriptions of this period that mention *negotiatores*, and in which 240 individual businessmen are mentioned, 32 percent is originating from the north-west provinces, while 17 percent is from Italy, excluding Rome, and 12 percent is from the provinces along the Danube and in Dalmatia. In the Spanish and African provinces such inscriptions are almost absent. This phenomenon becomes even more remarkable if the whole of epigraphical data from the western provinces is taken into account, for these are present in much smaller numbers in comparison to the Mediterranean areas. A concentration of epigraphical data concerning businessmen is present in Lugdunum, modern Lyon (France). The number of inscriptions from this city, namely 22, is only

[94] In Dutch: 'jachtbekers'.
[95] Thoen 1987, 77-80.
[96] *ibidem*, 80.

surpasses by Rome itself with 71. From Germania Inferior 35 of these inscriptions are known, of which 14 are emanating from the Nehalennia altars.[97]

This distribution of epigraphical data over different areas tells however little of the presence and nature of a business elite in our area of study. In the Mediterranean much more businessmen will have been active than were at the northern frontiers of the Empire. Also, senior businessmen from Italy would most likely been much more influential than their colleagues from Germania Inferior. The distribution of inscriptions concerning *negotiatores* leads however to the notion that the business elite from this area attached great value to publicly showing their involvement in trade. Their business activities seem to have played a major factor in the construction of a social identity and in emphasizing their political and social affiliation to Rome. The Roman army seems to have played a major role in this. According to calculations by Duncan Jones, some 120 soldiers were discharged from each legion every year.[98] Consequently, the legions that were stationed along the Rhine delivered about 960 veterans per year in the first century, and about 480 per year in the second century. The auxiliary forces discharged the same number of veterans. When 15 years of life are assumed for an average veteran after retirement, the amount of veterans coming from the armies of the Rhine region would have been 28,800 in the first century and 14,400 in the second century. Many ex-soldiers settled near their former camps, while others returned to their area of origin in Gaul or in the Germanic provinces. The veterans enjoyed much prestige, had a large social network to rely on with contacts with influential persons in the army, and had Roman citizenship. Next to this, they had a relatively large group of followers consisting of relatives, slaves and freedmen and had sufficient money at their disposal to be economically independent. Taking the Roman consumption and the resulting demand into account, as well as the social network of the veterans, it can be concluded that they played a vital role in the provincial-Roman economy as traders and producers. Not surprisingly, many notable traders were veterans from the Roman army.

The influence of the Roman traders, the *negotiatores*, on the market for products like wine, olives, fish sauce, and textiles was considerable. The army was a principle consumer. It produced indeed many goods itself, especially those that required lots of manpower, such as roof tiles and bricks, but for many raw materials and semi-manufactured articles it was dependant on the supply of the private businessmen. Soldiers were also customers individually. From the demand of the army, 'military markets' emerged that set new trends with the consumption of new, exotic products. Producers and traders discovered the new possibilities of these markets and set up local production of equal or comparable goods.

To acquire the goods for the everyday needs of the troops, the army had private representatives that were closely tied to the camps. They were sent to the production centres and the villae to buy locally produced or imported goods. Again it was the *negotiatores* who provided the army with salt, grain, wood, hides, wine, beer, luxury ceramics and textiles.[99]

Apart from traders and merchants, the army also delivered bankers, skilled artisans such as blacksmiths, engineers and sculptors, who invested their savings in their own businesses after they retired from the army. As a result of this, a broad spectrum of workshops like potteries, brick works and forges developed close to the army camps. Emperor Constantine (306-337) even decreed that veterans that invested their pension into one's own private company were exempt of tax payments. Intentionally or unintentionally, the Roman army created an economic and technological side effect in the areas it was present from the first century AD onwards. Customs, habits and trends that were introduced by the business elite, became slowly accepted by the local, indigenous or non-indigenous people. A clear example of this is the Roman legal system that was spread by businessmen who had Roman citizenship, for with the concluding of contracts they were bound to the laws of Rome. Most businessmen in the first century were of Roman origin, while in the second century indigenous businessmen seem to have found the military markets. Naturally, many of them were discharged from the army, which recruited more and more from the conquered peoples in this era. As a consequence, commerce had become Romanized and strongly aimed at markets.[100]

[97] Verboven 2006, 2-4.
[98] Duncan Jones 1994, 34.
[99] Verboven 2006, 7-11.
[100] *ibidem*, 13-15.

5 THE ROMAN MILITARY

Preceding the discussion of the Roman fortress at Aardenburg, the features of Roman military settlements in north-west Europe, mainly in the Rhine region, will be discussed in the following. Similar fortifications were built on all frontiers of the Roman Empire.

In the Netherlands, 20 fortifications are known that can more or less be characterized as *castella*. A number of these were excavated thoroughly and have lead to many new insights, like those at Valkenburg (Praetorium Agrippinae) and at Alphen aan den Rijn (Albaniana). All fortifications differ in size, shape and ground plan. There are however fixed principles in terms of layout. From the large amount of archaeological data that has come available in the last decades, it is now clear that the early forts differ in the type of building materials used with the later ones. In the first century, forts were built with combinations of wood and earth walls, while from the second half of the second century onwards, stone was used as the main building material for the walls and the main building. A typical *castellum* could house ca. 500 to 1000 soldiers. This type of fortification was the smaller variant of a *castra* that accommodated a legion of 5000 soldiers. The soldiers of the legions had Roman citizenship, while *castella* were meant for auxiliary forces (the *auxilia*), with troops recruited from friendly tribes. The auxiliary forces consisted of both infantry units, named *cohortes*, and cavalry units, named *alae*. The cohorts were named after the tribes of which the soldiers originated, but in course of time the units also contained soldiers of different origin. A regular cohort amounted normally 480 foot soldiers and was known as a *cohors quinqenaria peditata*. There were also cohorts of double size, namely the *cohortes milliariae*, and cohorts that consisted of infantry regiments with cavalry support called *cohortes equitatae*. The *castella* were certainly not fully manned at all times and could also be occupied by units from a legion that was stationed elsewhere.

Castella are rectangular forts that function as barracks, as is discussed above. The walls inhibit fortified watch-towers. The ground plan is intersected in the middle by the two major streets, namely the *via praetoria*, the main road, and the *via principalis*, the cross-road. Both streets form the main axes of the encampment. Along the inner foot of the wall was a street named the *intervallum*. The *via principalis* divided the camp in a front part, the *praetentura*, and a back part, the *retentura*. The *via praetoria* divided the *praetentura* in two and emerged into the main building that was located in the middle of the *retentura*. On all four sides there were generally gateways present – there are however exceptions to this. The main gate, the *porta praetoria*, was connected through the main street to the *principia*, and the back gate of the *castellum*, the *porta decumana*. On both sides of this axis lay the left and the right gate, named the *porta principalis sinistra* and the *porta principalis dextra*. These were connected through the *via principalis*. The whole complex was enclosed with one or more dry V-shaped ditches. The *principia* was the administrative centre of the *castellum* and often had an open courtyard, a *forum*, which was surrounded by a colonnade (*peristylium*). In the close-by *sacellum* or *aedes*, a small sanctuary, the banners and the exchequer of the cohort were kept. The soldiers were housed in the barracks. One barrack usually housed one *centuria*, a unit of 80 soldiers. These buildings were divided in ten double rooms in which the ordinary soldiers lived. The front room of each quarter was used for the storing of the weapons and armour (*arma*), while the backroom, the *papilo*, functioned as living and sleeping quarters and contained four bunk-beds for eight soldiers. The officer of the *centuria*, the *centurio*, had larger quarters, consisting of several rooms, at the ending of the oblong barracks building. The camp commandant lived in the *praetorium*, which was separate building within the camp that was equipped with much more luxury than the quarters of the soldiers and non-commissioned officers. Other buildings that were part of a typical *castella* were the workroom (*fabricula*), the granary (*horrea*), the sick-bay (*valetudinarium*) and the stables for the horses of horsemen. Whether all of these buildings were present depended on the size of the camp and the composition of the troops that were stationed there. Because of fire hazards, the baths ware always built outside the camp itself, since fire was required to heat the water.[101]

[101] Van Es 1981, 60-68.

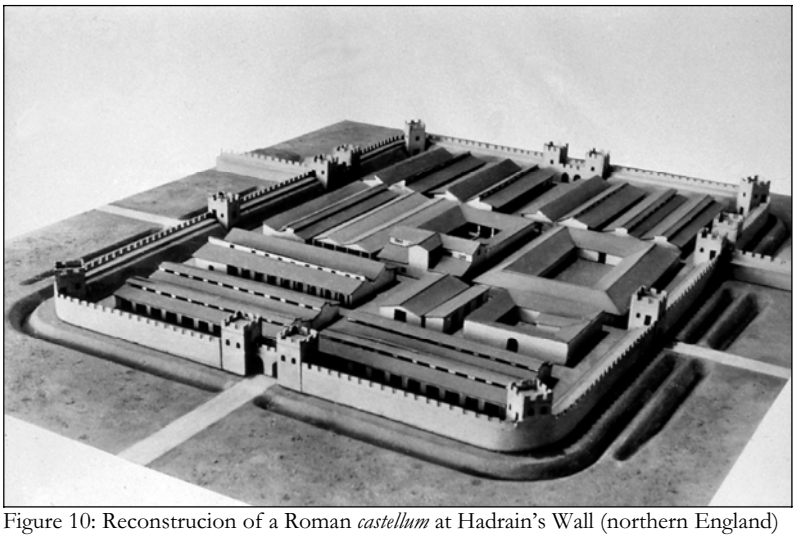

Figure 10: Reconstrucion of a Roman *castellum* at Hadrain's Wall (northern England) with its typical buildings inside the walls (source: RACM).

The construction of a *castellum* required a logistically favourable location where building materials could be transported from nearby, for example wood from close-by forests. Access to drinking water was another important requirement. The defensibility was another matter. Features in the local landscape could be used to service this. The task of finding a suitable spot for building a fortification was giving to military engineers. To mark out the ground plan, they used measuring-instruments, lances and coloured flags. The engineers were accompanied by an *augur*, a Roman priest, who supervised the marking out of the terrain according to ritual prescriptions.

The *castellum* functioned also the economic centre of its surroundings. Every *castellum* also had its own territory to control. This area was the property of the Roman people and was exploited by the army. On these military territories lay, close to the army camp, a settlement that was inhabited by civilians. At the *castra* these were called *canabae*, and at the *castella vici* (in singular: *vicus*) as has been discussed above. The population of these villages consisted of traders, merchants, artisans and shopkeepers, who had the task of supplying the troops with food and utility goods. These settlements cannot be characterised exclusively as civilian, since they had no separate administration, but were under direct control of the camp commandant, as is concluded from the fact that the settlement buildings were constructed according to army rules. The military territories were mainly put to agricultural use, benefiting the army. Veterans and civilians worked by order of the army to produce food. About the size and borders of the territories in the Low Countries is very little information. The nature of the settlements at the castra and *castella* is better understood in recent decades. Archaeological research at Valkenburg (South Holland), which was carried out from 1941 to 1988 has yielded much information on the occupation outside of the military fort.[102] To the south of the *castellum*, which was named Praetorium Agrippinae, excavations at De Woerd and Marktveld lead to the discovery of the village belonging to the fort. It was concluded that this settlement was to facilitate and supply the nearby fort. It had a dock, storehouses and granaries. At the *castellum* Albania, in present-day Alphen aan den Rijn, a similar settlement was found that also had storehouses.

Castra were the larger camps that housed whole legions, normally consisting of 5000 soldiers. In the Netherlands, only one *castra* was present, namely that at Nijmegen. The use of space of the *castra* was, apart from its lager size, roughly equal to that of a *castellum*. Along the *limes* at the Rhine, other, smaller fortifications were built in the areas between the *castella*. These were watchtowers that controlled about 1 to 1.5 km in the neighbourhood. The towers were about 3 to 4 m in length and width and were 5 to 8 m high. They were built out of wood or stone and surrounded by a wooden palisade and a ditch. The watchtowers were manned by 4 to 6 soldiers from the nearby *castellum* and could signal messages by using fire or smoke. There is no archaeological information whether these towers also stood at the coast, but it seems very plausible that a defensive system there functioned similarly to that along the Rhine.

[102] An overview of the archaeology of Praetorium Aggrippinae is found in De Hingh/Vos 2005.

5.1 Protection of commerce, the coastal defence

In the previous chapter, the region of the Scheldt estuary has been discussed in relation to trade. It has been shown that this area was vital in the trade routes to and from the Rhine region, England and the Atlantic coast as far as Spain. Watercourses were of great importance in the coastal Scheldt area, which lacked a structured road system. Transport over water was also much quicker, more efficient and thus cheaper than transport over land. This is why in this area settlements have to be viewed in coherence with former watercourses when the archaeological record is studied. In the Scheldt region, trading posts and trade routes needed protection, as was the case along the Rhine. Around AD 172 to 174, the coast was ravaged by pirates of the Chauci, a tribe from northern Germany. This ended a period of peace and quiet the regions had enjoyed from the middle of the first century onwards. To counter threats to the economy, the Roman government set up a series of fortifications, as was done at the *limes* along the Rhine in the first century. These fortifications stretched from the coast of the North Sea to north-west France. The British coast was also fortified. Different types of fortifications were constructed: naval bases, forts, fortlets and fortified towns. These defensive structures were also built outside the period in focus here, namely from the early Roman period to the late Roman period. In the past decades, the focus of archaeologists has been put on the later periods of the defensive system, mainly the forts located on the south-east coast of Britain and the opposite continental coast.[103] This particular defensive line was known as the Litus Saxonicum, the Saxon Shore, which was set up by the usurper Carausius, to deal with the attacks of the Saxon and Frankish tribes.[104] For the coastal areas of Gallia Belgica and Germania Inferior, Dhaeze distinguishes roughly four periods of Roman military activity:

- The incursions of the Chauci in AD 172 to 174 and the subsequent Roman response.
- The installation of the coastal defence in the years 175 to 180.
- The preparation of the support of the campaign of Septimus Severus in Britain.
- The coastal defence under the Gallic Empire.[105]

Reconstruction of the second century defensive line in the Netherlands leads to the notion that from the end of the second century the *limes* along the Rhine turned off to the south at the most western fortification, namely the *castellum* at Katwijk, since early modern times popularly known as the 'Brittenburg', of which the remains are located beneath the beach or in sea at present.[106] This means that along the whole coast south of the *limes* a series of fortifications was built. In the south-west of the Netherlands these are assumed to have been lying, from north to south, at the former mouth of the Rhine at Katwijk, near the Hague at Ockendburg and Scheveningseweg, at Naaldwijk, Oostvoorne, and Ouddorp, at the Roompot – the mouth of the Scheldt between Schouwen and Walcheren – and in Aardenburg.[107] Because of coastal erosion, it is however very difficult, or perhaps even impossible, to reconstruct the coastal defensive line completely. The coast-line, composed of Older Dune formations, was located more to the west in the Roman period, compared to the present-day situation. Also, the nature and size of the various fortifications is unknown and the individual datings are not fully corresponding. Based on the current archaeological data available, the coastal defensive system from the end of the second century cannot be reconstructed satisfactory.

For the defence of the coast, the Roman army as well as the Roman fleet was employed. The fleet, named Classis Germanica, was based at Altenburg near Cologne, and supervised the mouths of the rivers Rhine and Scheldt. It is probable that a base of the fleet was located between Oostkapelle and Vrouwenpolder, at the nature reserve of Oranjezon, as can be concluded from the roof tiles with the stamp of the fleet of Germania that were found on the beach here.[108] These stamps, with the letters CGPF, were also found near Ouddorp on Goeree, as is discussed above, Monster, Arentsburg (Voorburg) and Katwijk.[109] The presence of such stamps does however not automatically point to the presence of a naval base. Although most sites that contained these finds are located on strategically important rivers and

[103] Dhaeze in prep., 1.
[104] Because Aardenburg is archaeologically absent in this period, this particular defensive line will not be further discussed here.
[105] Dhaeze in prep., 1.
[106] Van Es 1981, 120-121.
[107] Trimpe Burger 2002, 11.
[108] *ibidem*, 24. The total number of stamps from this site currently amounts sixteen, as is concluded from the finds entered in Archis, the archaeological information system of the RACM.
[109] For the site at Katwijk, see Bloemers/De Weerd 1984.

estuaries, it is only evident that the fleet participated in building activities on these spots and that there is no direct evidence of the presence of naval bases.[110]

Three candidates for naval bases of the German Fleet are Oostkapelle/Vrouwenpolder, Ouddorp and Voorne. These sites revealed not only CGPF-stamps, but also archaeological traces of military presence. The site at Oostkapelle/Vrouwenpolder was situated on the northern shore of Walcheren at the sea outlet the 'Roompot'. A map from the 17th century of the hand of Nicolaas Visser shows a place on the map marked with the text: "The Roompot, an important castle built by the Romans used to be situated here".[111] Reports from the 17th century mentioned "large houses" and "streets" at Oude Wereld near Ouddorp on Goeree. Traces of two Roman settlements of military character were found near Ouddorp. On the island of Voorne, large fragments of stone with mortar and stone foundations were observed on the beach at low tide in the year 1752. Here only one CGPF-stamp was found, just as at Ouddorp.[112] Voorne is also a candidate for the settlement of Flenio (Helinio), which is mentioned on the map of Peutinger, since it is located on the presumed south bank of the Meuse estuary that was named Helinium in Roman times.[113]

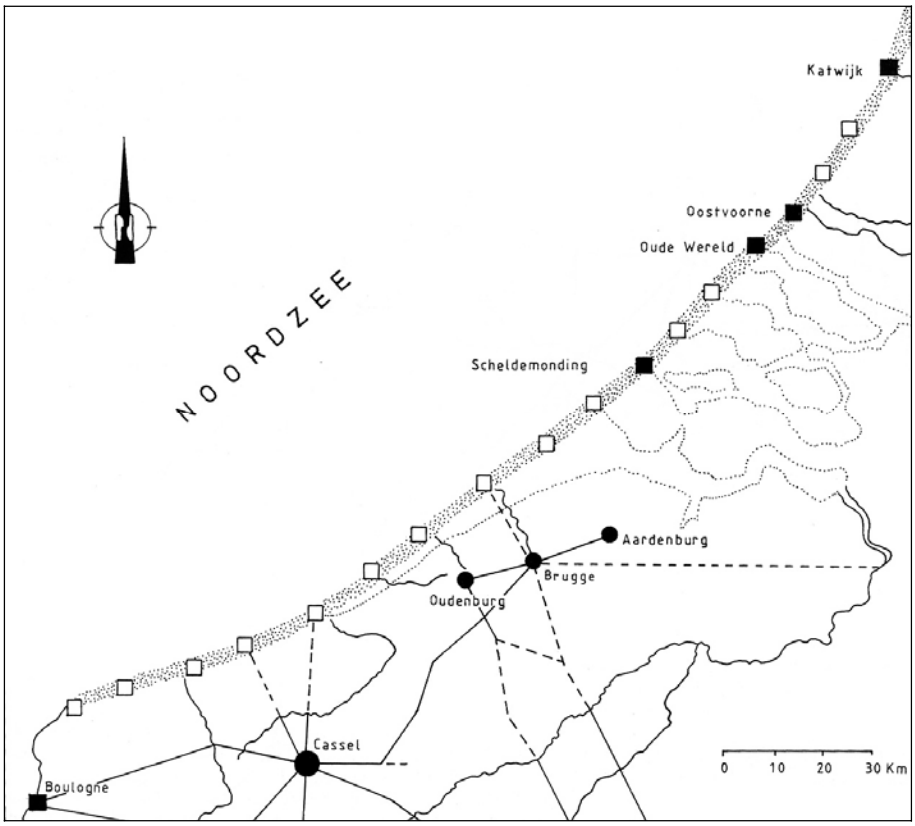

Figure 11: Discovered (black squares) and presumed bases (white squares) of the second century Roman coastal defence (after: Mertens 1987b).

[110] Konen 2000, 412-413.
[111] Trimpe Burger 1973a, 136. In the 19th century, it has been suggested that the designation 'Roompot' is a derivative of Romanorum Portus, the Roman name of the settlement, meaning 'Roman harbour'. This remains however a speculative hypothesis. A more commonly accepted origin of 'Roompot' is that it is a descriptive name of the outlet to the sea. See De Bruin 1982, 584.
[112] *ibidem*, 141.
[113] Hessing 1995, 98.

The main problem with these sites is that they are currently located several kilometres in the sea due to coastal erosion. All of the sites were located on the Older Dune formations, which have since then been swept away. The line of Roman fortifications seems not to continue in Belgium and northern France. From Nieuwpoort in Belgium to the south, the Older Dunes are preserved, but no traces or military presence have been found here or have been recovered from the sea. As a result of this, the southern-most fort of the coastal defence system was at Aardenburg, since Oudenburg is recently considered to be dating from a later period than was thought before. The resulting image of the coastal defence system of the late second and early third century appears odd and illogical. The southern part of the Flemish coastal plain seems to have been left unprotected, making economically important settlements vulnerable to invasions. The capitals of the civitas Menapiorum and of the civitas Morinorum, Cassel (Castellum Menapiorum) and Thérouanne (Teruanna), were easily accessible via the rivers Yser and Aa. Perhaps here a different strategy of defence was put in place, in which both estuaries were defended more inland. The coastal strip of Gallia Belgica may have been patrolled by the British Fleet, the Classis Britannica, which had its base at Boulogne. Such a nearby base may have been sufficient for patrols in the area, making secondary bases unnecessary.[114] From this, it can be concluded that the Classis Germanica had roughly the area from Katwijk to Aardenburg under its control. CGPF-stamps have however also been found at Rumst, located 14 km to the south of Antwerp at the confluence of the rivers Rupel, Dijle and Nete, and at Rijmenam, a further 14 km down the Dijle.[115]

The most evident archaeological traces of Roman troops in the region of western Flanders and Zeeland have been found at Aardenburg, Maldegem-Vake and Oudenburg, which are all located 10 to 20 km inland on the transitional zone of Pleistocene cover-sands and low-lying marshlands. These forts were connected to the sea by natural watercourses. It is presumed on the basis of topographical and historical data that a similar fort must have been located at Bruges. These larger fortifications had a different function than the smaller fortlets directly at the coast, which were situated at dune passes and constructed of earth walls and wooden palisades, as is concluded from archaeological finds at the British coast. The inland fortifications were intended to support the strongholds at the coast, supplying them with troops.[116]

The Flemish coastal region was already of military importance to the Romans in the first century AD. Julius Caesar, and Claudius a century later, had to use the North Sea here as a junction between the British Isles and the European mainland. To protect the routes, two fleets were established, namely the Classis Germanica and the Classis Britannica. Both were responsible for the protection of a part of the North Sea coast. As discussed above, the Classis Germanica controlled the mouth of the river Rhine and the northern coastal area as far as present Zeeland. The southern coast of the North Sea as far as France was controlled by the Classis Britannica, which had its main base at Boulogne. Secondary bases of this fleet are yet unknown, but it is probable that these were spread along the coast similar to those in the area of the fleet of Germania that were set up after the attacks by pirates at the end of the second century. These sites are likely have been affected by coastal erosion. The archaeological traces of the Roman road system may be useful in situating these strongholds. A prevailing theory for the Flemish coastal plain is that the roads, which were constructed under Emperor Augustus (27 BC to AD 14), were primarily intended as direct connections between military settlements. They connected the main occupation centres Cassel, Bavay and Tongeren with the stronghold at the coast. A linear road was running from Bavay to Torhout-Bredene after which it split up in a road in the direction of Ghent-Terneuzen and of Kluisberg-Tielt running until Wenduine at the coast.[117]

Until the era of Emperor Marcus Aurelius, the provinces of Gallia Belgica and Germania Inferior were relatively peaceful. The defence of the North Sea coast in the second century was set up by Didius Iulianus, governor of the province of Gallia Belgica. According to the Vita Didii Iuliani, the biography of Didius Iulianus in the Scriptores Historiae Augustae, this later Roman Emperor recruited auxiliary troops in his province and employed them against the invasions of the Chauci during the reign of Emperor Marcus Aurelius (AD 161 to 180). It concerns the following passage from the Vita Didii Iuliani: "Afterwards he administrated Belgica, flawless and for considerable time. There he resisted the Chaucic peoples or Germania that lived at the Elbe and were broken out, with hastily raised troops recruited from the inhabitants of the province. By this he was awarded the consulate on the Emperor's command."[118]

[114] Dhaeze in prep., 4.
[115] Rüger 1968.
[116] Cools 1987, 92-94.
[117] Mertens 1987b, 81-83.
[118] Historia Augusta, Vita Didii Iuliani I, 6-9.

To the Chauci, Gallia Belgica was an attractive target. It was poorly protected since the British Fleet was stationed only at Boulogne, and no other troop concentrations were present in the area. The rivers were easily accessible and a relatively dense road network enabled rapid advances.[119] Germania Inferior is not mentioned in the account, but it is assumed that the coast of this province was also attacked.[120] It is not evident from the historical account whether the Chauci invaded from the sea or by land. It is however generally assumed that they did not cross the Rhine and thus must have come by boat. This notion is supported by the fact that the Chauci were known for their seafaring skills and for their piracy activities (in AD 47), as is mentioned by Tacitus.[121] Also, the pattern of the destroyed sites shows that the invaders launched seaborne attacks.[122] The destruction layers found at the urban centres of Amiens (Samarobriva), Arras (Atrebatum), Bavay (Bagacum Nerviorum), Tongeren (Atuatuca Tungrorum) and Nijmegen (Ulpia Noviomagus Batavorum), which date from AD 160 to 180, are also considered to be the result Chauci invasions, according to Thoen.[123] It is however also possible that these destructions were caused by insurrections of the native population. According to Erdrich, the Chauci did not have the manpower and resources to attack and besiege these large urban centres. Instead they concentrated on the smaller, rural settlements and villae.[124]

In the cursus honorum, the career of honorary posts, of Didius Iulianus, his governorship of the province of Gallia Belgica is set in the years 172 to 174. In other works 170 to 174 are mentioned. It is however clear that in 175 his governorship ended, when he was awarded the consulate. This means that by that year the Chauci had been repelled and the defence of the coast was in place with the construction of permanent fortifications.

It is however probable that the coastal defence system dates from an earlier period. At Yorkshire in Britain, the find of a Roman watchtower has proven that the British east coast was already defended at the time of Emperor Hadrian (AD 122-137). The western coast was secured in coherence to the construction of Hadrian's Wall. It is thus illogical to leave the left flank of the Rhine *limes*, the North Sea coast, unprotected until the last decades of the second century. This theory is however not supported by the archaeological record up until now.

The Roman defence of the coasts of Germania Inferior and Gallia Belgica, set up in the last quarter of the second century, was primarily organised by the German Fleet, backed up by mixed units of cavalry and infantry, stationed at Aardenburg, and presumably at other forts such as the 'Brittenburg' at Katwijk. For an effective coastal defence, the combined use of land and sea forces was required. These forces provided deterrence and could be employed in repulsing landing attempts and invasions by the enemy. There were probably not enough forces and resources for a continuous defensive line. Therefore, the land units were stationed at the most vulnerable points and the fleet escorted convoys and patrolled the areas. The land units probably consisted of highly mobile troops that could rapidly react to threats, which were communicated to them by an effective signalling system of lighthouses along the whole coast.[125]

Around AD 180, Didius Iulianus had become governor of Germania Inferior. In this position, he ordered the restoration of several forts on the western part of the Rhine *limes*. Tile stamps bearing his name were found in almost every fort from Utrecht westwards to the coast. The restorations may have been needed after destructions caused by the invading Chauci some years earlier, but may also have been carried out as a preventive measure in preparation of future attacks.[126] At the same time, Forum Hadriani, the capital of the civitas Cananefatium, was fortified with a stone wall and a double ditch. This may have also been done as a reaction to the Chauci attacks.[127]

5.2 Support for the campaigns of Septimus Severus

As the fortifications were in place along the North Sea coast, they provided a useful infrastructure for military campaigns. Dhaeze suggests that the fortifications were used in the preparation and support of

[119] Cools 1985, 17.
[120] Erdrich 2001, 158.
[121] Tacitus, *Annales* XI, 18.
[122] Dhaeze in prep., 2.
[123] Thoen 1991, 194-195.
[124] Erdrich 2001, 159.
[125] Dhaeze in prep., 4-5.
[126] Erdrich suggests that the fortifications were repaired after destructions by the Chauci. Erdrich 2001, 30.
[127] Buitendorp 2006, 112.

Septimus Severus' campaign in Britain in AD 208.[128] In Britain itself, several sites can be linked to this campaign, namely the vexillation fortress at Carpow on the Tay and the fort at Cramond on the Forth, both in Scotland.[129] The fort of South Shields on the north-east coast of England served as a major supply base for the army of Septimus Severus.[130] Other forts at Brancaster, Caister-on-Sea and Reculver are of earlier date. These were at first dated in the first quarter of the third century, but have recently been reconsidered and dated before AD 200, as a result of new excavations at Reculver.[131] It appears that the forts were not built to support the Severian campaign in Scotland, but that they were rather part of a coastal defence system along the south-east coast of Britain. On the Continent, military bases were also involved in the preparation and support of Septimus Severus' campaign. Excavations at Boulogne have revealed reconstruction of barracks of the fort of the naval base occurred between AD 200 and 210. In the officer quarter of this structure, typical Severian style wall paintings were found. Tile stamps and pottery finds also point to a rebuilding date around AD 200. This makes it highly probable that the restorations took place in preparation of the Severian campaign in Britain. Both the Classis Britannica and the Classis Germanica must have been involved in this, namely with the transport of supplies and troops. A stone arch found in Boulogne in 1708 commemorated the passage of Severus and his wife Iulia. Unfortunately, the inscription was destroyed before it could be recorded.[132]

Reconstructions were also carried out at some forts along the western end of the Rhine, suggesting that these also played a role in the preparation and support for the campaign in Britain. Some of the building inscriptions mention the improvements of the forts after Severus defeated his rival Clodius Albinus in AD 197. At the *castellum* Albania in Alphen aan den Rijn, a building inscription was found that sets the reconstruction of the fort in the years AD 208-211. Parts of the road network in Gaul seem to have also been repaired during this time. A milestone found at Desvres, along the Roman road from Thérouanne to Boulogne, is dedicated to Septimus Severus and his two sons. The honorific titles used, suggest that the milestones date to AD 202-204. Milestones dating from the same years and with the same characteristics were found in the department of L'Aisne in northern France, at Bayeux (Normandy), and in the Alps.[133]

Besides Boulogne and the forts on the western end of the Rhine *limes*, other existing military bases on the coasts of Gallia Belgica and Germania Inferior may also have been involved in supporting the Severian campaign in Britain. Aardenburg could be one of these bases, as well as the presumed fort at Scheveningseweg (The Hague), of which only the *vicus* has been found. The fleet bases of the Classis Germanica, located somewhere in Zeeland and South Holland must also have been supportive, as can be said about the fort at Katwijk.[134]

The fourth phase that Dhaeze distinguishes in the history of the coastal defence of Gallia Belgica and Germania Inferior, is that of the Gallic Empire (Imperium Galliarum, AD 260-274). This Empire was the result of a rupture in the western part of the Roman Empire, put in motion by Postumus. The Gallic Empire was repeatedly invaded by the Franks and the Alemanni in the years AD 260, 262-264, at the end of 268 to the start of 269, and in 271 and 272. As a result, the naval fort at Boulogne was destroyed after 268/269 and the settlement at Aardenburg was deserted around 273, although this may have had environmental causes. The villae and rural settlements of north-west Gaul were largely abandoned. Somewhat later, in the last quarter of the third century, the forts along the Rhine in the Netherlands were destroyed or abandoned. Postumus and his successors had taken three measures to avoid invasions of German tribes into Gaul and Germania Inferior. They maintained the Rhine *limes*, set up a defence in depth in the areas, and maintained or rebuilt the coastal defences. The Gallic Emperors were possibly even the inventors of the strategy of defence in depth in northern Gaul, which became standard strategy of the Roman army in the late imperial period. Between AD 260 and 275, the road from Cologne to Bavay was provided with *stationes* and *burgi*, small fortlets and watchtowers defended by palisades and ditches. This functioned as a second line of defence, protecting the road that was vital in supplying the troops along the Rhine with goods from Boulogne. The road from Kortrijk to Velzeke, Asse, Elewijt, Tienen and Tongeren, from the west of Flanders to the east, was also fortified. It is not clear whether one of the

[128] Dhaeze in prep., 5-6.
[129] Pearson 2002, 53.
[130] Bidwell/Speak 1994.
[131] Philp 2005, 216.
[132] Dhaeze in prep., 6.
[133] *ibidem*, 6.
[134] *ibidem*. Is this why this fort was later called 'Brittenburg', referring to its connection with Britain?

Roman Emperors Gallienus, Probus or Aurelian, or the Gallic Emperors were responsible for the construction of these defences.[135]

The coastal defence of the North Sea and the Channel was most likely vitalised during the Gallic Empire. These areas were important for the communication with Britain, thus harbours must have been protected. The fleet played a vital role in this, but archaeological and numismatic evidence suggests that land units were also employed for the coastal defence. Military activity was at a peak at the fort of Oudenburg in the years 260 to 275, as well as in Aardenburg, as is concluded from the study of ceramics. Both sites appear to have been supplied with by the same source of pottery at the same time.[136] Coin finds also suggest increased military activity at both sites in the third quarter of the third century, while the numismatic data from Domburg and Schouwen shows the same characteristics.[137] The increased military activity was also present further north, in the south of South Holland, during this period.[138] All these indications lead to the conclusion that Postumus and his successors made serious efforts to protect the coast against invaders with the construction of defences.[139]

[135] Dhaeze in prep., 7-8.
[136] *ibidem*, 8. This ceramic study will be published by Dhaeze in his PhD-thesis in the near future.
[137] Van Heesch 1998, 165; Boersma 1967.
[138] De Bruin 2005, 32.
[139] Dhaeze in prep., 8

6 THE FORTIFICATION AT AARDENBURG

In the previous chapter it has become clear that Aardenburg was part of the coastal defence system put in place by the Romans in the last quarter of the second century, possibly by order of Didius Iulianus. This chapter deals with the Roman presence at Aardenburg itself, as well as the Roman military settlements in direct relation to it. The Roman military occupation at Aardenburg is dated archaeologically to the period of AD 170 to 275, on the basis of stratigraphical and find data.[140]

6.1 Roman occupation at Aardenburg

The partly excavated fortification at Aardenburg covers more than three hectares and is situated in the centre of the modern town. The occupation in Roman times was probably not confined to this terrain, but covered a much wider area. This notion is supported by the numerous stray finds that have been reported over the years in the area around Aardenburg. Recent archaeological research has also made evident that occupation or economic activity took place well outside the town centre, namely more than 3 km to the north, and excavations in 1991 showed that industrial activity was present more than 500 m to the east of the fortification walls.[141]

It is probable that in the second half of the second century, one square kilometre of the Pleistocene cover-sand ridge was occupied or used for other activities. The core of the occupation lies on the spot where the Roman road running from the direction of Bruges and a watercourse, presumably named 'Rudannâ' or 'Rodana', crossed each other. The denomination of this watercourse is reduced from the medieval name of Aardenburg: 'Rodanborch' or 'Rodanburg'. Due to permutation of consonants, or metathesis, Rodanburg later became Aardenburg. It has been suggested that the original Roman name of the town was 'Rodana' or 'Rodanum'. Of course, this hypothesis remains very speculative.

The location of the settlement core is also the highest point of the cover-sand ridge and at the same time the place where the Roman occupation layer has proven to be the thickest, namely almost 50 cm. In the north-west and south-east direction, the thickness of this layer is reduced to 10 to 20 cm. It seems that the occupation became concentrated on the highest part of the sand ridge in the third century. This can be explained by the increasing water table that was especially higher in the wet seasons. A clear argument for this is that the initially dry V-shaped ditch just outside of the fortification wall became filled with black, stratified mud rather quickly. In this mud layer, well-preserved remains of wood and leather were found, which points to the notion that the increase of the water table was not temporary. The black sediments in the ditch were afterwards covered by a 20 to 30 cm thick layer of heavy, greyish blue sea clay (Walcheren Layer Group, in Dutch: 'Laagpakket van Walcheren').[142]

During the excavations by the State Service of Archaeological Investigations in 1975 and 1976, the remains of the left main gate, the *porta principalis sinistra*, were uncovered, and at the same time a corner tower and an intermediate tower. Before, in 1961, remains of a central located building had been found. This construction was founded on wooden posts. In the middle of the backside was a projecting, semi-circular apse. The shape and size of the building – the width measured 45 m – suggest that this structure is a *principia*, the main building of a *castellum*. Directly against this building, several small rooms were built. These were not founded on wooden post and are presumably added at a later date. A well was found directly to the east of the main building. To the south-west of the *principia*, remains of several other buildings were uncovered that consisted of wood and loam. The ground plans of these structures could not be made clear. It is however possible that these were barracks that housed troops, since these buildings are a regular part of a Roman *castellum*. To the north of the *principia*, remains of dwellings were found. Outside of the fortification, about 260 m to the east of the *principia*, traces of another large structure were uncovered, which was also founded on wooden posts.[143]

[140] Trimpe Burger 1992a, 2.
[141] Diependaele 2005; Van Heeringen 1992, 119.
[142] Trimpe Burger 1992a, 7.
[143] Van Dierendonck/Swinkels 1983, 154.

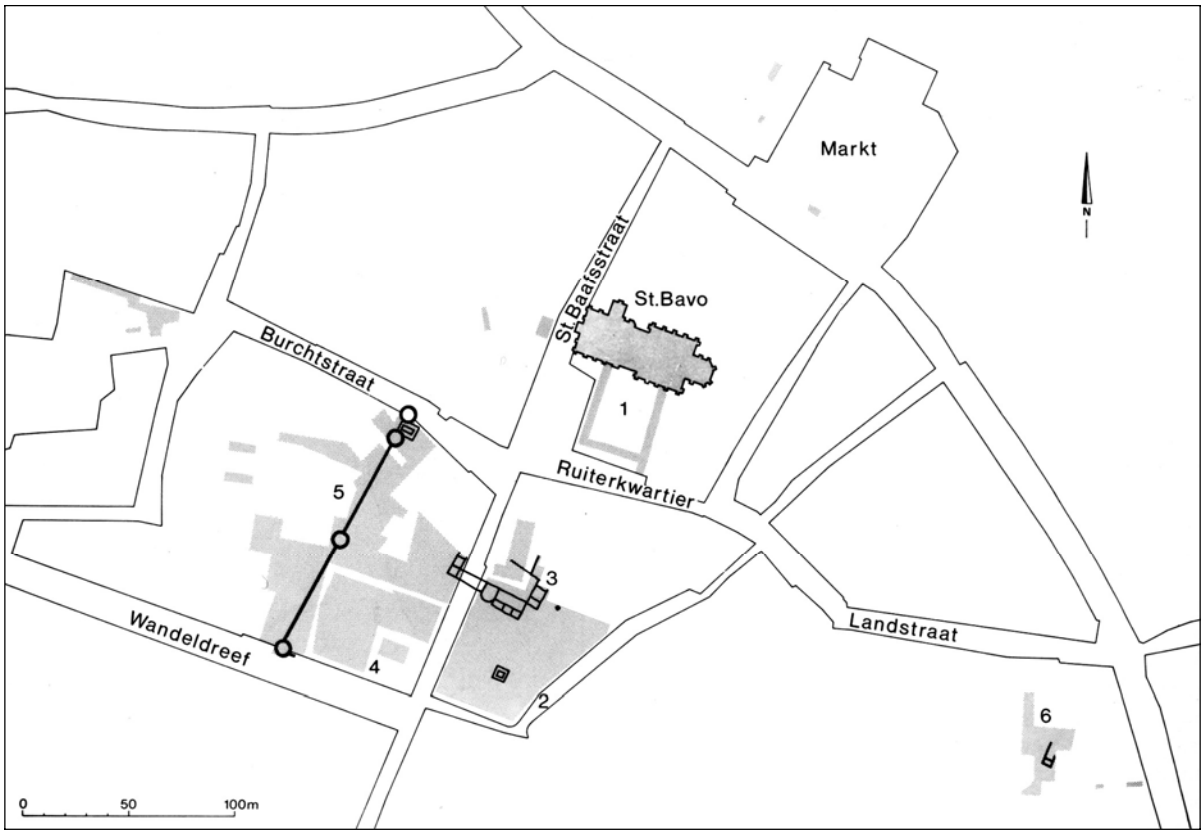

Figure 12: Excavated areas of the Roman fortification, with the excavation campaigns mentioned in the text:
1. St. Bavo (1956); 2. Site Quataert (1961-1962); 3. Garden of Overbeeke (1962); 4. Site Van der Hooft (1966); 5. Site De Smet (1974); 6. Site of the former gas-works (1965) (after: Van Dierendonck/Swinkels 1983).

In 1962 the foundation of a presumably Gallo-Roman temple was found just to the south of the *principia*. On the foundations of natural stone were charred wooden beams. The floor surface was covered with burned loam and scorched Roman roof tiles, of which nine had a stamp with the letters CIIA. This square building was 6 m long and wide, had a *cella* and a gallery. Within the gallery, the remains of a large *mortarium*, with a diameter of 70 cm were found. A small altar of sandstone with no inscriptions was also found near the temple.[144] From the finds, it can be concluded that the sanctuary dates from the beginning of the third century. The ground plan points to a Gallo-Roman type of temple. The presence of this within a *castellum* is however very unusual. A different kind of sanctuary is that was a regular part of a *castellum* is the *sacellum*, where the flags and the standards of an army unit were kept. These buildings do however have a different design. Trimpe Burger, the chief excavator of the site for many years, has suggested that the character of the Roman settlement changed in the third century from a military one to a town with a more civilian status. The Gallo-Roman temple would then have been added to the settlement in a later period. This hypothesis is supported by the material finds from a waste-pit found below the foundations of the temple. These finds date from the last quarter of the second century and involve painted ware and terra sigillata, including a bowl of the Dragendorff 37 type, produced by potter MAIIAAVS from Trier, who was active in this period.[145] Inside and outside the terrain of the fortification, several objects were found that point to the worship of Roman gods. Indigenous religious symbols are completely absent.

In 1988, the first major excavation outside of the central terrain of the fortification was undertaken (Hof Buize II). A strip of land of about 35 m in width and 300 m in length was excavated more than 400 m to the east of the eastern wall of the fortification. The material finds and traces in the soil were in correspondence with those found in the earlier excavations on the central terrain. The traces of occupation found here consisted of a well, three pits, and a large number of fireplaces, which were less well preserved. The fireplaces had a diameter of 1 to 1,5 m and were made up of a layer of ceramic sherds

144 Trimpe Burger 1992a, 9.
145 *idem* 1974, 85.

and roof tiles, and to a lesser extent of lumps of tuff and limestone. The whole was covered with red-burned loam. The actual building that must have stood on the spot was not traceable anymore. Traces of supply ducts, scattered coal material and harth waste in the refuse-layers around the structure show that kilns were in use here. For the construction of these kilns, ceramic material was reused, among which many terra sigillata sherds. This material provided a fairly narrow date for the complex of kilns, namely the second half of the second century AD to the first quarter of the third century. The well and the other pits were also roughly dated in this period. The function of the kilns remained unclear, but the absence of slag material excludes metallurgy, and the size of the structures seems too small for the production of ceramics. The lack of waste material makes production of salt or lime unlikely as well. The only remaining option seems to be fish sauce, since the production of this food does not leave much refuse material to be recovered.[146]

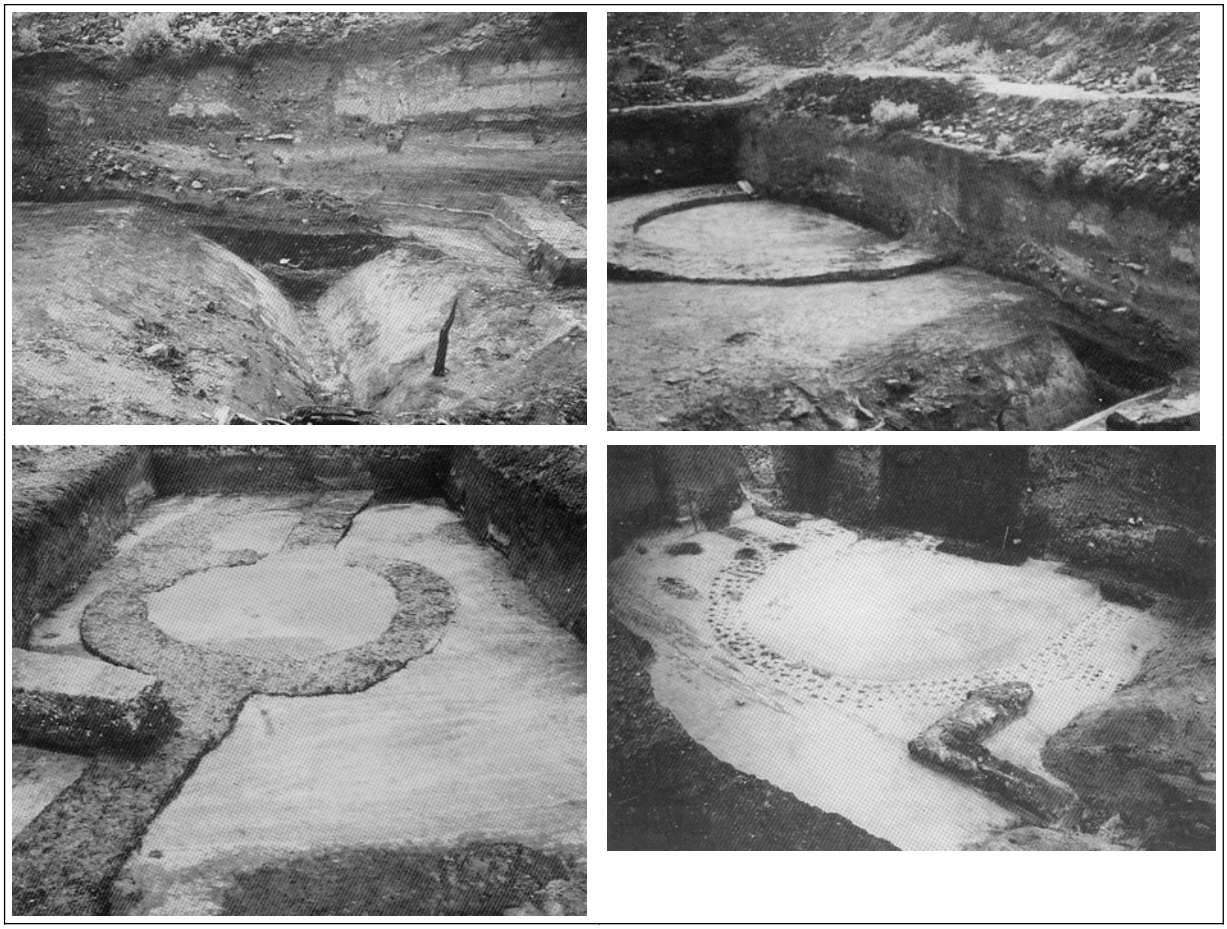

Figure 13: Excavated parts of the Roman fort. From left to right, starting above: the V-shaped defensive ditch; one of the towers of the western gate (*porta principalis sinistra*) with the same ditch in front; the corner tower in the western wall; the foundation with wooden pickets of the semicircular apsis on the southern side of the *principia* (after: Trimpe Burger 1992a).

The lower walls of the *porta principalis sinistra* was reconstructed in 1992, with which as much as available the original building material was used, coming from the excavated parts of the inner terrain. This material concerns mainly dark grey blocks of limestone from Doornik in Belgium. In the Middle Ages, the remnants of the Roman gateway were demolished as low as the foundation ditches to reuse the costly natural stone. From the remaining stone rubble and mortar, the excavators concluded that the two towers of the gateway were built of Doornik limestone and that the rectangular middle part, with below it the passage to the inner terrain, most likely was made out of volcanic tuff from the German Rhineland. Both types of natural stone was also found on the location were the main building must have stood. The gateway was founded on small wooden posts and had two round towers with a vaulted square passage or closing in between of about 2.5 m in width. Through the gate was a road that ran via a bridge over the

[146] Van Heeringen 1989, 131-134.

defensive ditch to the inside of the fort. This was possibly the main road of the fortification, the *via principalis*, that connected to the front side of the *principia*, a part that has not been excavated yet. The bridge rested on heavy oak beams, which were recovered during the excavation. The towers and the connecting walls were also built of tightly laid Doornik limestone, as far as could be concluded from the excavations. The first tower found during the excavations was the intermediate tower on the south side of the western wall, which had a diameter of 8 m. Further to the south, about 57 m, a corner tower was found that made a reconstruction of the whole fortification possible. The walls had a thickness of 1.2 m. Parallel to the walls, about 7 m outside, was a V-shaped ditch enclosing the whole fortification. On the western side, parallel to the ditch, was a 30 m wide creek or channelled watercourse. This may have been the Rudânna, the watercourse that connected Aardenburg to the sea in the Roman period.[147]

The measurements of the fortification of Aardenburg would have been ca. 240 m long and 150 m wide, as is calculated from the excavated parts of the fort. These dimensions remain theoretical until further research is carried out. Starting from this assumption, the distance from the *principia* in the centre, to the enclosing wall measured 75 m. If the distance from the excavated corner tower and the gatehouse in the western wall is doubled, this wall would have had a total length of 240 m. A small explorative excavation in 1979 confirmed the theoretical position of the northern part of the western wall. The city canal, dating from the 11th or 12th or earlier, is bended at the spot where the hypothetical north-west corner tower would have stood. From this it can be assumed that the medieval canal more or less coincided with the earlier defensive ditch of the Roman fort, as the canal bends at the corner of the earlier ditch. The medieval canal thus seems to have been placed alongside the northern wall of the fortification. This leads to the possibility of the wall, or a remnant of it, still being present in the Middle Ages. The churchyard of the St. Bavo Church has premises that run exactly along the presumed northern wall of the fortification. This further strengthens the theory of the ground plan as was put forward by Trimpe Burger (see figure 14). Similarly to the northern wall, the eastern wall is also recognizable in the modern street plan. Presuming that the total width of the fort was 150 m, it becomes clear that northern part of the eastern wall ran along the current Tuimelsteenstraat. This particular street is mentioned in 1459 as 'Tuimelaarsteen', meaning 'tumbler stone', which is again a useful indication of the hypothesis that old Roman constructions influenced the later layout of the street plan. The contours of the whole fortification must have amounted ca. 780 m. Presuming an average height of the walls of 4 to 5 m, around 40,000 cubic meters of rock was transported from the quarries of Doornik and the Eifel-region to Aardenburg.[148] Shells were used as a raw material for the mortar, since these were abundant in the coastal region.[149] The shells were burned in special kilns producing lime, but they were also mixed through the mortar unprocessed.[150]

One would expect that a Roman settlement such as Aardenburg must have had a gravefield somewhat outside of the centre of occupation. Unfortunately, up until now only scanty traces of this have been found. About 700 m to the west of where the north-western gate of the fort was located, a layer of ash was found by a private individual in his garden in 1988, containing an urn. The urn was of a regionally produced ceramic and contained ash and cremation remains. Based on the type of urn, the cremation was dated to the last quarter of the second century to the first half of the third century AD. Several other remains of human cremation were found some years later only a few meters from the earlier find spot, together with some fragments of terra sigillata and terra nigra ceramics. The location of these finds may be related to the presumed road that ran from Aardenburg to Bruges and Oudenburg, since gravefields were often located along the roads at the edge of settlements in the Roman period. This particular find spot showed that at this location the Roman layer was completely inhibited in the current top layer of the soil.[151]

Next to the road that ran south-west, another Roman road has been noticed, which is running in the south-east direction, roughly towards the modern village of Eede. This road has a width of about 3 m and is situated about 2 m below the surface. Apart from its discovery in 1976 on the eastern edge of modern Aardenburg, it has not yet been picked up anywhere further to the south.[152]

147 Trimpe Burger 1985, 339; Trimpe Burger/Van Duin 1977.
148 *idem* 1985, 342-343.
149 Van den Berg/Hendrikse 1980, 229.
150 Lime was produced in this manner in the region, as can be concluded from the kilns excavated in Koudekerke (Walcheren, province of Zeeland). See Van den Berg/Hendrikse 1980.
151 Van Heeringen 1989, 137; Van Heeringen 1991, 126.
152 Trimpe Burger 1978,123.

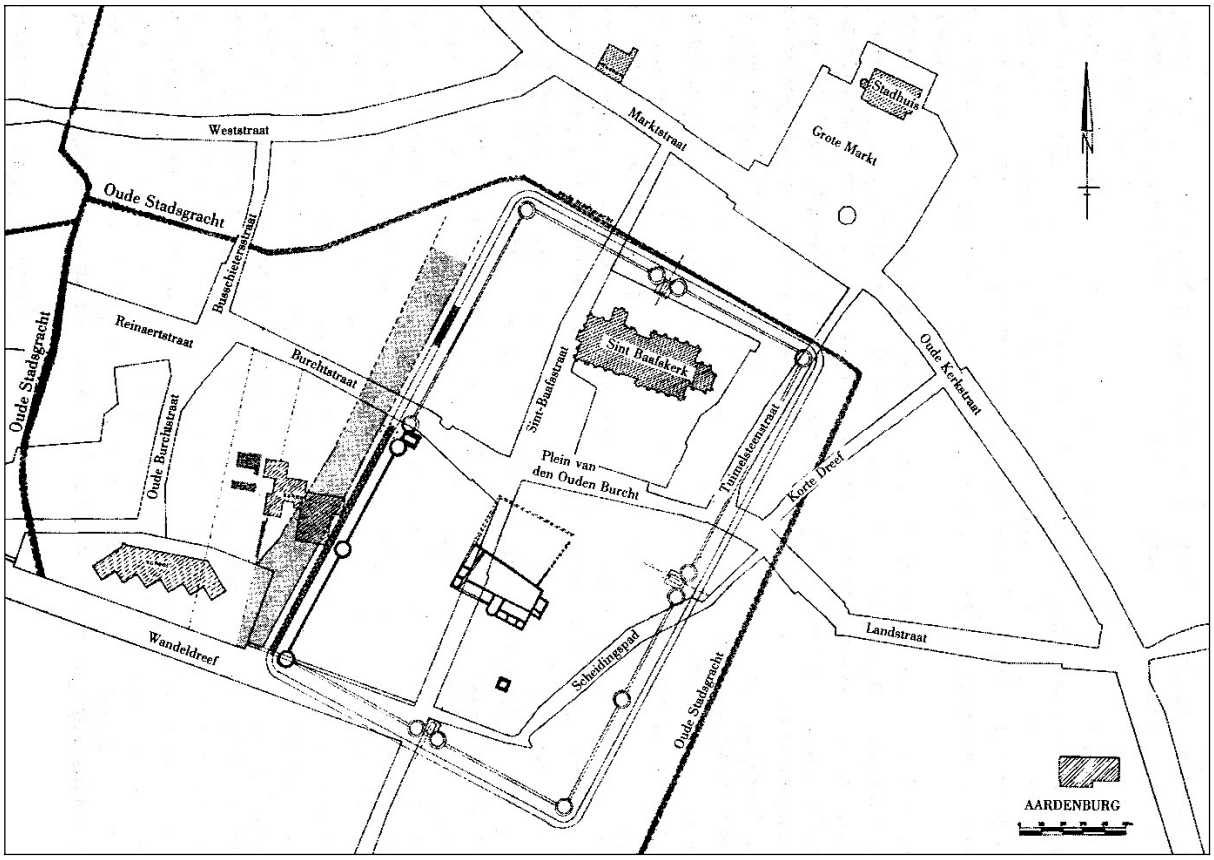

Figure 14: Reconstruction of the ground plan of the presumed *castellum* (after: Trimpe Burger 1985).

Many archaeological traces from the Roman period were disturbed in the late medieval period. At the site of Hof Buize II, the kiln complex was disturbed by a town's canal dug in 1299. For this reason, the top layer of soil in the town's centre nowadays contains many finds from the Roman period.[153] These disturbances have thus destroyed much of the archaeological record of the later Roman period of Aardenburg, especially the upper part of the Roman layer.[154]

6.2 Material finds

This paragraph discusses the material finds from the Roman period of Aardenburg, which have been published in several articles up until now. Since this concerns only small a selection of the total amount of finds, it is obvious that the image of the Roman occupation that is derived from this selection may be simplified.

6.2.1 Wall-painting fragments

A small number of fragments of wall-paintings were found during the excavations on the *castellum* terrain in 1955. The following excavations in the 1960's and 1970's resulted in larger amount of these finds. In total almost 2,300 fragments were found on 32 different spots inside and outside of the walls of the Roman settlement. Unfortunately, no fragment was found in situ. Three concentrations of fragments were however recorded within the close vicinity of the *principia*, one of which at a Roman well. Pieces of plaster were reused here as ironing of the walks. Next to the eastern wall of the *principia*, a large amount of white limestone was found on a floor of Roman tiles. These remnants were most likely part of stucco of the walls that could have been used for wall-paintings. Also at the small temple that has already been mentioned above, fragments of wall-paintings have been found, which however probably originate from

[153] Van Heeringen 1989, 134-137.
[154] Trimpe Burger has stated that two sherds of terra sigillata that fitted together were found some 20 m apart from each other at one time during the excavations, emphasizing the considerable disturbances of the Roman layer. Personal communication with Trimpe Burger (2007), also mentioned in Trimpe Burger 1995b, 193.

structures to the east of this building. Fragments of stucco that can be related to wall-paintings have also been found inside and outside the fortification walls.[155]

Examination of the recovered wall-painting fragments was carried out by Van Dierendonck/Swinkels, focussing on the designs and the techniques used.[156] The paintings have plain designs and are variants of the so-called panel decoration system, in which motifs in black, red, yellow and green were put up on a white stucco background. The panels were painted with straight lines on the background to which sometimes simple ornaments are added. Some paintings had yellow or red panels. Only seven instances show green garland as motifs. Other types of ornaments were also applied, but only in a few instances. In general, the paintings would have been undecorated. Only a small amount of fragments shows purple, beige, blue, brown or grey colours, whereby imitation of marble is pursued. Two categories of painting fragments have been recognized based on the surface treatment. Hereby, a clear relation between the technique of surface treatment and the quality of the decorations has been observed. Paintings of the first category (I), of which about 600 fragments were recovered, have smooth surfaces, are more richly decorated, and altogether more carefully treated than those of the second category (II) of which almost 1700 fragments were found. The latter have much coarser surfaces. The fragments with marble imitating motifs are, not surprisingly, of category I. These incorporate also much more frequently other types of decorative motifs, such as garlands, than those of category II. The difference in surface treatment and the quality of decoration leads to the question of which craftsmen were responsible for the application of wall-paintings at Aardenburg. While there seems to be little distinction in the applied images and designs, the differences between both categories are to such an extent that the notion has been put forward by the researchers involved suggesting that different workshops have been at work here. The moderate quality of the fragments of the second category has led to the conclusion that these wall-paintings must have been applied by unskilled craftsmen. The wall-paintings of category I were however probably drafted by professionals. Van Dierendonck/Swinkels have subsequently suggested that both categories of wall-paintings date from different periods in the Roman history of Aardenburg. A large number of fragments was found in the lower layers of the excavated area and are thus allocated to the earlier periods of occupation in Roman times, namely from ca. AD 170 to 225. It is not clear from the excavation data to what category these fragments belonged, but it is assumed that these were mainly from the second category. This leads to the conclusion that the wall-paintings of the poorer quality could have been replaced by those of better quality and richer decoration around AD 225. This would also explain why fragments of category II have been found in larger numbers but are at the same time mostly smaller in size. After the replacement of the poorer paintings, the materials of these were reused as road-metal, for instance at the well, through which they crumbled considerably. The wall-paintings from the second period (category I) were lost when the Roman buildings of the *castellum* were torn down. This is why only a small amount of the fragments have been preserved in the refuse layers of the site.

From most of the fragments of wall-paintings found, no information is available of their exact find spot. It is however clear that the main building of the *castellum*, the *principia*, and the large building located some 300 m to the east outside of the fortification walls (fig. 12, no. 6), had decorated (parts of) the inner walls with paintings. It is also possible that other buildings, of which only vague traces were observed, also contained wall-paintings. The central hall and the apse of the *principia* were most probably decorated with paintings of the highest quality of the whole site, namely panel decorations with garlands and circular motifs, of which a few fragments have been found.

Figure 15: Fragment of a wallpainting of category I (scale 1:2) (after: Van Dierendonck/Swinckels 1983).

[155] Van Dierendonck/Swinkels 1983, 154-156.
[156] See Van Dierendonck/Swinkels 1983 for a complete overview of the fragments discussed here.

The other parts of the wall-paintings that have been extrapolated from the fragments cannot be assigned to individual buildings.

The wall-paintings do not provide complementary information on the nature of the Roman settlement at Aardenburg. The decorations by which simple panels on a white background were applied have been found in large amounts in the Roman provinces. This in contrast to the multicoloured decorations, which are only applied in the most important rooms of governmental buildings and wealthy private houses. The richer wall-paintings seem to have been applied mainly in *principia*, baths and quarters of army officers, while barracks of ordinary soldiers were decorated with simple paintings, if present at all. Van Dierendonck/Swinkels have suggested that the simpler decorations in the building have been applied by soldiers of the Roman army themselves. It has also been suggested that the paintings in *castella* and other military sites were executed by craftsmen that were working locally and that therefore a clear distinction exists with decorations in civilian contexts such as in villae and towns. As said above, the paintings of category II, which are of lesser quality, can be dated in the period in which the fortification was constructed. Professional and specialised craftsmen would not have been present at the time, and therefore soldiers that were involved in the construction of the fort had to apply the paintings. Other find spots of fragments of wall-paintings have barely been found in the region. In the areas west of the rivers Lys (Leie) and Scheldt small numbers of fragments are from Oudenburg and Belsele (Belgium). While in the period in which the *castellum* of Aardenburg was in use (ca. AD 170 to 275) the Roman influence in the region was at its peak, the region remained relatively isolated from the areas in the hinterland. This is because of the absence of villae, as were present in the east of Gallia Belgica and Germania Inferior. From this it can be concluded that there were most likely no specialised workshops for wall-painting present in the region of Aardenburg. The richer decorations found, which were probably applied from around AD 225 onwards, must have been applied by specialised and skilled craftsmen who originated from an urban area. The particular workshop of the Aardenburg wall-paintings has not yet been traced. It is not even evident where such a workshop might have originated. Large settlements such as those at Nijmegen (Ulpia Noviomagus), Heerlen (Coriovallum) and Voorburg (Forum Hadriani), probably all had their own workshops for wall-paintings that worked by order of villa owners and military administrators. The workshop that carried out the paintings in Aardenburg was probably located in one of the larger settlement to the south, like Cassel (Castellum Menapiorum), Wervik (Viroviacum/Virovinum), Kortrijk (Cortoriacum) and Doornik (Turnacum).[157]

Little is known about painter's workshops in the Roman world. This is why no undisputed conclusions can be drawn on the issue of the wall-paintings from Aardenburg. The reasoning by Van Dierendonck/Swinkels, stating that certain wall-paintings were not executed by skilled craftsmen, is therefore difficult to substantiate, because it is not even clear how the workshops were organised and whether or not these existed in the assumed form. The difference in quality and complexity of the paintings could for instance also be explained by execution by a master painter or by an apprentice. Allison suggests not to use the term "workshops" but to talk of "decorators' teams", since there is no concept of geographically localisable businesses that decorated rooms by order. These teams consisted of painters and plasterers who joined in to decorate the walls and possibly also floors of houses, tombs and other buildings. For complex paintings, a supervisor or designer must have had the final responsibility of the project at hand.[158]

6.2.2 Inscriptions

Roof tiles were in the Roman period often labelled with a stamp, as was done with bricks and tiles. As mentioned above, several roof tiles were found at Aardenburg bearing the CIIA stamp. The stamp CIIS was also found. Although the stamps have a civilian appearance, the meaning of CII may be Cohors Secunda or 'second cohort', followed by the name of for instance an Emperor, in this case Antoninus, popularly known as Caracalla (198-217), and Severus (193-211). Both stamps have no parallels at other sites.

The Cohors II Antoniniana Treverorum was stationed at the *castellum* of Holzhausen an der Haide after AD 190.[159] This was a *cohors quingenaria peditata*, normally consisting of 480 foot soldiers. It was later

[157] Van Dierendonck/Swinkels 1983, 189-191; Van Dierendonck 1987.
[158] Allison 1995.
[159] Thoen 1993. According to Franzen/Haalebos, the unit received the honorary title Antoniniana in ca. AD 196. Haalebos *et al.* 2000.

named Cohors II Severiana Treverorum, as its honorary title was changed with the coming of a new Emperor, Severus Alexander. Remarkably, both the CIIA and CIIS stamps match the name of this particular unit, and also the ground plan of the *principia* resembles that of Aardenburg.

New possibilities for the interpretation of these stamps do emerge when the two characters 'II' are brought together to form the letter 'E'. This was not uncommon in Roman handwriting, but it was not used in formal inscriptions where the letter E was one of the 21 character used.[160] The kinds of types used to form the stamps differ clearly from the well-known Roman military stamps. It can even be stated that the CIIA and CIIS stamps are in fact not stamps at all, but do resemble some form of graffito type of script, also referred to as 'cursive'.[161] Consequently, the 'stamps' must be handwriting by which it was not unusual to use 'II' for an E. Hence, CIIA should be read as CEA, and CIIS as CES, and may be abbreviations of Cohors Equitata Antoniniana and Cohors Equitata Severiana. While this sounds quite tempting to embrace, *cohors equitata* were normally not designated in this particular way. Instead, the number of the cohort was mentioned and *equitata* was added after the term that indicated the origin of the unit. If in this case the unit was a *cohors equitata*, it would have been designated as something similar to Cohors II Antoniniana Equitata. Therefore, CIIA and CIIS may still be designations of cavalry units.

Two tiles from a *hypocaustum* bring in the same problem. These bear the stamp PRIMACORT, which can be read as PRIMA COHORS T. The T can be the first letter of a designation of the cohort involved, in this case possibly Tungrorum (Tongeren in Belgium) or Thracorum (Thrace). This latter suggestion was given by Bogaers for a similar inscription found at an archaeological investigation in Rijswijk (Gelderland, the Netherlands) at the *castellum* Levefanum.[162] This cohort would have been stationed there between AD 70 and 83. This early date renders a supposed relation of this particular cohort with Aardenburg very speculative.[163] At Naaldwijk (South Holland), a tile was found with the stamp PRIMCORS dating from the second or third century, as was a roof tile stamp with the same inscription from Arentsburg, near Voorburg in South Holland, which can both perhaps be seen in relation to those of Aardenburg.[164] Two unpublished roof tiles bearing the same stamp (PRIMCORS) have been found in a Roman well in Antwerp (Belgium). Unfortunately, no more information on these finds is available at this time.

Since Didius Iulianus recruited troops from the province he governed, Gallia Belgica, for the defence of this area in the late second century, the hypothesis can be put forward that the PRIMACORT stamps from Aardenburg refer to a unit named Prima Cohors Tungrorum or Cohors I Tungrorum. The *hypocaustum* to which the stamps belonged would have been build at the time of the establishment of the fort itself, since these facilities were only incorporated in the main buildings. This notion does not sound too illogical, especially if the size of a *prima cohors*, the first cohort of a legion, is taken into account. A first cohort normally consisted of 800 soldiers divided in 10 centuries, instead of the 480 soldiers in 6 centuries for a regular cohort. This large unit would require a fort of larger size than a typical *castellum*, as is found along the *limes*. Aardenburg provides the extra space with its dimensions of 240 by 150 m. It must however be noted that in general a fort was never fully manned, since parts of the unit were stationed elsewhere in neighbouring settlements, fortifications and watchtowers.

Figure 16: Monumental inscription fragment from Aardenburg, ca. 25 cm in length and height, 10 cm in depth (photograph by the author).

[160] Keppie 1991, 17-18
[161] *ibidem*, 18.
[162] Bogaers 1974b, 67.
[163] Personal correspondence with W. Dhaeze (Department of Archaeology and Ancient History of Europe, Ghent University).
[164] Bogaers 1974a, 77.

Only one fragment of a monumental inscription was found at Aardenburg (see fig. 16). This limestone slab contains the following characters:

] M O [
] R M A [

These are followed below by the upper parts of a few other characters, perhaps parts of numerals such as V or X and a C or O. Bogaers interpreted the characters as being part of a building inscription in which RMA is part of ARMAMENTARIVM, referring to the storehouse of arms and armour of the fort.[165] An inscription mentioning the reconstruction of an *armamentarium* was found at the *castellum* Matilo at Leiden-Roomburg. It could however also be possible that the characters on the slab are part of the honorific titles of a Roman Emperor, in which case the characters MO could have been part of MAXIMO and RMA could have been part of GERMANICO.[166] Additionally, the faint traces of the lower characters might have been numerals followed by COS, by which it would have been the desination of the consulate of an Emperor. Thus part of the original inscription would have been as follows:

M A X I] M O [
G E] R M A [N I C O
] XX C [

These particular parts of Imperial honorific titles are found only on the dedicatory inscriptions of certain Emperors, since not all were rewarded with these. A quick look into the occurance of these titles reveals that they appear in the titles of Hadrian as well as those of Marcus Aurelius and Commodus. Inscriptions with these parts of titles do however occur the most frequent with the two latter Emperors; at Holzhausen, a specimen of such an inscription was found.[167] The reign of Marcus Aurelius and Commodus corresponds with the construction of the fortification at Aardenburg. It is therefore appealing to presume a connection with this particular inscription and the establishment of the fort. All of this remains however very speculative, since only very few characters are present on the slab.

6.2.3 Building material

From the finds described above it can be concluded that a *hypocaustum*, a system of floor heating, was present inside the fortification walls. This was presumably located in the *praetorium*, the house of the camp commander. There is however no hard evidence for this notion. Since this category of finds has not been published, it will not be discussed here any further.

6.2.4 Military objects

Specific finds from Aardenburg that can be related to military activity, concern some of the metal and bone objects. These pieces of equipment include bone frames of sword scabbards, so-called sword-tip covers, of which seven different pieces have been found. One specimen is of a type common in Roman military sites in the Netherlands and Britain and was produced in great numbers. Only the upper part is preserved, of which the front side is decorated with an elliptic shield that is divided in two lengthwise by a rib. On both sides of the rib, two singular spirals are carved out that appear as reflections of each other. Another bone frame found was part of a round sword tip protector.[168]

The finds of leather fittings and bridle rings do point to the presence of cavalry in the Roman fort. This seems a logical notion since horsemen could reach different spots in the coastal region relatively quickly. Interestingly in this matter, the fort at Maldegem-Vake was occupied by horsemen as well.

[165] Personal correspondence between Bogaers and Trimpe Burger.
[166] I wish to thank Ton Derks (Free University, Amsterdam) for suggesting this new approach.
[167] Pallat 1904, 35.
[168] Trimpe Burger 1992c.

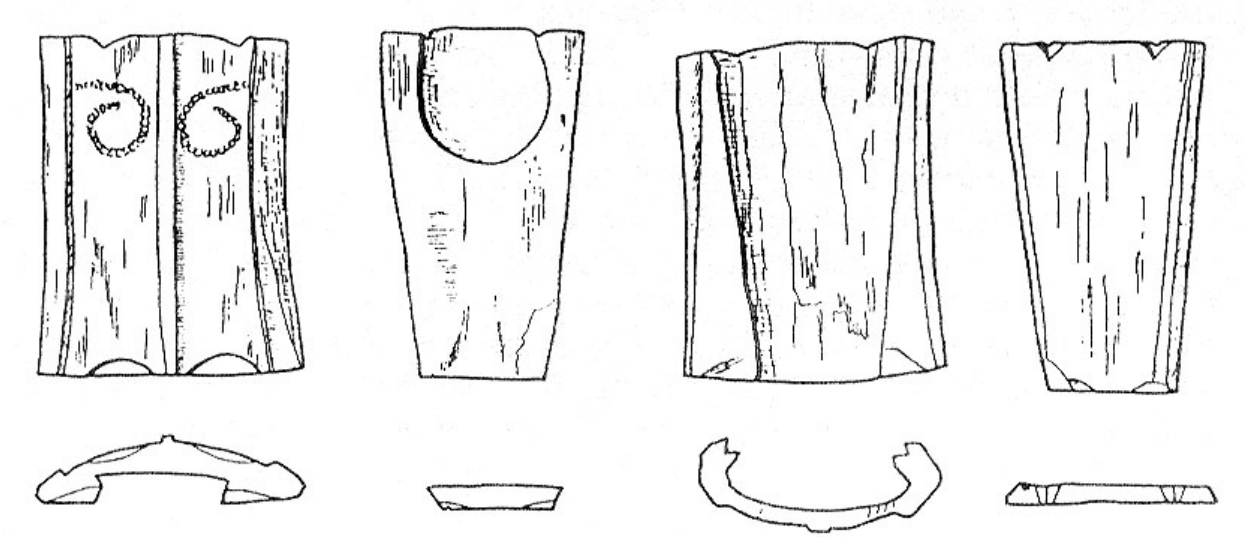

Figure 17: Front and backside of two sword-tip covers (after: Trimpe Burger 1992c).

6.2.5 Weighing instruments

Complete weighing instruments have not been recovered at Aardenburg. However, parts of scales and weigh-beams have been found, such as a poorly preserved pan with a diameter of 16 cm and four ring-shaped suspensions that was part of a balance. Next to two parts of weigh-beams, several hook-shaped objects were found that were presumably also parts of weighing instruments. The used weights were generally made of natural stone. A specimen of this from Aardenburg is of dark-grey limestone, has a width of 4.2 cm, and a diameter of 10,5 cm, weighing 924 gr. This object bears an inscription that represents the numeral III, probably indicating its weight.[169]

6.2.6 Ceramics

The ceramics from the Roman period found at Aardenburg give good indications on the dating of the settlement. It must be emphasized that several of these type of finds date from before the establishment of the *castellum*. This concerns the terra sigillata from southern Gaul (Banassac) that was produced in the early second century. Several terra sigillata sherds dating from the middle of the second century have been retrieved, originating from central Gaul (Lezoux) and eastern Gaul (north-eastern France and mid- and south-western Germany), namely from La Madeleine, Mittelbronn, Sinzig, Blickweiler, Heiligenberg, the Argonnes, Haute-Yutz and Trier. The Majority of the younger terra sigillata, dating from the third century, was produced in Rheinzabern, but the production centres at Trier and the Argonnes are also well represented in the archaeological record. Specimen from southern Gaul are not present in this period anymore. Some of the terra sigillata bowls originating from Trier have been produced in a workshop that was active from about AD 145 to 165 (Werkstatt II), while other sherds from Dragendorff 37 bowls, made by the potters COMITIALIS and MAIIAAVS, date from last quarter of the second century to the beginning of the third century.[170] Several sherds of terra sigillata bear Latin graffito inscriptions, such as one base ring with a graffito inscription that reads POLIONIBVS, meaning "to those called Polio". This was a typical custom of Roman soldiers to mark their personal crockery. Four sherds come from the same manufacturer from Haute-Yutz, namely ALPINVS, and originate from Dragendorff 37 type bowls. These specimen have been dated to the second quarter of the third century AD. Remarkable, Aardenburg is by far the most remote site where the ceramics of ALPINVS have been found, as the area of distribution of this relatively unknown fabric is generally restricted.[171]

Another luxury ceramic is the painted ware. One remarkable specimen from Aardenburg of this type is so-called quality-ware (*Qualitätswaren*, Brunsting technique D). This concerns a double-conical cup with a red, hard fabric, decorated with barbotine in the shape of leaf tendrils. This ceramic dates from AD

[169] Trimpe Burger 1994.
[170] *idem* 1995a; *idem* 1995b, 193.
[171] *idem* 1995b.

180/190 to the middle of the third century, but the barbotine decoration points to a date of before AD 200. The production centre must have been somewhere in central Gaul. Another specimen of the painted-ware dating from the last quarter of the second century, concerns a plate with a white fabric and a dark-brown surface layer (Brunsting technique B). This plate has a diameter of 18.7 cm and a height of 3.4 cm, and was found in a refuse dump below the foundations of the small Gallo-Roman temple. It dates from around the last quarter of the second century.[172]

The common utility ceramics originate from regional production centres in the coastal area and in the neighbouring hinterland within the *civitas* of the Menapii. This so-called Flemish-Roman ware is finely decorated with smooth lines and polishing. The good quality of the fabric made import of other utility wares unnecessary. Jars and amphorae were nevertheless imported, but uncertainties remain on the origin of the so-called Scheldt-valley amphorae.[173]

Other remarkable ceramic finds concern the fragments of cultus-ware. These are sherds of so-called 'planet vessels' originating from northern France. The walls of these vessels are decorated with busts of the seven week gods, namely Saturn, Sol Invictus, Luna, Mars, Mercury, Jupiter and Venus. Also, several sherds of the so-called *Schlangengefässe* ('snake-ware') have been found. This ceramic is characterized by a snake that is twisted in the spout, and is related to the Mithrascultus. The cultus-ware was originally often furnished with a layer of gold-mica, providing it with a bronze-coloured appearance. The sherds from Aardenburg date from the last quarter of the second century to the beginning of the third century.[174]

6.2.7 Numismatic data

Since the coin finds of Aardenburg have not been described and published in its archaeological context, it is only possible to give a more general notion of the information provided by this find-category.[175] Almost all of the coins found are of copper-alloy; a small number is made of silver, namely a *denarius* from AD 100, four *denarii* from the end of the second century to the beginning of the third century, and thirteen *antoniniani*, dating from AD 235 to 260 with a high silver content. Most of the coins must have been deposited due to loss from regular transactional use, besides the two hoards that have been found. Some of the single coin finds may however also have been part of scattered hoards.[176]

From the relation of find complexes and coins, it has been concluded that the establishment of a settlement generally coincides with a peak in the diagram representing the number of coins found there and the accessory dates (see appendix I). This is due to the slow process of distribution of coins in the Roman period in which newly struck coins reached the outskirts of the empire at a very slow pace. The Roman coins of Aardenburg and their datings are within the general picture for the Netherlands, including the northern areas that were not under Roman rule. The diagram of Aardenburg shows a sharp decrease in the number of coins after AD 180, which can possibly be explained by a decrease in military presence, since Roman soldiers were paid out with coins.[177] These low figures continue until 235, followed by an erratic course until 253. Coins from the period of 211 to 218 are completely absent. There is thus no local origin to the relatively low number of coins from the years 180 to 235. The low figure for the period of 235 to 253 is however in contrast to the picture elsewhere, for example that of the Dutch province of Noord-Brabant, which shows an increase of coins between 235 and 249. From this, it can be concluded that at Aardenburg a decreased period of activity occurred from AD 235 to 253. From 253 to 273, a second peak is shown in the diagram, something that is also observed in the diagrams of coin finds from Noord-Brabant, Westenschouwen and Domburg (see appendix I). The relatively increase of coins in this period in Zeeland is stronger than that in Noord-Brabant, by which it can be concluded that monetary circulation in the coastal areas was different from that in the hinterland. After 260, the economic activity seems to have increased. This development can perhaps be explained by appointment of Postumus as the Emperor for the newly formed Gallo-Roman Empire (AD 260-269). Postumus reinforced the coastal defence system, using the fleet to repel the enemies who had invaded the Low Countries from the sea. The increase of coins in this period supports the hypothesis of Aardenburg being part of Postumus' defences. The similar figures from Westenschouwen and Domburg can be explained by this very course

[172] Trimpe Burger 1974.
[173] See Van der Werff *et al.* 1997.
[174] Trimpe Burger 2002, 30-36.
[175] The publication of Boersma provides this information, as does that of Van Eert. See Boersma 1967 and Van Eert 2003.
[176] Van Eert 2003, 76.
[177] *ibidem*, 76.

of events, as can be said from Oudenburg. The coins of Postumus show the image of a ship on the backside, further strengthening the notion of him being involved in defence of the coast. After the death of Postumus in 269, the increased activity continues until the year 273, after which the intensive Roman presence in Zeeland seems to end abruptly. From the following decades, no coins have been found at Aardenburg. Small numbers dating from the fourth century are nevertheless present, as is also the case in Domburg and Westenschouwen, although to a much lesser extent than before AD 273.[178]

As regards to the increase in coins from the period of the Gallic Empire, it must be noted that the coins from this period concern very small devaluated *antoniniani*, which had a low value compared to their first and second century counterparts. Intensive use of these coins in small transactions increased the chances of loss. Also, the relatively low value of these small coins may have discouraged its owners to put much effort in finding them upon loss. Some of the Gallic coins are so-called barbaric imitations. These could have been minted after 273, the end of the Gallic Empire.[179]

The hoards must be viewed in relation to the period of chaos of the western provinces of the Roman Empire. People buried their money for safe-keeping at a time when inflation had become a major problem. It is in this period that barbaric imitations emerge. The hoards from Aardenburg are described by Boersma as "hoard A" and "hoard B".[180] Hoard A, found in the excavation of the Quataert meadow, contained *antoniniani* from the period of the Gallic Empire and imitations of these, totalling 146 coins. These coins are dated up to the end of the Gallic Empire, around 273, and it is therefore assumed that they were buried in this narrow period of time. The datings of the barbaric imitations are however doubtful, as it is also possible that they were minted after 273, namely between AD 273 and 320. Hoard B, found on the Van de Hooft parcel, consists of 52 coins of which five were barbaric imitations, and three fifths date from the period of 268 to 273. While Boersma argues that the absence of coins from Aurelianus (270-275) and Probus (276-282) in both hoards suggests that the hoards were buried between 273 and 276, the barbaric imitations can again point to a later date.[181] Van Eert concludes however, that the imitations that were part of hoards that must have been buried in 273 or a few years later, do not set the date for the burial of the hoards much later. The hoards must then have additionally contained regular coins from after 273.[182]

The small amount of coins after AD 294 suggests a minimal loss of coins due to the sharp decrease of the local population. Some higher locations, namely Quataert meadow, Van de Hooft parcel and Oude Stad, revealed small amounts of coins from AD 300 onwards, showing that these areas remained occupied after the collapse of the Gallic Empire.[183]

For the Roman site at Aardenburg it is imperative to acknowledge the fact that the coin finds have to be viewed in a military context. Coins were brought into circulation as payments for the soldiers of the army, for providing loans and for the accumulation of savings, as well as for the acquisition of goods for the army camp. This money was brought in by collecting taxes. By this, coins came into circulation in the neighbouring *vicus*. Nevertheless, there was no monetary local and regional economy, since bartering remained the dominant form of commercial transaction for the indigenous people.[184] While the largest part of the Roman coin finds in general are from urban contexts, including military settlements, where they were deposited into the soil as a result of economic activity (loss), it is known from rural contexts that more than half of the finds concern ritual deposits. This notion points to the limits of research of coin finds in relation to the provincial Roman economy. For Aardenburg however, this should not be much of an issue because of the military-urban context of the site. It is however evidently important to take the nature of the find-spot and the find conditions into account at all times, when studying the context of the deposition with the aim of distinguishing ritual deposition and unintentional loss of coins due to commercial transactions. Also, the type of coin can give information on the context of the deposition of the find. For instance, in third century northern Gaul, gold coins had a ritual status at cultus-sites. To conclude, it can be stated that coin finds in the northern provinces of the Roman Empire, coming from both rural and urban sites, and thus also those from Aardenburg, cannot be viewed exclusively in an economic perspective, but must be placed in the economic-cultural perspective of the

178 Boersma 1967, 73-80.
179 Kropff/Van der Vin 2003, 67-69.
180 *ibidem*, 78-79.
181 Van Eert 2003, 46-47.
182 *ibidem*, 76-79
183 *ibidem*, 78-79.
184 Aarts 2005, 9-12.

particular region.[185] For Aardenburg, the means that the historical context of the region has to be taken into account, focussing on the military course of events of around AD 170 and from 250 onwards.

The circumstances of coin finds is another issue that has to be taking into account when studying a numismatic data set. Since the coins from Aardenburg were found during archaeological excavations – although without the use of metal detectors – it can be assumed that the data set is reasonably representative for the total amount of coins that were deposited in the ground. This assumption is of course based on the fact that all types of coins are persevered sufficiently in the soil and that small coins were not overlooked by the excavators. The presence of the whole spectrum of coins from AD 170 to the start of the fourth century, shows that these two last factors did not have a major effect on the data set of Aardenburg that is currently available. Aardenburg is thus not affected by the problem of selective collection of coins, which has been the case at Domburg and Westenschouwen, shown by the relatively large amount of silver coins.[186]

Figuur 18: Intaglio with the image of Mercury (after:: Trimpe Burger 1992c).

6.2.8 Intaglios

Seven Roman intaglios have been found at Aardenburg. These oval engravings were made of semi-precious stones or coloured glass-paste and framed into bronze finger rings. Images were carved into the flat surface, representing gods and goddesses, mythological characters, humans and animals, or religious or mythological symbols. The rings were not only worn as jewellery, but also as seal-rings for imprinting ones personal seal in wax. Three of the seven intaglios found in Aardenburg were still framed in a bronze ring. These rings probably belonged to women, as can be concluded from the diameters. One intaglio of deep-blue glass-paste depicts the winged goddess Victoria. Another bronze ring contains an intaglio of dark glass-paste depicting a character, possibly Hercules, holding an object in its left hand. A third intaglio, also of dark glass-paste, is also framed in a bronze ring and depicts a godlike character with a raised left hand, a whip in its right hand and a cape (*chlamys*). The posture and the head attire, an aureole, make it conceivable that the Roman sun god Sol Invictus is represented here, who is often connected to the Mithrascultus. The last intaglio with an image is depicting Mercury. The well-preserved intaglio shows this Roman god sitting on a rock with a stretched out left hand holding a money-bag. His right arm is stretched backwards, covered by a cape, while in his hand he holds a *caduceus*, a serpent sceptre that symbolises peace and trade (see figure 18). A cock is standing at his feet, a typical symbol of Mercury. The fabric of the intaglio consist of two layers glass-paste of which the upper layer is light blue and the lower one dark-blue. This gives the engravings a darker tone by which they sharply contrast with the rest of the depiction. The two detached intaglios from Aardenburg are also made of blue glass-paste, but are of lesser quality. One depicts a standing character in short dress with a long spear in its left hand and to the right a shield resting on the floor. The other depicts a standing, naked character that could be Mercury holding a money-bag and a *caduceus*. One intaglio was found outside of the town centre of Aardenburg. This specimen is made of carnelian and has a representation of a goat being milked by a shepherd. The engraving of the wide grooves was done by using a small wheel.[187]

6.2.9 Coal

The excavations revealed coal on several spots inside and outside of the site of the Roman fort. The chemical composition of coal can reveal its place of origin, making it an interesting category of finds for tracing trade contacts. Chemical analysis of the coal found on the excavated terrain within the former walls close to the Gallo-Roman temple, has shown that it originates from layers close to the surface, dating from the Upper Carbon period. This has lead to the conclusion that this coal was dug in Belgium or Westfalen in Germany.[188]

[185] Aarts 2005, 17-27.
[186] Van Eert 2003, 79-82.
[187] Trimpe Burger 1992b.
[188] *idem* 1973b.

6.3 Roman military presence at Aardenburg

As has been discussed above, several metal finds point to the presence of cavalry in the Roman period at Aardenburg. According to Thoen it is however more plausible that, because of the position of the fort on the outskirts of the coastal plain of that time, a cohort consisting mainly of foot soldiers (*cohors peditata*) was stationed at Aardenburg. The stamped roof tiles mentioned before, bearing stamps CIIA and CIIS, support this hypothesis, since cavalry units were designated as *alea* instead of *cohortes*. The *principia* of the camp is also an important issue in this discussion. During the second century, the Roman *castella* along the *limes* were built with a *principia* of which the *aedes*, the room in the centre in which the flags and the standards of the army units were kept, had a pronouncing apse. This change in architecture only occurred in Germania and not in Britannia. The ground plans of the main buildings of the *castella* at Niederbieber and Holzhausen an der Haide (Germany), both built around AD 190, show the same characteristics as the one at Aardenburg, namely a pronouncing apse upon the *aedes*. This supports the notion of a more or less strong connection of Aardenburg with the German *limes* areas, by which the transfer of troops from Germania to Aardenburg to man the newly built *castellum* in AD 170/175 seems conceivable.[189]

6.4 Fortifications in the region

As mentioned above, the fortification of Aardenburg was not an isolated military settlement, but was part of a defensive system. It is therefore imperative to address the military settlements that were in direct connection with that at Aardenburg.

6.4.1 Oudenburg

About 30 km to the west of Aardenburg, the town of Oudenburg (Belgium) is located, at which another *castellum* was built. This fort was also situated on the Pleistocene sand ridges, some 8 km inland, providing a raised and therefore dry area for occupation on a strategic position overlooking the coastal plain. The tidal area to the west of the sand ridges had a direct connection to the sea via a system of natural watercourses. Oudenburg was situated on a junction of roads that originated from Bavay, the capital of the civitas Nerviorum, and Aartijke in the south, and from Brugge and Aardenburg in the north. In the second half of the first century AD, a trading settlement was established here, with a small harbour that gradually grew into a flourishing town and by then probably covered almost all of the sand ridge. The Roman army unit that occupied the town somewhat later, profited from the economic activity here. In the third quarter of the third century, the civilian settlement had turned into a purely military settlement. The medieval successor of the old Roman town is presumed to have existed as early as the ninth century. By then, the town was named 'Aldeborg' referring to a pre-medieval origin. The current layout of the streets is directly related to the main roads of the Roman fort and was already recorded in the 16th century by cartographer Jacob van Deventer. Next to this, the surrounding medieval canals, dating from 1128, run parallel to the position of the walls of the Roman fort.[190]

The excavations at Oudenburg have, from the 1950's to the 1970's, revealed three phases of construction of the *castellum*. The area was raised previous to each building phase. The first two phases were constructions of wood only, while in the third phase stone was used as a building material. Oudenburg phase I was directly built on the sandy soils. The faint traces of this are a ditch of just 1.4 m deep and 4.5 m wide, and a rampart of earth and sand on which presumably a wooden palisade was placed. The gates and towers of this phase have not been found. Numerous postholes and concentrations of finds show that the camp was densely occupied. The size of the ditches shows that Oudenburg I was smaller than the later phases. The date of this phase is not fully known. The earliest coins date from the age of Trajanus (98-117) and Hadrianus (117-138), but were found among materials of which the majority dates from the end of the second century and from the third century.[191]

For the construction of the new fortification, that of Oudenburg II, the site was raised some 55 cm. The existing ditch was partly filled up and a new ditch was dug, although less deep and only 3 m wide. The rampart was made of sods and sand, had a width of at least 8 m, and was probably campshed with upright

[189] Thoen 1993, 27-28.
[190] Vanhoutte 2007, 199-202.
[191] Recent research has indicated that Oudenburg I dates from the beginning of the third century at the earliest. This leads to the odd notion that the coastal defence ran from Katwijk to Aardenburg and no further. See Dhaeze in prep., 4.

wooden beams. The contours of the rampart shows that Oudenburg II was the same size of the later phase III. Wooden buildings were constructed on the inner terrain, but remarkably also a stone building was set up there. It was located in the northern part of the *castellum* across the southern gate by which it was connected with a pebble road. The stone building measures 18.5 m long and 13.5 m wide and was made of Doornik limestone. The convention of construction a stone building next to barracks of wood was typical for Roman camps in the third century AD in the western provinces. This sets Oudenburg II in the period before the invasions of the Saxons and the Franks in the third quarter of the third century. This hypothesis is supported by the numerous layers of debris and ash and the reconstructions that follow up on this construction phase.[192]

The construction of Oudenburg phase III required another raise of the site, this time with about 1 m. This may have been issued because of the threat of floods that visited the area in this period. The dimensions of the stone fortifications measured 163 to 146 m, and match those of several border fortresses such as Keulen-Deutz at the Rhine, and Dover, Portchester and Richborough on the English coast. The walls were 1.3 m thick and were constructed of Doornik limestone, similar to those at Aardenburg. For phase III, the V-shaped defensive ditch was deepened and widened to at least 20 m. In contrast to Aardenburg, no intermediate towers were added. There were, however, corner towers and two towers at each of the four gates. This type of layout is probably due to the smaller dimensions of the Oudenburg fort (163 by 146 m), compared to that of Aardenburg (240 by 150 m). The archaeological research has however been rather limited at this site and resulted in the excavation of only one tower. It is therefore also a possibility that the intermediate towers were indeed present but have not been discovered yet. The excavated corner tower had a diameter of about 9 m. The round towers of Oudenburg III do not pose the same problem as those at Aardenburg, since this feature was clearly a building convention from the second half of the fourth century onwards.[193]

The date of phase II of Oudenburg supports the notion of the *castellum* of Oudenburg replacing that at Aardenburg when it was abandoned around AD 275. Oudenburg itself was abandoned after AD 410 or some years before, when the whole Western Roman Empire was in decline.

At Oudenburg, a civilian settlement was present as well, from the second half of the first century AD to the third quarter of the third century. The traces of this have been obtained by systematic prospective investigations, and point to a *vicus* with a significant trade aspect. Also, indications for the extraction of iron ore and the production of ceramics were found. The most remarkable structure uncovered was a stone building made of Doornik limestone and tuff from the Rhineland, the same building materials used at the military sites in the area. With subsequent building phases, this structure was enlarged with an extra room of 5.5 by 5 m, for which glauconite-rich 'field stone' was used. During the excavations here, upright walls were uncovered on two spots, consisting of sloping tuff stones and 'field stones' laid in a fish bone pattern. The finds of Roman roof tiles, heating tubes (*tubuli*), hypocaust tiles, lumps of mortar, and painted stucco, point to a luxurious building in which one or more rooms could be heated. The building may have functioned as a bath house.[194] The archaeological research at Oudenburg has shown that most of the Pleistocene cover-sand ridge, on which the *castellum* was also situated, was inhabited in the Roman period. In the third quarter of the third century, civilian occupation seems to have ended. This could have been caused by floods in the area and the invasions of the Franks and the Saxons. In the fourth century, the settlement evolved into that of a more military nature and was concentrated around and close to the *castellum*. The graveyard found some 300 m to the west of *castellum*, dates to this period and is ascribed to the military settlement.[195]

This graveyard was fully excavated and consisted of 216 graves. The typological and numismatic data of the finds lead to the conclusion that the graves dated to the last phase of the *castellum* (Oudenburg III) and was in use by the soldiers and their families that were stationed here. Most of the deceased were adults, while 10 percent were children below the age of fifteen. 133 graves contained burial finds, by which 21 could be marked as female graves. The deceased were placed in a heavy wooden coffin and laid on their back, fully dressed. The men wore a tunic with belt around the loins and in most instances a covering mantle (*chlamys*) that was fastened on the right shoulder with a three-knobbed fibula. These decorated fibulae, usually of bronze and sometimes gilt, are regarded as official military distinguishing marks of the deceased. The buckles and belt ornaments, which were in some cases found at the feet of the deceased,

[192] Mertens 1987b, 84-85.
[193] Thoen 1978, 128-133; Mertens 1987b, 85-87.
[194] Thoen 1987, 64. For an elaborate description of the finds, see Creus 1975.
[195] Hollevoet 1987, 48-50.

also suggest a military character of the graves, as does a solid silver bracelet in one grave and a secondary burial of a dog in another grave. Remarkably, the soldier graves did not contain any weapons, but did reveal axes and knives. One grave contained the tip of a lance that was possibly a flag shaft of the army unit stationed at the *castellum*. Mertens interprets the absence of weaponry in the graves as an indication of the troops being regular Roman army soldiers instead of mercenaries. The regular troops did not own the weapons they used, while for mercenaries these were personal properties that were buried with them. The deceased in the women graves were also dressed in official robes. Two typical cone-shaped silver fibulae point to a Germanic origin of the inhabitants, who were possibly from the north German Saxon region. It is therefore plausible that the soldiers and their families stationed at Oudenburg were Germans who were incorporated by the Romans. The other grave goods found, consisted of luxury ceramics, glass cups, bottles, jars, and tin plates. These suggest a high standard of living for the inhabitants of the *castellum*.
The chronology of the *castellum* at Oudenburg is difficult to relate to the date of the graveyard. Based on the material finds, the graveyard is dated in the second half of the fourth century and in the beginning of the fifth century. It would however be inaccurate to suggest that this graveyard must have belonged to Oudenburg III, since it is possible that other graveyards are present in the vicinity. A small part of another graveyard was found about 100 m to the south-east of the graveyard discussed above.

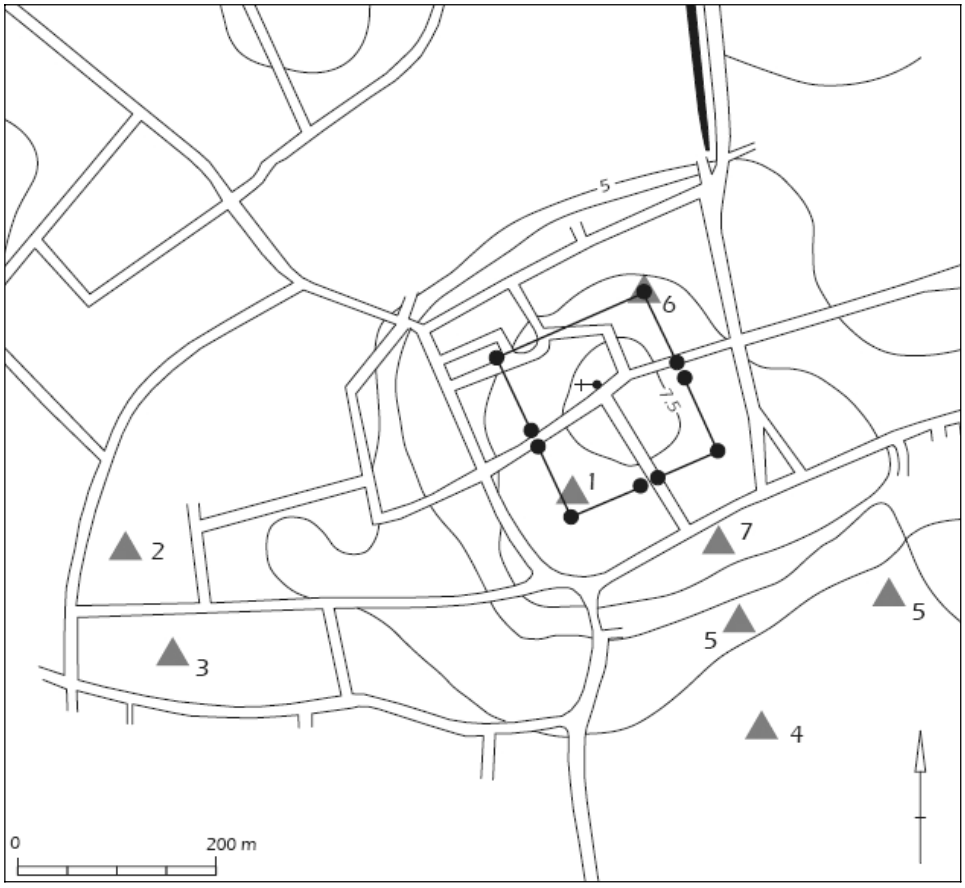

Figure 19: Ground plan of the Roman fort at Oudenburg. Legend: 1. the archaeological zone on the southwest corner of the fort. 2. inhumation cemetery A, excavated in 1963-1964 and 1968 by J. Mertens. 3. inhumation cemetery B, of which some graves were discovered in 1962. 4. cremation cemetery of which over 450 graves were excavated in 1990-1992 and 1994. 5. occupation traces north and northeast of the graves dating back to the High Empire. 6. archaeological research on the north-eastern corner of the fort (2003-spring 2004). 7. site Hoogstraat (2003) (after:: Vanhoutte 2007).

The graves found here date to the first half of the fourth century, making it clear that is it incorrect to exclusively relate the other graveyard to Oudenburg III. The stone fort of phase III may certainly have been constructed during the reign of Constantine (AD 306-337), looking at the architectural features such as the octagonal towers. The construction of Oudenburg III can however also be related to the total reform of the Roman army in the border areas of the Empire and to the restructuring of the coastal defence that followed the invasions of AD 352 and 355. The *castellum* could have been rebuilt during

Emperor Julianus' (AD 360-363) or Valentinianus' rule (364-375), the latter of whom was responsible for drastic troop transfers around 369.[196]

The chronology of Oudenburg as described above has recently been challenged as a result of new excavations from 2001 to 2005. It is now believed that three wooden and earthen constructions preceded two stone phases. These first three phases were probably temporary camps that were set up in periods of menace. The first permanent stone fort can perhaps be related to the campaigns of Postumus against the Franks in AD 260-268 and also to the Gallic Empire of the following years. At the end of the third century, the fort of phase IV was abandoned. Around 320, it was reoccupied and in the second half of the fourth century renovated, probably as part of a larger rebuilding programme of the coastal defences named Litus Saxonicum.

The recent excavations have shown that the military occupation of Oudenburg started around AD 200 and ended at the start of the fifth century AD. In terms of spacial use, the layout of the settlement changed radically with each new phase of occupation. This points to discontinuation of occupation between the different phases. From the late third century onwards, the distinct military use of space is not visible anymore, and it is therefore concluded that the settlement was not purely of military character from this period onwards.[197]

6.4.2 Maldegem-Vake

Another Roman military settlement close to Aardenburg is located at Maldegem-Vake in Belgium. This presumably cavalry fort is located some 6 km to the south of Aardenburg and was first discovered using aerial photography. It was archaeologically researched from 1984 onwards, showing that the fortification measured ca. 157.5 by 157.5 m and was enclosed by two parallel ditches of about 3.5 m wide and 2 m deep. The excavations revealed a wooded construction composed of several building phases. The finds date from the second century, in particular from the second half and the last quarter. The youngest coin found in the fort itself dates to AD 171/172, providing a very narrow end date for the establishment of the fort. Within the earth rampart, a coin with the image of Marcus Aurelius was found, which was minted in AD 170/171. The specific type of barracks show that the camp only existed for a short period. These buildings, so-called *hibernacula*, were meant to house troops for only a few seasons. Soon after the founding of the camp, it was abandoned, whereby the construction material was reused for as much as possible. Even the wells were demolished, and the ditches were filled up. This systematic clearance must have been completed before AD 175.

While there is no direct archaeological information to a connection with the fort at Aardenburg, it is assumed that both settlements were related. Thoen has suggested that the fort at Maldegem-Vake provided the one at Aardenburg with logistical support.[198] It seems however more plausible that, in view of the dates of both camps, the troops initially stationed at Maldegem-Vake, were transferred to Aardenburg at the time the military tasks of Maldegem-Vake were taken over by Aardenburg.[199]
The finds from Maldegem-Vake show that for a short period of time a *cohors milliaria equitata*, a unit combined of cavalry and foot soldiers, was stationed at the fort.[200] The square ground plan with an area of 2.48 hectares supports this notion, as well as the large number of wells found, so far up to ten, and the double barrack construction, which can be interpreted as a stable for horses. The river cobble-stones found may have functioned as utility goods, but could also have been used as projectiles for artillery (*ballista*). The cobble-stones originate in the Meuse region, around Liège and Maastricht. The auxiliary forces of Maldegem-Vake might also have come from this area.[201]

6.5 The end of the Roman occupation

Around the end of the third century or the beginning of the fourth century AD, the settlement at Aardenburg was abandoned. This date is concluded from the coin finds that have been discussed above. Preceding this however, the whole Roman Empire was already in distress. In the east, the Romans were

196 Mertens 1987b, 87-89.
197 Vanhoutte 2007, 228-229.
198 Thoen 1988, 76.
199 *idem* 1993, 26.
200 Trimpe Burger 2002, 30.
201 Thoen 1993, 26.

fighting the Persians, and at the Danube the borders were threatened by the Goths, while the west was suffering from invasions by the Alemanni and the Franks. The situation became critical when the supreme commander of the Rhine armies, Postumus, separated his territories from the Roman Empire under Emperor Gallienus (253-268) and declared an independent Gallic Empire, which soon comprised Spain and Britain, next to Gallia. Postumus failed to bring peace to the area. In 261 the Rhine border was breached by the Alemanni at Koblenz and in 262 and 263 campaigns were launched against the Germans as a reaction to their threats to the borders. In AD 265, Postumus had to defend his empire against an offensive of Emperor Gallienus and in 267 he had to mount counter-attacks against pirate raids on the North Sea. In 268 Postumus was murdered after he had defeated a rebelling commander, Laelianus, who had proclaimed himself Emperor with the support of the Rhine legions. Postumus' death caused the total collapse of the coastal defence system, resulting on the invasion of the Gallic provinces by German tribes, such as the Saxons and the Franks, in 275/276. Numismatic data points to depopulation at the end of Postumus' reign or somewhat later. The floods that occurred subsequently at the end of the third century made repopulation of the areas difficult or impossible.[202]

Aardenburg was struck by disaster as well. The *castellum* was presumably destroyed by repeated attacks of invading German tribes or perhaps demolished by the Romans themselves upon their retreat. The excavations have shown that the fortification walls were taken down from the inside out. The destruction of the fort as a result of invading tribes remains hypothetical, since this notion is based on historical accounts and is so far not supported by the archaeological record. A different hypothesis states that the coastal defence system was wittingly dismantled as a punitive measure for support the local troops had provided to the Gallic Empire. This then resulted in the undefended areas becoming easy targets for the invading Germans.

An additional problem next to the political and military chaos at the end of the third century and beginning of the fourth century, was the wetting of the landscape. The lower lying foreland that connected the cover-sand ridges with the sea, was slowly inundated, resulting in the virtual depopulation of the region. This can be concluded from the layer of thick clay that covers the strip of debris originating from the *castellum* walls. This transgressional phase, specified as Duinkerke II, grew stronger in the fifth and sixth century, resulting in the silting up of the river Rudannâ with a 2,5 m thick layer of clay and sand deposits. The bank of this natural watercourse eroded during the second phase of floods, whereby a part of the defensive ditches of the *castellum* was affected. The inner terrain of the *castellum* remained untouched because of its high position on the cover-sands. However, this terrain became more and more isolated because of the floods that made the area around it impassable. Next to this, the ground water was salted up, making living conditions altogether very hard. Therefore, in the late Roman period and the Early Middle Ages there could have been little occupation on the terrain of the former *castellum*. The very few finds dating from these periods support this notion. In the 11th and 12th century, much of the natural stone from the Roman fort was reused, resulting in many negative construction traces that were uncovered during the excavations. The Roman layer is currently situated about 2 m below the surface, since the terrain was raised during the later Middle Ages with the soil that was coming from the digging out of the city canals. Also, much debris was dumped here after the destructions of Aardenburg in the 13th and 14th century.[203]

Whether a direct attack on the *castellum* was the cause of its demise, or whether this had a natural cause is not fully understood. It is possible that the fort became uninhabitable after a massive flood in the region around AD 273, after which it was destroyed in an invasion of Germanic tribes. Phase III of the fortification at Oudenburg was build around this date, which shows that the area was still under Roman rule at and after that time. The archaeological record shows that since the floods that occurred at the end of the third century, occupation in the coastal regions of Flanders and Zeeland only remained on the Pleistocene cover-sands and in the hinterland.[204] Coin finds do however point to thinly inhabited areas directly at the coast on the Older Dune formations.[205] The whole Scheldt region had become a tidal area, consisting of submerged peat-bogs and mudflats. Subsidence of the peat and natural and anthropogenic drainage of the soils accelerated the process of flooding.[206] The population density had decreased sharply and the economic activity must have diminished. The so-called golden age of northern Gaul had ended

[202] Thoen 1987, 63-64.
[203] Trimpe Burger 2002, 26-27.
[204] Thoen 1987, 64.
[205] Boersma 1967, 70, 72.
[206] Vos/Van Heeringen 1997, 67.

permanently due to the instable political and military situation. In Zeeland and the surrounding areas, natural processes can be considered the main cause of this depression.

In Flanders, the Roman coastal defence was retreated inland in the fourth century to the border of the Pleistocene sand zones. The tasks of the *castellum* of Aardenburg were taken over by that at Oudenburg. Presumably, a whole new line of defensive fortifications was set up along the newly developed coast-line. The defensive strategy was reformed from a static defence to a more dynamic one that used mobile intervention units. Around AD 410, the late Roman coastal defence system, the Litus Saxonicum, was definitively abandoned as a result of the total collapse of the Western Roman Empire.

7 THE METAL FINDS

In total 351 metal objects were studied for this thesis.[207] The catalogue is divided in ten find categories and is found in appendix II. These categories are described separately in this chapter. For the material study, almost all objects were measured and the measurements are included with the objects in the catalogue.[208] All objects are designated with a unique inventory object number that was newly added to all objects for this study. The old find numbers (which are not unique per object) are however also included, since these can be connected to the original documentation of the excavations and to other objects found in the same context. A short object description is included in the catalogue and, whenever available, references to similar finds have been added. These are however not exhaustive. Although the composition of the metal objects is included in the description, this study does not incorporate analysis of the compounds of alloys. The object descriptions are followed by 16 plates, in which a large part of the objects is illustrated using photographs and/or drawings.

7.1 Statuettes

The bronze statuettes from Aardenburg can be considered to be the most attractive metal objects that have been recovered (plate I). These finds were among the few metal finds to be published up until now.[209] The state of the statuettes varies considerably, as is the case with the objects in the other categories. All five statuettes are of well-known Roman gods, namely Bacchus, Isis-Fortuna and Mercurius. Remarkably, three of the five statuettes are depictions of Bacchus, but it would be incorrect to conclude that this deity would have had special attention in Aardenburg. Two of the Bacchus statuettes (no. 1.2 and 1.3) were used as part of an ornamental piece on furniture, a door, or perhaps on a carriage, in contrast to the other statuettes, which were probably used for private religious purpose.

Statuettes were very common in the Roman world and are found in various different contexts, in civilian settlements as well as military camps, throughout the whole Roman era. Stylistic differences through time are difficult to denote on individual specimen. This is also the case with the Aardenburg statuettes. The statuette of Mercury was found in the lowest level of the excavation (Quataert), which was dated in the second half of the second century AD. The other statuettes have no stratigraphical information with them and are dated in accordance with the general dating of the Roman settlement.

7.2 Furniture accessories

The furniture accessories are a well represented category among the metal finds that comprises handles, fittings, studs and nails, hinges, supports and keys (table 1; plates II, III and IV). Seven handles originate from furniture, such as cupboards, chests and trunks. The size of the handles can indicate to what piece of furniture they were fixed originally. Context finds of similar handles have shown to what objects the belonged.[210] Some chests were used for storage and safe-keeping of valuables, such as money, jewellery and documents. These particular chests (caskets) were quite small, lockable and sometimes clothed with leather on both the inside and outside. They were equipped with decorative fittings and corner fittings for strengthening. The larger chests (trunks) were used for storing less valuable goods such as clothes and tools, and were therefore not lockable. Cupboards were used for storage of scrolls and writing materials.

Complete chest are rare in archaeological contexts, since the main construction element was wood. Reconstructions of caskets have been made possible from complete sets of metal finds that have been recovered from female graves, where the caskets were deposited as grave gifts together with their contents that were made up of jewellery and toilet implements. Each casket consisted of the following parts: handles, hinges, functional fittings, supports and decorative fittings, and in some cases a lock. The size of chests is evident from the size of these different parts, since large chests required heavy and strong handles with massive hinges with predominantly iron fittings, while medium sized chest had large, mostly

[207] This is the total number of objects included in the catalogue. Objects that were clearly of non-Roman origin were filtered out in the initial phase of this study.
[208] Some objects could not be measured due to absence of these in the depot during the period of study.
[209] Zadoks-Josephus Jitta 1969, 14-15, 18-19, 36-37, 68-69, 124-125.
[210] See Riha 2001, 16-17.

bronze, fittings. The smaller caskets had refined decorative handles, small hinges and locks, and predominantly bronze fittings. These caskets were often about 20 to 25 cm in length, width and height, but larger and smaller sizes are also known, ranging from 20-23 cm to 30-50 cm in length and width, and 15-55 cm in height. The general shape is therefore cubical, which is also evident from images on reliefs and sculptures. The lid of the casket is commonly one fourth of the total height of the casket and can be either flat or convex. The shape of the casket itself is generally rectangular (or square), but oval and octagonal designs were also used. The casket was made up of wooden planks that were 0.5-1 cm to 2.5 cm thick. No particular type of wood seems to have been preferred.

The handles can be subdivided by their decorative type and style, since several types of handles were very common in most provinces of the Roman Empire. Caskets had generally two handles, one on the left and one on the right side of equal size. A larger handle was in some cases present on the lid, and a smaller one below the lock plate. It can be stated that in general small handles were used with small and medium-sized chests, while larger, heavy handles were applied in trunks. The handles were attached to the wood by use of iron or sometimes bronze split pins, of which no. 2.17 and 2.18 are examples. Solid nails or pins with an eyelet may however also have been used (no. 2.19 and 2.21). These were made of one piece of metal that was folded to form an eyelet in the middle and two shafts. The cross-section was often rectangular, sometimes round. The split pins were driven into the wood and bent on the other side of the wooden plank, resulting in a firm construction (no. 2.20). The holes these pins made in the wood were covered by fittings, so that the wood behind the handle was covered and protected from wear.[211]

The first type of handle to be discussed here is the so-called dolphin-handle (bronze), in which two dolphins are joined together at the head and are attached to the chest at both tails. These handles were, together with the sea-horse handle, which is much less common, typically used with small chests (caskets) where they were placed on the right and left side of the chest and sometimes on top of the lid. Two specimen (one intact and one fragment) of these types have been found in Aardenburg (no. 2.7 and 2.8). Both handles have a decorated front side and a rougher and undecorated back side, which is typical for these handles since they were normally hanging on two split pin with only the front side visible. Upon grabbing and releasing the handle, it would fall back into position by which the back side could not be seen. No. 2.8 is an example of the plainness that is typical for the handles that were probably stylised models of the refined first century types known from Italy. No. 2.7 may be dating from the first century AD, based on its refined decorations and parallel finds, but the highly stylised dolphin or seahorse shapes make a later dating plausible as well. The dolphin handle type has its origins in Pannonia.[212]

Another widely distributed type of handle was the swan-head handle. The earlier examples of this type had swan-heads on both ends. The specimen from the Roman provinces however, are of a more plain design, which is also evident with no. 2.9. This handle shows only the shape of the swan-neck, while the heads have been stylised into a knot-like ornaments. The handle was attached either to a chest or a vessel. Similarly shaped handles were attached to soldier helmets for carrying purposes, but these were smaller than this specimen.[213] The size of this object would make it unpractical when attached to a helmet. Carrying handles of helmets have a smaller standard size of the internal width that allows a maximum of three fingers to fit through.[214]

Other widely distributed handles are those with a bulge in the middle of the handle bow, with a size that varies from 5 to 14 cm. It is presumed to be a simplified style of the richly decorated Acanthus-leaves handle with a knot in the centre, a type that dates from the first century AD. These plain handles are often small or medium-sized and were applied in small, thin-walled chests as is concluded from the short nails (about 1 cm in length) that have been found in relation to these handles. The cross-section of this type of handle is either round, square, hexagonal or octagonal. The terminals are typically knobbed and curved, so that they could be fixed to the hinges on both ends. The terminals were at best decorated with acorns or Silenus heads.[215] This type of handle was obviously manufactured according to a common scheme. The production may have been in local metallurgy workshop, or in larger production centres, which exported their goods across large areas. This can be concluded from the fact that the distribution of these handles was spread out across all of the provinces of the Empire.[216] No. 2.1 is a typical specimen; its design is

[211] Riha 2001, 23-24.
[212] *ibidem*, 24-25.
[213] See Rodenburg 1998, cat. 31, no. 821; Bishop/Coulson 1993, 95 no. 7.
[214] Bishop/Coulson 1993, 93.
[215] Silenus is a figure in Greek mythology. This follower of Dionysus was usually drunk and is portrayed as a bald, bearded man.
[216] Riha 2001, 28-29.

plain and standardised. The similarity of no. 2.2 is striking, and both handles may thus have come from the same mould. No. 2.3 is a slightly more slender example and had originally two acorn-shaped decorated terminals. Two fragments (no. 2.4 and 2.5) are from handles of the same type. A much larger specimen is no. 2.6, which is also not decorated in accordance with the common scheme. The almost undamaged handle has one original split pin still attached to it. Both terminals are decorated with phallus symbols of which similar shapes are known from horse gear pendants. The bulge in the middle is however very similar to the other handles discussed here. The large size of this handle and the length of the split pin suggest that this object was applied on a larger chest or perhaps a door.

The lock mechanism of a casket was protected by a special fitting plate. This lock fitting was often square, but round and rectangular types were also used, and made of iron of bronze. It was fixed over the lock on the outside of the casket using nails or studs. No. 2.12 is a fitting plate with a similar design as the lock fittings, except that there is no keyhole present. Parallels show that this type of fitting plate was a decorative piece used on caskets, perhaps to complete the ornaments on a casket, as a counterpart of the lock fitting.[217] This particular object dates from the third century AD or later.[218]

Two bronze lion head hinges were found at Aardenburg (no. 2.10 & 2.11). These were attached to caskets and had different types of handles fixed through the opened mouth. The handles could be single rings (ring handles) or handles with a bulge in the middle, as are discussed above. Both specimen are of similar size, but not equal in design. The larger opening on no. 2.10 suggests that it would have held a larger handle, perhaps of the size of no. 2.1 and 2.2, in which case two similar hinges would have been used. The lion head hinges were in use throughout the whole imperial period and have been found in all of the western Roman provinces.[219]

Only one rotating hinge is among the finds (2.16). Based on its small size, this bronze hinge was used in a small piece of furniture.[220] It was part of a tripartite hinge connected with one iron pin.

Caskets were strengthened using iron or bronze corner fittings, of which no. 2.13 and 2.14 are examples. These were fixed to the sides of a wooden chest using small nails. The terminals are leaf or diamond-shaped with a hole for a nail in the middle. Other types were however also in use, but this type seems to have been the most commonly applied in small chest.[221]

One object that resembles a modern drawer-handle (no. 2.15), was probably a decorative top of a stud, as can be concluded from similar objects found elsewhere.[222]

Among the metal finds are 19 bronze studs. These objects have a large, round head and a rectangular shaft. The top comes in different types, namely the bell shape, the flat shape and mushroom shape. The bell-shaped heads are most numerous, namely twelve. Six studs have mushroom-shaped heads (no. 2.35, 2.36, 2.37, 2.38, 2.39 and 2.40) and one has a flat head (no. 2.34). The bell-shaped heads have two types of forms, namely solid (no. 2.22, 2.23, 2.24, 2.25, 2.26, 2.27, 2.28, 2.29 and 2.30) and open (hollow) (no. 2.31, 2.32 and 2.33). All of these objects have a raised centre point, to which a decorative piece may have been fixed, but this seems only logical with the open heads. The cross-sections of the shafts vary from rectangular and flat to square. Some of the shafts have a hole through it on the end, presumably for extra fixture using a small nail. The studs vary in length from 2.5 to 8 cm. Their purpose was probably to attach the lock fittings and decorative fittings to chests and caskets, and perhaps in some cases to other furniture objects.[223]

Two legs or foots that functioned as supports were studied here. One is a typical and common lion foot (no. 2.43). Part of the thin shaft is still present, showing that it was part of a light piece of furniture. In general, these feet supported small tables (also folding tables), stools, candelabra, portable altars and statue bases. The other foot is the form of a hoof (no. 2.44), but of the same size as the lion foot. These finds are common in the provinces of the Roman Empire and cannot be dated accurately without context data.

One of the best preserved and finest metal finds is the upper part of a candelabrum (no. 2.45). No exact parallel of the piece are known, although some finds from the northern provinces do resemble this

[217] Riha 2001, 54-58, 63.
[218] Based on parallels; see the catalogue.
[219] See the catalogue for references.
[220] Riha 2001, 36.
[221] *ibidem*, 64-65.
[222] See catalogue.
[223] Riha 2001, 73-74.

piece.[224] Its ornamental character is obvious, and the object may have been either part of a richly furnished private dwelling or a public administrative or religious facility.

The last finds in this category are the keys and key handles. These belonged to lockable chests and caskets. Two bronze handles are of common and widely distributed Roman type (no. 2.46 and 2.47). The upper part is made up of openwork with typical droplet shapes that resemble keyholes. Towards the shaft is a cornice. The shaft itself was originally mostly made of iron and is missing on both specimen, because of poor preservation conditions. This type of handle is generally dated in the middle Roman period. A smaller key handle is no. 2.48 of which no parallels have been found so far, but the handle resembles the larger ones and was probably used with a smaller lock and casket. No. 2.49 is a different type of key handle, which was attached to a much smaller key bit. The key was probably carried on a chainlet and was thus more or less for personal use. One iron key (no. 2.50) is in poor condition, which made detailed analysis impossible, although the object seems a common type with a large round handle.

Type	Quantity	Percentage(%)
Handle	9	18
Hinge/split pin	8	16
Fitting	4	8
Stud	20	40
Support	2	4
Key(handle)	5	10
Other	2	4
total	50	100

Table 1: Quantities of the various types furniture accessories.

7.3 Jewellery

The personal ornaments, apart from fibulae, consist of fingerings, bracelets, hairpins, and bracelets (table 2; plates V and VI). Three of the finger rings with intaglios found at Aardenburg, were published before and have been described in paragraph 6.2.8.[225] Remarkably, the silver finger ring with blue glass paste intaglio (no. 3.1) was not published. This specimen is the only one made of silver and is considerable larger than the bronze finger rings. It is therefore the only ring that undoubtedly belonged to a male. The remaining four bronze finger rings hold no intaglio and are of very simple design (no. 3.5, 3.6, 3.7 and 3.8). The size of these specimen suggests that they were worn by women. The fingerings can hardly be dated since their plain designs were common for a long period of time. The glass paste intaglios however, were mainly produced in the Rhine region from AD 200 onwards.[226]

No. 3.9 is a finely worked bronze decorative hairpin. Its purpose is suggested by the representation, since many different types of decorative hairpins are known. These usually depict deities in the form of human figures and human busts, but animal figures and depictions of inanimate objects are also applied.[227] Two other pins (no. 3.10 and 3.11) are very common plain types with square-shaped heads. No. 3.12 is smaller and slightly more refined. The hairpins cannot be dated further than the Roman period. In general, the lengths of hairpins can provide some information when dating a particular site, but in this case too few specimen are available to make plausible statement. Obviously, the hairpins belonged to females.

In total 22 bracelets and fragments were analysed. A remarkable specimen is 3.13, which is made up of one bronze main wire which can be adjusted to change the diameter of the ornament. It is the only closed bracelet among the finds. This type of bracelet seems to have been in production from the third century onwards, and is found on the north-western provinces.[228] The remaining bracelets can be divided into two groups, namely the strip-shaped bracelets and those with a round or oval cross-section. Dating these bracelets is almost impossible, due to the poor state of most of the specimen, but also because of the fact that these plain types were in use in most periods of the Roman era. The strip-shaped bracelets were often decorated on the outside, as is still visible on no. 3.15, which has diagonal patterns on its outside. No. 3.14 has the remnants of a fastening on both terminals. The triangular shape of the whole bracelet is unique among the whole set of bracelets from Aardenburg. No. 3.20 is probably a plain

[224] See the catalogue.
[225] See Trimpe Burger 1992b. These rings are also included in the catalogue.
[226] Waasdorp 1999, 108.
[227] Johns 1996, 140-143.
[228] See the catalogue for references.

specimen of a snake bracelet. These types had snake head on both terminals. Gold and silver specimen were often much finer and more richly decorated. The plain bronze types were common in the north-western provinces, since the snake depictions are of Celtic origin.[229] No. 3.19 may also be a plain type of snake bracelet, on which the terminals are decorated only with transverse lines. The remaining fragments of bracelets are made of narrow strips of bronze, except no. 3.21 is made of a bronze wire. The whole set of bracelets among the metal finds is quite large. The diameters of the objects suggest that almost all were worn by women, when diameters of 7 cm or more are considered certain to be worn by males.

No. 3.35 is likely to be an earring, because of its small size. It was kept in place but the counter-knob on one end. There may have been an additional ornament hung on this object.

The last object in this category is phallic pendant (no. 3.36). Its small size suggests that it was worn as a personal ornament, and that it was thus not used as horse gear. No parallels of this object have been found however.

Type	Quantity	Percentage (%)
Finger ring	8	22.3
Hairpin	4	11.1
Bracelet	22	61.1
Other	2	5.6
total	36	100

Table 2: Quantities of the various types of jewellry.

7.4 Fibulae

For this material study, 78 fibulae were analysed (table 3; plates VI, VII and VIII). Most of these are the very common wire fibulae, namely 65, and 13 are different types of fibulae, which will be discussed here first.

One is a bronze penannular fibula/brooch that is shaped as a ring with an opening (no. 4.1). It is also referred to as ring fibula. Both terminals have a knob-like feature, resulting in a typical Celtic torc shape. This type of fibula (Böhme type 51) was worn by men on the right shoulder, and is found in all northern provinces of the empire. It is generally considered as dating from the late Roman period, in the third and fourth centuries AD.[230]

No. 4.2 is bronze disc fibula laid in with red, white and blue millefiori enamel. This type of fibula (Böhme type 41z) is generally dated from the second half of the second century to the third quarter of the third century AD. Its distribution ranges from the Rhine regions, to northern Gaul and Britain. A centre of production was located near Namur (Belgium). These fibulae were exclusively worn by women, as has become evident from burial gifts.[231]

Among the metal finds are five bronze crossbow fibulae and fragments of these (no. 4.3, 4.4, 4.5, 4.6, and 4.7). This type of fibula (Böhme type 28g) is characterised by its long transverse hinges, a semicircular bow with a knob on the head, and a pin holder integrated into the foot. All the examples from Aardenburg are of a particularly plain type, which is clearly different from the decorated types that date from the late Roman period. The crossbow fibula was widely distributed across the Roman Empire, roughly in the area from Britain to the Rhine and Danube regions as far as Dura-Europos in Syria, but not in the 'barbarian' territories such as Germania Libera. The crossbow fibula is found almost exclusively in military settlements, which suggests that it was worn by soldiers only.[232] In the Netherlands, this type of fibula is found almost exclusively in the military settlement along the Rhine. Aardenburg itself is a remarkable exception to this according to Haalebos.[233]

[229] Johns 1996, 143.
[230] Böhme 1972, 46.
[231] *ibidem*, 38; Waasdorp/Zee 1988, 26.
[232] Böhme 1972, 26-27.
[233] Haalebos 1986, 59.

No. 4.8 is a bronze P-shaped fibula with a semicircular, decorated bow and a short foot (Böhme type 25h). This type with its protruding knobs is very uncommon and exact parallels are only known from Caerleon (Wales) and Corbridge (north-east England). The fibulae of this type could have originally been gilded. The finds from Britain are dated in the late second century to the early third century AD. No. 4.9 is of the Böhme type 25b, and a bow with a distinctive D-shaped cross-section. It is dated from the middle of the second century to the early third century AD. The P-shaped fibulae are generally considered to be worn by soldiers and are related to the crossbow fibulae.[234] No. 4.10 could be a fragment of a P-shaped fibula, but may also have been part of a crossbow type.

Figure 20: Replica of a wire fibula and a crossbow fibula (photograph by H. Hendrikse).

The strip bow hinge fibula (no. 4.11) was generally silver-plated or laid in with enamel or glass on the bow. This bronze specimen however, shows no traces of enamel or silver, probably because of corrosion. The pin was attached to the bow by a hinge. This type of fibula (Böhme type 17a) is not very common, dates from the second century AD, and was probably worn exclusively by women.[235] It is distribution is concentrated in southern Belgium and is it much less common along the Rhine. It is found almost exclusively in military and urban contexts.[236]

The bronze single knot fibula (no. 4.12) is characterised by a short upright bow with a sharp bend in it. This type (Böhme type 3/Almgren 19) dates from first century AD and was worn by both men, including soldiers, and women.[237] Its distribution is concentrated in the German Rhine region, but it is to a lesser extent also found in western Rhine region and in northern Belgium.[238]

No. 4.13 is a bronze twofold bow fibula with a typical high placed pin holder. This type (Böhme type 37e) originates from across the *limes*, in the Elbe region and Denmark, and is generally dated from the end of the second century to around 300 AD. In the Netherlands, the twofold bow fibula has been found on both sides of the *limes*, but is generally quite rare. It is not clear whether this type was worn by men or women.[239]

65 of the 78 fibulae (83.3 percent) found at Aardenburg are bronze wire fibulae. These can be divided into two groups, namely those with a semicircular bow (Böhme type 15/Almgren type 16) and those with a straight bow (Böhme type 14/Almgren type 15). The first group consists of eight specimen, while the latter contains 57 specimen. The wire fibulae have a spring wire with four coils, and a bow with a round, angular or strip-shape cross-section. The pin holder is closed in most instances. The straight wire fibulae from Aardenburg have a distinct sharp rectangular bend close to the head, which resembles the design of the simple hook fibula, as well as a straight foot. The bend is often achieved by an indentation on the bottom side of the bow. In all instances that were present, the spring is strip-shaped and consisted originally of four coils, while the bow has a round cross-section and is decorated with diagonal lines in a few instances. No iron wire fibulae, which are generally dated in the early first century AD, are among the finds.[240] The particular design of the straight wire fibulae from Aardenburg in comparison to other sites, suggests that it had a regional distribution. In general, the design is at least from the Flavian period and later (after AD 70), but reaches well into the second century and the beginning of the third century. Its distribution is concentrated along the Rhine, and to a lesser extent in the Danube region and the Alps, Germania Libera and Britannia, to which they seem to have been exported. The straight wire fibula is often referred to as Legionnaire's fibula, but burial contexts have shown that this type was also worn by women.[241] The eight wire fibulae with a semicircular bow are all of similar design (Böhme type 15/Almgren type 16), except for one (no. 4.19), which has an upward placed pin holder with an eyelet. The bow of these specimen has a triangular or roof-shaped cross-section that connects to a short foot

[234] Böhme 1972, 23-24.
[235] *ibidem*, 15.
[236] Haalebos 1972, 47.
[237] Böhme 1972, 10; Haalebos 1986, 31.
[238] Haalebos 1986, 31-32.
[239] Böhme 1972, 34-35; Haalebos 1986, 63-67.
[240] Haalebos 1986, 51-52.
[241] Van der Roest 1988, 153-154.

with a triangular pin holder. The hole in the pin holder of 4.19 suggests that is was worn in pair using a chain, in which case it was meant for females, as is also evident from burial finds in Belgium. The main distribution area was indeed Gallia Belgica, where it is dated in the second century AD, but it has also been found in the Dutch and German Rhine regions. [242]

Type	Quantity		Percentage(%)	
Ring fibulae	1		1.3	
Disc fibulae	1		1.3	
Crossbow fibulae	5		6.4	
P-shaped fibulae	3		3.8	
Hinge fibulae	1		1.3	
Single knot fibulae	1		1.3	
Twofold bow fibulae	1		1.3	
Wire fibulae (semicircular)	8	65	10.3	83.3
Wire fibulae (straight)	57		73.1	
total	78		100	

Table 3: Quantities of the types of fibulae.

7.5 Toilet implements, medical tools & utilitarian objects

The finest object among the finds of this category (plates VIII, IX and X) is the fragment of a bronze decorated mirror (no. 5.1). Its original diameter must have been around 12 cm. Mirrors were originally held in a wooden box or frame and had a circular design. At least one side was originally silvered or tinned to achieve a reflective surface. Mirrors were mostly in use by women, as is concluded from burial finds, for the same purposes they are used today. This particular specimen is dated in the middle Roman period.[243]

No. 5.2 is a typical bronze pair of tweezers as is still used today. The small size suggests personal use instead of a medical function. No. 5.3 is a quite different type of tweezers, since it was used for depilation, as can be concluded from the wide head. No. 5.4 is a handle of a pair of tweezers used for medical purposes, which is suggested by its size. These typically profiled handles were in use from the early Imperial period onwards. The other tweezers can also not be dated accurately, since they were in use throughout the whole Roman period.[244] Three additional handles (no. 5.5, 5.6 and 5.7) have presumably also been part of medical instruments or toilet implements. One object (no. 5.8) may have been used cosmetically as an ear probe, but these types of refined probes are also thought to have been used as medical tools for urological purposes.[245]

The two fragments of spoons are typically Roman forms, with droplet-shaped blades (no. 5.9 & 5.10). These types of spoons are found throughout the whole empire and date from the early imperial period to the fourth century AD.[246] No. 5.11 is a fragment of a knife that was presumable used for preparing meals. The decorated handle (no. 5.12) has a depiction of a dog chasing a hare. Many parallels have been found in northern Gaul, but also in Britain, which are generally dated in the middle Roman period. No. 5.13 was presumably also a knife-handle, with the depiction of an animal, but its poor condition dismissed further statements. No. 5.14 and 5.15 are typical iron knives from the Roman period. Their utilitarian function of both objects is clear from the blade, which is sharpened on one side only, unlike the typical knives daggers or used as weapons, which have a pointed tip.[247]

Five bronze needles are in this category of finds (no. 5.16, 5.17, 5.18, 5.19 and 5.20). No exact dating can be provided with these objects.

Various other tools and utilities were studied that were used for different kinds of industrial purposes. Four of these are bronze, netting needles, which originally have two fork-like features on both terminals (no. 5.21, 5.22, 5.23 and 5.24). The netting needles were presumable used to make fishing nets from threads.

[242] Van der Roest 1988, 155-156.
[243] Lloyd-Morgan 1981.
[244] Künzl 2002, 3.
[245] *ibidem*, 4.
[246] *ibidem*, 43; Cunliffe 1968, 101.
[247] See e.g. Bishop/Coulston 1993, 75.

Four fragments are of small bronze steelyards (no. 5.25, 5.26, 5.27 and 5.28). A complete steelyard would have had two arms (or beams) with four or more eyelets on one arm on which different weight units could be hung. The other arm had a sliding mechanism with which the preferred amount of a certain material, for example gold or silver, could be determined by using the specific weights on the other beam. Two bronze hooks (no. 5.29 & 5.30) may have been used with these types of steelyards. Three lead weights were used with these or other types of steelyards (no. 5.31, 5.32 and 5.33). The other cone-shaped perforated weights (no. 5.34, 5.35, 5.36 and 5.37) are often associated with textile manufacture, although other use cannot be excluded.[248] No. 5.38 may have been used in the same industry or was perhaps used as a plumb bob.

7.6 Vessels & lids

Bronze vessels (plates X and XI) are considered to be luxury wares because of the relatively large amount of costly metals involved in producing them. Their high cost as well as their high durability meant that they were in use for a very long period of time, making it difficult to date these objects. The high cost is also the reason for the melting down of vessels once they were worn out or damaged. This is why much less material is available in comparison to pottery.[249]

A remarkable find from Aardenburg is a bronze cup dating from the early third century AD (no. 6.1).[250] It closely resembles the Hofheim 8 type terra sigillata cups. No. 6.2 is a bronze base of a similar cup, while three other bronze bases originate from plates, bowls, or cups (no. 6.3, 6.4 and 6.5).

One decorated bronze jug-handle (no. 6.6) was originally part of a small metal jug or tankard, as can be concluded from its arched shape. Its Roman origin is obvious, but no accurate dating can be provided. No. 6.8 is a bronze attaché that was originally fixed on a bucket. It is probably of Gallo-Roman origin and is dating from the end of the second century to the beginning of the third century AD, but was in use for a longer period of time. Two lids have been recovered, of which one is decorated with the depiction of a duck that functions as a thumb-support (no. 6.9). The other object was used with a small jar or cup (no. 6.10). Both objects cannot be dated accurately.

A Roman well with ceramics dating from around AD 150, contained a set of a wine dipper and strainer (no. 6.11 & 6.12). Both objects are in considerably poor condition, but most features are still clear. These sets were widely in use in the Roman period to sift defilements such as seasonings from imported wine prior to consumption. This particular type of dipper and strainer is dating from the middle of the second century to the end of the third century AD, and is very common in the Gallic provinces as well as in the Rhine provinces, as it was produced in these areas.[251] No. 6.14 is a fragmented wine strainer that is of a similar type as the other two wine vessels. Its poor condition prevents further analysis. No. 6.13 is probably a handle from a small type of vessel.

7.7 Militaria

Among the militaria (plates XI and XII) are three buckles of which two bronze specimen (no. 7.1 & 7.2) can be characterized as military according to Oldenstein.[252] No. 7.3 is an iron specimen of a type that could not be assigned to military use exclusively, based on its design. Another accessory of the hip-belt (*cingulum*) of a Roman soldier was the hip-belt suspension, of which, presumably, no. 7.4 is an example. The scabbard-slide (no. 7.5) was used to attach the scabbard to the baldric. This particular type is dating from the second half of the second century AD to middle of the third century, and is found in the Rhine provinces and in Britain.[253] No. 7.6, 7.7 and 7.8 are probably baldric *phalerae* that may have been decorated on the front side and were attached to the balteus. These types of *phalerae* were in use in the second and third century AD. A hoard of coins that was found near no. 7.6, suggests that it dates from the third quarter of the third century.

Two bronze ringlets from *lorica hamata* show that this type of armour must have been in use at Aardenburg (no. 7.9). Iron and bronze *lorica hamata* were worn through the whole Roman period, and

[248] Evans/Metcalf 1992, 175.
[249] Den Boesterd 1956, XIX.
[250] Based on parallels and context finds, see catalogue.
[251] Den Boesterd 1956, 19-22.
[252] Oldenstein 1976, taf. 77-78.
[253] See the catalogue.

although *lorica segmentata* (laminated strip-armour) came into use in the second and third century for both legionnaires and auxilia, mails were worn by all kinds of soldiers, especially those that required good mobility such as cavalry men.[254]

One arrow-head was found at Aardenburg, namely no. 7.10, which is a bronze specimen. This type of arrow-head, with its flat cross-section, is considered to be dating from the late third century.[255] Other fragments of weapons are one upper part of a *pilum* (no. 7.11) and the two butts from spears, lances or *pila* (no. 7.13 and 7.14). The *pilum* was an offensive weapon that was thrown at the enemy to penetrate the shield and subsequently disabling it by bending of the soft iron point. The butts were put on the lower end of a lance, spear or *pilum*. It is not determinable to which of these two weapons the butts belonged. Additionally, there is no typology available by which these objects can be dated more specifically than 'Roman', since they were in use throughout the whole Roman era.[256] While Tacitus mentions that the *pilum* was the weapon of legionnaires, numerous finds have shown that it was also used by the *auxilia*. The spear and lance were the weapons of the *auxilia*, and mainly of the cavalry. The larger lances were used for thrusting, while the smaller spears were thrown at the enemy. [257] No. 7.12 is probably the upper part of a *pilum*, *plumbata* or spear, but its poor condition prevents further classification.

7.8 Horse gear

This category includes the objects that were used as equipment to ride horses (table 4; plates XII, XIII, XIV, and XV). The objects of horse gear can generally be divided into three groups, namely those from the head set, including the hackamore, the bit, the head cap, those from the saddle, including the saddle fitting, and those from the harness, including the fastening, the strap junction, the strap terminal, the decorative fitting, the strap mount, the pendant, the bell, the bone amulet, and the spur. This category also includes objects that can be considered to be related to civilian contexts. However, most information on the use of horse gear in the Roman period comes from military contexts, and from monumental reliefs and ownership inscriptions associated with the Roman cavalry.[258]

The catalogue contains three pendants that considered to be used as horse gear. Pendants were meant to decorate the horse gear and were considered to have protective powers. They were either attached to *phalerae* with an eyelet or directly to the leather straps with a simple fitting plate. The phallic pendants with a relatively large eyelet were fixed with a narrow strip of leather through the eyelet. The pendants with phallic symbols were often part of horse gear, as were *lunula* pendants. No. 8.1 is a specimen that has no exact similar parallels. It is a combination of a phallus and *lunula* symbol, as the *lunula*-shape is used for the back-plate. The use of both symbols in combination is very common on second and third century horse gear pendants. The larger phallic pendants were used as centre pieces on the headset of the horse gear, and were together with the lunula pendants, considered to have protective powers.[259] No. 8.2 is a typical heart-shaped pendant with a phallic motif on the lower end, which is very common in both military and civilian contexts in the second and third century AD.[260] No. 8.3 is a typical leaf or droplet-shaped pendant which is also very common in the north-western provinces, dating from the same period.[261]

Another type of decorative object in the category of horse gear is the bell. Three of these are among the finds from Aardenburg (no. 8.4, 8.5 and 8.6). According to Nicolay, bells are known from *auxilia*-camps as well as from civilian contexts. He dates these particular types (D and E) in the second and third century AD.[262]

The most numerous finds (34) in this category are the decorative fittings. Some additional objects may also be decorative fittings, but this is not conclusive. As is evident from the denomination, the function of these objects was mainly decorative. The fittings come is various forms and sizes. The way of attaching the fitting to the leather provides two chronologically separate groups. The first group has one or more simple shafts on the back side, which are driven through the leather and fixed on the back with round counter knobs or narrow counter plates. These separate counter knobs, which were fixed after the

[254] Nicolay 2005, 21-22; Bishop/Coulston 1993, 145.
[255] *ibidem*, 34-35.
[256] *ibidem*, 33.
[257] Tacitus *Annales* XII, 35; Nicolay 2005, 32-33.
[258] Nicolay 2005, 47-64.
[259] *ibidem*, 259-263.
[260] *ibidem*, 60-61, type B, variant 3.
[261] *ibidem*, 60-61, type B, variant 1. See also the catalogue.
[262] *ibidem*, 61-62.

fitting was attached to the leather, are a distinct first and second century feature. In later periods, from the middle of the second century to at least the end of the third century, the counter knobs were already placed on the back of the fittings with the fabrication of the object. The fittings were attached to the leather by putting the counter knobs through small holes in the leather. The decorative fittings from Aardenburg are all placed in this second group. The largest part of the decorative fittings has a round, often convex-shaped head, with one or two rivets with counter knobs on the back. One larger fitting (no. 8.31) has pelta-shaped openings and no exact parallels, but its features clearly show that is can be considered horse gear. Five fittings are Venus shell fittings, a common type in the north-western provinces (8.32, 8.33, 8.34, 8.35 and 8.36). Two fittings have a vulva (coffee bean) motif, another type that is common among horse gear. Some have on eyelet on the lower edge on which a phallic pendant was hung; a feature that may have been broken off of these specimen. No. 8.39 is a typical shield-shaped fitting. No. 8.40 is a cone-shaped object with ribs on the outside, a feature that is used in decorative fittings. Its lack of parallel finds leaves its exact function unsure. The other fittings mentioned in the catalogue are unclear as well, since their poor condition and plainness prevent further classification (no. 8.41, 8.42, 8.43 and 8.44). No. 8.45 appears as a double-button that resembles a hip-belt fastener, although it is too large to be one. The rosette feature is however very common in horse gear decorative pieces, so this specimen is therefore placed in this category.

Three fragments of spurs are among the finds, which belong to two specimen. The first one (no. 8.46) is difficult to classify in the typology provided by Nicolay, although it appears to be at least later than the first century AD. The second specimen (no. 8.47), despite its poor condition, clearly dates from the second century or later.[263]

Quite remarkably numerous in the category are the bridle rings (14) and one yoke fitting. These objects are generally not considered to be part of the horse gear, but instead associated with draught-animals. Horses could be used for this purpose, as is evident from images on monumental reliefs and coins, but oxen and mules were also used, presumably for heavy-weight transport. The bridle rings were most likely used with the yokes of the carts. The so-called Gallo-Roman double yoke was used to put one pair of oxen, mules or horses to a cart. The wooden yoke rested in the neck of both the animals, where it had its distinctive triangular shape and in the upper side bronze rings for conducting the bridles. With only one animal put to a cart, presumably no wooden yoke was used, but a leather construction instead. Archaeological finds of the double yoke are rare, but the few yokes found were made of wood, strengthened by strips of lead and covered with leather. In general, the construction has an elevation just above the necks of both animals. In the centre of the elevation is a bronze bridle ring and two rings or decorative knobs are placed on the sloping sides. The latter objects are driven through the wood of the yoke and are used for fixing the V-shaped iron bow that is hung over the neck of the animal. Additional decorative fittings and bridle rings were placed on both ends of the yoke. In most cases, only the bronze parts of the Gallo-Roman yoke are preserved in the archaeological record.[264]

Type	Quantity	Percentage (%)
Pendant	3	4.8
Bell	3	4.8
(Decorative) fitting	38	61.3
Spur	2	3.2
Bridle ring	14	22.6
Other	2	3.2
total	62	100

Table 4: Quantities of various types of horse gear.

7.9 Rings

The metal rings found at Aardenburg have been placed in this separate category (plates XV and XVI). In total 21 rings were found, of which nineteen are bronze, one iron, and one lead. Their function is not traceable, since non-ornamental rings were used for various purposes that cannot be determined from their shape or size, while valuable context data is missing in this case. Possible applications of these rings

[263] Nicolay 2005, 63-64.
[264] *ibidem*, 250-252.

are in combination with handles and hinges of furniture, as horse gear with bridles, bits and strap dividers, but other purposes are certainly not to be ruled out.

7.10 Miscellaneous and unknown objects

This category contains all remaining metal objects of which the exact function is unsure (plate XVI).

The bronze wheel-shaped amulet (no. 10.1) is difficult to relate to any use. It could have been worn as a personal amulet, but may also have been applied on another object as a decorative piece. Its context and function are therefore also unclear, as it may have been for private use only or perhaps used in a public religious context. The symbolism of the wheel seems to date back as early as the bronze age in Europe. Miniature wheels appear together with miniature axes in the European archaeological record in both the prehistoric and the Roman periods. The wheel-sign is thought to have had protective, talismanic properties in prehistory and may be associated a Bronze and Iron Age sky-cult in which it represented the sun. The sun-wheel symbol is closely associated with the Celtic god Taranis, which was syncretised with Jupiter in the Roman period. It appears in the form of pins, amulets, pendants and necklets, and also incorporated in the armour of warriors. The unrealistic and stylised models are considered to be a combination of decorative and ritual elements, as is the case with this particular specimen, taking into account its very wide spokes and not precisely round shape. The wheel-models are distributed most widely in the Romano-Celtic areas and are in general frequently from rituals contexts.[265]

The same uncertainty surrounds the antler-shaped fragment of a bronze object, presumably an amulet. No parallels are however known, and the object could therefore also have had a different function (no. 10.2).

Two fragments of bronze chains could possibly belong to the same chain, but no context data of both finds are available (no. 10.3 & 10.4). The heaviness of the links suggests that the chain was not used in combination with jewellery, and although similar chains have been associated with horse gear, the exact function of both finds remains unclear.[266]

The two bronze nails that have been included in the catalogue are distinctly Roman (no. 10.5 & 10.6). Other nails, made of iron, were present among the total set of metal finds, but are not discussed in detail here, since it could not be fully determined whether these nails were either Roman or medieval due to the poor condition these are in. The contexts of these finds do however suggest that they date from the Roman period.

No. 10.15 is possibly a hinge, but it may have had a different purpose. Both ends of this bronze object depict a bearded man that may be Silenus. Two bronze ornamental pieces are possibly decorative fittings (no. 10.16 & 10.17). These fragments are however difficult to classify. The fittings could have been either used as horse gear or perhaps with the military hip-belt. Two bronze objects, in poor condition, may have been part of medical or cosmetic instruments, or perhaps other personals tools (no. 10.18 & 10.19). Lack of parallels prevents further classification of these objects. Two objects are possibly handles, but again their poor condition leaves this unsure (no. 10.20 & 10.21). This also applies for the other twelve objects in this category, since their state and lack of parallels leaves their exact function unclear.

Category	Quantity	Percentage (%)
Statuettes	5	1.4
Furniture accessories	50	14.2
Jewellery	36	10.3
Fibulae	78	22.2
Toilet implements, medical tools & utilitarian objects	38	10.8
Vessels & lids	14	4.0
Militaria	14	4.0
Horse gear	62	17.7
Rings	21	6.0
Miscellaneous and unknown objects	33	9.4
total	351	100

Table 5: Quantities of objects in the various categories.

[265] Green 1984, 276 f.f.
[266] See for example Walke 1965, taf. 131-132.

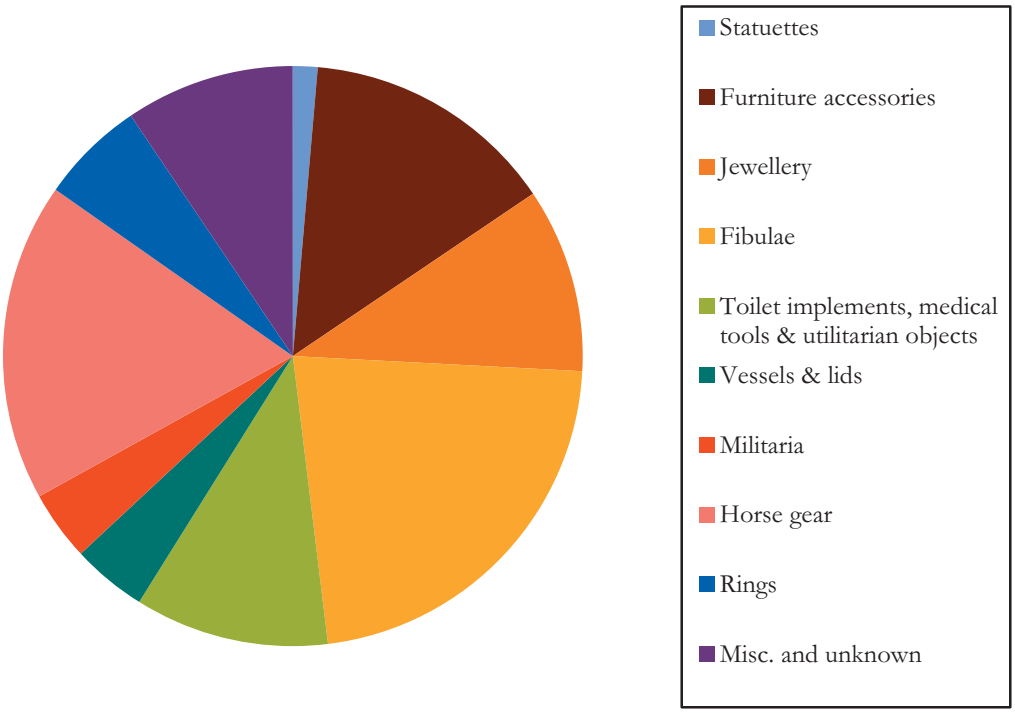

Figure 21: Diagram of the quantities of the objects in the various categories.

7.11 Synthesis of the metal finds

The sets of objects described above provide only a general image of the Roman occupation at Aardenburg. It must be emphasized that only parts of the inner terrain of the fortification have been excavated and even fewer areas outside of it (see fig. 12). Another notable circumstance is that very few data on the contexts of the finds were available for this study. Next to this, no conclusive inscriptions pointing to the possible presence of a particular military unit are available, as is sometimes the case with *castella* along the *limes*, where it is known which cohort was present in a certain period of time. It may however be useful to compare the whole assemblage of metal objects to that of other Roman sites.

Several problems do however emerge when comparing metal assemblages, which limit the certainty of the conclusions drawn. As is the case at Aardenburg, most Roman settlements are not fully excavated, limiting the representative character of the set of metal objects, since the distribution pattern of metal finds may not be similar along the whole settlement area. Another factor is that the preservation of metal finds differs in certain environments. At Aardenburg, very few iron finds have been recovered, which is due to the sandy soils of the site in which iron is persevered poorly. Thirdly, it must be taking into account that about 20 years ago metal detectors were introduced into archaeological fieldwork. This considerably increased the number of metal finds that were recovered at archaeological excavations. It must therefore be noted that older excavations have yielded less metal finds than those carried out in recent decades, particularly the very small objects. At Aardenburg, almost all excavations were carried out before the metal detector era.

Table 5 and figure 21 show the assemblage of the Aardenburg metal finds. A striking characteristic that becomes evident instantly is the low quantity of militaria. Only four percent of the metal finds are certainly of military origin. A study the military metal finds of both the *castella* of Bunnik-Vechten (Fectio) and Leiden-Roomburg (Matilo) along the western Rhine-*limes* show that both these sites contained large quantities of militaria.[267] Both *castella* were set up in the first century AD and continued, in several construction phases, until around AD 275 and were thus occupied quite longer than Aardenburg. At Fectio, the military objects were all recovered at the site of the *vicus* next to the *castellum*. It is presumed that the objects were produced and repaired there for the two consecutive cohorts of cavalry that were present here. At Matilo, few military metal finds were recovered at the civilian settlement. Most finds

[267] Rodenburg 1998. It must be emphasized that only the metal finds (excluding fibulae) that were considered military were included in the thesis of C. Rodenburg.

come from the Corbulo canal, which is located right next to the fortification. It is presumed that these objects were disposed of directly from the fort. It must be emphasized that all military metal finds from both these sites were thus not recovered from the inner terrains of the fortifications, but originate from outside the *castellum* walls.

At Fectio, 25 parts of armour were found, while at Matilo, 91 parts were recovered. In comparison, at Aardenburg very few objects can be characterized with certainty as parts of armour. The same notion is evident for objects belonging to soldier's personal gear. Only eight were found at Aardenburg, while at Fectio 37 objects were found and 40 at Matilo. Remarkably, the quantity of objects belonging to horse gear from Aardenburg is more comparable to Fectio, with 62 at Aardenburg compared to 69 at Fectio, while at Matilo only 17 of these objects were found. A further analysis of the horse gear category shows that the dataset of Fectio is roughly comparable to that of Aardenburg in terms of proportions of types of horse gear objects, with the exception of the clearly larger amount of bridle rings and the absence of saddle parts at Aardenburg.[268]

Both Fectio and Matilo are clearly military settlements, although they had the customary *vici* in their vicinity that were facilitating the army unit stationed there. A site that is perhaps more comparable in terms of geographical location is that of Scheveningseweg at The Hague, since it is situated on the Older Dune formations at the North Sea coast.[269] It must be noted here that the excavated area of Scheveningseweg is considerably smaller than that of Aardenburg, which had roughly four times the excavated surface area. The upper level and second phase of Roman occupation showed that a Romanized settlement was established here around the middle of the second century and was probably part of a *vicus* of a nearby army camp. A military component is clearly visible when looking at the set of metal finds.[270] The militaria are relatively numerous and comparable in terms of quantity to those of Aardenburg, but far greater in relative numbers. A larger number of exclusively military fibulae were found at Scheveningseweg, namely 17 (56 percent), compared to 8 (10 percent) at Aardenburg. The total amount of fibulae at Scheveningseweg is 30 (of the second phase of Roman occupation), while at Aardenburg 78 fibulae were found. In terms of quantities of fibulae, the fort at Niederbieber in Germany may be even more useful to compare to Aardenburg, since the fibulae found there were from within the *castellum* terrain.[271] The period of occupation is also similar, from the end of the second century to middle of the third century AD, and it has been suggested that its *principia* shares similarity in design with that of Aardenburg.[272] At Niederbieber around 72 percent of the fibulae are of military origin, which is again in sharp contrast to Aardenburg, with only 10 percent of the fibulae being clearly military. Unfortunately, the other metal finds from Niederbieber were not published extensively.

Considering the other categories of finds, some similarities between Scheveningseweg and Aardenburg are evident. However difficult to compare, the categories of jewellery, toilet implements and utilitarian objects seem roughly similar in terms of relative quantities and nature, showing clearly the presence of females in both settlements. The relatively large amount of furniture accessories at Aardenburg is not present among the finds of Scheveningseweg, as also appears to be the case with the *castella* along the Dutch Rhine area.[273] However, similar quantities are found at the large fortification of Straubing-Sorviodurum at the Danube *limes* in southern Germany, but the total set of metal objects of this site is quite different than that of Aardenburg, since it contains many more purely military objects.[274] Other large army camps, such as the legionary fort at Caerleon (Wales), do not contain as many ornamented furniture accessories, but again have revealed large amounts of military objects, as can be naturally expected at these large military sites.[275] It may be thus safe to conclude that furniture accessories do not exclude military presence, since caskets, chests and cupboards must also have been in use in military settlements.

Many parallels of the furniture accessories come from Augst (Augusta Rurica) in Switzerland. The relatively high number of these objects from Aardenburg raise the question whether the Roman settlement can be considered to have been of an urban nature as well, although – naturally – of much

[268] Rodenburg 1998, 74.
[269] Waasdorp 1999.
[270] *ibidem*, 169-170.
[271] Gechter 1980.
[272] See § 6.3
[273] See for example Zwammerdam (Haalebos 1977, 217 ff.) and Alphen aan den Rijn (Haalebos *et al.* 2000, 149 ff.).
[274] Walke 1965.
[275] Evans/Metcalf 1992.

smaller size.[276] Perhaps such a type of settlement is the only possibility when looking at the total dataset of metal objects from Aardenburg. A purely military site seems unlikely, since far too few objects of weapons, armour, and personal gear (from soldiers) have been found. Additionally, many metal finds point to non-military occupation, such as the jewellery that was clearly worn by women. Nicolay has made clear that horse gear can not be solely associated with military occupation, and that its metal remains are often found in civilian contexts as well, especially from the third century onwards.[277] Notable are also the relatively large amount bridle rings, which are associated with draught animals.

From the above it seems clear that Aardenburg was not as strongly militarized as the 'classical' *castella* along the Rhine. Its civilian component is much clearer in the total set of metal finds than its military component. Based on the metal finds, it is most plausible that Roman Aardenburg was an urbanized town rather then a *castellum* in its period of existence. The fortification would have had basic military presence in the form of a small garrison that supported the governing authorities and was responsible for security, explaining the few military objects that have been found. Of course this situation could have been different throughout its period of existence from ca. AD 170 to 275. Such variations that may have a occurred in this narrow period do not become evident in the set of metal finds since dating metal finds is often not precise. Therefore, initial military presence could have been reduced as the settlement grew into a more civilian town and perhaps the settlement became militarized again during the Gallic Empire.

The study of the metal finds has not challenged the generally presumed occupational period for Roman Aardenburg, since no objects clearly date from earlier or later centuries. Most importantly, there are no typical and distinctive late Roman finds such as fibulae. This again rules out that the fortification of Aardenburg may have been of late Roman origin, as is also evident from the numismatic data.

[276] For the furniture accessories of Augst see Riha 2001.
[277] Nicolay 2005, 12.

8 CONCLUSION

The previous chapters have shown that the Roman fortification of Aardenburg is thought to have been part of a defensive system along the coastline of Germania Inferior and Gallia Belgica that was constructed by the Romans around AD 175. This line was meant to protect the areas that were of vital importance to the economy of the northern parts of the Roman Empire. This protection resulted in a period of unprecedented economic activity and prosperity.

In the Roman period, the coast of both Flanders and Zeeland was inhabited by the Menapii, a tribe who are known from historical and epigraphical sources only. The most important source of subsistence of these inhabitants was live-stock and fishery, but they also produced salt. The river Scheldt, of which the course was similar to the present-day Oosterschelde River, was presumably the natural border between the Roman provinces of Gallia Belgica to the south, and Germania Inferior to the north. In Zeeland, the settlement that was presumably called Ganuenta, which was located north of present-day Colijnsplaat, has produced many archaeological finds that provide a unique insight in the intensity of the economic activity in the middle Roman period. This settlement must have been of the most important Roman trade centres along the coast of the Netherlands and Belgium, together with the settlement located at Domburg, where the other temple of Nehalennia stood. Ganuenta was connected to the Rhine with channels and watercourses and therefore a place of transhipment where inland-shippers and seafarers found one another. The settlement was thus a junction in the 'international' trade in this part of the Roman Empire. The votive altars that have been found at Colijnsplaat and Domburg clearly show the international character of the trade, and also imply that both settlements were Romanized. The nature of the Nehalennia cult shows that the worship of the deity was a typically Roman matter in which the business elite was most prominently visible.

The coastal areas were protected by a series of fortifications that were constructed along the coast. Presumably, this line was comparable to the typical defensive lines that the Romans had set up along the borders of the Empire. It is assumed that small fortifications and watchtowers were constructed directly at the coast on the Older Dunes formations. The bases of the Roman navy were presumably located here as well. Coastal erosion has subsequently engulfed and destroyed these sites in later periods. However, similar sites on the southern coast of Britain and along the Rhine-*limes* have revealed some of the structure of this defensive line. The fortifications in the hinterland are considered to be part of the coastal defence system as these provided logistical support and supplied troops to the smaller forts and stations. Apart from Aardenburg, these larger bases were probably located to the north near Ouddorp on Goerree, near Oostvoorne, and close to Katwijk. To the south, at the Flemish coast, these forts were located at Bruges and Oudenburg.

The fortification at Aardenburg was constructed on a favourable location, namely on a Pleistocene cover-sand ridge and next to a natural watercourse, on a site that had been inhabited from prehistoric periods onwards. Numismatic finds and historical data have revealed that the Roman fortification was established around AD 170-175. It is however feasible that a settlement was already present there, in which case the occupation of Roman Aardenburg must have started earlier, as may be concluded from coin finds dating from the early Roman period. The Roman army connected Aardenburg with the other fortifications in the region by a network of roads. Oudenburg is the most notable of these nearby forts. It is in many ways comparable to Aardenburg. The construction of the fortification seems to have been carried out in the same period and the location and distance to the coastline suggest a similar military function. It is even conceivable that the position of Aardenburg was taken over by the fort at Oudenburg when Aardenburg was deserted around AD 273, as a result of the worsening wet condition and flooding of the landscape. The fortification at Maldegem, about 6 km to the south of Aardenburg, is considered to be a direct forerunner of that at Aardenburg.

It has been suggested that the occupation of the fort at Aardenburg consisted of auxiliary forces, and perhaps a combination of cavalry and foot soldiers (*cohors equitata*). Thoen has suggested that the rectangular plan of the fort and the location close to the bordering coastal plain imply that mainly foot soldiers (*cohors peditata*) must have been stationed at Aardenburg.[278] The finds of stamps on roof tiles and hypocaust tiles do not provide further clues on the nature of the troops, but they may have originated

[278] Thoen 1993, 27.

from the Roman part of Germania, as can be concluded from the similarity of ground plans of several *principia* in the German Rhine area.[279] The roof tile stamps from Aardenburg can point to the same origin of the troops, however, the PRIMACORT stamp may point to relations with military settlements in the Low Countries.[280]

The study of the metal finds from Aardenburg has shown that a civilian component is clearly visible in the archaeological record. Remarkably, relatively few exclusively military objects are among the finds. Notable is also the lack of iron objects among the metal finds due to the poor preservative conditions of the sandy soils, which could be related to the low number of objects of military equipment. It must also be noted that most of the excavations at Aardenburg took place before the introduction of the metal detector in the 1980's, thus the smaller metal objects may have been missed upon excavating. These circumstances do however not suppress the strong civilian component in the whole set of metal finds. The civilian use of militaria and horse gear is subject of a recent discussion in the archaeology of the Roman northern provinces, in which Nicolay has pointed out that from the late first century AD these objects are not strictly used by the Roman military, but also by civilians.[281] The bridle rings are however notable, since their large amount seems unusual. This could suggest that draught animals were frequently present in the settlement.

It has become evident that the study of the metal finds does not support the theory of the purely military function of Aardenburg in the Roman period. No evidence of a (large) army unit is present in the total set of finds. The assemblages of typical *limes-castella* clearly differ from that of Aardenburg, as they show much greater quantities of militaria and typical military fibulae. The large amount of metal finds that point to civilian occupation imply that in the settlement was a town rather than a *castellum*. In addition to this, it must be noted that several find categories can not be exclusively associated to civilian use either. The finds of furniture accessories may originate from furniture used by military personnel. The same can be said about the other objects that were not exclusively used by women or infants. Some of the fibulae, bracelets and finger rings were clearly used by women. No hard conclusion can be drawn from this however, since many soldiers lived with their families in the army camps from the second century onwards.

The towers of Roman fortification at Aardenburg were round, a feature that was only applied in civilian settlements in the second and third century AD.[282] In the fourth century, round towers were typical for Roman *castella*. It is however unclear how strict this assumption can be taken, and whether Aardenburg is possibly an exception to this. The small Gallo-Roman temple found within the fortification walls is of great importance in this discussion, because the presence of temples within *castella* is very unusual. Trimpe Burger has suggested, based on the finds, that this structure was not originally incorporated into the ground plan of the fortification, but that it was a later addition. Around AD 225 the settlement gradually changed its military status into a civilian status. This hypothesis is endorsed by Van Dierendonck, who states that the change from a military settlement into a civilian one involved newly added wall paintings in certain buildings. The increased quality of the wall paintings can thus be connected to the change in status of the settlement.[283] Perhaps the discussion of the military or civilian character of the settlement is not as relevant as it was regarded in the past. The Severian Emperors Septimus Severus (AD 193-211) and Severus Alexander (AD 222-235) incorporated many civilian towns in their military defence system in the first quarter of the third century, by which the distinction between military and civilian settlements faded.[284]

Concerning the dating of the settlement, the study of the metal finds has not challenged the generally accepted dating of Roman Aardenburg, since no finds clearly date from outside the range of AD 170-275. In general, the dating of metal finds is bound to fairly large ranges of time, since specific typologies are not present and because of the fact that many types of objects remained almost unchanged for centuries. However, the finds do not challenge the notion of occupation of the site before AD 170, but the end of the occupation seems to be quite well fixed at a date no later than AD 300, since specific late Roman finds are not present at all.

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[279] See § 6.3.
[280] See § 6.2.2.
[281] Nicolay 2005, 11-12.
[282] A copperplate from 1581 by Abraham Ortelius shows the ground plan of the Brittenburg at Katwijk with round towers. If the accepted dating of this site indeed is AD 160-240, then the similarity with that at Aardenburg is remarkable.
[283] Van Dierendonck 1987.
[284] Lamarcq/Rogge 1996, 65.

The conclusions of this material study raise the question whether the model of the Roman coastal defence system set up in the last quarter of the second century has to be reviewed. This is however not needed if the 'town', which Aardenburg subsequently must have been, was still included in the defence system. Perhaps the model needs to incorporate a more flexible Roman force in which the Classis Germanica played a leading role. The static auxiliary forces of the Roman army may not have been very useful to counteract the attacks of invaders from the sea and was thus not present at Aardenburg. Instead a flexible navy that operated directly at the coast may have been employed. Aardenburg may then have been a regional logistical base of these forces, which had their main defensive bases directly on the coast at the previously discussed sites such as Ouddorp and Oranjezon. Such a large logistical base would have become a major commercial centre for the region as well, since it was an excellent junction between the hinterland of Flanders and the sea routes of northern and southern continental Europe and to Britain. This hypothesis implies that the settlement of Aardenburg was a main trading port in the region, in which it functioned as a transhipment station where both traders over land and seafarers met, not only facilitating the military forces but also providing civilians with excellent commercial opportunities. This in contrast to the settlement at Colijnsplaat which functioned as a transhipment port for inland-shippers and seafarers. The relatively large amount of bridle rings from Aardenburg support this hypothesis, since goods that were traded over land were carried in carts with draught-animals. The harbour of this town was constructed next to the watercourse that connected the sand-ridge to the sea. Finds recovered outside of the modern town's centre show that the Roman settlement was spread out much further than just inside en directly outside the fortification walls, implying that the size of this settlement may have been considerable.

As the capital of the Frisiavones-tribe is still missing on the provincial-Roman map of the Low Countries, Aardenburg can be considered another candidate next to the settlement of Ganuenta at Colijnsplaat.[285] Roman Aardenburg may have been fortified within the same construction programme as Forum Hadriani, in the second half of the second century AD, further supporting this hypothesis.[286] Additionally, its round towers further suggest its function as a fortified town rather than a *castellum*. The fragment of the inscription found at Aardenburg may originate from the construction of the fortification, as it could date from around AD 160-180.

When implying much importance to the logistical role of Aardenburg in the Roman period, the reasons for its final downfall in the late third century also become clearer. With the landscape becoming ever more wet as a result of the initial phase of the late Roman transgression, the natural watercourse was likely to have silted up and the roads leading to the town would have also been rendered useless. The town would therefore have become isolated, as traders, both land- and seaborne, could not reach it anymore, and its logistical function was thus lost. The inhabitants deserted the town as the set out for a drier landscape. This transition happened in the late third century in which the western Roman Empire was already in distress as it was invaded by Germanic tribes, while Roman warlords fought among each other for the Imperial office. The fortification walls of Aardenburg were demolished in the early Middle Ages as the stone was reused to build a new town.

[285] Stuart/Bogaers 2001.
[286] De Jonge *et al.* 2006, 113-116.

ABBREVIATIONS

BAR	British Archaeological Reports
BROB	Berichten van de Rijksdienst voor het Oudheidkundig Bodemonderzoek
JROB	Jaarverslag van de Rijksdienst voor het Oudheidkundig Bodemonderzoek
NAR	Nederlandse Archeologische Rapporten
OMROL	Oudheidkundige Mededelingen van het Rijksmuseum van Oudheden te Leiden
ORL	Obergermanisch-Raetischer Limes
RAM	Rapportage Archeologische Monumentenzorg

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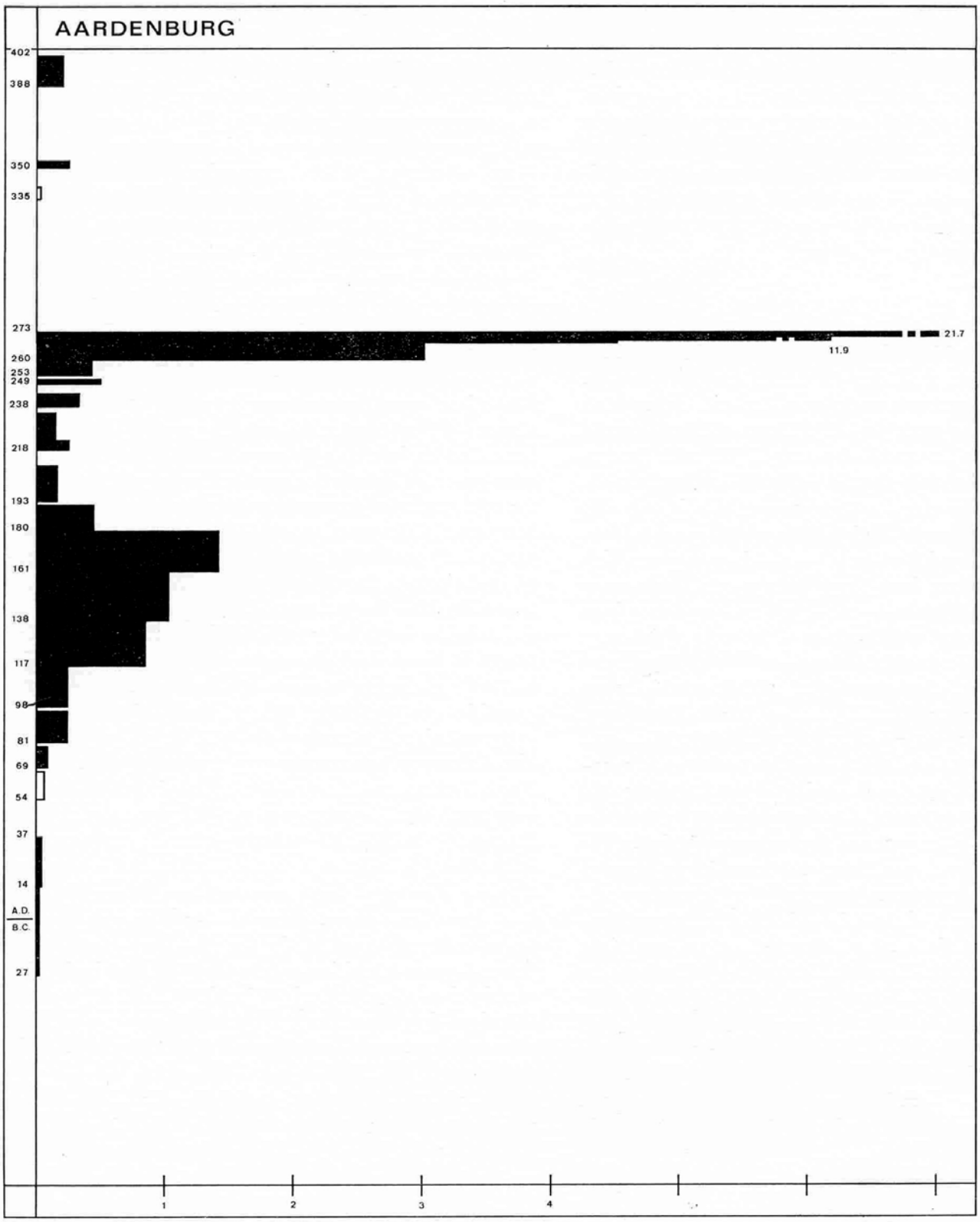
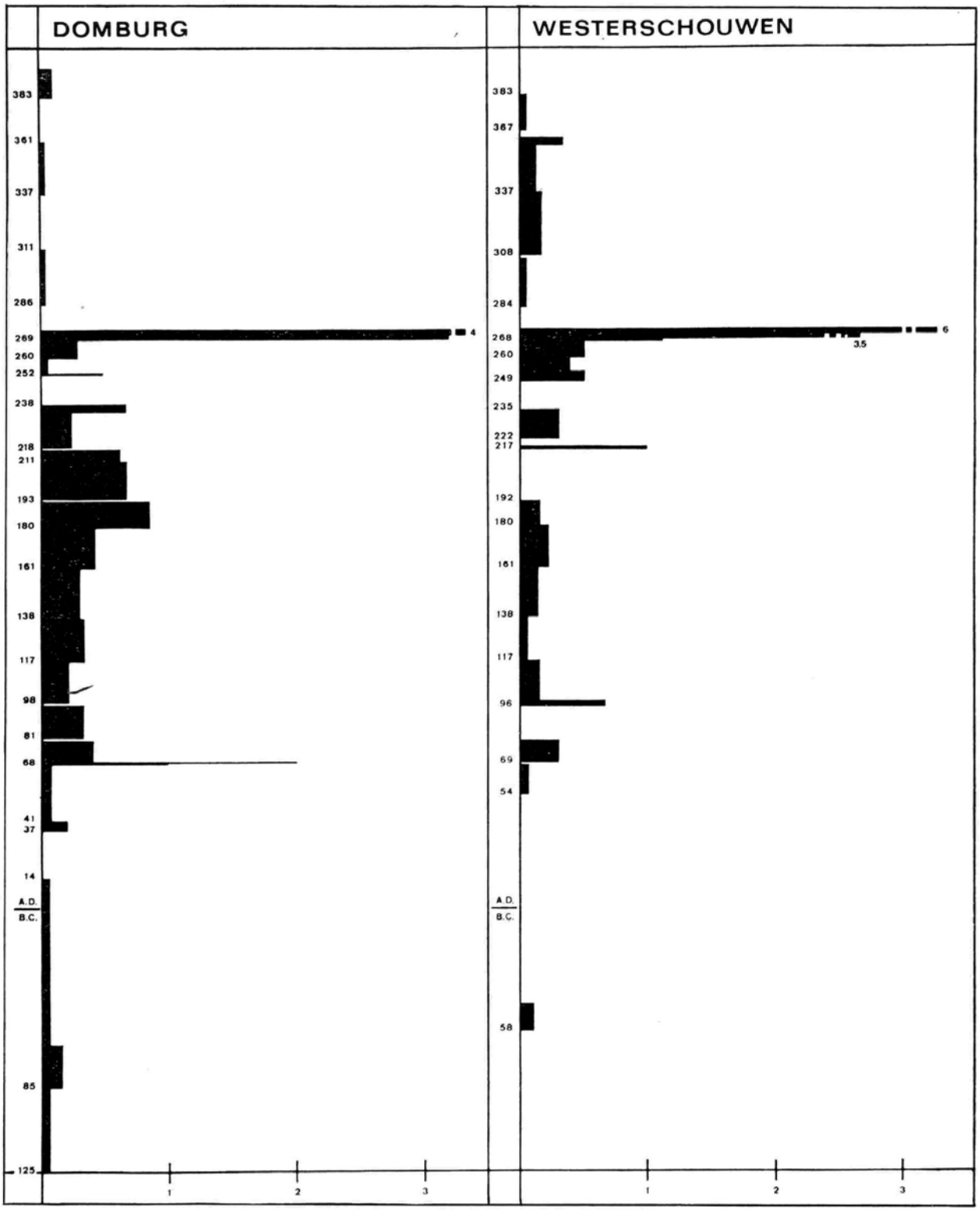
APPENDIX I – NUMISMATIC GRAPHS

Numismatic graph of the Roman period of Aardenburg (after: Boersma 1967)



Numismatic graphs of the Roman period of Domburg and Westerschouwen (after: Boersma 1967)



APPENDIX II - CATALOGUE

1 STATUETTES

1.1 Bacchus

inventory no.: 002-17
find no.: 1961-Q-28
context: Trench I, in Roman layer containing many mussel shells.
height: 13.1 cm
technique: Cast hollow.
state: Parts of both lower legs and the right forearm, the attribute in the left hand with part of the fingers, and the penis are missing. Cleaned and treated with polyvinylchloride in 1961 at Amersfoort ROB. The surface is badly corroded and has dappled green patina.
description: Boy striding, nude except for short mantle, with long hair and flower on top of his head. The youthful appearance, the long hair and the flower characterise this figure as Bacchus. The right leg is placed forward, the left one backwards. Only the left leg is slightly bent. The body is inclined backwards and to its right. The right upper arm is extended sideways and obliquely upwards, the forearm was obviously held almost straight upwards. The head is turned to its right and thrown backwards. The gaze follows the movement of the arm. The left shoulder is lowered. The left arm is held at some distance from the body and is slightly bent. In the hand are the remnants of an attribute. The modelling of the back conforms to the stance of the body. The short mantle crosses the body obliquely both in front and at the back, from the right shoulder to the left hip. Long curly hair covering the ears, frames the face and hangs down onto the shoulders. On top of the forehead there is a small four-petalled flower.
The treatment of the body is naturalistic. The muscles are clearly indicated. The buttocks are marked. The nose is thick and blunt, the closed mouth small. Vague grooves suggest the eyes. The hair is naturalistically treated without sharp divisions between the curls. The skull is damaged by corrosion. The folds of the mantle are straight.
Though badly damaged the excellent quality of this figurine is still apparent.[287]

1.2 Bacchus

inventory no.: 002-274
find no.: 1961-SB-5
context: Trench opposite of St. Bavo Church, in mixed soil containing Roman and Medieval sherds.
height: 6.4 cm
technique: Cast solid. Presumably the breasts had been inlaid with copper. At the back a rectangular hole for a fastening device.
state: The copper in the breasts is missing. Slight damage in front of the leg. Cleaned and treated with polyvinylchloride in 1961 at Amersfoort ROB. The surface shows traces of corrosion and has a shiny brownish green patina.
description: Young boy sitting, with a wreath of flowers in his hair and a basket with flowers in his left hand. The flowers of wreath and basket characterise this figure as young Bacchus. The right leg is slightly bent and held obliquely downward and to the right. The left leg is bent at a sharp angle; it is held downward and the sole of the foot touches the left side of the right leg. The figurine is not able to sit by itself. It may have been seated on a panther or lion or, as might be deduced from the rectangular hole at the back, attached to some object. The trunk is slightly

[287] Cit. Zadoks-Josephus Jitta 1969, 14.

curved to its left. Presumably the breast had been inlaid with copper. The right arm is bent at a sharp angle and held sideways; the hand lies on the back of the head. The left upper arm is held obliquely sideways, the forearm obliquely forward; the hand supports a basket filled with flowers which leans against the left high. The buttocks are marked, but the back cursorily treated and there is no spinal furrow. The head is inclined to its right. The curly hair covering the ears is surmounted by a wreath of flowers. The treatment of the body is naturalistic. The muscles are clearly indicated. The toes and the fingers of the left hand are carefully modelled, the fingers of the right hand, at the back of the head, are cursorily treated. A circular incision indicates the navel. The neck is very short and thick. The back of the head is flat. In the round face the blunt nose and the closed mouth are carefully modelled. Eyelids and eyebrows are rendered in shallow relief. The curls are vaguely indicated, except for the right side of the face where some sharp grooves can be seen. The wreath consists of a cord to which stylised round flowers are tied, of which four are visible and one is covered by the right hand. Each flower has a distinct button and two rows of vaguely indicated petals, which are separated by a clearly marked circular groove. The oval basket tapers towards the bottom. On top and below there is a marked rim. At the sides and on the upper rim there is a slight suggestion of wicker-work. Seven flowers fill the basket and form together a convex surface. Each flower consists of a large button surrounded by petals. This charming figurine is one of the most attractive specimens found in Dutch soil.[288]

1.3 Bacchus

inventory no.: 002-13
find no.: 1961-Q-2
context: Test pit and the end of trench I, in Roman layer ca. 30 m to the east of a large Roman building, at a depth of around 30 cm below ground level.
height: 20.2 cm
technique: Cast hollow.
state: The baluster is damaged on top and below. The nose is damaged. Cleaned and treated with polyvinylchloride in 1961 at Amersfoort ROB. The surface shows traces of corrosion and has a dappled brown and green patina.
description: Male calyx bust wearing a mantle, on baluster. Hair dress and nudity characterise this figure as a deity. From comparison with better-defined specimens it can be deduced that Bacchus is represented. The baluster shows a low square base and a roughly cubic capital merging into a bust. Presumably it formed part of the leg of a couch. The bust rises from a simplified acanthus leaf. It comprises parts of the breast and the shoulders and is trapeze-shaped. Breast and head are both unilateral. A mantle which may represent a goatskin is fastened on the right shoulder. The head is held slightly backwards to its right. The straight hair leaves the ears uncovered. It is parted in the middle and has pointed outline on top of the forehead. It frames the face like a triangular crown. At the back its structure is not indicated. The thick neck is extremely short. The round face has bulging cheeks and a pointed chin. The nose is thick and blunt. The small mouth is closed and the lips are hardly indicated. The left eye is damaged by corrosion. The right eyelids and eyebrow are modelled in shallow relief and the pupil is indicated by a hollow. The ears are cursorily treated.[289]

[288] Cit. Zadoks-Josephus Jitta 1969, 18-19.
[289] Cit. Zadoks-Josephus Jitta 1969, 36.

1.4 Isis-Fortuna

inventory no.: 002-103
find no.: 1962-Q-467
context: Trench VIII, on Roman pavement, ca. 12 m to the south-west of foundation of the small Gallo-Roman temple.
height: 15.7 cm
technique: Cast hollow.
state: The right lower leg, the major part of left lower leg and the left arm, the major part of the attributes in both hands are missing. One large hollow in front, one at the back; both are filled up. Several breaks. Cleaned, restored and treated with polyvinylchloride in 1962 at Amersfoort ROB. The surface is badly corroded and has a dappled green patina.
description: Woman standing, wearing *chiton* and mantle, two ostrich-feathers on top of her head, holding the remnants of a rudder with her right hand and those of cornucopiae in her left hand. The ostrich-feathers and the remnants of rudder and cornucopiae characterise this figure as an Isis-Fortuna.
The weight of the body rested on the left leg. The right leg is flexed; its knee is in advance of the left. The body is inclined backwards and to its left. The right hip is curved outwards. The right arm is held close to the body, the forearm is extended obliquely sideways. The hand held an attribute, presumably a rudder, of which a small part remains. The left arm was held downward and close to the body; its hand held a cornucopia, the lower part of which is preserved. The right shoulder is lowered. The modelling of the back conforms the stance of the body. The chiton covers the whole body except for the right hand and the rise of the neck. The mantle lies over the left shoulder, it crosses the body obliquely, both in front and at the back, and passes over the right hip. The head is inclined to its right. The wavy hair covers the ears. On top of the forehead two joined ostrich-feathers stand upright. The principle forms of the body are visible under the garments, in particular the breasts are marked. The neck is broad. Details of the hand, face and feathers can no longer be distinguished. The hair lies flat on the skull, it frames the face with wavy strands and is gathered in a knot in the nape of the neck. Two ringlets hang down in front of the shoulders.
Though badly damaged, the excellent quality of this figurine is still apparent.[290]

1.5 Mercurius

inventory no.: 002-81
find no.: 1962-Q-409
context: Trench IX, at the deepest excavation level (second half of second century AD).
height: 6.9 cm
technique: Cast solid.
state: Major part of the right arm and of the right lower leg, part of the left lower leg, the entire right wing, major part of the left wing and the attribute in the left hand are missing. Two breaks in left arm. Cleaned, restored and treated with polyvinylchloride in 1967 at Amersfoort ROB. The surface has a dappled green patina.
description: Young man standing, nude, with traces of wings in his hair. The traces of wing and the entire position characterise this figure as Mercurius.
The weight of the body rested on the right leg. The left leg is flexed and placed backwards; its knee is in advance of the right one. The body is inclined backwards and to its left. The right hip is curved outward. The left upper arm is held sideways and slightly backwards at some distance from the body. The forearm is extended obliquely forward in the position of holding a *caduceus*, of which a small part remains in the hand. The right shoulder is lowered. The modelling of the back conforms the stance of the body. The head is inclined to

[290] Cit. Zadoks-Josephus Jitta 1969, 68.

its right. It had two wings on top. The curly hair covers the ears. The treatment of the body is very naturalistic. The muscles are indicated. At the back the spinal furrow and the buttocks are marked. The left hand is cursorily treated. The neck is sturdy. The chin is receding. In the broad face the features are indicated in shallow relief without any details. The curly hair is perfunctorily rendered.[291]

2 FURNITURE ACCESSORIES

2.1 Handle

inventory no.: 002-206
find no.: 1967-H-314
context: Trench VI, level 4.
length: 15.0 cm
description: Handle of cast bronze of which both ends have been broken off. The front side is somewhat bulged, while the back is flat, hollow and undecorated. On both ends are crosswise features that connect to the curved terminals, to which the hinges were attached. The further parts are broken off and could have been acorn shapes (see no. 2.3). The bow has a hexagonal cross-section and a bulge in the middle. The handle is in fairly good condition and has a green and brown patina on it. This object is likely to be from the same mould as 002-19.
Cf.: Riha 2001, taf. 7, no. 79; Waasdorp/Zee 1988, 39, no. 6.5.

2.2 Handle

inventory no.: 002-19
find no.: 1961-Q-241
context: Trench I, in a small pit containing shells.
length: 15.0 cm
description: Handle of cast bronze of which both ends have been broken off. The front side is somewhat bulged and five-sided, while the back is flat and hollow. On both sides are knots forming joints to the bended round ends. The further parts are broken off and could have been acorn shapes (see no. 2.3). The handle is in fairly good condition and has a green and brown patina on it. This object is likely to be from the same mould as no. 2.1.
Cf.: Riha 2001, taf. 7, no. 79; Waasdorp/Zee 1988, 39. no. 6.5.

2.3 Handle

inventory no.: 002-201
find no.: 1957-OVL-36
context: Roman layer north of a sewer trench, between 1.20 and 1.30 m below NAP, beneath a reddish layer of loam.
length: 9.5 cm (reconstructed)
description: Bronze handle in good condition; one end is broken off. The bronze is cast and solid. The bow has a hexagonal cross-section and has a bulge in the middle where the cross-section is circular. Similar enlargements or knots are present on both ends of the handle. One side is still intact with an acorn shaped ending attached to the bended part where the split pin was attached. The front and backside are similar, in contrast to no. 2.1 and 2.2.
Cf.: Riha 2001, taf. 7, no. 79; Waasdorp/Zee 1988, 39, no. 6.5.

[291] Cit. Zadoks-Josephus Jitta 1969, 124.

2.4 Handle (fragment)

inventory no.: 006-51
find no.: 1962-Q-408
context: Trench IX, in yellow ochre layer containing many mussel shells
length: 6.5 cm
description: Fragment of a bronze handle. The fragment is half of the grip of a handle, including the ribbed enlargement in the middle. The cross-section is octagonal.
Cf.: Riha 2001, taf. 7, no. 79; Waasdorp/Zee 1988, 39, no. 6.5.

2.5 Handle (fragment)

inventory no.: 006-86
find no.: 1962-Q-440
context: Trench VII, Roman level, stray find.
length: 7.1 cm
description: Fragment of a bronze handle. The fragment is the full grip of a handle, including the ribbed enlargement in the middle. The cross-section is octagonal.
Cf.: Riha 2001, taf. 7, no. 79; Waasdorp/Zee 1988, 39, no. 6.5.

2.6 Handle

inventory no.: 002-213
find no.: 1966-H-162
context: Trench V, in reworked soil from Roman layer, near and on a pit containing many other finds.
length: 14.3 cm (max.)
description: Bronze handle in excellent condition, with a dark grey patina on it. The bronze is cast and solid. The handle is U-shaped with on both sides phallus-shaped decorative endings that in length exceed the length of the functional handle itself. In the middle of the grip is an enlargement with ribs on both sides. The backside of the grip is somewhat hollow and rough; the cross-section is rectangular and rounded off on the front side. One of the split pins is still present and attached to the handle. The overall structure of the handle seems to be somewhat asymmetrical, which was probably caused by the appliance of disproportional forces to the object.
Cf.: Riha 2001, taf. 7, no. 76.

2.7 Handle

inventory no.: 002-25
find no.: 1961-Q-90
context: Layer containing many mussel shells.
length: 5.4 cm
height: 4.8 cm
description: Finely decorated bronze handle in excellent condition. Central mouldings are visible. It is more or less omega-shaped with a knot-like ornament projecting on top. The front is decorated and somewhat convex, while the back is undecorated and flat. The overall shape of this handle can be interpreted as the typical dolphin or seahorse shape that consists of two of these animals that are joined with their heads in the centre. In this instance the tails are pelta-shaped. This interpretation is supported by the fact that only one side is decorated and that is cast is done in two parts, which have been moulded together. The dotted decorations are also typical for these type of handles. In the case of seahorses, the scaly skin is visualised with dots. This handle is probably a highly stylised and simplified instance of these types of handles. It is probably dated in the first century AD, based on the known parallels.
Cf.: Den Boesterd 1956, 54, no. 183; Lehner 1904, 411, fig. 16, pl. XXXIII.

2.8 Handle (fragment)

inventory no.: 002-56
find no.: 1962-Q-440
context: Trench VII, Roman level.
length: 7.9 cm
height: ca. 4.7 cm
description: Part of a bronze handle in the shape of a dolphin. The bronze is cast and hollow on the backside. Only one half of this typical 'dolphin-handle' remains, in this case almost one dolphin since only the mouth is missing. The tail is bended down and shaped like a leaf connected to the body on one tip. The body of the dolphin is the main part of the handle. In the middle, the mouth originally joined another dolphin, forming a symmetrical structure.
The object was restored because of the bad condition of the upper part, where it was attached to a split pin. The surface shows a green and greenish brown patina.
Cf.: Riha 2001, taf. 6, no. 53-65; Walke 1965, taf. 115, no. 13 & 14.

2.9 Handle

inventory no.: 002-222
find no.: 1967-H-220
context: Trench VI, level 2.
width: 11.3 cm (max.)
description: Bronze handle in excellent condition. The surface has brown and slightly green patina, but the metal itself is also still visible. The cross-section of somewhat square with rounded angles. The object was forged into its shape. Both ends are decorated crosswise. This handle was probably attached to furniture such as a cupboard or cabinet or to a vessel. The handle would fit through one eye socket of a split pin on each end, allowing it to swing freely.
Cf.: Riha 2001, taf. 9, no. 119-128, 136-144; Jacobi 1913, taf. VIII, no. 3; Bushe-Fox 1928, pl. XXI; Walke 1965, taf. 135.

2.10 Lion head hinge

inventory no.: 002-1
find no.: 1962-Q-362
context: Trench V, northern section.
diameter: 4.2 cm
depth: 6.2 cm (including rivet)
description: Bronze hinge in the form of a lion head, round and bulged, with a peg attached to the hollow rear side. The surface shows mostly brown, but some green patina. The object that was originally present through the mouth of the lion head, functioned as the actual handle. Due to corrosion, details such as the mane and the inside of the opened mouth are not distinct anymore. Behind the mouth there are openings on two sides through which the movable ring or handle was placed. Somewhat similar to no. 2.11.
Cf.: Riha 2001, taf. 11, no. 145-146; Menzel 1966, taf. 96, 300a & b; Bushe-Fox 1949, pl. XLIV, no. 168 (dated AD 275-300; Walke 1965, taf. 115, no. 3.

2.11 Lion head hinge

inventory no.: 002-251
find no.: 1977-B-315
context: Trench V, level 3.
diameter: 4.4 cm
description: Bronze hinge in the form of a lion head, round and bulged. The peg that was attached to the hollow rear side is broken off. On the edge is a circular groove present, which is partly corroded away. Behind the mouth there are openings on two sides through which the movable ring was placed (not present). The object is in good condition, since details such as the eyes, the ears, the nose, the mane, and

the pronounced lower jaw are clearly visible. The tip of the tongue sticks out of the mouth. The surface shows a brown patina. Somewhat similar to no. 2.10.
Cf.: Riha 2001, taf. 11, no. 145-146; Menzel 1966, taf. 96, 300a & b; Bushe-Fox 1949, pl. XLIV, no. 168 (dated AD 275-300; Walke 1965, taf. 115, no. 3.

2.12 Fitting plate

inventory no.: 002-212
find no.: 1967-H-321
context: Trench VI, level 5.
length: 11.3 cm
width: 11.0 cm
thickness: 0.1 cm
description: This square bronze fitting plate has a setting of 1 mm thick and in the middle a circular framework. On the four corners and in the centre are square-shaped holes for the rivets with some iron remnants of these.
Cf.: Riha 2001, taf. 30, no. 370; Bushe-Fox 1949, 142, pl. XLVII, no. 176a & b, pl. XLVIII (from a casket containing a hoard of coins from AD 268-270); Nash-Williams 1941, fig. 8. no. 35 (late Roman dating); Ulbert 1959, 94, taf. 19, no. 14.

2.13 Corner fitting (fragment)

inventory no.: 006-197
find no.: 1967-H-321
context: Trench VI, level 5.
length: 7.5 cm
width: 1.2 cm (max.)
description: Bronze piece of fitting with a elongated shape, with one round-shaped end with a triangular protrusion. The object is badly corroded, but in the middle of the round ending, a hole is still visible by which it could be attached to the wood with a rivet. The object is part of a corner fitting that was used for strengthening a casket.
Cf.: Riha 2001, taf. 36-41; Amand 1975, 34, fig. 15, no. 11-13.

2.14 Corner fitting (fragment)

inventory no.: 002-59
find no.: 1962-Q-299
context: Trench V, "between upper stones of the small street".
length: 5.3 cm
width: 1.1 cm (max.)
description: Bronze piece of mounting with a elongated shape, with one diamond-shaped end with a protrusion on it. It the middle of this ending, a hole is still visible by which it could be attached to the wood with a rivet. On the other side are also two holes for attaching the object using rivets.
Cf.: Riha 2001, taf. 36-41; Amand 1975, 34, fig. 15, no. 11.

2.15 Fitting

inventory no.: 002-64
find no.: 1962-Q-408
context: Trench IX, southern section, in yellow ochre layer containing many mussel shells.
height: 3.0 cm
diameter: 2.5 cm (base)
description: Bronze decorative fitting from furniture (presumed). The front has concentric circles and a raised centre point. The back side (base) has a small protrusion that was used for attaching it to a cupboard or chest. The handle is dumbbell-shaped and solid. The back side is slightly larger in diameter than the decorated front side.
No known parallels. See Riha 2001, taf. 47, for other knob-shaped handles.

2.16 Hinge

inventory no.: 002-62
find no.: 1962-Q-469
context: unknown
length: 4.8 cm
width: 1.4 cm (max.)
thickness: 0.9 cm (max.)
description: Bronze part of a tripartite, heave hinge, in good condition. The object has a conical-shaped end with a hole in it, through which originally it was attached to the other two parts of the hinge using a peg. It was probably used with a large object such as a door. The slimmer end is somewhat bend out of shape.
Cf.: Riha 2001, taf. 28, no. 347 & 348; Amand 1975, 36, fig. 16, no. 9 & 10.

2.17 Split pin

inventory no.: 006-5
find no.: 1974-SM-53
context: Trench II, level 1 to 2.
length: 6.1 cm
width: 0.9 cm
description: Bronze hinge used for the attachment of handles. The hinge has an eyelet through which the handle was attached. Strongly corroded.
Cf.: Riha 2001, taf. 11, no. 157-161.

2.18 Split pin

inventory no.: 006-85
find no.: 1962-Q-440
context: Trench VII, Roman level.
length: 3.4 cm
width: 2.2 cm
description: Bronze hinge used for the attachment of handles, in poor condition. It is made out of one strip of bronze, which is bent into an eyelet with the two ends pressed together to form a T-shaped split pin.
Cf.: Riha 2001, 97, no. 244 c-f & taf. 11, no. 157-161.

2.19 Nail/hinge

inventory no.: 005-209A
find no.: 1967-H-390
context: unknown
length: 7.3 cm
width: 0.6 cm (max. of shaft)
description: Iron nail or hinge, strongly corroded, tapering, with a rectangular cross-section. The end is bent forming an eyelet.
Cf.: Ulbert 1959, taf 30, no. 3-9.

2.20 Nail/hinge

inventory no.: 005-209B
find no.: 1967-H-390
context: unknown
length: 4.8 cm
width: ca. 0.5 cm (max. of shaft)
description: Fragment of an iron nail or hinge, strongly corroded, bend 90°.
Cf.: Ulbert 1959, taf. 30, no. 45.

2.21 Nail/hinge

inventory no.: 005-1
find no.: 1962-Q-423
context: Trench VII, Roman level.
length: 9.3 cm
width: 2.0 cm (head)
description: Iron nail, strongly corroded, tapering, with a round cross-section. The head is round and flat and was originally an eyelet.

2.22 Stud (fragment)

inventory no.: 002-16
find no.: 1962-Q-356
context: Trench VI.
length: 3.8 cm
diameter: 3.5 cm (max. of the head)
description: Bronze bell-shaped stud of which the peg is partly broken off. The surface shows a green and brown patina. The bronze is cast, solid and somewhat corroded. The bell-shaped head has a radial profile with a raised centre point. The remainder of the peg is flat rectangular.
Cf.: Riha 2001, taf. 47, no. 624-630, taf. 48, no. 633; Waasdorp/Zee 1988, 40, no. 6.13; Webster 1992, 135, no. 139-141; Amand 1975, 32, fig. 14, no. 2 & 7; Allason-Jones 1985.

2.23 Stud

inventory no.: 006-74
find no.: Q
context: unknown
length: 5.0 cm
diameter: 3.5 to 4.0 cm (head)
description: Bronze bell-shaped stud of which the peg intact or almost intact. The surface shows a green and brown patina. The bronze is cast, solid and somewhat corroded. The bell-shaped head has a radial profile with a raised centre point. The peg is rectangular and tapering.
Cf.: Riha 2001, taf. 47, no. 624-630, taf. 48, no. 633; Waasdorp/Zee 1988, 40, no. 6.13; Webster 1992, 135, no. 139-141; Amand 1975, 32, fig. 14, no. 2 & 7; Allason-Jones 1985.

2.24 Stud

inventory no.: 006-75
find no.: Q
context: unknown
length: 5.5 cm
diameter: 3.6 cm (head)
description: Bronze bell-shaped stud of which the peg intact or almost intact. The surface is corroded. The bronze is cast. The bell-shaped head has a radial profile with a raised centre point. The peg is rectangular and tapering.
Cf.: Riha 2001, taf. 47, no. 624-630, taf. 48, no. 633; Waasdorp/Zee 1988, 40, no. 6.13; Webster 1992, 135, no. 139-141; Amand 1975, 32, fig. 14, no. 2 & 7; Allason-Jones 1985.

2.25 Stud

inventory no.: 002-21
find no.: 1962-Q-243/249
context: unknown
length: 4.2 cm
diameter: 2.5 cm (head)

description: Bronze bell-shaped stud in good condition of which peg is broken off slightly at the end. The bronze is cast, the surface shows a mostly brown patina. The bell-shaped head is radially profiled with a raised centre point that is raised higher than the head itself and is hollow inside. The peg is rectangular and almost square and tapering.
Cf.: Riha 2001, taf. 47, no. 624-630, taf. 48, no. 633; Waasdorp/Zee 1988, 40, no. 6.13; Webster 1992, 135, no. 139-141; Amand 1975, 32, fig. 14, no. 2 & 7; Allason-Jones 1985.

2.26 Stud

inventory no.: 002-104B
find no.: 1962-Q-414
context: unknown
length: 4.0 cm
description: Bronze bell-shaped stud in good condition, complete with peg. The bronze is cast, the surface shows a black and green patina. The head is bell-shaped and radially profiled with a raised centre point that is raised as high as the head itself. The head is hollow. The peg has a rectangular cross-section that is tapering.
Cf.: Riha 2001, taf. 47, no. 624-630, taf. 48, no. 633; Waasdorp/Zee 1988, 40, no. 6.13; Webster 1992, 135, no. 139-141; Amand 1975, 32, fig. 14, no. 2 & 7; Allason-Jones 1985.

2.27 Stud

inventory no.: 006-73
find no.: Q
context: unknown
length: 4.6 cm
diameter: 2.9 cm
description: Bronze bell-shaped stud in good condition, complete with peg. The bronze is cast, the surface shows a green patina. The head is bell-shaped and radially profiled with a raised centre point that is raised as high as the head itself. The head is hollow. The peg has a rectangular cross-section that is tapering.
Cf.: Riha 2001, taf. 47, no. 624-630, taf. 48, no. 633; Waasdorp/Zee 1988, 40, no. 6.13; Webster 1992, 135, no. 139-141; Amand 1975, 32, fig. 14, no. 2 & 7; Allason-Jones 1985.

2.28 Stud

inventory no.: 006-8
find no.: 1975-SM-255
context: Trench XIII, level 3.
length: 5.0 cm
diameter: ca. 3.7 cm (head)
description: Bronze bell-shaped stud with peg, in poor condition. The bronze is cast. The head is bell-shaped with the remnants of a raised centre point on top. The head is was originally hollow. The peg has a rectangular cross-section and is partly broken off.
Cf.: Riha 2001, taf. 47, no. 624-630, taf. 48, no. 633; Waasdorp/Zee 1988, 40, no. 6.13; Webster 1992, 135, no. 139-141; Amand 1975, 32, fig. 14, no. 2 & 7; Allason-Jones 1985.

2.29 Stud

inventory no.: 006-6
find no.: 1974-SM-37
context: unknown
length: 3.8 cm
diameter: 2.5 cm (head)

description: Bronze bell-shaped stud with peg, in good condition. The bronze is cast. The head is bell-shaped with a raised centre point on top. The peg has a rectangular cross-section that is tapering and has a hole through at the terminal.
Cf.: Riha 2001, taf. 47, no. 624-630, taf. 48, no. 633; Waasdorp/Zee 1988, 40, no. 6.13; Webster 1992, 135, no. 139-141; Amand 1975, 32, fig. 14, no. 2 & 7; Allason-Jones 1985.

2.30 Stud

inventory no.: 002-271
find no.: 1955-SB-214
context: unknown
length: 4.5 cm
width: 2.7 cm (max. of the head)
description: Bronze bell-shaped stud in good condition, complete with peg. The bronze is cast, the surface shows a black and green patina. The head is bowl-shaped and radially profiled with a raised centre point that is raised above the head itself. The head is solid. The peg has a square cross-section and is tapering.
Cf.: Riha 2001, taf. 47, no. 624-630, taf. 48, no. 633; Waasdorp/Zee 1988, 40, no. 6.13; Webster 1992, 135, no. 139-141; Amand 1975, 32, fig. 14, no. 2 & 7; Allason-Jones 1985.

2.31 Stud

inventory no.: 002-108
find no.: 1962-Q-44
context: unknown
length: 7.5 cm
width: 3.5 cm
description: Bronze stud in good condition of which the bell-shaped head is broken partly broken off. The bronze is cast; the surface shows a brown and black patina. The head is radially profiled with a raised centre point that is raised slightly higher than the head itself. The peg is intact, has a square cross-section and is considerably thinner than those of the other studs.
Cf.: Riha 2001, taf. 46, no. 594; Webster 1992, 135, no. 139-141; Allason-Jones 1985.

2.32 Stud

inventory no.: 002-272
find no.: 1955-SB-213
context: unknown
length: 4.0 cm
width: 4.8 cm (max. of the head)
description: Bronze bell-shaped stud in excellent condition of which the peg is broken off. The bronze is cast, the surface shows a brown patina. The head is radially profiled with a raised centre point that is raised as high as the rim of the head. The remnant of the peg has a rectangular cross-section. The head itself is hollow and is only a few millimetres thick. Very similar to no. 2.33.
Cf.: Riha 2001, taf. 46, no. 594; Webster 1992, 135, no. 139-141; Allason-Jones 1985.

2.33 Stud

inventory no.: 002-28
find no.: 1962-Q-411
context: Trench IX, Roman layer.
length: 8.0 cm
diameter: 4.1 cm (max. of the head)

description: Bronze bell-shaped stud in excellent condition, complete with peg. The bronze is cast. The head is radially profiled with a raised centre point just above the rim of the head. The peg has a rectangular cross-section. The head is hollow and is only a few millimetres thick. Very similar to no. 2.32.
Cf.: Riha 2001, taf. 46, no. 594; Webster 1992, 135, no. 139-141; Allason-Jones 1985.

2.34 Stud

inventory no.: 002-220
find no.: 1967-H-286
context: Trench VI, level III.
length: 4.5 cm
diameter: 2.2 cm (head)
description: Bronze stud in poor condition, complete with peg. The bronze is cast, the surface shows a black and green patina and is corroded on the head. The damaged head is solid, flat and round with a centre point that is raised above the head itself. The rim of the head is radially profiled. The peg has a rectangular cross-section that is even in size towards the end.
Cf.: Webster 1992, 136, no. 147-148; Frere 1972, 131, fig. 39, no. 118.

2.35 Stud

inventory no.: 002-100
find no.: 1962-Q-484
context: Stray find from trench VII.
length: 4.4 cm
diameter: 2.8 cm (head)
description: Bronze stud in fairly good condition, complete with peg. The bronze is cast, the surface shows a green patina. The head is solid, flat and round, smooth on top and shows signs of decoration. The peg is somewhat corroded and has a rectangular cross-section that is tapering. At the end of the peg is a round hole that was drilled into it.
Cf.: Waasdorp/Zee 1988, 40, no. 6.13; Webster 1992, 136, no. 147-148; Amand 1975, 34, fig. 15, no. 4.

2.36 Stud

inventory no.: 006-76
find no.: Q
context: unknown
length: 4.2 cm
diameter: 3.6 cm (head)
description: Bronze stud in fairly good condition, complete with peg. The bronze is cast, the surface is corroded. The head is hollow and flat a circular rim on top and a centre point. The peg is somewhat corroded and has a rectangular cross-section that is tapering slightly. At the end of the peg is a round hole.
Cf.: Waasdorp/Zee 1988, 40, no. 6.13; Webster 1992, 136, no. 147-148; Amand 1975, 34, fig. 15, no. 4.

2.37 Stud (fragment)

inventory no.: 006-77
find no.: Q
context: unknown
length: 4.2 cm
thickness: ca. 0.7 cm
description: Head of a bronze stud in poor condition. The bronze is cast, the surface is corroded. The head is flat with a circular rim on top. No other features visible. Similar to no. 2.36.

Cf.: Waasdorp/Zee 1988, 40, no. 6.13; Webster 1992, 136, no. 147-148; Amand 1975, 34, fig. 15, no. 4.

2.38 Stud

inventory no.: 006-62
find no.: 1962-Q-484
context: Stray find from trench VII.
length: 3.5 cm
diameter: 2.3 cm (head)
description: Bronze stud in excellent condition. The head is round and smooth on top, and is mushroom-shaped. The peg has a square cross-section and is tapering. The construction is somewhat similar to no. 2.35 but smaller, and very similar to 2.39. There is no hole in the peg.
Cf.: Waasdorp/Zee 1988, 40, no. 6.13; Webster 1992 (Caerleon, Wales), 136, no. 147-148; Amand 1975, 34, fig. 15, no. 4.

2.39 Stud

inventory no.: 002-161
find no.: 1974-SM-12
context: Trench I, level 2.
length: 3.3 cm
diameter: 2.6 cm (head)
description: Bronze stud in excellent condition. The head is round with a raised rim, and is mushroom-shaped. The peg has a square cross-section and is tapering. The construction is very similar to no. 2.38. There is no hole in the peg.
Cf.: Waasdorp/Zee 1988, 40, no. 6.13; Webster 1992, 136, no. 147-148; Amand 1975, 34, fig. 15, no. 4.

2.40 Stud

inventory no.: 006-71
find no.: -
context: unknown
length: 2.5 cm
diameter: 1.9 cm (head)
description: Bronze stud in poor condition. The head has a circular protrusion in the middle. The peg has a round cross-section.

2.41 Shaft

inventory no.: 006-184
find no.: 1967-H-218
context: unknown
length: 4.0 cm
description: Bronze shaft that was probably part of a stud.

2.42 Nail

inventory no.: 005-6
find no.: 1961-Q-15
context: Trench I.
length: 5.0 cm
width: ca. 0.7 cm (max. of shaft)
description: Iron nail, strongly corroded, bent on the end for fixing it to the wood, resulting in a Z-shape.

2.43 Foot/support

inventory no.: 002-96
find no.: 1962-Q-423
context: Trench VII, Roman level.
height: 3.7 cm
description: Bronze foot of an a piece of furniture in the form of a loins paw with four toes. The bottom side is hollow. This leg was part of a small piece of furniture such as a casket or a small table, since the flattened leg would not have been suitable for supporting heavy weights.
Cf.: Riha 2001, taf. 4, no. 37-43 & 47-49; Van de Weerd 1944, 358, fig. 74, no. 31.

2.44 Foot/support

inventory no.: 006-79
find no.: 1962-Q-414
context: Trench VIII, Roman level, stray find.
length: 3.8 cm
height: 1.9 cm
description: Bronze foot of an a piece of furniture in the form of a hoof. The bottom side is flat, while the object is solid. This leg was probably part of a small piece of furniture such as a casket or a small table.
Cf.: Riha 2001, taf. 4, no. 33.

2.45 Candelabrum

inventory no.: 002-205
find no.: 1966-H-46
context: Trench IV, upper section of the Roman layer.
height: 9.7 cm
diameter: 10.0 cm (max.)
description: Upper part of a candelabrum shaped as a chalice. The cast is solid, making this object quite heavy. It is decorated with ivy leaves in medallions. On the top of the chalice are concentric rings around the rim. The base ring is a reconstruction, but shows how this candleholder was placed on a presumably wooden or metal support. The object is in excellent condition, showing almost no sign of corrosion.
Cf.: Holwerda 1936, 36, fig. 23; Van de Weerd 1944, 358, fig. 74, no. 30 & 32.

2.46 Key handle

inventory no.: 002-5
find no.: 1961-Q-240
context: Found on the dump near the small Gallo-Roman temple.
length: 5.6 cm
width: 3.1 cm
description: Bronze handle of a key. It shows some corrosion on the surface but is in fairly good condition. The surface has a mostly green patina. The base is rectangular, with horizontal groove around it. The cast is solid but with a round hole in the bottom. The upper part has open work in the form of three key or droplet shapes. Based on parallels, the bit of the key was probably of iron and has therefore corroded more quickly than the bronze upper part.
Cf.: Van den Hurk 1975, 87, fig. 33; Waasdorp/Zee 1988, 39, nr. 6.3; Sier/Koot 2001, 191, fig. 7.6b; Bushe-Fox 1949, 86, pl. XXXIV (dating after AD 90); Amand 1975, 36, fig. 16, no. 23.

2.47 Key handle

inventory no.: 002-58
find no.: 1962-Q-323
context: Trench VI, southern section, Roman layer.
length: 5.6 cm
width: 3.2 cm
description: Bronze handle of a key in good condition. The rectangular base is of variable proportions and has horizontal grooves around it. The handle is broken off at the bottom side, where the fracture is round. The upper part is open work with three droplet shapes. Based on parallels, the bit was probably of iron and has therefore corroded away.
Cf.: Van den Hurk 1975, 87, fig. 33; Waasdorp/Zee 1988, 39, nr. 6.3; Sier/Koot 2001, 191, fig. 7.6b; Bushe-Fox 1949, 86, pl. XXXIV (dating after AD 90); Amand 1975, 36, fig. 16, no. 23.

2.48 Key handle

inventory no.: 002-204
find no.: 1966-H-27
context: Trench IV, Roman layer.
length: 3.2 cm
width: 2.0 cm
description: Bronze handle of a key with a round cross-section where it is broken off. The open work is shaped in the form of three keyholes. It is unclear what metal the bit was made of.

2.49 Key handle

inventory no.: 002-20
find no.: 1962-Q-408
context: Trench IX, southern section, in yellow ochre layer containing many mussel shells.
length: 7.0 cm
description: Fragment of a bronze handle with an eye on one side. The other side is broken off but there are remnants of two crosswise prominences. The handle was probably part of a small key that was carried on a chainlet.
Cf.: Bushe-Fox 1949, 115, pl. XXXVI.

2.50 Key

inventory no.: 005-54
find no.: 1974-SM-1
context: Trench I, level 1.
length: 7.5 cm
width: ca. 3.0 cm (max.)
description: Iron key, strongly corroded, with its round handle. The shaft and the bit are not further recognisable.
Cf.: Cunliffe 1968, pl. XLV-XLVI, no. 196-203.

3 JEWELLERY

3.1 Finger ring

inventory no.: 006-309
find no.: 1973-AOS
context: unknown
diameter: 3.5 cm (outer), 1.8 cm (intaglio)
description: Large silver finger ring with an intaglio of blue glass-paste. The silver ring is in excellent condition, but the intaglio is slightly damaged, which is why only a figure with a raised arm can be recognized here.

3.2 Finger ring

inventory no.: 002-66
find no.: 1962-Q-422
context: Section between trench IX and VI, Roman layer, yellow-ochre clay.
diameter: 1.2 cm (outer), 1.5 cm (intaglio)
description: Bronze finger ring with an intaglio of blue glass-paste with the engraved image of Victoria. In fairly good condition.[292]

3.3 Finger ring

inventory no.: 002-227
find no.: 1966-H-38
context: Trench IV.
description: Bronze finger ring with an intaglio of dark glass-paste with the engraved image of a standing figure. The bronze is in poor condition.[293]

3.4 Finger ring

inventory no.: 002-232
find no.: 1966-H-22
context: Trench IV, upper part of Roman layer.
description: Bronze finger ring with an intaglio of glass-paste with the engraved image of presumably Hercules. The bronze is in poor condition.[294]

3.5 Finger ring

inventory no.: 006-397
find no.: -
context: unknown
diameter: 2.2 cm (outer), 1.8 cm (inner)
description: Small bronze finger ring in good condition with a glossy dark brownish grey surface. Not exactly round and worn off on one side. In good condition.

3.6 Finger ring

inventory no.: 006-180
find no.: 1966-H-34
context: unknown
diameter: 1.9 cm (outer), 1.5 cm (inner)
description: Small bronze finger ring in good condition. Not exactly round and worn off on one side. The cross-section has a somewhat triangular shape.

[292] Published in Trimpe Burger 1992b.
[293] Published in Trimpe Burger 1992b.
[294] Published in Trimpe Burger 1992b.

3.7 Finger ring

inventory no.: 006-388
find no.: -
context: unknown
diameter: 1.8 cm (outer), 1.4 cm (inner)
description: Small bronze finger ring in poor condition. The object has an oval shape that is flat on the decorative upper side. The presumed decorations are not visible anymore.

3.8 Finger ring

inventory no.: 006-156
find no.: 1966-H-110
context: Second level.
diameter: 2.2 to 2.4 cm (outer)
description: Open bronze finger ring in good condition. The object is made of one bended strip-shaped wire. Both ends are bent slightly out of shape.

3.9 Decorative hairpin

inventory no.: 002-27
find no.: 1962-Q-423
context: unknown
length: 4.1 cm
description: Bronze hairpin with decoration on top in the form of a dog sitting on a square base or column. The eyes, ears and snout of the dog are delicately treated as is the upper part of the column. The bottom end of this hairpin is missing and could have been made of iron. This object is in excellent condition. It could have been used either as a hairpin or a clothing pin.

3.10 Hairpin

inventory no.: 006-350
find no.: -
context: unknown
length: ca. 14.0 cm
description: Bronze, fairly thick hairpin, intact but bent. The head is has a square cross-section.

3.11 Hairpin

inventory no.: 006-379
find no.: -
context: unknown
length: ca. 14.0 cm
description: Bronze pin, fairly intact but bent. The head is square-shaped and below it are traces of decorative lines.

3.12 Hairpin

inventory no.: 006-384
find no.: -
context: unknown
length: 5.0 cm
diameter: 0.8 cm (head)
description: Bronze pin in good condition with a knobbed, triangular-shaped head with a groove in the middle. The shaft has a round cross-section and is bent slightly. Cf.: Webster 1992, 148-149.

3.13 Bracelet

inventory no.: 002-215
find no.: 1967-H-281
context: Trench VI, level 2, in Roman layer at about 35 cm below the surface.
diameter: 8.1 cm (max.)
description: Bronze bracelet of which the main wire is covered by a spire wire on two sides, both ending in a knot like feature on the top side of the object. This makes diameter adjustable and by pushing it in or out. The wire is held together on the bottom side with an eye and hook construction, by which it can opened. It is somewhat bended out of shape, but overall in excellent condition.
Cf.: Déchelette 1927, 733-734, fig. 520,1; Bogaers 1955, 79, no.158, 87, no. 318, pl. 38, no. 5 & 6; Brailsford 1951, fig. 7, no. 10; Forrer 1927, part II, taf. XXXIX; Bloemers 1973, 61-62, fig. 22.

3.14 Bracelet

inventory no.: 002-34
find no.: 1962-Q-441
context: Trench VII, southern section.
width: 1.0 cm
diameter: 5.7 cm
description: Bronze strap-shaped open bracelet, widened towards both ends, which are broken off. The terminals were part of a fastening. In good condition.

3.15 Bracelet

inventory no.: 002-4
find no.: 1962-Q-408
context: Trench IX, yellow-ochre layer containing mussel shells.
diameter: ca. 7.0 cm
description: Large fragment of a geometrically engraved bronze bracelet, in good condition. The cross-section is convex, resulting in a hollow inside.
Cf.: Bushe-Fox 1949, pl. XLIX.

3.16 Bracelet

inventory no.: 006-375
find no.: -
context: unknown
diameter: 7.0 cm (max.)
description: Bronze open bracelet in fairly good condition with no decorations present. The surface is bulged and widened towards both ends, while the middle part is flat. Both terminals are tapering. The object is bent slightly out of shape and broken on one side.

3.17 Bracelet

inventory no.: 002-209
find no.: 1966-H-13
context: Trench II, western trench, Roman layer.
diameter: ca. 4.5 cm
thickness: 0.4 to 0.1 cm
description: Thin bronze open bracelet, strap-shaped. The surface has no decorations. One end is broken off, the other end is tapering.
Cf.: Bushe-Fox 1949, pl. XLIX.

3.18 Bracelet

inventory no.: 006-188
find no.: 1966-H-118
context: unknown
diameter: 6.0 cm to 5.3 cm
thickness: 0.3 cm
description: Intact thin bronze open bracelet with an oval cross-section, no decorations on the surface.
Cf.: Bushe-Fox 1949, pl. XLIX.

3.19 Bracelet

inventory no.: 002-13
find no.: 1961-Q-2a
context: Trench I, Roman level, 30 cm below the surface.
diameter: ca. 5.6 cm
thickness: ca. 0.3 cm
description: Fairly intact bronze bracelet with an opening. Both ends are decorated with crosswise grooves. The front side is round, the backside is flat. Slightly bend out of shape but overall in fairly good condition.
Cf.: Bushe-Fox 1949, pl. XLIX.

3.20 Bracelet

inventory no.: 006-377
find no.: 1962-Q-
context: unknown
diameter: 6.7 cm (max.)
description: Bronze bracelet in poor good condition of which both ends are decorated with crosswise lines and eye-like ornaments. It has a strip-shaped cross-section. The object is corroded and bent out of shape.
Cf.: Bushe-Fox 1949, pl. XLIX.

3.21 Bracelet (fragment)

inventory no.: 002-120
find no.: 1962-Q-423
context: Trench VII, Roman layer.
width: unknown
thickness: unknown
description: Bended fragment of a bronze bracelet made of one wire.

3.22 Bracelet (fragment)

inventory no.: 006-119
find no.: 1962-Q-314
context: unknown
thickness: 0.2 to 0.3 cm
description: Small piece of a bronze bracelet.

3.23 Bracelet (fragment)

inventory no.: 002-33
find no.: 1962-Q-286
context: Trench below the small temple.
diameter: ca. 6.0 cm (reconstr.)
description: Piece of a bronze bracelet with an D-shaped cross-section. This one end has a knobbed thickening. Decorations were present originally, but have decayed almost completely.

3.24 Bracelet (fragment)
inventory no.: 002-118
find no.: 1962-Q-357
context: Trench V, northern section, upon removal of the Roman layer.
length: 1.2 cm
description: Bronze piece, probably part of a bracelet, bended and broken off.

3.25 Bracelet (fragment)
inventory no.: 002-119
find no.: 1962-Q-423
context: Trench VII, Roman layer.
width: 2.0 cm
thickness: 0.2 cm
description: Bronze piece, probably part of a bracelet, bended square-wise on two spots.

3.26 Bracelet
inventory no.: 006-376
find no.: 1962-Q-?
context: unknown
diameter: 5.9 cm (max.)
description: Bronze open bracelet in fairly good condition. No decorations present. The surface is bulged on the outside and flat on the inside.

3.27 Bracelet
inventory no.: 006-194
find no.: 1967-H-334
context: unknown
diameter: ca. 7.0 cm
thickness: ca. 0.2 cm
description: Bronze open bracelet in very poor condition.

3.28 Bracelet (fragment)
inventory no.: 006-22A
find no.: 1975-SM-244
context: Trench XIII, level 3, "from pit containing many mussel shells".
diameter: ca. 4.9 cm
thickness: ca. 0.2 cm
description: Fragment of a bronze bracelet in poor condition.

3.29 Bracelet (fragment)
inventory no.: 006-22B
find no.: 1975-SM-244
context: Trench XIII, level 3, "from pit containing many mussel shells".
diameter: ca. 5.0 cm
thickness: ca. 0.2 cm
description: Fragment of a bronze bracelet in poor condition.

3.30 Bracelet (fragment)
inventory no.: 006-22C
find no.: 1975-SM-244
context: Trench XIII, level 3, "from pit containing many mussel shells".
diameter: ca. 4.6 cm
thickness: ca. 0.2 cm
description: Fragment of a bronze bracelet in poor condition.

3.31 Bracelet (fragment)

inventory no.: 006-359
find no.: -
context: unknown
diameter: ca. 6.6 cm
thickness: ca. 0.3 cm
description: Fragment of a bronze bracelet in poor condition.

3.32 Bracelet (fragment)

inventory no.: 006-356
find no.: -
context: unknown
diameter: ca. 5.7 cm
thickness: ca. 0.3 cm (max.)
description: Fragment of a bronze bracelet in poor condition.

3.33 Bracelet (fragment)

inventory no.: 006-178
find no.: 1967-H-283
context: Trench VI, second level, southern corner.
diameter: ca. 7.0 cm (reconstr.)
thickness: ca. 0.3 cm (max.)
description: Fragment of a bronze bracelet in poor condition.

3.34 Bracelet (fragment)

inventory no.: 006-53
find no.: 1962-Q-408
context: Trench IX, yellow-ochre layer containing mussel shells.
diameter: unknown
description: Strap-shaped bronze object, possibly a fragment of a bracelet.

3.35 Earring

inventory no.: 002-35
find no.: 1961-Q-2b
context: unknown
diameter: 4.0 cm (both in length and width)
thickness: 0.4 cm
description: Bronze open earring with one knob-shaped end. The cross-section is oval-shaped.

3.36 Phallic pendant

inventory no.: 006-98
find no.: 1962-Q-414
context: Trench VIII, stray finds from Roman layer.
length: 1.9 cm
context: Two coins, dates: AD 148-149, AD 235-253.
description: Fragment of, presumably, a pendant with a phallus on it. On one end is an eyelet for attaching the object. In fairly good condition, but probably incomplete.

4 FIBULAE

4.1 Penannular brooch

inventory no.: 002-95
find no.: 1962-Q-484
context: Trench VII, Roman level, stray find.
diameter: 2.7 cm
description: Bronze penannular brooch in fairly good condition despite corrosion (Böhme type 51). Only the ring remains, the pin is missing. Both terminals are shaped as flat round knobs, so that the object appears as a Celtic torc.
Cf.: Böhme 1972, taf. 31, no. 1226-1227 (Saalburg); Curle 1911, 326, no. 8, 9, 11, 12, 16, 17, 18; Oldenstein 1976, 278, no. 1056, 1057, pl. 79.

4.2 Disc fibula

inventory no.: 006-10
find no.: 1974-SM-20a
context: Trench I, level III.
diameter: 3.3 cm
thickness: 0.2 cm
description: Bronze disc fibula laid in with red, white and blue millefiori enamel (Böhme type 41z). This surface decoration is damaged and absent for three fifths. The millefiori decoration consists of alternating red and blue bordered squares that contain tiny blue and white squares. The red bordered squares have been filled a little less refined than the white bordered ones. The back of the fibula has two rectangular remains (0.7 by 0.7 cm) where the pin holder was originally present.
Cf.: Böhme 1972, taf. 26, no. 1008-1011 (Saalburg) & 1015 (Zugmantel); Haalebos 1990, 184, no.9; Waasdorp/Zee 1988, 26-27, no. 1.9; Verwers *et al.* 1990, 150-151, fig. 22; Walke 1965, taf. 95, no. 23; Bushe-Fox 1949, pl. XXIX, no. 47.

4.3 Crossbow fibula

inventory no.: 002-51
find no.: 1962-Q-370
context: Trench VII (next to VI), Roman level.
length: 6.3 cm
width: 3.9 cm
description: Bronze crossbow fibula in good condition (Böhme type 28g). This fibula is of a basic design and has a highly arched semicircular bow with a rectangular cross-section and angular protrusions on it that may have been decorated originally. The bow ends on a long, tapering foot in which the pin is fixed. Square to the bow are both of the wide and transverse arms, both with a round cross-section to which the pin is attached. At the head is a knob. Although bend, the pin is still present and oxidised onto the foot.
Cf.: Böhme 1972, taf. 19, no. 779-792 (Saalburg); Gechter 1980, 602-603, no. 36-37; Cunliffe 1968, pl. XXXII, no. 76&77; Frere 1972, pl. 28, no. 53.

4.4 Crossbow fibula

inventory no.: 006-72
find no.: 1962-Q-408
context: Trench IX, from yellow ochre layer with mussel shells.
length: 6.2 cm
width: 3.5 cm
description: Bronze crossbow fibula in good condition, although the pin is missing (Böhme type 28g). This fibula is of a basic design and has a highly arched semicircular bow with a rectangular cross-section and angular protrusions on it that may have been decorated originally. The bow ends on a straight, tapering foot in which the

pin holder is present. Square to the bow are both of the wide and transverse arms, both with a round cross-section to which the pin is attached. At the head is a knob that is designed more elegantly than that of no. 4.3. The rest of the object is very similar to no. 4.3.
Cf.: Böhme 1972, taf. 19, no. 779-792 (Saalburg); Gechter 1980, 602-603, no. 36-37; Cunliffe 1968, pl. XXXII, no. 76&77; Frere 1972, pl. 28, no. 53.

4.5 Crossbow fibula (fragment)

inventory no.: 006-104
find no.: 1962-Q-370
context: Trench VII (next to VI), Roman level.
length: ca. 6.0 cm (reconstr.)
width: ca. 4.0 cm (arms)
description: Bow and cross arms of a bronze crossbow fibula (Böhme type 28g).
Cf.: Böhme 1972, taf. 19, no. 779-792 (Saalburg); Gechter 1980, 602-603, no. 36-37; Cunliffe 1968, pl. XXXII, no. 76&77; Frere 1972, pl. 28, no. 53.

4.6 Crossbow fibula (fragment)

inventory no.: 006-105
find no.: 1962-Q-408
context: Trench IX, from yellow ochre layer with mussel shells.
length: 2.9 cm
description: Fragments of a bronze crossbow fibula (Böhme type 28g), which was originally similar to 006-72.
Cf.: Böhme 1972, taf. 19, no. 779-792 (Saalburg); Gechter 1980, 602-603, no. 36-37; Cunliffe 1968, pl. XXXII, no. 76&77; Frere 1972, pl. 28, no. 53.

4.7 Crossbow fibula (fragment)

inventory no.: 006-351
find no.: -
context: unknown
length: 4.4 cm (current)
description: Fragment of a bronze crossbow fibula (Böhme type 28g).
Cf.: Böhme 1972, taf. 19, no. 779-792 (Saalburg); Gechter 1980, 602-603, no. 36-37; Cunliffe 1968, pl. XXXII, no. 76&77; Frere 1972, pl. 28, no. 53.

4.8 P-shaped fibula

inventory no.: 006-196
find no.: 1966-H-30
context: Trench IV.
length: 5.8 cm
width: 2.4 cm
description: Bronze P-shaped fibula in excellent condition of which the pin is missing and the foot is bend slightly to one side (Böhme type 25h). The bow is decorated with four protruding knobs and has a flattened cross-section. The foot is narrower than the bow and straight towards the end, with an upward terminal. The foot has a straight, rectangular pin holder. The head is of basis design, with small protrusions on both ends, similar to the end of the foot. The head has a square opening where the pin was originally attached by a hinge.
Cf.: Böhme 1972, 28, abb. 1, no. 2 (Caerleon, Wales) & taf. 14, no. 611 (Zugmantel).

4.9 P-shaped fibula (fragment)

inventory no.: 006-106
find no.: 1962-Q-423
context: Trench VII, Roman level.
length: ca. 6.0 cm (reconstr.)
description: Fragment of a bronze P-shaped fibula consisting of the sheath-shaped foot with the pin holder, and part of the bow (Böhme type 25b). The cross-section of the bow is somewhat triangular-shaped (D-shaped).
Cf.: Böhme 1972, taf. 13, 587 (Saalburg) & 588 (Zugmantel).

4.10 P-shaped fibula (fragment)

inventory no.: 006-112
find no.: 1962-Q-296
context: Trench V, southern end, "between stones of small street".
length: 3.1 cm
description: Fragment of a bronze P-shaped fibula consisting of the part of the head and bow. It is not clear whether this was a crossbow type or different P-shaped type.

4.11 Strip bow hinge fibula

inventory no.: 006-170
find no.: 1966-H-140
context: Trench IV, Roman layer, "between stones".
length: 5.0 cm
width: 1.6 cm
description: Bronze strip bow fibula with a wide, stretch flat bow on which six pearl cornices are placed (Böhme type 17a). The foot, which is set off with a small pearl rim, has a tapering end with transverse ribs. The pin is missing; the damaged pin holder is punctured with one hole.
Cf.: Böhme 1972, taf. 5, no. 321 (Zugmantel); Haalebos 1986, fig. 42, 22.

4.12 Single knot fibula

inventory no.: 002-37
find no.: 1961-Q-71
context: Trench I, level I, middle section.
length: 4.8 cm
description: Bronze single fibula (Böhme type 3/Almgren 19). The twofold bow is angular with a typical bend (or knot) in the middle and has an oval cross-section. Part of the spring is missing, which was originally made up of six coils, as well as the pin. The foot is tapering and pointed at the end.
Cf.: Böhme 1972, taf. 1, no. 4 (Zugmantel); Waasdorp 1999, 80, no. 4.1; Haalebos 1986, 31, fig. 10, no. 2.

4.13 Twofold bow fibula

inventory no.: 006-122
find no.: 1962-Q-414
context: Trench VII, Roman level.
length: unknown
description: Bronze bow fibula with a high pin holder and a twofold bow (Böhme type 37e).
Cf.: Böhme 1972, taf. 22 & 23, no. 900-914 (Saalburg & Zugmantel).

4.14 Wire fibula

inventory no.: 002-31
find no.: 1962-Q-296
context: Trench V, southern part, "between the stones of the small street."
length: unknown

description: Bronze wire fibula with a semicircular bow, with a triangular cross-section, and strip-shaped spring wire (Böhme type 15/Almgren type 16). The spring roller is made up of two coils. Part of the pin is broken off and the pin holder is damaged.
Cf.: Böhme 1972, taf. 4 & 5, no. 310 (Zugmantel) & 312 (Saalburg).

4.15 Wire fibula

inventory no.: 002-210
find no.: 1966-H-25
context: unknown
length: 4.0 cm
description: Bronze wire fibula with a semicircular bow, with a triangular cross-section, and strip-shaped spring wire (Böhme type 15/Almgren type 16). The spring roller is made up of four coils. Both the pin and the pin holder are intact.
Cf.: Böhme 1972, taf. 4 & 5, no. 310 (Zugmantel) & 312 (Saalburg).

4.16 Wire fibula

inventory no.: 006-193
find no.: 1967-H-200
context: unknown
length: unknown
description: Bronze wire fibula with a semicircular shaped bow, with a triangular cross-section, and strip-shaped spring wire (Böhme type 15/Almgren type 16). Both the pin and the pin holder are intact.

4.17 Wire fibula (fragment)

inventory no.: 006-361
find no.: -
context: unknown
length: 4.0 cm
description: Bow of a bronze wire fibula with a strip-shaped semicircular bow, with a groove running along it (Böhme type 15/Almgren type 16). Only one coils of the spring is present. In poor condition.

4.18 Wire fibula

inventory no.: 002-218
find no.: 1967-H-462
context: Trench VII.
length: 4.4 cm
description: Bronze wire fibula with an semicircular bow and a strip-shaped spring wire (Böhme type 15/Almgren type 16). The bow has a square cross-section with no decorations. Part of the pin holder is missing, but the pin is still intact.
Cf.: Böhme 1972, taf. 4 & 5, no. 310 (Zugmantel) & 312 (Saalburg).

4.19 Wire fibula

inventory no.: 006-107
find no.: 1962-Q-423
context: Trench VII, Roman level.
length: 4.7 cm
description: Bronze wire fibula with a semicircular bow with a triangular cross-section. Fairly intact, with a strip-shaped spring wire (Böhme type 15/Almgren type 16). The pin holder is placed upwards and has a small eyelet on top.

4.20 Wire fibula

inventory no.: 006-110
find no.: 1962-Q-423
context: Trench VII, Roman level.
length: 3.1 cm
description: Bronze wire fibula with a semicircular bow, strongly oxidised. Both the pin and pin holder are broken off (Böhme type 15/Almgren type 16).

4.21 Wire fibula (fragment)

inventory no.: 006-95
find no.: 1962-Q-414
context: Trench VIII, stray finds from Roman layer.
length: 2.3 cm
context: Two coins, dates: AD 148-149 and 235-253.
description: Bronze wire fibula with an semicircular bow (Böhme type 15/Almgren type 16). Bow and part of the spring are present.

4.22 Wire fibula

inventory no.: 002-42A
find no.: 1962-Q-308
context: Trench VI, northern section, Roman level.
length: 5.5 cm
description: Bronze straight wire fibula with a slightly angular bow (Böhme type 14/Almgren type 15). The spring wire is strip-shaped; the bow has a round cross-section and with engraved crosswise lines. The pin holder is damaged slightly.

4.23 Wire fibula

inventory no.: 006-126
find no.: 1962-Q-314
context: Trench V, "on small street".
length: 6.0 cm
description: Bronze straight wire fibula with a angular curved bow (Böhme type 14/Almgren type 15). The spring wire is shaped like a strip; the bow is engraved with crosswise lines. The pin holder is damaged slightly.

4.24 Wire fibula

inventory no.: 006-127
find no.: 1962-Q-314
context: Trench V, "on small street".
length: 6.0 cm
description: Bronze straight wire fibula with a sharply angular curved bow (Böhme type 14/Almgren type 15). The spring wire is shaped like a strip. Both the pin and the pin holder are missing.

4.25 Wire fibula

inventory no.: 002-43
find no.: 1962-Q-410
context: Trench IX, southern section, "from clayey soil".
length: 6.3 cm
description: Bronze straight wire fibula, fairly intact (Böhme type 14/Almgren type 15). The angular shaped bow is decorated with crosswise lines. The pin holder is corroded, but the pin is complete. The spring wire is strip-shaped.

4.26 Wire fibula

inventory no.: 002-208
find no.: 1967-H-313
context: Trench VI, level 3.
length: 5.2 cm
description: Bronze straight wire fibula with an angular bow (Böhme type 14/Almgren type 15). The spring wire is strip-shaped. Both the pin and part of the pin holder are present.

4.27 Wire fibula

inventory no.: 006-108
find no.: 1962-Q-423
context: Trench VII, Roman level.
length: 4.7 cm
description: Bronze straight wire fibula with a angular bow, with a strip-shaped spring wire (Böhme type 14/Almgren type 15). Both the pin and the pin holder are broken off. In poor condition.

4.28 Wire fibula

inventory no.: 006-117
find no.: 1962-Q-423
context: Trench VII, Roman level.
length: 6.7 cm
description: Bronze straight wire fibula with an angular bow and a strip-shaped spring wire (Böhme type 14/Almgren type 15). The pin holder is damaged.

4.29 Wire fibula

inventory no.: 006-109
find no.: 1962-Q-423
context: Trench VII, Roman level.
length: 4.5 cm
description: Bronze straight wire fibula with a slightly angular bow (Böhme type 14/Almgren type 15). Strongly oxidised. The pin is broken off.

4.30 Wire fibula

inventory no.: 006-66
find no.: 1962-Q-423
context: Trench VII, Roman level.
length: 5.0 cm
description: Bronze straight wire fibula with a slightly angular bow and strip-shaped spring wire (Böhme type 14/Almgren type 15). The pin holder and part of the pin are broken off.

4.31 Wire fibula

inventory no.: 006-366
find no.: 1962-Q-356?
context: Trench VI (unsure).
length: 5.0 cm
description: Bronze straight wire fibula with an angular bow and strip-shaped spring wire. Both the pin and pin holder are broken off (Böhme type 14/Almgren type 15).

4.32 Wire fibula

inventory no.: 002-36
find no.: 1962-Q-258
context: Trench II, in reworked medieval soil, level of the floor of the *principia*.
length: ca. 4.0 cm

description: Bronze straight wire fibula with an angular bow and strip-shaped spring wire (Böhme type 14/Almgren type 15). Part of the pin and pin holder are broken off.

4.33 Wire fibula

inventory no.: 006-65
find no.: 1962-Q-408
context: Trench IX, from yellow ochre layer with mussel shells.
length: 6.7 cm
description: Bronze straight wire fibula with an angular bow and a strip-shaped spring wire (Böhme type 14/Almgren type 15). The bow has a round cross-section. The pin and part of the pin holder are missing.

4.34 Wire fibula

inventory no.: 006-121
find no.: 1962-Q-408
context: Trench IX, from yellow ochre layer with mussel shells.
length: 4.0 cm
description: Bronze straight wire fibula with an angular bow and a strip-shaped spring wire (Böhme type 14/Almgren type 15). The bow has a round cross-section. The pin and part of the pin holder are missing.

4.35 Wire fibula

inventory no.: 006-91
find no.: 1962-Q-414
context: Trench VIII, stray finds from Roman layer.
length: 5.9 cm
context: Two coins, dates: AD 148-149, AD 235-253.
description: Bronze straight wire fibula with an angular bow and a strip-shaped spring wire (Böhme type 14/Almgren type 15). Both the pin and part of the pin holder are missing.

4.36 Wire fibula

inventory no.: 006-92
find no.: 1962-Q-414
context: Trench VIII, stray finds from Roman layer.
length: 4.8 cm
context: Two coins, dates: AD 148-149, AD 235-253.
description: Bronze straight wire fibula with an angular bow and a strip-shaped spring wire (Böhme type 14/Almgren type 15). Both the pin and pin holder are missing.

4.37 Wire fibula

inventory no.: 006-93
find no.: 1962-Q-414
context: Trench VIII, stray finds from Roman layer.
length: 5.1 cm
context: Two coins, dates: AD 148-149, AD 235-253.
description: Bronze straight wire fibula with an angular bow and a strip-shaped spring wire (Böhme type 14/Almgren type 15). Part of the pin as well as the pin holder is missing.

4.38 Wire fibula (fragment)

inventory no.: 006-94
find no.: 1962-Q-414
context: Trench VIII, stray finds from Roman layer.
length: 5.7 cm
context: Two coins, dates: AD 148-149, AD 235-253.

description: Fragment of a bronze straight wire fibula. (Böhme type 14/Almgren type 15). Fragment of the spring and the pin.

4.39 Wire fibula (fragment)

inventory no.: 006-96
find no.: 1962-Q-414
context: Trench VIII, stray finds from Roman layer.
length: 3.6 cm
context: Two coins, dates: AD 148-149, AD 235-253.
description: Bow of a bronze straight wire fibula (Böhme type 14/Almgren type 15).

4.40 Wire fibula (fragment)

inventory no.: 006-97
find no.: 1962-Q-414
context: Trench VIII, stray finds from Roman layer.
length: ca. 3.0 cm
context: Two coins, dates: AD 148-149, AD 235-253.
description: Bronze straight wire fibula with a semicircular bow (Böhme type 14/Almgren type 15?). The object is bent severely and the pin is missing.

4.41 Wire fibula

inventory no.: 006-100
find no.: 1962-Q-414
context: Trench VIII, stray finds from Roman layer.
length: 3.5 cm
context: Two coins, dates: AD 148-149, AD 235-253.
description: Bronze straight wire fibula with an angular bow (Böhme type 14/Almgren type 15). The pin and pin holder are missing.

4.42 Wire fibula

inventory no.: 006-101
find no.: 1962-Q-440?
context: unknown
length: 4.6 cm
description: Bronze straight wire fibula with an angular bow and a strip-shaped spring wire (Böhme type 14/Almgren type 15). Both the pin and the pin holder are missing.

4.43 Wire fibula

inventory no.: 006-99
find no.: Q
context: unknown
length: 4.0 cm
description: Bronze or iron straight wire fibula with an angular bow and a strip-shaped spring wire (Böhme type 14/Almgren type 15). Both the pin and the pin holder are missing.

4.44 Wire fibula

inventory no.: 006-102
find no.: 1962-Q-440?
context: unknown
length: 4.6 cm
description: Bronze straight wire fibula with an angular bow and a strip-shaped spring wire (Böhme type 14/Almgren type 15). Both the pin and part of the pin holder are present.

4.45 Wire fibula

inventory no.: 002-29
find no.: 1961-Q-150
context: Trench III, level 3/4, from waste pit with coin from M. Aurelius and t.s. stamp VICTORINUS.
length: 3.8 cm
description: Bronze straight wire fibula with an angular bow and a strip-shaped spring wire (Böhme type 14/Almgren type 15). Both the pin and the pin holder are missing.

4.46 Wire fibula

inventory no.: 006-118
find no.: 1961-Q-484
context: Trench VII, Roman level, stray find.
length: 4.2 cm
description: Bronze straight wire fibula with a somewhat angular bow and a strip-shaped spring wire (Böhme type 14/Almgren type 15). The pin is still present, as well as the pin holder, although slightly damaged.

4.47 Wire fibula

inventory no.: 006-123
find no.: 1961-Q-484
context: Trench VII, Roman level, stray find.
length: 4.0 cm
description: Bronze straight wire fibula with a somewhat angular bow and a strip-shaped spring wire (Böhme type 14/Almgren type 15). The pin is still present, as well as the pin holder, although slightly damaged.

4.48 Wire fibula

inventory no.: 006-124
find no.: 1961-Q-440
context: Trench VII, Roman level, stray find.
length: 4.8 cm
description: Bronze straight wire fibula with a somewhat angular bow and a strip-shaped spring wire (Böhme type 14/Almgren type 15). The pin is still present, as well as the pin holder, although slightly damaged.

4.49 Wire fibula

inventory no.: 006-4
find no.: 1974-SM-20b
context: Trench I, level 3.
length: 3.8 cm
description: Bronze straight wire fibula with an angular bow and a strip-shaped spring wire (Böhme type 14/Almgren type 15). The pin and pin holder are partly preserved.

4.50 Wire fibula

inventory no.: 006-3
find no.: 1974-SM-85
context: Trench III, Roman layer.
length: 3.6 cm
description: Bronze straight wire fibula with an angular bow and a strip-shaped spring wire (Böhme type 14/Almgren type 15). The pin is still present, as well as part of the pin holder.

4.51 Wire fibula

inventory no.: 006-125
find no.: 1962-Q-362?
context: unknown
length: 5.1 cm
description: Bronze straight wire fibula with an angular bow and a strip-shaped spring wire (Böhme type 14/Almgren type 15). Both the pin and the pin holder are missing.

4.52 Wire fibula

inventory no.: 006-13
find no.: 1974-SM-85b
context: Trench III, Roman layer.
length: 4.6 cm
description: Bronze straight wire fibula with an angular bow and a strip-shaped spring wire (Böhme type 14/Almgren type 15). The pin is still present, although bent out of shape. The pin holder is missing.

4.53 Wire fibula

inventory no.: 006-14
find no.: 1974-SM-85b
context: Trench III, Roman layer.
length: 4.0 cm
description: Bronze straight wire fibula with an angular bow and a strip-shaped spring wire (Böhme type 14/Almgren type 15). The pin and port of the pin holder are missing. In poor condition.

4.54 Wire fibula

inventory no.: 002-221A
find no.: 1966-H-119
context: Trench IV.
length: ca. 3.5 cm
description: Bronze straight wire fibula with an angular bow and a strip-shaped spring wire (Böhme type 14/Almgren type 15). The pin is present, but the pin holder is missing.

4.55 Wire fibula

inventory no.: 002-221B
find no.: 1966-H-119
context: Trench IV.
length: ca. 4.5 cm
description: Bronze straight wire fibula with an angular bow and a strip-shaped spring wire (Böhme type 14/Almgren type 15). Both the pin and the pin holder are missing.

4.56 Wire fibula

inventory no.: 006-169
find no.: 1967-H-450
context: Trench VII, between stones of squat grave.
length: 4.5 cm
description: Bronze straight wire fibula with straight bow and a strip-shaped spring wire (Böhme type 14/Almgren type 15). The pin and part of the pin holder are present.

4.57 Wire fibula

inventory no.: 002-275
find no.: 1955-SB-212
context: Next to the church, Roman layer 4, 1° north-south section.
length: 5.6 cm
description: Bronze straight wire fibula with an angular bow and a strip-shaped spring wire (Böhme type 14/Almgren type 15). The pin is missing, but the pin holder is still present. Above the pin holder is small hole.

4.58 Wire fibula

inventory no.: 002-164
find no.: 1974-SM-22
context: Trench I, level 2 to 3.
length: 6.1 cm
description: Bronze straight wire fibula with an angular bow and a strip-shaped spring wire (Böhme type 14/Almgren type 15). Both the pin and the pin holder are present.

4.59 Wire fibula

inventory no.: 002-165
find no.: 1974-SM-22
context: Trench I, level 2 to 3.
length: 4.5 cm
description: Bronze straight wire fibula with an angular bow and a strip-shaped spring wire (Böhme type 14/Almgren type 15). Most of the pin and also the pin holder are missing.

4.60 Wire fibula

inventory no.: 002-166
find no.: 1974-SM-22
context: Trench I, level 2 to 3.
length: 4.7 cm
description: Bronze straight wire fibula with an angular bow and a strip-shaped spring wire (Böhme type 14/Almgren type 15). Part the pin and the pin holder are missing.

4.61 Wire fibula

inventory no.: 006-120
find no.: 1962-Q-214
context: unknown
length: 3.4 cm
description: Bronze straight wire fibula with an angular bow and a strip-shaped spring wire (Böhme type 14/Almgren type 15). Part the pin and the pin holder are missing.

4.62 Wire fibula

inventory no.: 002-219
find no.: 1967-H-449
context: Trench VII, between the stones of the Roman squat grave.
length: ca. 5.7 cm
description: Bronze straight wire fibula with an angular bow and a strip-shaped spring wire (Böhme type 14/Almgren type 15). The pin and part of the pin holder are missing. The bow is bend out of shape sideways. In poor condition.

4.63 Wire fibula

inventory no.: 006-368
find no.: -
context: unknown
length: 5.2 cm

description: Bronze straight wire fibula with an angular bow and a strip-shaped spring wire (Böhme type 14/Almgren type 15). The pin and the pin holder are missing. In poor condition.

4.64 Wire fibula (fragment)

inventory no.: 006-369
find no.: -
context: unknown
length: 5.1 cm
description: Fragment of a bronze or iron straight wire fibula with an angular bow (Böhme type 14/Almgren type 15). The pin and the pin holder are missing, as well as the spring. In poor condition.

4.65 Wire fibula (fragment)

inventory no.: 006-370
find no.: -
context: unknown
length: 2.9 cm
description: Fragment of a bronze straight wire fibula with an angular bow (Böhme type 14/Almgren type 15). The pin and the pin holder are missing, as well as part of the spring. In poor condition.

4.66 Wire fibula

inventory no.: 006-371
find no.: -
context: unknown
length: 4.5 cm
description: Bronze straight wire fibula with an angular bow (Böhme type 14/Almgren type 15). Part of the pin and pin holder are present. In poor condition.

4.67 Wire fibula

inventory no.: 006-372
find no.: -
context: unknown
length: 5.8 cm
description: Bronze straight wire fibula with an angular bow (Böhme type 14/Almgren type 15). Part of the pin and pin holder are present. In poor condition.

4.68 Wire fibula (fragment)

inventory no.: 006-373
find no.: -
context: unknown
length: 5.5 cm
description: Fragment of a bronze straight wire fibula with an angular bow (Böhme type 14/Almgren type 15). The pin and the pin holder are missing, as well as part of the spring. In poor condition.

4.69 Wire fibula (fragment)

inventory no.: 002-219B
find no.: 1967-H-449
context: Trench VII, between the stones of the Roman squat grave.
length: ca. 3.5 cm
description: Bronze straight wire fibula with an angular bow (Böhme type 14/Almgren type 15). The pin and part of the pin holder are missing. The bow is bend out of shape. In poor condition.

4.70 Wire fibula (fragment)

inventory no.: 002-219C
find no.: 1967-H-449
context: Trench VII, between the stones of the Roman squat grave.
length: 2.9 cm
description: Angular bow of a small bronze straight wire fibula (Böhme type 14/Almgren type 15). The pin and part of the pin holder are missing. In poor condition.

4.71 Wire fibula (fragment)

inventory no.: 002-219D
find no.: 1967-H-449
context: Trench VII, between the stones of the Roman squat grave.
length: 2.9 cm
description: Angular bow of a small bronze straight wire fibula (Böhme type 14/Almgren type 15). The Spring, the pin and part of the pin holder are missing. In poor condition.

4.72 Wire fibula

inventory no.: 006-154
find no.: 1966-H-144
context: Trench IV.
length: 3.7 cm
description: Bronze straight wire fibula with an straight bow and a strip-shaped spring wire (Böhme type 14/Almgren type 15). Part of the pin holder is missing. In poor condition.

4.73 Wire fibula

inventory no.: 006-155
find no.: 1966-H-144
context: Trench IV.
length: 3.9 cm
description: Bronze straight wire fibula with an straight bow and a strip-shaped spring wire (Böhme type 14/Almgren type 15). Part of the pin and the pin holder is missing. In poor condition.

4.74 Wire fibula

inventory no.: 006-153
find no.: 1967-H-288
context: Trench VI, level 3 to 4.
length: ca. 3.9 cm
description: Bronze straight wire fibula, in two fragments, with an angular bow and a strip-shaped spring wire (Böhme type 14/Almgren type 15). The pin is missing.

4.75 Wire fibula (fragment)

inventory no.: 006-2
find no.: 1975-SM-230
context: Trench Xb.
length: 4.0 cm
description: Bronze straight wire fibula with an angular bow (Böhme type 14/Almgren type 15). Both the pin and pin holder are present. In poor condition.

4.76 Wire fibula (fragment)

inventory no.: 006-20
find no.: 1975-SM-244
context: Trench XIII, level III, “from pit with mussel shells”.
length: 4.6 cm

description: Bronze straight wire fibula with an angular bow that is partly broken off (Böhme type 14/Almgren type 15). The pin is still present. Overall in poor condition.

4.77 Wire fibula (fragment)

inventory no.: 006-21
find no.: 1975-SM-244
context: Trench XIII, level III, "from pit with mussel shells".
length: 4.3 cm
description: Bronze straight wire fibula with an angular bow (Böhme type 14/Almgren type 15). Only the bow and part of the spring coils are still present. In poor condition.

4.78 Wire fibula (fragment)

inventory no.: 006-174
find no.: 1966-h-40
context: Trench IV, level 2.
length: ca. 4.4 cm
description: Pin and part of the spring of a bronze straight wire fibula (Böhme type 14/Almgren type 15).

5 TOILET IMPLEMENTS, MEDICAL TOOLS & UTILITARIAN OBJECTS

5.1 Mirror (fragment)

inventory no.: 002-9
find no.: 1961-Q-41
context: Trench I, Roman layer, close to medieval cellar.
width: 6.0 cm (maximum)
thickness: 0.2 cm
description: Bronze fragment of a mirror shaped like a disc. The surface has a green and brown patina, with bad corrosion on some parts, especially in the centre. The rim of the mirror is decorated with engraved concentric circles with centre-points. The circles form a chain along the whole rim and are bordered by a groove. Decorative grooves are visible in the centre. No decorations are present on the back.
Cf.: Brailsford 1951, 12, fig. 5, no. 6.

5.2 Pair of tweezers

inventory no.: 002-67
find no.: 1962-Q-423
context: unknown
length: 7.0 cm
width: 0.6 to 1.0 cm
description: Complete pair of tweezers, bronze or brass, strongly oxidised. The surface is decorated with fine crosswise lines. The small size made this pair of tweezers for personal use and not a professional medical instrument.
Cf.: Künzl 2002, taf. 48-50, no. C 7-C 19.

5.3 Pair of tweezers

inventory no.: 002-10
find no.: 1962-Q-324
context: Trench VI, Roman layer.
length: 6.5 cm
width 0.3 to 0.5 cm (handle), 1.9 cm (max. of the head)

description: Complete pair of tweezers in fairly good condition. Both sides have been fused due to corrosion except for the head. The relatively large head was meant for using this instrument for cosmetic purposes, namely depilation. It can therefore also be described as a depilatory. The handle is decorated with crosswise lines at the end were it is connected to the head. The head could also have been decorated originally, but due to corrosion the surface layer is not present anymore.
Cf.: Künzl 2002, taf. 50, no. C 20.

5.4 Tweezers-handle

inventory no.: 002-93
find no.: 1962-Q-470
context: Stray find.
length: 7.8 cm
width: 0.5 to 0.7 cm
description: Bronze tweezers-handle with a circular cross-section. The object has crosswise grooves or ribs across the length with a thickening at the back end. The blades of the tweezers are partly broken off and were probably very long. Therefore the instrument can be better regarded as a medical tool.
Cf.: Künzl 1983, 76, no. 8-12, 90, no. 3-4; Künzl 2002, taf. 29, no. B 30-B 31, taf. 48., no. C 7-C 8.

5.5 Handle

inventory no.: 006-302
find no.: 1973-AOS
context: Trench IIa.
length: 10.9 cm
width: 0.5 cm (max.)
description: Bronze handle, presumably from a toilet implement. One end has a square cross-section and is decorated with diamond shapes with round indentations in them. The terminal has a hole through it, perhaps for carrying it on a chainlet or a string. The other end was the functional part, but is broken off. Here a fork-like feature is still partly present. The cross-section on this end is oval. Faint traces of decorative lines are visible on the handle.

5.6 Handle

inventory no.: 006-396
find no.: -
context: unknown
contour: ca. 6.5 cm
width: 0.5 cm (max.)
description: Bronze handle, presumable from a toilet implement, in good condition with a flat cross-section. On the terminal is an eyelet, presumably for carrying the object. Three crosswise protrusions are places near the terminal. The object is broken off on the other end.

5.7 Handle

inventory no.: 006-183
find no.: 1967-H-218
context: unknown
length:: 4.3 cm
description: Bronze fragment of the handle of an instrument, such as a toilet implement, or a writing pin, with vague traces of crosswise decorative lines.

5.8 Ear probe

inventory no.: 006-385
find no.: -
context: unknown
length: ca. 11.0 cm
description: Bronze ear probe, intact but bent. The head is round, flat and put 45° to the side of the pin.
Cf.: Künzl 2002, taf. 35, no. B 95-B 100, taf. 52-53, no. C 55- C-66.

5.9 Spoon (fragment)

inventory no.: 006-111
find no.: 1961-Q-202
context: unknown
length: 4.1 cm
width: 2.5 cm
description: Blade of a small bronze spoon. The bowl is intact, but the handle is broken off.
Cf.: Cunliffe 1968, pl. XLIV, no. 180; Walke 1965, taf. 110, no. 1-2; Künzl 2002, taf. 46; Künzl 1983, 46, fig. 13, no. 3.

5.10 Spoon (fragment)

inventory no.: 006-115
find no.: 1962-Q-408
context: unknown
length: 9.0 cm
width: 2.6 cm
description: Bronze spoon of which part of the handle is present. The bow is damaged, but was originally droplet-shaped. The handle and the bowl are separated by small transverse arms.
Cf.: Walke 1965, taf. 110, no. 1-2.

5.11 Knife

inventory no.: 002-73
find no.: 1962-Q-298
context: Trench V, between stones (upper section) of Roman street.
length: 10.4 cm
description: Incomplete bronze knife. The blade is partly broken off. The base of the knife-handle has a pronounced brim. The handle has a square cross-section.
Cf.: Smith 1920, 149, fig. 183, no. 439.

5.12 Knife-handle

inventory no.: 002-48
find no.: 1962-Q-98
context: Trench II, Roman layer, in or above burned layer.
length: 8.6 cm
description: Bronze knife-handle decorated with an openwork depiction of a dog chasing a hare. The object is slightly corroded. Originally the lower frame may have contained a text.
Cf.: De Loë 1937, 174-175; Amand 1971, 7, fig. 2; Daremberg/Saglio 1887, 1583, fig. 2101 (very similar); Walters 1899, 357; Smith 1920, 149, fig. 183e (quite similar); Webster 1992, 150, no. 318 (two specimen of which one is dated AD 230-296).

5.13 Knife handle

inventory no.: 006-310
find no.: 1973-AOS
context: unknown
length: 7.5 cm
width: 2.2 cm (max.)
height: 2.4 cm (max.)
description: Bronze decorative knife handle in the shape of a animal lying down. The features of the animal are only faintly visible, since the object is badly corroded. It was attached with the square hole on the back side. On the front side is the animal head with its paws below it.
Cf.: Smith 1920, 149, fig. 183.

5.14 Knife

inventory no.: 005-2
find no.: Q
context: unknown
length: 18.8 cm
width: 2.0 (max. of blade)
description: Iron knife, strongly corroded. The object is broken off towards the end where the cross-section is somewhat rectangular.
Cf.: Walke 1965, taf. 121, no. 1-6.

5.15 Knife

inventory no.: 005-3
find no.: Q
context: Trench II, waste pit.
length: ca. 23.5 cm
width: 2.0 (max. of blade)
description: Iron knife, strongly corroded. The object is broken off towards the end where the cross-section is somewhat rectangular. At the end is a semicircular feature.
Cf.: Walke 1965, taf. 121, no. 3.

5.16 Needle

inventory no.: 006-168
find no.: H
context: unknown
length: 4.9 cm
width: 0.3 cm (max.)
description: Bronze needle with an eyelet. It has a somewhat flat shape and therefore an oval cross-section.
Cf.: Smith 1920, 148, fig. 180.

5.17 Needle

inventory no.: 006-70
find no.: Q
context: unknown
length: 4.9 cm
width: 0.3 cm (head)
description: Bronze needle with an eyelet and a round cross-section. The tip is broken off.
Cf.: Smith 1920, 148, fig. 180.

5.18 Needle

inventory no.: 006-69
find no.: Q
context: unknown
length: 3.1 cm
width: 0.5 cm (head)
description: Bronze needle with an eyelet, in poor condition. Part of the shaft is broken off. The eyelet is flat and the shaft has a round cross-section.
Cf.: Smith 1920, 148, fig. 180.

5.19 Needle

inventory no.: 006-67
find no.: Q
context: unknown
length: 5.5 cm
width: 0.3 cm (max.)
description: Bronze needle of which the eyelet is missing, but remnants are visible. The shaft has a round cross-section.
Cf.: Smith 1920, 148, fig. 180.

5.20 Needle

inventory no.: 006-68
find no.: Q
context: unknown
length: 5.1 cm
width: 0.2 cm (max.)
description: Bronze needle of which the head is missing. The shaft has a round cross-section.

5.21 Netting needle

inventory no.: 002-44
find no.: 1962-Q-41
context: Trench I, Roman layer, near medieval cellar.
length: 16.7 cm
description: Bronze netting needle with two forked ends with two teeth each. The fork-shaped ends are placed crosswise towards each other and bended inwards. The object is intact and in good condition, somewhat bended lengthwise but originally probably straight. It is in good condition. The surface has a black and green patina.
Cf.: Smith 1920, 148, fig. 181; Müller 2002, 213, no. 898, pl. 83.

5.22 Netting needle (fragment)

inventory no.: 002-49
find no.: 1962-Q-533
context: Stray find.
length: 16.2 cm
description: Bronze netting needle with a fork with two teeth on one side. One forked end is broken off. The object is similar to 002-44 but slightly thicker. It is also bended lengthwise, but was originally straight. The object is slightly corroded; the surface has a black and green patina.
Cf.: Smith 1920, 148, fig. 181; Müller 2002, 213, no. 898, pl. 83.

5.23 Netting needle (fragment)

inventory no.: 006-380
find no.: -
context: unknown
length: 5.7 cm

description: Fragment of a bronze netting needle. One forked end is broken off. The object is similar to 002-44.
Cf.: Smith 1920, 148, fig. 181; Müller 2002, 213, no. 898, pl. 83.

5.24 Netting needle

inventory no.: 002-109
find no.: 1961-Q-41
context: Trench I, Roman layer, near medieval cellar.
length: ca. 17.0 cm (reconstr.)
description: Bronze netting needle with two forked ends with two teeth each. The fork shaped ends are placed crosswise towards each other. The whole object is finer than 002-44 and 002-49, and may thus have been used in the production of finer threaded material. The object is complete, somewhat bended lengthwise but originally probably straight. It is in fair condition, but has been restored from fragments. The surface has a mostly brown patina.
Cf.: Smith 1920, 148, fig. 181.

5.25 Steelyard (fragments)

inventory no.: 002-41
find no.: 1962-Q-368
context: Trench VI, southern half.
length: unknown
description: Two fragments of one steelyard that probably belonged to the same object. The two fragments together have four eyelets on which hooks were hung that carried weights of certain units. The sole upper eyelets was used to fix the weigh-beam itself, while the object that had to be weighed was placed on the longer half, where it could be adjusted to the preferred weight by sliding it along horizontally.
Cf.: Cunliffe 1968, pl. XLVII, no. 214.

5.26 Steelyard (fragment)

inventory no.: 006-304
find no.: 1973-AOS-220
context: Trench VII, first or second trench, Roman layer.
length: 3.7 cm
description: Fragment of a bronze steelyard. This is one of the terminals. It has a flat cross-section and a circular end. Very similar to the larger terminal of 002-41.
Cf.: Cunliffe 1968, pl. XLVII, no. 214.

5.27 Steelyard (fragment)

inventory no.: 006-362
find no.: -
context: unknown
length: 4.5 cm
description: Fragment of a bronze steelyard, of one of the terminals. It has a flat cross-section and a circular end with an eyelet. It was decorated with crosswise lines.
Cf.: Cunliffe 1968, pl. XLVII, no. 214.

5.28 Steelyard (fragment)

inventory no.: 006-152
find no.: 1966-H-47
context: Trench I, reworked medieval soil.
length: ca. 11.3 cm
description: Fragment of a bronze steelyard (inconclusive), in fairly good condition. One end is tapering, while the other is broken off at an eyelet feature. Some crosswise decorations visible.

5.29 Hook

inventory no.: 002-11
find no.: 1962-Q-368
context: unknown
length: 8.3 cm
description: Bronze hook, probably part of a steelyard. The surface shows green patina, but the object is in excellent condition.

5.30 Hook

inventory no.: 002-90
find no.: 1962-Q-423
context: Trench VII, Roman level.
length: unknown
description: Bronze bended hook, probably part of a steelyard. On one end is a broken off eyelet. The cross-section is slightly oval and rectangular.

5.31 Weight

inventory no.: 006-378
find no.: -
context: unknown
diameter: 6.5 cm
thickness: 1.1 cm (max.)
description: Lead disc-shaped weight with an upward rim and iron oxide patina on it. The weight of the object is 265 gr. In fairly good condition.

5.32 Weight

inventory no.: 006-190
find no.: 1966-H-112
context: Trench IV, Roman layer.
diameter: 3.9 cm
thickness: 0.4 cm (max.)
description: Lead disc-shaped weight with a hole in the centre and an upward rim. About 1/3 of the object is missing. In poor condition.

5.33 Weight

inventory no.: 006-151
find no.: 1967-H-210
context: Trench VI, level 2.
diameter: 3.9 cm (max.)
thickness: 2.0 cm
description: Flat lead object, probably a weight, with a more or less oval shape. In the centre are two indents. The weight is 20 gr.

5.34 Weight

inventory no.: 006-382
find no.: -
context: unknown
diameter: 3.2 cm
thickness: 0.6 cm (max.)
description: Lead flat cone-shaped weight with a hole in the centre. About 1/5 of the object is missing, but it is in overall good condition.

5.35 Weight

inventory no.: 006-364
find no.: 1966-H-112
context: Trench IV, Roman layer.
diameter: 2.3 cm
height: 1.7 cm
description: Lead cone-shaped weight with a round shape and a small hole through the centre. It weighs 58 gr. and is intact and in good condition.

5.36 Weight

inventory no.: 006-311
find no.: 1973-AOS
context: unknown
diameter: 2.5 cm (max.)
height: 2.0 cm
description: Lead cone-shaped weight with a flat bottom side and hole through the centre.

5.37 Weight

inventory no.: 006-308
find no.: 1973-AOS-108
context: Trench IIb.
diameter: 3.1 cm (max.)
height: 2.0 cm
description: Lead cone-shaped weight with a flat bottom side and hole through it. This weight is crudely shaped and not round as the other weights.

5.38 Weight

inventory no.: 006-80
find no.: 1961-Q-110
context: Trench II, at ca. 41 m., from Roman layer.
height: 2.5 cm
width: 0.8 cm (max.)
description: Small lead object shaped as a spindle with a hole in the bottom, presumably a weight. On top is a protrusion that shows that it is broken off.

6 VESSELS & LIDS

6.1 Cup

inventory no.: 002-14
find no.: 1962-Q-402
context: Trench IX, in yellow ochre layer of ash and loam, containing may mussel and cardium shells, with a terra sigillata sherd dating from the first quarter of the third century AD.
height: 3.0 cm
diameter: 8.8 cm (rim).
thickness: 0.3 cm
description: Bronze cup with a raised base, a rounded wall and on the top a slightly thickened rim of which the topside is flattened. On the outside below the rim there is a groove. The surface has a greenish brown patina. This object is dated from the early third century AD onwards.[295] It is in very good condition. This type of cup is similar to the hemispherical terra sigillata cups (Hofheim 8) dating from the first century AD.[296]
Cf.: Den Boesterd 1956, 33, no. 93-94 (dated early third century AD or later); Fremersdorf 1928, 112, fig. 2, 8 (grave find, dated early third century AD); Loeschke 1928, 74, pl. III, 18; Eggers 1951, 112, pl. 11 (third century, Roman manufacture); Schulz 1933, 10 & 41, pl. 17,4 (ca. 300 AD); Künzl 2002, 62-63, fig. 30, no.4.

6.2 Base of a cup

inventory no.: 002-228
find no.: 1966-H-315
context: Trench VI, level IV (see also 1967-H-312).
diameter: 6.5 cm
description: Bronze base with base ring of a jug with a bended body. On the bottom the folded rim is probably melted and fused to it. This object is probably dating from the start of the third century onwards.[297] The object bears close resemblance to the base of no. 6.1.
Cf.: Den Boesterd 1956, 33, no.93-94, pl. IV.

6.3 Base of a cup/bowl

inventory no.: 006-81
find no.: 1962-Q-368
context: Trench VI, southern section.
width: 8.5 cm
height: 2.2 cm
description: Bronze object that could have been a base with base ring of a bowl, jug or cup.

6.4 Base of a plate/bowl

inventory no.: 002-3
find no.: 1962-Q-422
context: Section between trench VI and X.
diameter: 6.3 cm (max).
description: Fragment of a bronze base with base ring of a plate or bowl.

[295] Description by dr. M.H.P. den Boesterd, 10-11-1970.
[296] Den Boesterd 1956, 34.
[297] Description by dr. M.H.P. den Boesterd, 10-11-1970.

6.5 Base of a plate/bowl

inventory no.: 006-187
find no.: 1967-H-282
context: Trench VI, level 2.
diameter: 6.6 cm (max); 4.4 cm (base ring)
description: Fragment of a bronze base with base ring of a plate or bowl.

6.6 Jug-handle

inventory no.: 002-230
find no.: 1966-H-143
context: Trench IV, Roman layer. "From this corner of the excavation there are many finds of different origin, such as coins, terra sigillata, bronze objects, traces of burning, and possibly the edge of a graveyard which contained some skeletons without any burial goods."
height: 7.3 cm
description: Bronze handle or ear from a jug, which is bended round. Two arms enclose the mouth of the jug and end in round knobs. The ear ends at the bottom in a semicircular pearl rim with below a calyx from which a palmette emerges with volutes on both sides. One arm is broken off and one volute is damaged. The surface has a greenish patina.[298] The size of this handle suggests that it was attached to a small jug, perhaps a tankard.
Cf.: Bouloumié 1973, 33.

6.7 Handle

inventory no.: 005-57
find no.: 1975-SM-138?
context: "From Roman excavation."
length: ca. 26.0 cm
width: 1.0 cm (max. of shaft)
description: Iron handle of a vessel or bucket, strongly corroded, with a rectangular cross-section. On both end are two protrusions where the object was attached to the vessel.

6.8 Bronze attaché

inventory no.: 002-85
find no.: 1962-Q-423
context: Trench VII, Roman layer. Among several scattered finds (fibulae, studs, pair of tweezers, claw, two ringlets, and some coins dating from the first, second and third century AD (Boersma 1967, 83-90).
length: 9.6 cm
description: Bronze attaché from a bucket, still filled with lead-solder in its hollow inside. It is somewhat triangular shaped ending in a point at the bottom and has a round eye for attaching it. The surface has a green patina and the preservation is good. It is probably of Gallo-Roman origin and dates to end of the second century to the beginning of the third century AD. It was in use for a much longer period of time.[299]
Cf.: Eggers 1951; Werner 1936, 258 (dating from AD 175-225); Den Boesterd 1956, 47, no. 153, pl. VI; Jacobi 1909, 93, pl. XIII, no. 9, 12 & 14; Tassinari 1975, 56-57, no. 130-137, pl. XXVIII.

[298] Description dr. M.H.P. den Boesterd, 10-11-1970.
[299] Description dr. M.H.P. den Boesterd, 10-11-1970.

6.9 Lid

inventory no.: 002-231
find no.: 1966-H-312
context: Trench IV, level III, in the proximity of many finds of different origin and traces of wooden or loam buildings.
length: 3.8 cm
width: 3.3 cm
description: Bronze lid of a jug made out of a thin sheet of bronze with a distinctively heavy ear. The lid has a sitting bird as a support for the thumb, probably a duck. The tail of the bird forms the hinge; holes for the hinge pin are not present. One hinge wing is broken off. The lid is slightly damaged and has a greenish patina. It is dated from the first to the third century AD.[300]
Cf.: Den Boesterd 1956, 69-70, no. 245-249, pl. XI.

6.10 Lid

inventory no.: 006-303
find no.: 1973-AOS-220
context: Trench VII, first or second trench, Roman layer.
height: 2.3 cm
width: 3.0 cm
description: Fragment of a bronze bell-shaped lid. On top of the object is a knob with a brim that functioned as a handle. It was probably part of a small jar or cup.

6.11 Wine dipper

inventory no.: 002-254
find no.: 1988-B-797
context: Trench XII, level 2-3, in Roman draw-well with terra sigillata ceramics dating from around AD 150.
length: 31.2 cm (handle and bowl)
diameter: 15.3 cm (bowl)
description: Bronze wine dipper that belongs to the strainer it was found with (no. 6.12). The strainer fits the dipper exactly, showing that these objects were used as one set. Both the dipper and strainer have a round bowl. Both handles are flat and undecorated, with a widening in the middle with rounded, projecting points. The rim of both objects is projecting, slightly sloping and upstanding, vertically flattened on the outside and undercut. On the outside of the dipper are two grooves round the bowl. The strainer has a concentric pattern of three circles made of fine perforations on the bottom of the bowl. This bottom is only preserved partly, since both objects are heavily corroded. Only the handle and upper part of the bowl is intact on both objects, next to part of the bottom of the strainer. Dippers and strainers with this particular rim and grooves date from the middle of the second century and the third century AD, originating from Gaul and the Rhine provinces.[301]
Cf.: Den Boesterd 1956, 19-22, no. 53, 58 & 59, pl. III.

6.12 Wine strainer

inventory no.: 002-253
find no.: 1988-B-796
context: Trench XII, level 2-3, in Roman draw-well with terra sigillata ceramics dating from around AD 150.
length: 27.3 cm (handle and bowl)
diameter: 13.2 cm (bowl)
description: See 002-254.

[300] Description by dr. M.H.P. den Boesterd, 10-11-1970.
[301] Den Boesterd 1956, 21-22.

6.13 Handle

inventory no.: 006-54
find no.: 1962-Q-408
context: Trench IX.
length: 6.3 cm
description: Bronze object shaped as a handle of a vessel, in poor condition. Three holes for rivets or nails are present.
Cf.: Walke 1965, taf. 114, no. 6.

6.14 Wine strainer

inventory no.: 002-160
find no.: 1974-SM-14
context: Trench I, level 2, Roman layer.
length: unknown
diameter: unknown
description: Fragments of the handle and the base of a wine strainer. Despite the poor condition, the typical features of the strainer are still visible on the fragments of the base. The handle is flat and undecorated with a widening in the middle with the remains of rounded, projecting points.
Cf.: Den Boesterd 1956, pl. III.

7 MILITARIA

7.1 Buckle

inventory no.: 002-72
find no.: 1962-Q-337
context: Trench VI, southern section, on black soil on top of a burned layer.
length: 2.6 cm
width: 4.2 cm
thickness: ca. 0.8 cm
description: Part of a bronze buckle with a rectangular clasp. The axle was fixed to the clasp separately. The belt tongue of this buckle is broken off. It originally turned around its axis. The front side of the clasp is rounded, while the back side is flat.
Cf.: Oldenstein 1976, taf. 78, no. 1041.

7.2 Buckle

inventory no.: 002-122
find no.: 1962-Q-423
context: Trench VII, Roman layer.
length: 5.1 cm
width: 4.3 cm
thickness: 0.5 to 0.9 cm
description: Part of a bronze buckle with a round clasp. The axle is made out of one piece together with the clasp. The belt tongue is broken off.
Cf.: Oldenstein 1976, taf. 77.

7.3 Buckle

inventory no.: 005-302
find no.: 1955-SB-211
context: unknown
length: 5.1 cm
width: 7.4 cm
thickness: 0.4 to 0.9 cm

description: Iron buckle with a round clasp, corroded but still complete. The axle is made out of one piece together with the clasp, and the belt tongue is still present and incrusted to the clasp, where it would have been movable originally.

7.4 Hip-belt suspension

inventory no.: 002-65
find no.: 1962-Q-345
context: Trench VI, southern section.
length: 6.6 cm
diameter: 1.2 cm
description: Part of a bronze hip-belt suspension. On the remaining end, part of a wire is fused to the eyelet it is running through. The other side is split and has the remains of a rivet fused to it.
Cf.: Nicolay 2005, pl. 41, no. 211.29.

7.5 Scabbard slide

inventory no.: 002-158
find no.: 1975-SM-213
context: Trench VII, east section, inner side of the fortification wall.
length: 9.4 cm
width: 1.1 cm (max.)
description: Bronze scabbard slide in excellent condition. This piece was used to attach the scabbard to the baldric. The upper end is profiled. The ornament that was present on the lower end is now missing. On the back side, the two extensions for attaching the object to the baldric with pins are visible. This type is generally dated from the second half of the second century to the middle of the third century AD.[302]
Cf.: Oldenstein 1976, taf. 12-13, no. 45-50; Webster 1992, 128, no. 117; Nicolay 2005, pl. 25, no. 13.9 & 269.3; Waasdorp/Zee 1988, 28-29, no. 2.2.

7.6 Baldric phalera

inventory no.: 002-24
find no.: 1962-Q-369
context: Trench VI between level 3 and 4, in southern part in the middle of wall ditches of Roman buildings made out of wood or loam. This area also contained a hoard of coins that were found "amid the traces of the rectangular structures near the large stone establishment and the Gallo-Roman temple".[303] These date from the late second century up to 273 AD with four fifths of the hoard dating from 268-273.
diameter: 4.3 cm
description: Bronze baldric phalera with thin plate. The loop at the back is oval shaped and was used to slide along a leather strap. Only about half the original disc is still present, but the remaining material is in good condition, although the loop is bent sideways. The surface has a brown patina. It may have been decorated on the front side originally.
Cf.: Oldenstein 1976, taf. 84-85; Nicolay 2005, pl. 48, no. 288.3 & 228.2; Bishop/Coulston 1993, 132, no. 1-3.

[302] Oldenstein 1976, 107-108.
[303] Boersma 1967, 78, 87-89.

7.7 Baldric Phalera

inventory no.: 002-207
find no.: 1966-H-29
context: Trench IV, Roman layer.
diameter: 3.3 cm (max.)
thickness: 0.1 cm
description: Rounded-rectangular bronze baldric phalera with bulb-shaped centre. No loop is present on the back.
Cf.: Kenyon 1948, fig. 88, no. 14-15; Nash-Williams 1941, pl. XXXII, no. 4 (dated as Flavian); Nicolay 2005, pl. 48, no. 242.12.

7.8 Baldric phalera

inventory no.: 002-106
find no.: 1961-Q-414
context: unknown
diameter: 5.0 cm
description: Bronze round and bulged disc-shaped object that was probably a phalera. In poor condition.
Cf.: Nicolay 2005, pl. 48, no. 242.12.

7.9 Lorica hamata ringlets

inventory no.: 006-179B
find no.: 1966-H-30
context: unknown
diameter: 0.9 cm
thickness: 0.2 cm
description: Two small bronze ringlets that were part of *lorica hamata* armour. Both ringlets have an opening that was originally locked.
Cf.: Nicolay 2005, pl. 7, no. 123.2 & 82.1.

7.10 Arrow-head

inventory no.: 002-84
find no.: 1962-Q-534
context: Stray find.
length: 5.4 cm (with reconstructed tip)
width: 1.1 cm (max.)
description: Two fragments of a bronze arrow-head. The head is typically diamond-shaped with a flattened cross-section. Below the head are the remains of a shaft with which the head was attached to the wooden stick. The cross-section of the shaft is corroded badly, which makes its shape, whether round or square, indeterminable.
Cf.: Walke 1965, taf. 108, no. 27; Waasdorp 1999, 58, no. 2.27.

7.11 Pilum

inventory no.: 005-4
find no.: 1961-Q-175?
context: Trench II.
length: ca. 25.0 cm
width: 0.6 (max. of shaft)
description: Iron fragment of a *pilum* in poor condition. The shaft has a round cross-section and is flattened slightly on the end. The tip is bend.
Cf.: Bishop/Coulston 1993, 123, fig. 83.

7.12 Pilum/plumbata/spear head

inventory no.: 005-7
find no.: 1961-Q
context: unknown
length: ca. 25.0 cm
width: 2.1 (max. of blade)
description: Iron fragment of a *pilum*, *plumbata* or spear. The tip is diamond-shaped and partly broken off. The shaft has a rectangular cross-section that is widened towards the end.

7.13 Spear/lance/pilum butt

inventory no.: 006-55
find no.: 1962-Q-484
context: Stray find from trench VII.
height: 3.7 cm
width: 1.7 cm (base)
description: Bronze butt of a spear, lance or *pilum*. The butt has a pointed top and hollow inside and is made up of one sheet of bronze. In fairly good condition.
Cf.: Nicolay 2005, 33, fig. 2.9 & pl. 34; Bishop/Coulston 1993, 52, no. 7-12, 124, no. 15-17 & 19.

7.14 Spear/lance/pilum butt

inventory no.: 006-56
find no.: 1962-Q-484
context: Stray find from trench VII.
height: 5.5 cm
width: 1.2 cm (base)
description: Bronze butt of a spear, lance or *pilum*. The butt has a pointed top and hollow inside and is made up of one sheet of bronze. In fairly good condition.
Cf.: Nicolay 2005, 33, fig. 2.9 & pl. 34; Bishop/Coulston 1993, 52, no. 7-12, 124, no. 15-17 & 19.

8 HORSE GEAR

8.1 Phallic pendant

inventory no.: 002-157
find no.: 1974-SM-20c
context: Trench I, level 3.
height: 4.4 cm
width: 4.3 cm
description: Bronze pendant shaped as a phallus in combination with a lunula, in excellent condition. On the top side of the back plate is an eyelet for a attaching the object. It could have been used in horse gear, but may also have had another function.
Cf.: Amand 1975, 36, fig. 16, no. 16.

8.2 Phallic pendant

inventory no.: 002-2
find no.: 1962-Q-484
context: Found among several scattered finds.
height: 4.8 cm
width: 1.8 cm
description: Bronze phallic pendant in good condition. It was originally attached to another pendant, such as the typically coffee-bean-shaped vulva pendants. The top has an eyelet. Below it is an heart shape to which the phallus is attached.
Cf.: Oldenstein 1976, taf. 34, no. 265; Nicolay 2005, pl. 91, cat. B3.

8.3 Pendant (fragment)

inventory no.: 002-86
find no.: 1962-Q-484
context: Trench VII, stray find from the Roman layer.
length: 4.4 cm
width: 1.5 cm
description: Fragment of a leaf-shaped bronze pendant. The top side originally had an eyelet.
Cf.: Walke 1965, taf. 98, no. 33 & 35; Oldenstein 1976, taf. 29, no. 188; Nicolay 2005, pl. 88, no. 82.120.

8.4 Bell

inventory no.: 002-94
find no.: 1962-Q484 / 335-2(?)
context: Trench VII, Roman layer, stray find.
height: 2.9 cm
diameter: 2.9 cm (max.)
description: Bronze intact bell with a round shape and an eyelet on top. It is in fairly good condition, but the clapper is missing. On the inside are two small remnants of a clasp visible, on which the clapper was fixed.
Cf.: Walke 1965, taf. 113, no. 3; Nicolay 2005, pl. 94-95.

8.5 Bell

inventory no.: 002-123
find no.: 1962-Q-484
context: Trench VII, Roman layer, stray find.
height: 3.7 cm
diameter: 5.4 cm (max.)
description: Bronze intact but heavily oxidised bell. The round shape is interrupted along the middle by a bulge, resulting in a biarticulate profile. Neither the clapper, nor an eyelet on top is present. The poor condition makes it impossible to determine whether such an eyelet was originally attached to it.
Cf.: Walke 1965, taf. 113, no. 6; Nicolay 2005, pl. 95, E.

8.6 Bell (fragment)

inventory no.: 002-124
find no.: 1962-Q-415
context: Trench VIII, Roman layer.
height: 4.6 cm
width: 5.3 cm
description: Fragment of a bronze bell, heavily oxidised. This bell was originally quite large compared to the other ones (no. 8.4 & 8.5). This upper part has an eyelet. Originally, the object probably had a biarticulate profile.
Cf.: Walke 1965, taf. 113; Nicolay 2005, pl. 95, E.

8.7 Decorative Fitting

inventory no.: 002-53
find no.: 1967-Q-357
context: Trench V, northern section, in Roman layer.
diameter: 6.4 cm
description: Large though thin bronze decorative fitting with a round convex-shaped head and two rivets. In good condition apart from a slightly damaged edge.
Cf.: Nicolay 2005, pl. 70, no. 82.180; Oldenstein 1976, taf. 56.

8.8 Decorative Fitting

inventory no.: 006-61
find no.: 1962-Q-423
context: Trench VII, Roman level.
diameter: 5.6 cm
description: Large though thin bronze decorative fitting with a round convex-shaped head. Damaged on the edge.
Cf.: Nicolay 2005, pl. 70, no. 82.180; Oldenstein 1976, taf. 56.

8.9 Decorative Fitting

inventory no.: 006-90
find no.: 1962-Q-423
context: Trench VII, Roman level.
diameter: 5.1 cm
description: Medium-sized bronze decorative fitting with a round convex-shaped head and two rivets on the back. Damaged on the edge.
Cf.: Nicolay 2005, pl. 70, no. 82.180; Oldenstein 1976, taf. 56.

8.10 Decorative Fitting

inventory no.: 002-52
find no.: 1962-Q-442
context: unknown
diameter: 6.5 cm
description: Large, though thin, bronze decorative fitting for leather with a round convex-shaped head and two rivets. In good condition but damaged on the edge.
Cf.: Nicolay 2005, pl. 70, no. 82.180; Oldenstein 1976, taf. 56.

8.11 Decorative Fitting

inventory no.: 006-58
find no.: 1962-Q-484
context: Trench VII, on Roman level.
diameter: 4.2 cm
thickness: ca. 0.2 cm
description: Bronze decorative fitting with a round head and two rivets of which one is broken off at the base.
Cf.: Nicolay 2005, pl. 70, no. 82.180; Oldenstein 1976, taf. 56.

8.12 Decorative Fitting

inventory no.: 006-57
find no.: 1962-Q-484
context: Trench VII, Roman level.
diameter: 3.9 cm
description: Fairly intact bronze decorative fitting with a round and almost flat head. Two rivets are present on the back.
Cf.: Nicolay 2005, pl. 70, no. 82.180, 211.70, 288.83; Oldenstein 1976, taf. 56.

8.13 Decorative Fitting

inventory no.: 006-59
find no.: 1962-Q-484
context: Trench VII, Roman level.
diameter: ca. 3.8 cm
description: Fragment of a bronze mounting with a round, convex-shaped head and one remaining rivet on it.
Cf.: Nicolay 2005, pl. 70, no. 82.180, 211.70, 288.83; Oldenstein 1976, taf. 56.

8.14 Decorative Fitting

inventory no.: 006-60
find no.: 1962-Q-484
context: Trench VII, Roman level.
diameter: 4.8 cm
description: Damaged bronze decorative fitting of a flat shape. The edge is badly corroded. The material is very thin. The two rivets on the back are in good condition.
Cf.: Nicolay 2005, pl. 70, no. 82.180; Oldenstein 1976, taf. 56.

8.15 Decorative Fitting

inventory no.: 006-116
find no.: 1962-Q-413
context: Trench VIII, northern section, Roman layer.
diameter: ca. 3.6 cm
description: Corroded but fairly intact bronze decorative fitting with a slightly damaged edge. The head is round and slightly convex and there are two rivets present on the back.
Cf.: Nicolay 2005, pl. 70, no. 82.180, 211.70, 288.83; Oldenstein 1976, taf. 56.

8.16 Decorative Fitting

inventory no.: 006-157
find no.: 1967-H-318
context: Trench VI, layer 5.
diameter: 3.1 cm (head), ca. 0.6 cm (rivet)
height: 1.1 cm
description: Bronze decorative convex-shaped fitting with one rivet on the back.
Cf.: Nicolay 2005, pl. 70, no. 242.60 & 296.8; Oldenstein 1976, taf. 47, no. 512-515.

8.17 Decorative Fitting

inventory no.: 006-158
find no.: 1967-H-318
context: Trench VI, layer 5.
diameter: 0.9 cm (head)
height: 1.1 cm
description: Bronze decorative convex-shaped fitting with one rivet on the back.
Cf.: Nicolay 2005, pl. 70, no. 300.2, 234.4, 270.2, 52.6, 51.31; Oldenstein 1976, taf. 46, no., 485-489.

8.18 Decorative Fitting

inventory no.: 006-171
find no.: 1967-H-287
context: unknown
diameter: 3.6 to 3.9 cm
description: Bronze decorative fitting with a round convex-shaped head and two rivets, in excellent condition. It is bend slightly between the positions of the rivets probably due to its attachment to a belt-shaped object. The counter knobs of the rivets reach beyond the rim of the head.
Cf.: Nicolay 2005, pl. 70, no. 82.180, 211.70, 288.83; Oldenstein 1976, taf. 56.

8.19 Decorative Fitting

inventory no.: 006-195
find no.: 1967-H-287
context: Trench VI, level 3 to 4, together with charred grain and a larger piece of leather fitting.
diameter: 1.0 cm (head)

height: 0.5 cm
description: Fairly intact bronze decorative fitting. The edge shows some damage.
Cf.: Nicolay 2005, pl. 70, no. 300.2, 234.4, 270.2, 52.6, 51.31; Oldenstein 1976, taf. 46, no., 485-489.

8.20 Decorative Fitting

inventory no.: 002-229
find no.: 1967-H-311
context: Trench VI, level 3 to 4.
diameter: 5.8 cm
description: Large but thin bronze decorative with two rivets. The edge is slightly damaged.
Cf.: Nicolay 2005, pl. 70, no. 82.180; Oldenstein 1976, taf. 56.

8.21 Decorative Fitting

inventory no.: 002-214
find no.: 1967-H-321
context: Trench VI, level 5.
diameter: 3.8 cm
description: Bronze decorative fitting with a round head and convex shape.
Cf.: Nicolay 2005, pl. 70, no. 82.180, 211.70, 288.83; Oldenstein 1976, taf. 56.

8.22 Decorative Fitting

inventory no.: 002-202
find no.: 1967-H-265
context: Trench VI, level 2 to 3.
diameter: 3.5 cm
description: Fairly intact bronze fitting with an almost flat head. One of the two rivets is broken off at the base.
Cf.: Nicolay 2005, pl. 70, no. 82.180, 211.70, 288.83; Oldenstein 1976, taf. 56.

8.23 Decorative Fitting

inventory no.: 002-151
find no.: 1974-SM-15
context: Trench I, level 2.
diameter of head: 1.5 to 1.9 cm
length: 1.3 cm
description: Bronze decorative fitting of which the rivet is broken off. Heavily deformed.
Cf.: Nicolay 2005, pl. 70, no. 300.2, 234.4, 270.2, 52.6, 51.31; Oldenstein 1976, taf. 46, no., 485-489.

8.24 Decorative Fitting

inventory no.: 002-155
find no.: 1974-SM-53a
context: Trench III, level 2 to 3.
diameter: 1.7 to 1.5 cm
length: 0.9 cm
description: Decorative bronze fitting with a slightly oval head. The rivet is still present and includes a counter knob.
Cf.: Nicolay 2005, pl. 70, no. 300.2, 234.4, 270.2, 52.6, 51.31; Oldenstein 1976, taf. 46, no., 485-489.

8.25 Decorative Fitting

inventory no.: 006-17
find no.: 1975-SM-227
context: Trench X, “along partition between De Smet and v.d. Hooft parcels”.
diameter: 1.9 cm

height: 1.0 cm
description: Bronze decorative fitting with a round, flat head and one rivet on the back. In poor condition.
Cf.: Nicolay 2005, pl. 70, no. 300.2, 234.4, 270.2, 52.6, 51.31; Oldenstein 1976, taf. 46, no., 485-489.

8.26 Decorative Fitting (fragment)

inventory no.: 006-89
find no.: 1962-Q-423
context: Trench VII
length: 1.5 cm
height: 1.0 cm
description: Fragment of a bronze decorative fitting with one rivet still present. It was probably part of a larger convex-shaped fitting with two rivets.

8.27 Decorative Fitting

inventory no.: 002-154
find no.: 1974-SM-9
context: Trench I, level 2 to 3.
diameter: 4.1 cm
thickness: <0.1 cm
description: Bronze decorative fitting with a round head. In good condition.
Cf.: Nicolay 2005, pl. 70, no. 82.180, 211.70, 288.83; Oldenstein 1976, taf. 56.

8.28 Decorative Fitting

inventory no.: 006-11
find no.: 1975-SM-
context: unknown
diameter: 5.7 cm
thickness: 0.2-0.3 cm
description: Bronze decorative fitting with a round head and two rivets. The surface has a green patina due to oxidation. Remains of a shell have attached to it.
Cf.: Nicolay 2005, pl. 70, no. 82.180, 211.70, 288.83; Oldenstein 1976, taf. 56.

8.29 Decorative Fitting

inventory no.: 006-202
find no.: 1971-TMS
context: Found next to large limestone blocks.
diameter: 5.5 cm
description: Bronze decorative fitting with a round head and two rivets. The condition is poor due to heavy oxidation.
Cf.: Nicolay 2005, pl. 70, no. 82.180, 211.70, 288.83; Oldenstein 1976, taf. 56.

8.30 Decorative Fitting

inventory no.: 006-203
find no.: 1971-TMS
context: Found next to large limestone blocks.
diameter: 4.1 cm
description: Bronze decorative fitting with a round head and two rivets.
Cf.: Nicolay 2005, pl. 70, no. 82.180, 211.70, 288.83; Oldenstein 1976, taf. 56.

8.31 Decorative Fitting

inventory no.: 002-102
find no.: 1962-Q-341
context: Trench VI, middle section, in the upper level of the Roman layer.
length: 5.6 cm
width: 3.1 cm (max.)
description: Bronze decorative fitting, elongated with rounded edges, with four pelta-shaped openings as decorations. The object is somewhat out of shape, as one side if wider than the other. On the bottom are two rivets with counter knobs of which one is missing.

8.32 Decorative Fitting

inventory no.: 006-201
find no.: 1971-TMS-9
context: Roman layer.
length: 3.2 cm
width: 2.2 cm
height: 1.2 cm
description: Bronze decorative fitting with the shape of a Venus shell. On the lower side are two protrusions. On the back are two rivets present.
Cf.: Nicolay 2005, pl. 73, B5; Oldenstein 1976, 57, no. 696-699.

8.33 Decorative Fitting

inventory no.: 002-76
find no.: 1961-Q-232a
context: Trench I, Roman layer, stray find.
length: 3.5 cm
width: 3.9 cm
description: Fairly intact bronze decorative fitting with the shape of a Venus shell. On the back side are two rivets.
Cf.: Nicolay 2005, pl. 73, B5; Oldenstein 1976, 57, no. 696-699.

8.34 Decorative Fitting

inventory no.: 006-63
find no.: 1962-Q-?
context: unknown
length: 3.4 cm
width: ca 3.8 cm (reconstr.)
description: Fairly intact bronze decorative fitting with the shape of a Venus shell. On the bottom are two rivets. The right side is partly broken off.
Cf.: Nicolay 2005, pl. 73, B5; Oldenstein 1976, 57, no. 696-699.

8.35 Decorative Fitting

inventory no.: 002-112
find no.: 1961-Q-232b
context: Trench I, Roman layer, stray find.
length: 3.0 cm
width: 3.0 cm
description: Fairly intact bronze decorative fitting in the form of a Venus shell. On the back are two rivets.
Cf.: Nicolay 2005, pl. 73, B5; Oldenstein 1976, 57, no. 696-699.

8.36 Decorative Fitting

inventory no.: 002-30
find no.: 1962-Q-337
context: Trench VI, southern section.
length: 3.3 cm
width: 3.4 cm
description: Slightly slender and pointed bronze decorative fitting in the form of a Venus shell. One side is broken off.
Cf.: Nicolay 2005, pl. 73, B5; Oldenstein 1976, 57, no. 696-699.

8.37 Decorative Fitting

inventory no.: 002-113
find no.: 1962-Q-414a
context: Among stray finds from trench VIII.
length: 2.1 cm
width: 1.4 cm (in the middle)
description: Elongated bronze decorative fitting shaped as a shield with six sides. On the front is a depiction of a vulva that appears as a coffee bean. On the bottom are two small rivets with counter knobs.
Cf.: Nicolay 2005, pl. 79, B17; Oldenstein 1976, taf. 34, no. 267-272.

8.38 Decorative Fitting

inventory no.: 002-114
find no.: 1962-Q-414b
context: Among stray finds from trench VIII.
length: 3.0 cm
width: 1,9 cm (in the middle)
description: Elongated bronze decorative fitting shaped as a shield with six sides. On the front is a depiction of a vulva that appears as a coffee bean. On the bottom are two small rivets with counter knobs.
Cf.: Nicolay 2005, pl. 79, B17; Oldenstein 1976, taf. 34, no. 267-272.

8.39 Decorative Fitting

inventory no.: 002-75
find no.: 1961-Q-117
context: Trench II, Roman layer.
length: 4.3 cm (max.)
width: 2.5 cm (max.)
description: Bronze decorative fitting in the shape of a double hyperbole (shield-shaped) The front side is flat, while two rivets are present on the back. In good condition.
Cf.: Jacobi 1909, taf. XII, no. 43; Oldenstein 1976, taf. 59, no. 733-734; Nicolay 2005, pl. 74, cat. B.

8.40 Decorative fitting?

inventory no.: 002-97
find no.: 1962-Q-413
context: Trench VII, northern section, Roman layer.
diameter: 7.9 cm (max.)
height: ca. 5.9 cm
description: Bronze cone-shaped object with fifteen ribs running from top to base. On the top is a round hole about 1.3 cm wide. On the inside, a molten layer of metal is attached. Its function is unclear, but similar decorative ribs are applied decorative horse gear fittings.[304] This object is however very large for a fitting and unpractical of shape.

[304] See for example Nicolay 2005, pl. 72, B3.

8.41 Decorative fitting?

inventory no.: 006-181
find no.: 1967-H-1967
context: Trench VI, level 4.
diameter: 4.6 cm
description: Bronze disc-shaped object with a slight convex shape that may have been a decorative fitting. On the hollow side are decorative concentric circles. The centre point of this side is raised slightly. The object is overall in poor condition. Its hollow shape rules out the possibility of a phalera.

8.42 Fitting?

inventory no.: 006-186
find no.: 1966-H-118a
context: unknown
diameter: 7.9 cm
thickness: 0.3 cm
description: Three fragments of one flat bronze disc of which the function is unclear, perhaps used as a fitting. In the centre is a small hole (3 mm). In poor condition.

8.43 Fitting?

inventory no.: 006-114
find no.: 1962-Q-484
context: unknown
diameter: 2.6 cm
thickness: 0.2 cm
description: Small bronze disc that may have been part of a fitting. On the middle is a small hole with a concentric circle around it on one side.

8.44 Fitting?

inventory no.: 006-251
find no.: 1977-B-134
context: unknown
diameter: ca 3.6 cm (reconstr.)
description: Fragment of a small bronze disc-shaped object with a hole in the middle. In poor condition.

8.45 Double button

inventory no.: 002-89
find no.: 1962-Q-423
context: Trench VII, Roman layer.
diameter: 2.8 cm (max.)
width: 3.5 cm
description: Dumb-bell-shaped double button in excellent condition. Both ends are shaped as a rosette, are solid and of equal size.
Cf.: Oldenstein 1976, taf. 46, no. 483.

8.46 Spur

inventory no.: 002-107+002-116
find no.: 1962-Q-469
context: Stray find?
width: ca. 17.0 cm (reconstruction of the complete spur)
length: ca. 11.5 cm (reconstruction of the complete spur)
thickness: 0.5 cm
description: Part of a find of two bronze fragments of spurs. On the largest fragment, the sting is still present as is a rectangular sheet with remnants of six rivets that attached the spur to the leather. Both of these two fragments fit together near the sting.
Cf.: Nicolay 2005, pl. 96.

8.47 Spur (fragment)

inventory no.: 002-110
find no.: 1962-Q-531
context: unknown
width: 6.2 cm (between both ends)
thickness: 0.3 to 0.5 cm
description: Fragment of an iron spur, corroded but still recognizable. A small protrusion functioned as the sting. Towards the middle of the spur, near the sting, the cross-section is round on the outside and flat on the inside. Towards both ends, the cross-section is rectangular.
Cf.: Nicolay 2005, pl. 96.

8.48 Bridle ring

inventory no.: 002-74
find no.: 1962-Q-307
context: Trench VI, northern section in Roman layer.
diameter: 6.2 cm (max. of lower part)
height: 7.3 cm
description: Part of a corroded bronze bridle ring with on the bottom side protrusion that are somewhat sideways and upwards. In the middle of the bottom is a square that attached the object to something else, which was probably made of lead or iron. On the top, another object was attached, as can be concluded from the round, flat surface present there, possible an ornamental piece.

8.49 Bridle ring

inventory no.: 002-45
find no.: 1962-Q-402
context: Trench IX, in yellow ochre layer.
diameter: 6.5 cm (max.)
height: 6.5 cm
description: Almost intact bridle ring. The edge is slightly corroded. The upper ring is flattened vertically and has a diameter of 3.8 cm. The lower ring is placed crosswise towards the top ring and is covered by a bell-shaped sheet of bronze that is attached in the middle between both rings.
Cf.: Ulbert 1959, taf. 22, no. 1; Amand 1975, 36, fig. 16, 28.

8.50 Bridle ring

inventory no.: 002-46
find no.: 1962-Q-407
context: Found in trench VIII in Roman layer.
diameter: 5.3 cm (max.)
height: 7.0 cm (max.)

description: Almost complete bridle ring. The edge is slightly corroded. The upper ring is convex on the outside and flat on the inside. The lower ring is placed square on the upper ring and is covered by a bell-shaped sheet of bronze that is attached in the middle, between both rings.
Cf.: Ulbert 1959, taf. 22, no. 1; Amand 1975, 36, fig. 16, 28.

8.51 Bridle ring

inventory no.: 002-47
find no.: 61-Q151
context: Trench III.
height: 7.0 cm
diameter: 6.1 cm (max.)
description: Bronze bridle ring of which the upper ring has a convex outside and flat inside, somewhat similar to no. 8.50. The lower ring is placed square on the upper ring and is covered by a bell-shaped sheet of bronze that is attached in the middle, between both rings. The object is slightly corroded.
Cf.: Ulbert 1959, taf. 22, no. 1; Amand 1975, 36, fig. 16, 28.

8.52 Bridle ring

inventory no.: 002-91
find no.: 1962-Q-423a
context: Found in trench VII in Roman layer.
length: 5.6 cm
width: 4.6 cm
description: Fragment of a bronze bridle ring of which the upper ring is broken off. Heavily oxidised.
Cf.: Ulbert 1959, taf. 22, no. 1; Amand 1975, 36, fig. 16, 28.

8.53 Bridle ring (fragment)

inventory no.: 002-121
find no.: 1962-Q-423b
context: Found in trench VII in Roman layer, stray find.
length: 4.8 cm
width: 4.2 cm
description: Fragment of a bronze bridle ring of which the upper ring is broken off.
Cf.: Ulbert 1959, taf. 22, no. 1; Amand 1975, 36, fig. 16, 28.

8.54 Bridle ring

inventory no.: 002-152
find no.: 1975-SM-252
context: Trench VIII, layer 3, in clayey pit with Roman ceramics.
height: 6.5 cm (max.)
description: Bronze bridle ring, heavily oxidised but intact.
Cf.: Ulbert 1959, taf. 22, no. 1; Amand 1975, 36, fig. 16, 28.

8.55 Bridle ring

inventory no.: 002-98
find no.: 1961-Q-144
context: Trench II, from wooden well.
height: 6.5 cm (max.)
description: Bronze bridle ring, slightly corroded, of which the upper ring has a round cross-section. The lower ring is placed square on the upper ring and is covered by a bell-shaped sheet of bronze that is attached in the middle between both rings. Very similar to 8.49.
Cf.: Ulbert 1959, taf. 22, no. 1; Amand 1975, 36, fig. 16, 28.

8.56 Bridle ring (fragment)

inventory no.: 006-173
find no.: 1966-H-40
context: Trench IV, layer 2 or 4.
height: 3.0 cm
diameter: 2.1 cm
description: Bronze bridle ring of which the lower part of broken off. The upper ring has an almost round cross-section, with the inner side a bit flattened.
Cf.: Ulbert 1959, taf. 22, no. 1; Amand 1975, 36, fig. 16, 28.

8.57 Bridle ring (fragment)

inventory no.: 006-179A
find no.: 1966-H-30
context: unknown
height: 3.7 cm
diameter: 2.4 cm
description: Bronze bridle ring of which the lower part of broken off. The upper ring has a flat cross-section and appears to have been worn off on top.
Cf.: Ulbert 1959, taf. 22, no. 1; Amand 1975, 36, fig. 16, 28.

8.58 Bridle ring

inventory no.: 002-22
find no.: 1962-Q-233a
context: Stray find.
diameter: 4.5 cm (of the ring)
length: 10.5 cm
description: Bronze bridle ring with a peg attached to it. Somewhat corroded but in good condition. The ring has an oval shaped cross-section, wider in diameter at the top and narrower near the peg. Between the ring and the peg is a brim. The peg has a rectangular cross-section that is decreasing in size towards the end.

8.59 Bridle ring

inventory no.: 002-99
find no.: 1962-Q-233b
context: Stray find.
diameter: 4.1 cm (of the ring)
length: 9.6 cm
description: Bronze bridle ring with a peg attached to it, in good condition. The ring has an oval shaped cross-section, wider in diameter at the top and narrower near the peg. The inner side of the ring is asymmetrical. The peg has a rectangular cross-section that is decreasing in size towards the end. No brim is present between the ring and the peg.

8.60 Bridle ring

inventory no.: 002-71
find no.: 1962-Q-484
context: Stray find.
diameter: 4.0 cm (of the ring)
length: 5.4 cm
description: Bronze bridle ring with a peg attached to it that is partly broken off. The ring has an oval shaped cross-section. The peg has a rectangular cross-section and a brim is present between the ring and the peg, similar to no. 8.58.

8.61 Bridle ring

inventory no.: 006-357
find no.: -
context: unknown
diameter: 5.1 cm (ring)
length: 9.9 cm
description: Bronze bridle ring with a peg attached to it. The ring has an oval shaped cross-section. The peg has a rectangular cross-section and a brim was probably present between the ring and the peg, but is now strongly corroded.

8.62 Yoke fitting

inventory no.: 002-7
find no.: 1962-Q-423b
context: Stray find.
length: 4.7 cm
height: 2.5 cm
description: Bronze yoke fitting with a saddle-shaped upper side with a ring attached to it. Dating from the Flavian period to the end of the third century.
Cf.: Nicolay 2005, 251, fig. 6.6, no. 8.

9 RINGS

9.1 Ring

inventory no.: 002-79
find no.: 1962-Q-237
context: Trench II.
diameter: 3.6 cm (outer), 2.3 cm (inner)
description: Bronze ring, fairly corroded but intact.

9.2 Ring

inventory no.: 002-77
find no.: 1962-Q-345
context: Trench VI, southern half.
diameter: 3.2 cm (outer), 2.3 cm (inner)
description: Bronze ring in good condition. Both sides are a bit flattened, resulting in an oval shaped cross-section.

9.3 Ring

inventory no.: 002-78
find no.: 1962-Q-532
context: unknown
diameter: 4.6 cm (outer), 3.0 cm (inner)
description: Bronze ring in fairly good condition. It has an oval cross-section with a protrusion on the outer side.

9.4 Ring

inventory no.: 002-55
find no.: 1962-Q-408
context: Trench IX, in yellow ochre layer with mussel shells.
diameter: 2.5 cm (outer), 1.8 cm (inner)
description: Small bronze ring in good condition. The cross-section is a bit oval shaped.

9.5 Ring

inventory no.: 006-78
find no.: 1962-Q-408
context: Trench IX, in yellow ochre layer with mussel shells.
diameter: 3.4 cm (outer), 2.6 cm (inner)
description: Fragment of two thirds of a small bronze ring. Heavily oxidised and indication of wear on one side.

9.6 Ring

inventory no.: 002-92A
find no.: 1962-Q-423
context: Trench VII, Roman level.
diameter: 5.0 cm (outer), 3.6 cm (inner)
description: Bronze ring in good condition.

9.7 Ring

inventory no.: 002-92B
find no.: 1962-Q-423
context: Trench VII, Roman level.
diameter: 3.8 cm (outer), 3.0 cm (inner)
description: Small bronze ring in good condition.

9.8 Ring

inventory no.: 002-92C
find no.: 1962-Q-423
context: Trench VII, Roman level.
diameter: 2.3 cm (outer), 1.6 cm (inner)
description: Small bronze ring in good condition.

9.9 Ring (fragment)

inventory no.: 006-177
find no.: 1967-H-283
context: Trench VI, second level, southern strip.
diameter: 5.0 cm (outer), 3.7 cm (inner)
description: A fragment of about three quarters of a bronze ring, in fairly good condition. It has an oval cross-section.

9.10 Ring

inventory no.: 006-165
find no.: 1967-H-219
context: Trench VI, level I.
diameter: 3.3 cm (outer), 2.4 cm (inner)
description: Bronze ring in good condition.

9.11 Ring

inventory no.: 006-162
find no.: 1967-H-290a
context: Trench VI, level III.
diameter: 2.2 cm (outer), 1.5 cm (inner)
description: Small bronze ring in poor condition. Exactly similar in size as 9.12 and 9.13.

9.12 Ring
inventory no.: 006-163
find no.: 1967-H-290b
context: Trench VI, level III.
diameter: 2.2 cm (outer), 1.5 cm (inner)
description: Small bronze ring in poor condition. Exactly similar in size as 9.11 and 9.13.

9.13 Ring
inventory no.: 006-164
find no.: 1967-H-290c
context: Trench VI, level III.
diameter: 2.2 cm (outer), 1.5 cm (inner)
description: Small bronze ring in poor condition. Exactly similar in size as 9.11 and 9.12.

9.14 Ring
inventory no.: 006-189
find no.: 1967-H-289
context: Trench VI, level III to VI.
diameter: 2.1 cm (outer), 1.4 cm (inner)
description: Small bronze ring in good condition.

9.15 Ring
inventory no.: 002-277
find no.: 1955-SB
context: "Near foundation with piece of bone".
diameter: 4.8 cm (outer), 3.6 cm (inner)
description: Bronze ring in good condition.

9.16 Ring
inventory no.: 002-162
find no.: 1975-SM-260
context: Trench XII.
diameter: 4.0 cm (outer), 3.0 cm (inner)
description: Bronze ring in good condition.

9.17 Ring
inventory no.: 006-305
find no.: 1973-AOS-220
context: Trench VII, first or second trench, Roman layer.
diameter: 2.6 cm (outer), 1.6 cm (inner)
description: Bronze ring in poor condition. The cross-section is oval.

9.18 Ring
inventory no.: 006-360
find no.: -
context: unknown
diameter: 3.4 cm (outer), 2.4 cm (inner)
description: Bronze ring in poor condition. The cross-section is round.

9.19 Ring
inventory no.: 006-391
find no.: -
context: unknown
diameter: 1.1 cm (outer), 0.9 cm (inner)
description: Small bronze ring in good condition.

9.20 Ring
inventory no.: 005-201
find no.: 1967-H-320
context: Trench VI, level 5.
diameter: 4.0 cm (outer)
description: Iron ring, strongly corroded.

9.21 Ring
inventory no.: 006-1
find no.: 1974-SM-60
context: Trench I.
diameter: 3.5 cm (outer), 2.1 cm (inner)
description: Lead ring with a flattened cross-section.

10 MISCELLANEOUS AND UNKNOWN OBJECTS

10.1 Wheel-shaped amulet
inventory no.: 002-156
find no.: 1974-SM-20b
context: Trench I.
diameter: 6.0 to 6.3 cm
thickness: ca. 0.3 mm
description: Bronze wheel-shaped amulet with six spokes, not perfectly round.
Cf.: Winkelmann 1907, fig. II no.1(a) & 7; Kofler 1897, taf. III, no. 14; Green 1984, pl. XXXV, no. 8, pl. XLVII, no. 247, pl. LIX, fig. 19.

10.2 Antler-shaped amulet
inventory no.: 002-83
find no.: 1962-Q
context: unknown
length: 5.3 cm
description: Bronze fragment of presumably an amulet, shaped as a deer antler.

10.3 Chain fragments
inventory no.: 006-355
find no.: -
context: unknown
length: ca. 30 cm
description: Five fragments of presumably one chain made up of 8-shaped links that are all ca. 1.5 cm in length. The chain links are overall in fairly good condition.

10.4 Chain fragment
inventory no.: 006-353
find no.: -
context: unknown
length: 11.3 cm
description: Fragment of a chain made up of 8-shaped links that are all ca. 1.5 cm in length. The chain is corroded but still in fairly good shape. Very similar to no. 10.3.

10.5 Nail
inventory no.: 006-26
find no.: 1974-SM-85b
context: Trench III, Roman layer.

length: 2.4 cm
diameter: 0.7 cm (head)
description: Short bronze nail with a knobbed head in excellent condition. The shaft is pointed towards the end and has irregular lengthwise grooves. The head is hexagonal.
Cf.: Webster 1992, 148-149, no. 298-316; Riha 2001, 106, no. 664 d & e.

10.6 Nail
inventory no.: 002-105
find no.: 1962-Q-414
context: Trench VIII, scattered finds in Roman layer.
length: 4.0 cm
description: Bronze nail made of winded sheets of metal, resulting in a head with the shape of a star and a hollow inside. The top is flat, probably as a result of hammering.

10.7 Nail
inventory no.: 005-207
find no.: 1967-H-334
context: unknown
length: 5.0 cm
width: ca. 0.5 cm (max. of shaft)
description: Iron nail, strongly corroded, tapering.

10.8 Nail
inventory no.: 005-206
find no.: 1967-H
context: unknown
length: 16.5 cm
width: ca. 0.8 cm (max. of shaft)
description: Iron nail, strongly corroded, tapering towards the end, with a flat and rectangular cross-section.

10.9 Nail
inventory no.: 005-251
find no.: 1977-B-484?
context: Trench VIII.
length: 8.5 cm
width: ca. 0.5 cm (max. of shaft)
description: Iron nail, strongly corroded, tapering, with a square cross-section.

10.10 Nail
inventory no.: 005-58
find no.: 1975-SM-138
context: "From Roman excavation."
length: 8.0 cm
width: ca. 0.5 cm (max. of shaft)
description: Iron nail, strongly corroded, tapering, with a square cross-section.

10.11 Nail (fragment)
inventory no.: 005-5
find no.: 1961-Q
context: Trench II.
length: 4.6 cm
width: ca. 0.5 cm (max. of shaft)
description: Iron nail, strongly corroded, tapering, with a square cross-section. The tip is broken off.

10.12 Nail

inventory no.: 005-56
find no.: 1974-SM
context: unknown
length: 5.2 cm
width: ca. 0.5 cm (max. of shaft)
description: Iron nail, strongly corroded, tapering, with a square cross-section and a flat head.

10.13 Peg/Shaft

inventory no.: 005-205
find no.: 1966-H-101
context: Roman layer, ca. 20 cm deep.
length: +10.0 cm
width: 1.2 cm (max. of shaft)
description: Iron shaft, strongly corroded, tapering, with a square cross-section. No head present.

10.14 Nail

inventory no.: 005-52
find no.: 1974-SM-85b
context: Trench III, Roman level.
length: 7.9 cm
width: 0.5 cm (max. of shaft)
description: Iron nail, strongly corroded, tapering, with a square cross-section. No head present.

10.15 Hinge?

inventory no.: 006-352
find no.: -
context: unknown
length: 4.2 cm
width: 2.1 cm
description: Dumb-bell-shaped double button in good condition. Both ends are decorated with the image of a bearded man.

10.16 Decorative fitting?

inventory no.: 002-203
find no.: 1967-H-450
context: Trench VII, between the stones of the Roman squat grave.
length: 4.4 cm (of the end)
width: 3.8 cm (of the end), 8.9 cm (total width of original object, reconstr.)
thickness: 0.3 cm
description: One half of a bronze fitting that was probably symmetrical in shape. It may have been part of a buckle, but the exact function is unknown.

10.17 Decorative fitting?

inventory no.: 006-390
find no.: -
context: unknown
length: 4.2 cm
width: 0.8 cm
description: Flat bronze fragment of a fitting with decorations on one side, consisting of a decorative rim and a plant motif in between. The back side is flat and undecorated.

10.18 Medical instrument? (fragment)

inventory no.: 006-113
find no.: 1961-Q-144
context: Trench II, "at 53 m., from Roman well"
length: 6.8 cm
description: Fragment of a bronze instrument, possibly for medical purposes. It has a flat and tapering shape. In the middle of the original intact object was a small indentation. The surface is corroded.

10.19 Medical instrument? (fragment)

inventory no.: 006-354
find no.: 1993?
context: unknown
length: 10.5 cm
description: Bronze fragment of presumably a medical instrument. It has a flat and tapering shape. The surface is corroded. Similar to no. 10.18.

10.20 Handle?

inventory no.: 006-25
find no.: SM
context: unknown
length: 7.4 cm
description: Fragment of a bronze object, possibly a handle, in poor condition. It has a semicircular shape and is broken off towards both terminals. It might have been used either as a carrying handle on a helmet or as a furniture handle.
Cf.: Rodenburg 1998, cat., 31.

10.21 Handle?

inventory no.: 006-306
find no.: 1973-AOS-220
context: Trench VII, first or second trench, Roman layer.
diameter: 3.7 cm
description: Fragment of an iron object with an elongated shape and a square cross-section. It is broken off on one side, showing a hollow inside. This object may have been part of a handle.

10.22 Point/tip?

inventory no.: 005-204
find no.: 1967-H-333
context: "From Roman excavation."
length: 18.5 cm
width: ca. 1.6 cm (max.)
thickness: ca. 0.3 cm
description: Iron object, strongly corroded, elongated with a pointed tip. It may have been used as a fishing tool.
Cf.: Walke 1965, taf. 120, no. 11, 16 & 17.

10.23 Rim?

inventory no.: 006-185
find no.: 1967-H-218
context: unknown
contour: 10.0 cm
description: Thin strip of bronze of which the outer side is bulged and the inner side flat. It could have been the rim of a vessel such as a wooden bucket.

10.24 Lid?

inventory no.: 006-307
find no.: 1973-AOS-39
context: unknown
diameter: 3.6 cm
description: Bronze object with a convex shape and a protrusion on top, possibly a lid. In poor condition; corroded on the edges.

10.25 Unknown object

inventory no.: 005-203
find no.: 1967-H-?
context: unknown
length: 8.9 cm
width: 4.1 cm
description: Iron object, shaped as a modern door handle, with an rectangular cross-section along the 'handle' and a round cross-section on the other end.

10.26 Unknown object

inventory no.: 006-301
find no.: 1973-AOS99
context: Trench VI/VII
length: 7.8 cm
width: 1.9 cm
description: Bronze object that may have been part of a steelyard or a locking mechanism. It is made up of one piece that is connected to another with a hinge. This piece has a protrusion with an eyelet, possibly to a nail. The terminal is a bit upward and decorated with scale-like features. The cross-section of this piece is triangular with a rounded top side and a flat bottom side. The other piece is broken off close to the hinge.

10.27 Unknown object

inventory no.: 006-23
find no.: SM
context: unknown
length: ca. 22 cm
description: Bronze strip-shaped elongated object, tapering on one end, in poor condition.

10.28 Sheet

inventory no.: 006-52
find no.: 1962-Q-414
context: VIII, stray find.
length: 8.1 cm
width: 1.4 cm
thickness: 0.2 cm
description: Strip-shaped sheet of bronze of unknown function.

10.29 Sheet

inventory no.: 006-186
find no.: 1966-H-118a
context: unknown
length: ca. 5.0 cm
width: ca. 8.0 cm
thickness: 0.1 to 0.2 cm
description: Fragment of a bronze sheet with a semicircular shaped protrusion on one side.

10.30 Sheet

inventory no.:	006-176
find no.:	1967-H-458
context:	Trench VII
length:	ca. 9.0 cm
width:	3.0 cm
thickness:	<0.1 cm
description:	Fragment of a rectangular bronze sheet. It is broken off on two ends and has one hole for a rivet or nail.

10.31 Plate

inventory no.:	006-166
find no.:	1966-H-81
context:	Trench III?
length:	13.0 cm
width:	3.5 cm (max.)
thickness:	ca. 0.5 cm
description:	Fragment of a elongated bronze plate with a rounded side and a more straight side. In poor condition. It has charred grain attached to it.

10.32 Plate

inventory no.:	005-59
find no.:	1974-SM-43
context:	unknown
length:	8.3 cm
width:	3.3 cm
thickness:	0.1 to 0.2 cm
description:	Plate of iron, almost rectangular in shape. It is corroded and broken off on one side. The hole of a rivet is visible on one edge. The width seems to narrow for an armour plate (*lorica segmentata*).

10.33 Strap-shaped object

inventory no.:	006-15
find no.:	1975-SM-227
context:	Trench X, "along partition between De Smet and v.d. Hooft parcels".
contour:	ca 8.0 cm
width:	2.2 cm
description:	Fragment of a bronze strap-shaped object with a convex cross-section, possibly part of a bracelet. One end is tapering, the other flattened. In poor condition.

Plate I

1.1

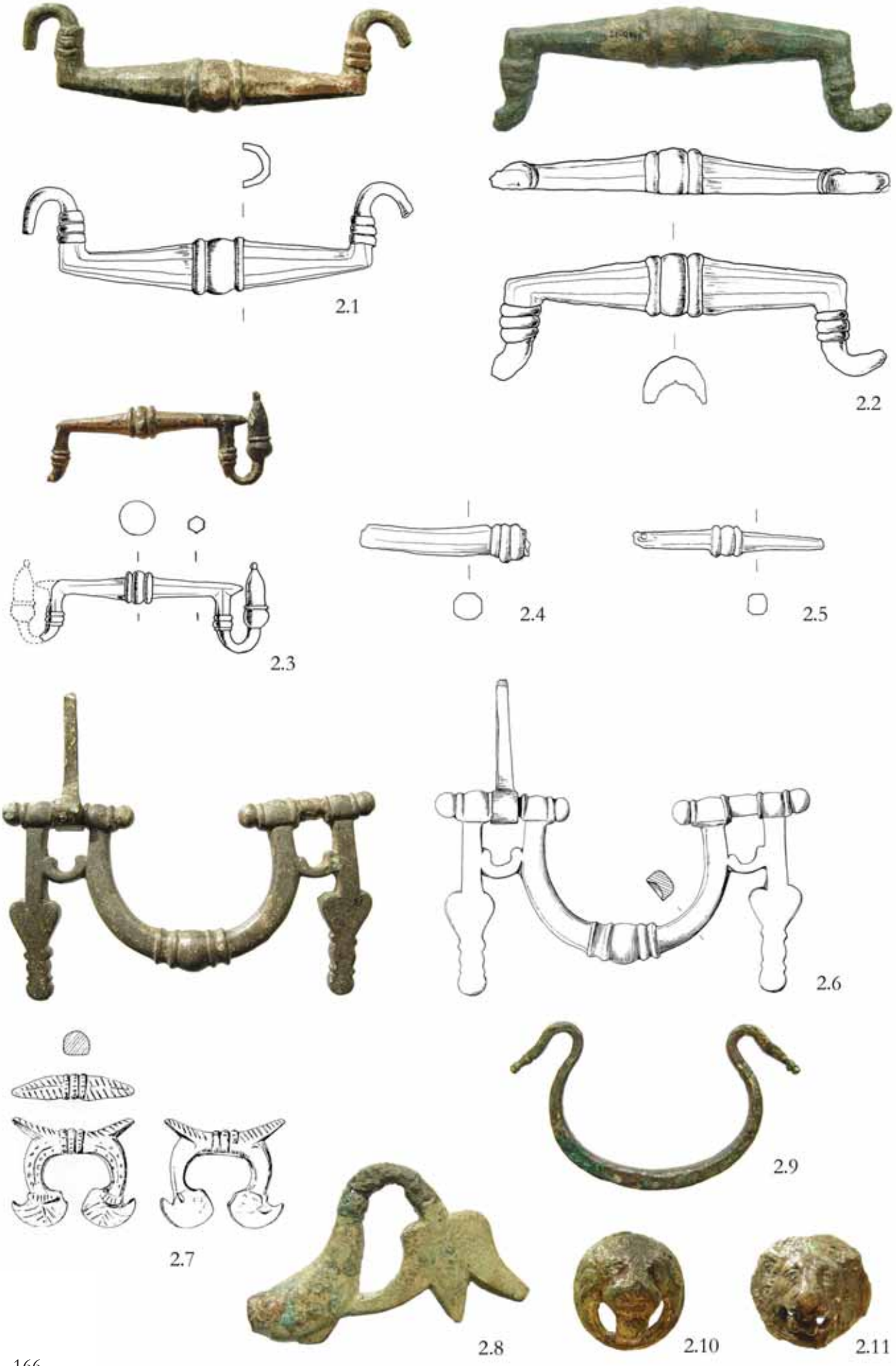
1.2

1.5

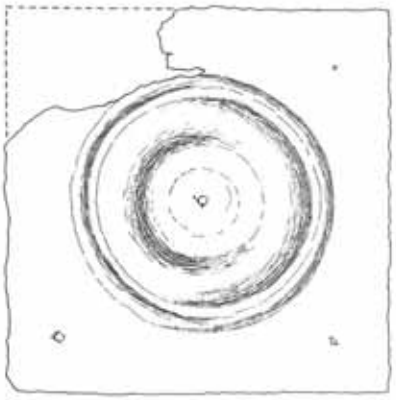
1.4

1.3

Statuettes - no. 1.1-1.2 & 1.5, scale 1:1; no. 1.3-1.4, scale 1:2



Furniture accessories - no. 2.1-2.11, scale 1:2



2.13

2.12

2.15

2.16

2.18

2.20 2.19

2.21

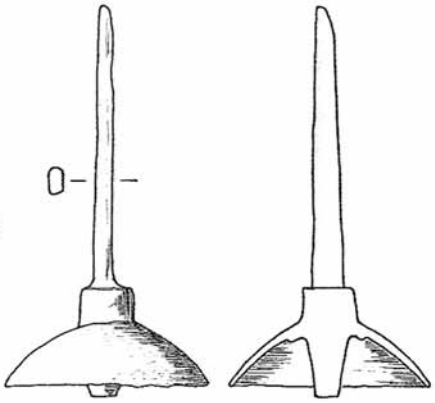
2.22

2.23

2.24 2.25 2.26 2.27 2.28

2.29 2.30

2.32



2.33

2.31

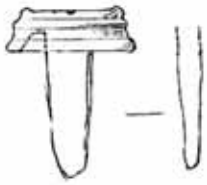
Furniture accessories - no. 2.12-2.13, scale 1:2; no. 2.15-2.33, scale 2:3

2.34

2.35

2.36

2.38



2.39

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2.49

2.50

Furniture accessories - no. 2.34-2.50, scale 2:3

3.1

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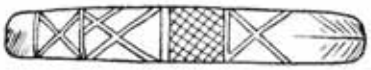
3.13



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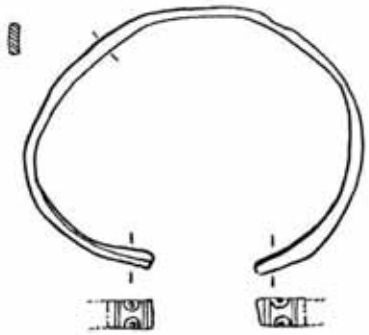
3.19



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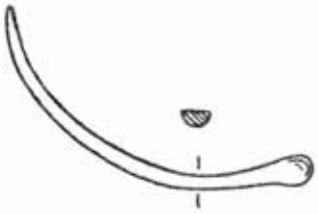


3.23

Jewellery - no. 3.1-3.2 & 3.6-3.9, scale 1:1; no. 3.10-3.23, scale 2:3; no. 3.3, no scale

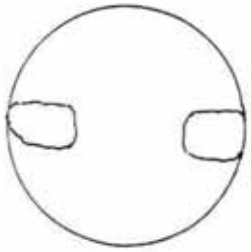
3.26

3.27

3.35

3.36

4.1



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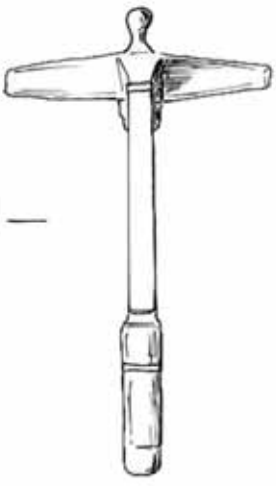
4.3



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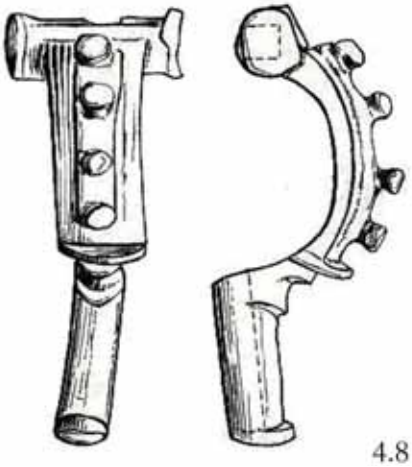
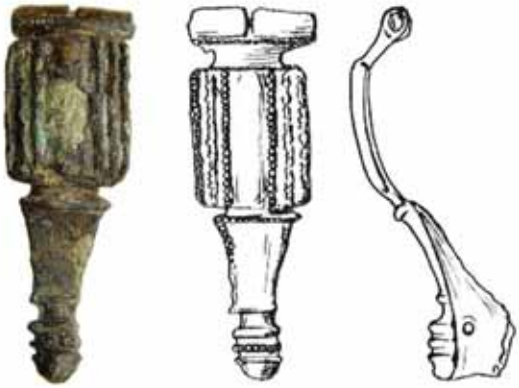
4.7



4.8

Jewellery - no. 3.26-3.36, scale 2:3; Fibulae - no. 4.1-4.8, scale 1:1

4.9



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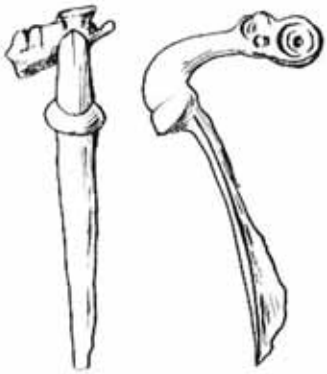

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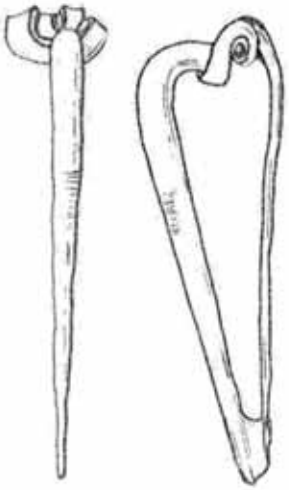
4.26



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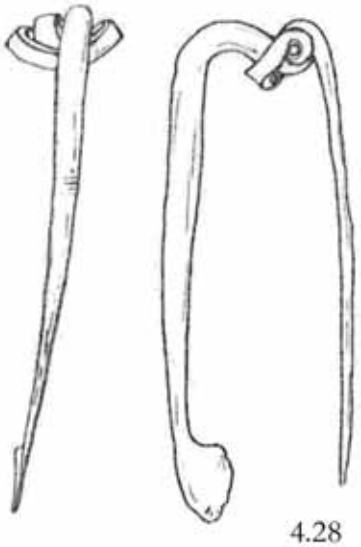

4.28

4.29

4.30

4.32

4.33

4.35

Fibulae - no. 4.9-4.35, scale 1:1

4.36

4.37

4.44

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4.49

4.54

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4.56

4.57

4.61

4.72

5.1

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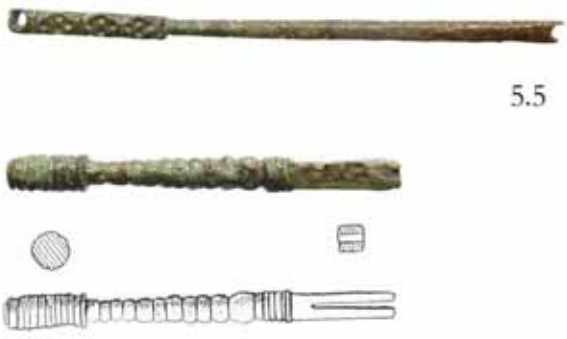

5.4

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5.10

Fibulae - no. 4.36-4.72, scale 1:1; Toilet implements, medical tools and utilitarian objects - no. 5.1-5.10, scale 2:3

Toilet impl., med. tools and util. objects - no. 5.11-5.24 & 5.27-5.29 & 5.31-5.38, scale 2:3; no. 5.25 & 5.30, no scale

5.31

5.32

5.33

5.34

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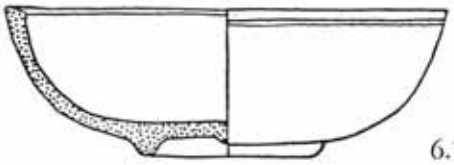
5.36

5.37

5.38

6.2

6.4



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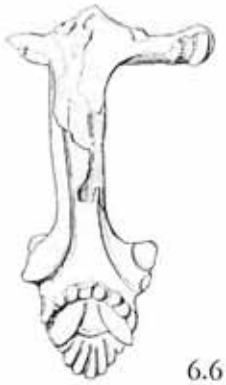
6.3



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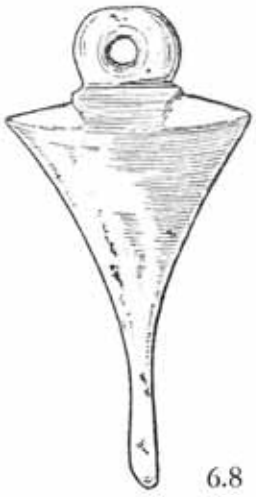

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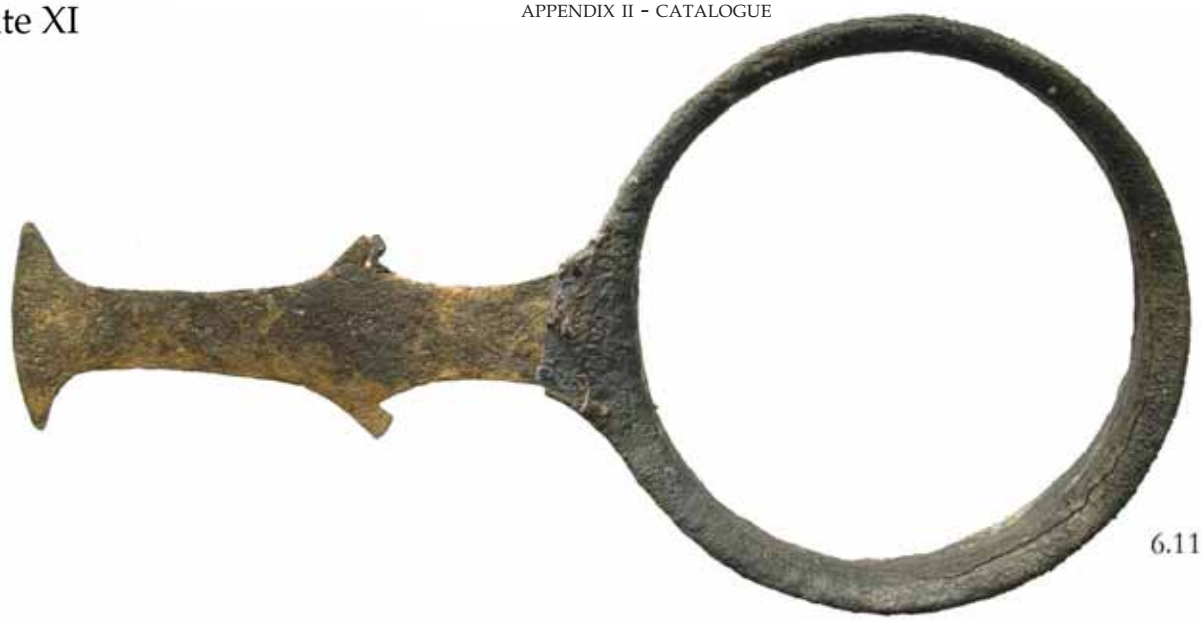
6.10

Toilet implements, medical tools and util. objects - no. 5.31-5.38, scale 2:3; Vessels & lids - no. 6.1-6.10, scale 2:3



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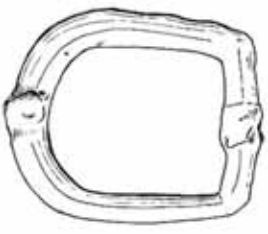
6.14

7.1



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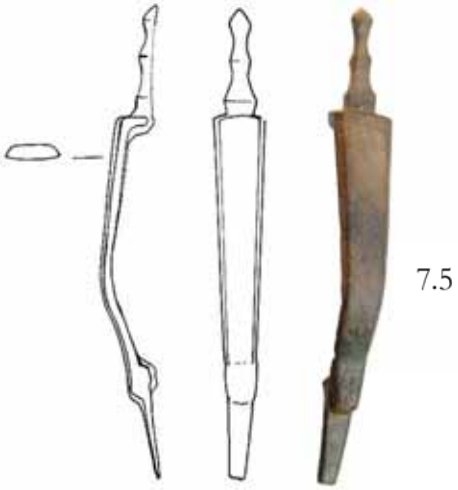
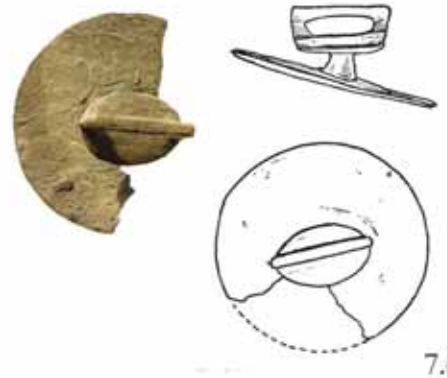


7.5

Vessels & lids - no. 6.11-6.13, scale 1:2; no. 6.14, no scale; Militaria - no. 7.1-7.5, scale 2:3



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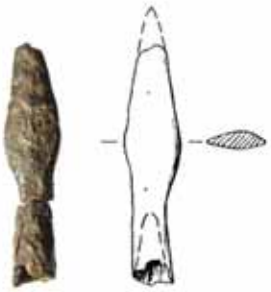

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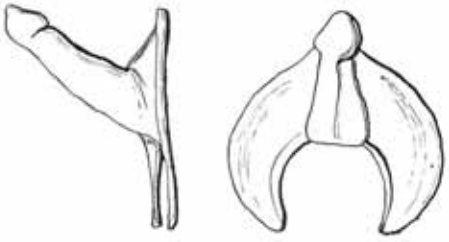

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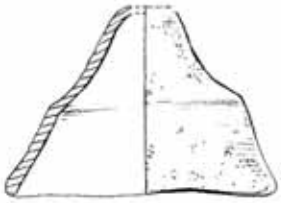

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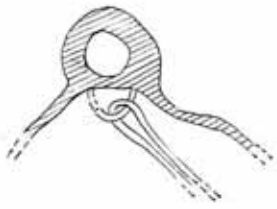
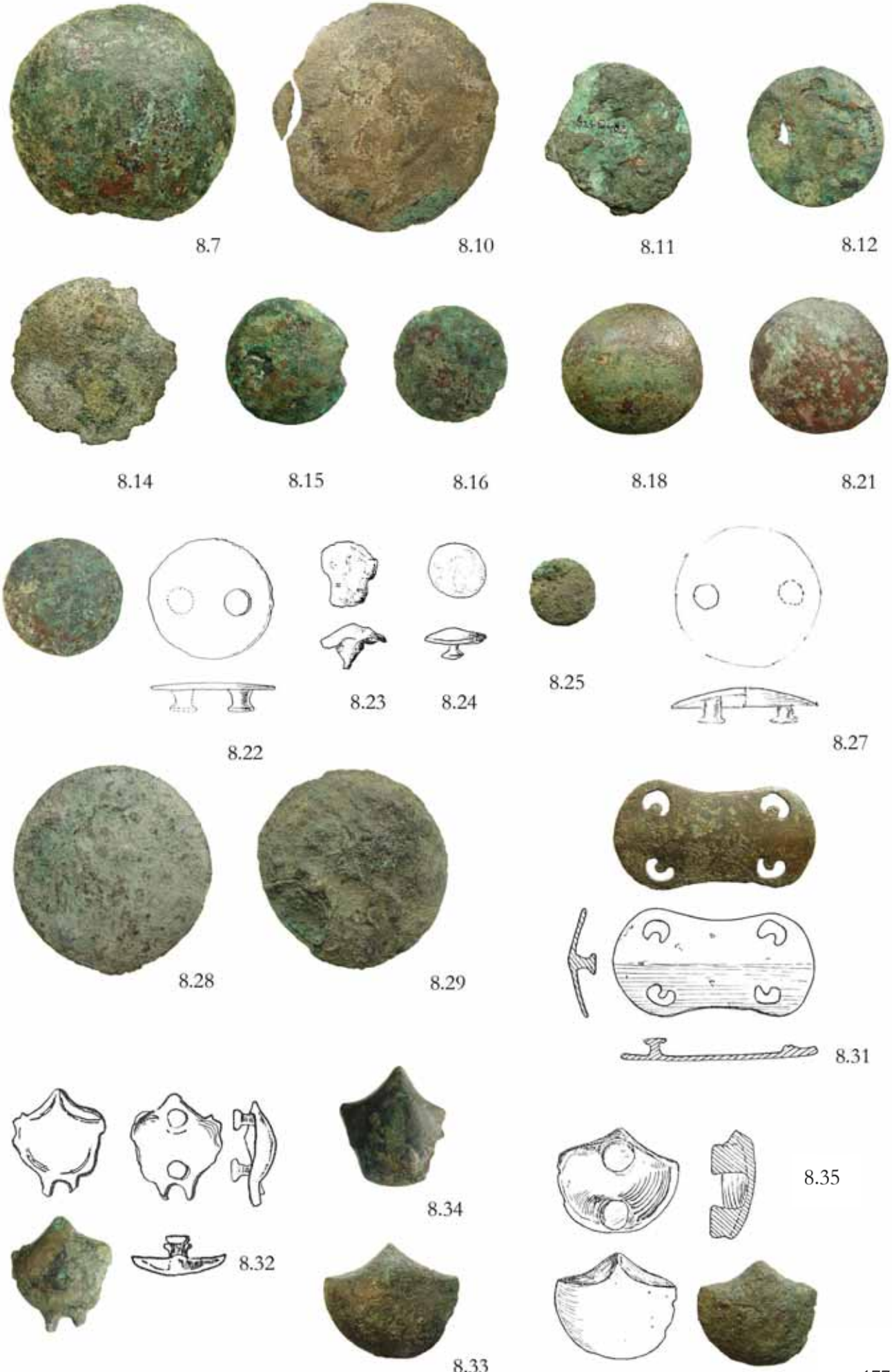


8.6

Militaria - no. 7.6-7.14, scale 2:3; Horse gear - no. 8.1-8.4, scale 2:3

Plate XIII

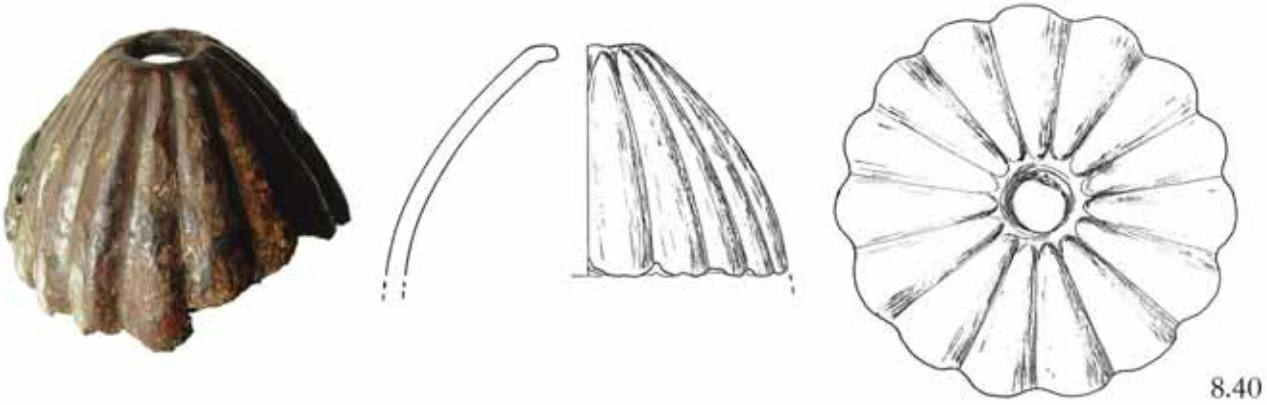


Horse gear - no. 8.7-8.35, scale 2:3

8.37

8.38

8.39



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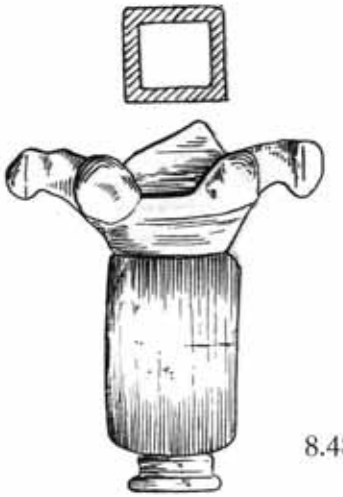

8.48

Horse gear - no. 8.37-8.48, scale 2:3

Horse gear - no. 8.49-8.62, scale 2:3; Rings - no. 9.1-9.11, scale 2:3

Rings - no. 9.12-9.18, scale 2:3; Miscellaneous and unknown objects - no. 10.1-10.32, scale 2:3

A STUDY OF THE ROMAN SETTLEMENT AT AARDENBURG AND ITS METAL FINDS

Beneath the surface of Aardenburg, a small town in the south-western part of the Netherlands, lie the remains of a Roman settlement that is presumed to have been named Rodanum. Extensive archaeological excavations from the late 1950's to the late 1980's revealed that the Roman settlement was similar in size or even larger than the modern community at this location. Its centre was formed by a large *castellum*-type fortification wall that enclosed several large stone buildings. The settlement was connected to the sea by a natural watercourse that defined its economic and logistical importance in the region. Rodanum's military function was to secure the regional coast against attacks by Germanic tribes via the North Sea, which occurred around AD 175. It continued to be inhabited until the late third century or the beginning of the fourth century, after which the settlement was deserted until the early Middle Ages.

The first part of this study provides an overview of Aardenburg during the Roman period, in which its economic and military functions within the region are explored. In particular, the military and civilian character of the town is discussed. The second part contains a study of the metal objects and aims to present significant additional information. This part concludes with a critical review of the current state of research at this site.

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