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2 Materials

2.1 INTRODUCTION

This chapter discusses the skeletal collections analysed in this research to assess the influence of the socioeconomic developments in Holland and Zeeland during the Central and Late Middle Ages. In all, this study includes 362 individuals from three different skeletal assemblages (see table 2.1 for an overview). These specific collections were chosen because together they are able to reflect the socioeconomic developments in the period and geographic area under study. Furthermore, the skeletal assemblages were available for study and could be analysed within the time frame of this research.

The human remains from Blokhuizen represent individuals from a cemetery associated with a reclamation village from the central medieval period. The skeletal collection from Blokhuizen represents the only assemblage of this type and from this time period excavated in Holland and Zeeland. Even though the preservation of the remains is somewhat poor, the study of these skeletons gives insight in life in a reclamation village during the central medieval period before large-scale urbanisation and associated changes took place in the area.

The skeletal remains from the later village of Klaaskinderkerke allow research into the influence of the socioeconomic developments on the rural residents in the late medieval period. This skeletal collection is one of the few rural cemeteries excavated in the study area from this particular time period, and currently the only one available for study. Although its sample size is relatively small in comparison with the other collections, the excellent preservation of the remains allows detailed research of the skeletons. Furthermore, it can be assumed that the Klaaskinderkerke individuals had a similar social status as the individuals from Blokhuizen, making them comparable in this regard. Thus, the comparison of the Blokhuizen to Klaaskinderkerke potentially reveals the impact of the socioeconomic processes in the countryside in the late medieval period.
The skeletons from the late medieval town of Alkmaar have been selected for this research in order to represent the urban perspective. In a relatively short period of time, Alkmaar grew in terms of number of inhabitants and size, and transformed into a true urban settlement. The Alkmaar individuals are expected to have had a similar socioeconomic background as the individuals from Blokhuizen and Klaaskinderkerke, thereby ensuring that any differences observed in this research are not due to status variations. Other urban collections from the same time period and study area available for analysis are either from hospital sites or known to consist of individuals who had a higher social economic status. Even though Alkmaar is not the largest town in the study region, its relatively high population density and urban character make this skeletal collection a good case study within the framework of this research.

Table 2.1:  Human skeletal collections used in this research.

<table>
<thead>
<tr>
<th>Site</th>
<th>Date</th>
<th>Type</th>
<th># of individuals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blokhuizen</td>
<td>AD 900-1194</td>
<td>Rural</td>
<td>119</td>
</tr>
<tr>
<td>Klaaskinderkerke</td>
<td>AD 1286-1573</td>
<td>Rural</td>
<td>54</td>
</tr>
<tr>
<td>Alkmaar</td>
<td>AD 1448-1572</td>
<td>Urban</td>
<td>189</td>
</tr>
</tbody>
</table>

The skeletal collections are currently stored at the Faculty of Archaeology, Leiden University under the site name, feature number/box number, and find number/skeletal number. This information per individual can be found at http://dx.doi.org/10.17026/dans-zkt-8y3h. The various contexts of the archaeological sites, such as location, occupation history, specific context of the human remains as well as excavation and curation history, are discussed below. In addition, short paragraphs on the skeletal assemblages used for comparative analysis are presented at the end of this chapter.

2.2  BLOKHUIZEN

2.2.1 Site context

The archaeological site of Blokhuizen is located in the current province of North-Holland (figure 2.1). In the 10th century AD, this area consisted mainly of peat interspersed by some sandy ridges, as was briefly discussed in chapter one (Beenakker 1988). Living on the peat was thought to be impossible, because the soil furnished no stable foundations on which houses could be built (Borger 1992). However, archaeological evidence from the Roman era suggests that in this period the peat in Holland was used for habitation. It has been hypothesised that the engineering skills of the Romans created sufficient drainage to make the peat suitable for housing and other activities. Interestingly, for the period after Roman occupation there is no evidence for settlements on the low-lying peat of Holland (Borger 1992). It is clear that habitation started again in the 9th century AD. Large-scale land reclamation with artificial
drainage systems made the area habitable (Besteman 1997; Borger 1992). During this period, small settlements started to emerge (Beenakker 1988), of which the village associated with the skeletal remains found at the archaeological site of Blokhuizen was one.

The name of the archaeological site ‘Blokhuizen’ derives from the presence of ‘block’-shaped houses on maps from the 16<sup>th</sup> century. It is, however, the current understanding that these houses were not related to the archaeological remains found in 1983. These ‘<i>blok huizen</i>’ were most likely constructed after AD 1318, post-dating the finds encountered during the excavation (Diederik 1989). Historical research suggests that the human skeletal remains and other finds from this site could belong a village called Geddingmore (or Geddenmore) (Diederik 1989; Beenakker 1988), although other researchers locate this village more to the North (Beenakker 1988:173).

Unfortunately, little is known about the village to which the archaeological remains belonged. Archival research indicates that the village was most likely part of a manor of the abbey of Egmond, as was most of the land in this area, that belonged to the autonomous ‘peasant republic of Westfriesland until the incorporation into the County of Holland by the end the 13<sup>th</sup> century. The village appears to have been fairly small with only a few farm houses, a church and cemetery, and some farmland (Diederik 1989). The inhabitants of the village, whether it was Geddingmore or not, were most likely agriculturalists considering the material found at comparative locations. Although exact information on the crops they cultivated and the animals they kept is unavailable since only part of the cemetery was excavated, from comparable reclamation villages in the peat area, it is known that emmer wheat was locally cultivated and that cattle breeding was important.

The reclamation of the land resulted in subsidence of the soil, which made the area more vulnerable (Beenakker 1988). Until large dikes and water mills had been constructed in the area in order to protect the land from incoming water, many villages were lost as a result of flooding (Beenakker 1988). It appears that this is also what happened to this village: at the end of the 12<sup>th</sup> century storms caused the area to be flooded and the settlement was abandoned as a result of this (Diederik 1989). Considering the uncertainty about the original name of the village associated with the skeletal remains, the name of the archaeological site and its early modern name, Blokhuizen, is used in this study.
2.1.2 Excavation history

In 1982, archaeological remains, such as 11th and 12th century ceramics, sand stone fragments, and human bones were encountered during agricultural work. These finds suggested that this site used to be the location of a church and associated cemetery. Since archaeological sites of this type from this time period are rare, it was decided to excavate the area (Woltering 1983, 1984). In 1983, the excavation was carried out by The Netherlands Archaeological Working Community (Archeologische Werkgemeenschap voor Nederland) and was supervised by the Dutch Cultural Heritage Agency (Rijksdienst voor het Oudheidkundig Bodemonderzoek).

The excavation confirmed the initial hypothesis: a rectangular cemetery with many primary interments (figure 2.2 and 2.3), surrounded by small ditches, was encountered. The exact location of the church could not be confirmed; pieces of sand stone and tuff were found throughout the excavation area. Other finds such as pottery suggested that the cemetery was most likely in use from the 10th to the 12th centuries. The area ceased to be used for burial when the rising water drove the inhabitants away and flooded the area (Diederik 1989; Woltering 1984). In all, 130 primary inhumations were completely excavated and lifted. Additionally, 40 other individuals were excavated but not lifted; only bone samples were collected. Before transport to Leiden University in 2012, the material was curated.
in the depot of the province of North-Holland. The present study includes 119 primary inhumations. The remaining inhumations were too incomplete or poorly preserved to be of use in this research.

Figure 2.2: Drawing of layer 2 of the excavation unit in Blokhuizen (adapted from drawing G. Alders, 1983).
2.3 KLAASKINDERKERKE

2.3.1 Site context

The village of Klaaskinderkerke was located in the southwest of The Netherlands in the current province of Zeeland, on the island Schouwen-Duiveland (figure 2.4). The village was founded on a naturally elevated ridge and first mentioned in a treaty of AD 1286. Archaeological research suggests that at this time, the area of the cemetery and church was artificially enlarged and raised to create better protection from the sea. It is assumed that the church was built after AD 1286 and that the cemetery was first used some years afterwards (Trimpe Burger and Huizinga 1964). The palaeogeological map of Zeeland (figure 2.5), as it was supposed to have been around AD 1300, shows Klaaskinderkerke in the northernmost part of Schouwen (Scouden).

It is clear that most of Zeeland consisted of clay (green), and some small areas of sand (yellow).

Since only the cemetery and church remains were excavated, there is limited information on the village of Klaaskinderkerke itself. Fortunately, more general historical sources on the county give insight into rural life in Zeeland in the late medieval period. While pastoral farming, especially of sheep, was important in the 10th and 11th centuries, the focus shifted towards labour-intensive crops for the urban centres during the late medieval period. As discussed, soil subsidence, which was so problematic in Holland, was not an issue in Zeeland (van Steensel 2012b). Considering this, it can be assumed that the people of Klaaskinderkerke were mainly involved in (commercial) arable farming with additionally some pastoral farming for their own use on the side.
In AD 1570, despite all efforts to protect the area with dikes, Zeeland was struck by a heavy storm which resulted in flooding of the entire island of Schouwen. It appears that the inhabitants of Klaaskinderkerke did not return to the village thereafter (Trimpe Burger and Huizinga 1964).

Figure 2.4: Map of The Netherlands with the province of Zeeland and location of Klaaskinderkerke indicated.
2.3.2 Excavation history

In 1953, large parts of the province of Zeeland, including the cemetery site of Klaaskinderkerke, flooded during a severe storm which resulted in the removal of the local topsoil, subsequently exposing the cemetery’s human remains. Although it was attempted to keep the area as a historical monument and preserve the remains in situ, this proved to be very difficult. It was therefore decided to excavate the entire area in order to prevent further damage. In 1959, the area of the cemetery was completely excavated by the Dutch Cultural Heritage Agency (Rijksdienst voor het Oudheidkundig Bodemonderzoek) (Trimpe Burger and Huizinga 1964).

During the excavation it became clear that little was left of the church: only remnants of the foundation of the western wall were found. In addition, patches of debris, marking the rough outline of the church, were found. As a result of various inundations during World War II and during the great flood of 1953, many graves had become disturbed: only 54 in situ burials were identified at the site. In addition, 57 isolated crania and several other disturbed skeletal parts were encountered and recovered (Trimpe Burger and Huizinga 1964). After excavation, the remains were curated in the depot of the province of Zeeland. In the context of the current research, only the 54 in situ burials are included in the analysis.
2.4 PAARDENMARKT, ALKMAAR

2.4.1 Site context

Alkmaar is located in the north-western part of The Netherlands in the current province of North-Holland (figure 2.6). The area consists of several sandy ridges which made early habitation possible in this predominantly wet environment (Bitter 2007a; Hakvoort et al. 2015). Habitation in the Alkmaar region probably dates back to the Early Bronze Age (1700 BC) and occupation of the area continued into the Iron Age and Roman Period (Bitter 2007a; Hakvoort et al. 2015). It appears that occupation ceased in the region during the 4th century AD, which is possibly related to the disintegration and eventual fall of the Roman Empire. From the 7th century AD onwards, evidence for habitation is observed again, although archaeological remains dating to the early medieval period are scarce in Alkmaar (Bitter 2007a; Cordfunke 1973; Hakvoort et al. 2015).

From the 10th century onwards, Alkmaar expanded (Hakvoort et al. 2015), and the town received city rights from Count Willem II of Holland in AD 1254 (Cox 2007; Streefkerk 2004). During this early period, the majority of the Alkmaar inhabitants were most likely still working as farmers, cultivating crops and breeding cattle and other animals. Archaeological remains from this time period suggest that the Alkmaar inhabitants occupied farm houses, similar to those in the countryside (Hakvoort et al. 2015). During the 13th and 14th centuries,
Alkmaar developed: the town increased in size and canals for fortification were dug (figure 2.7) (Hakvoort et al. 2014). The population of Alkmaar grew substantially in the centuries that followed; many people previously living on the surrounding countryside moved into the town (Kaptein 2007). At the end of the 16th century, Alkmaar was a town with approximately 8000 inhabitants (Kaptein 2007; Lucassen 2002). While it was still relatively small in size and had a relatively open character in comparison with other towns in Holland, Alkmaar had a fairly average population density of 136 inhabitants per hectare. Strategically, Alkmaar was of great importance since it represented the only way of passage to the northern part of Holland, making it an important port for international trade (van Nierop 2000; Streefkerk 2004).

![Figure 2.7: Expansion of the city of Alkmaar. A) AD 1325, B) Expansion in AD 1400 (36 hectares), C) Expansion in 16th century (59 hectares) (after van Oosten 2014).](image)

The skeletal remains analysed in the context of this research were buried in a cemetery which belonged to the Franciscan monastery of Alkmaar. This monastery was founded in AD 1448 at a location known as Het Heilighe Velt (‘The Holy Field’) in the northern part of the town (figure 2.8) (Alders 2009; Bruinvis 1893; Hakvoort et al. 2015). In AD 1481, the old chapel was replaced by a new cruciform church which was consecrated in AD 1486. Even though most of the Alkmaar citizens were buried in or outside of the larger parish church, some inhabitants chose to be interred with the Franciscans. Most likely, people sympathised with the beliefs of the Franciscans (Bitter 2015). Both the church itself and the cemetery were used
as a location for burial, although the individuals included in this research were all interred outside. There is little information on the cost for burial at the Franciscan friary, although 20 nickels had to be paid to the parish church to pay off their right to bury the citizens of Alkmaar (Bitter 2010, de Raad 2015).

Bruinvis (1893) indicates that both poor and wealthy citizens were buried with the Franciscans. On a list kept by the parish church, 108 people are buried at the cemetery of the Franciscan friary most of which were ‘ambachtslieden’, the commoners of Alkmaar (Bitter 2010, de Raad 2015). It is unclear if the individuals on the list are included in the sample. However, since the list also notes occupations for some of the individuals, it is a valuable source of information. Appendix 1 shows the list of names, the occupations (if listed), and if they were buried inside or outside the church (if listed).

Burial at this location ceased in AD 1572 as a result of the Eighty Years’ War when protestant followers of William of Orange captured the friars and destroyed large parts of the monastery. The monastery church, however, survived the Eighty Years War and was demolished in AD 1574 (Alders 2009; Bruinvis 1893). It appears that the cemetery was used again as a burial site for victims of the siege of Alkmaar in AD 1573 (Hakvoort et al. 2015; Schats et al. 2014; Schats 2015a).

Figure 2.8: The church of the Franciscan monastery, directly behind the town wall. Pen drawing by C.W. Bruinvis, c. 1860, after the situation around AD 1570 (Regional Archives Alkmaar).
After the destruction of monastery and church, the area was used as an animal market in the 17th and 18th centuries. As a result, the site became known as the Paardenmarkt (‘horse market’), even though other animals were sold here as well. In the 19th century, a gas factory was built at the location of the former monastery (Bruinviss 1893). Most recently, the area was used as a parking lot of a supermarket. Today, the area still holds the name Paardenmarkt and outlines of the graves have been made visible in the pavement.

2.4.3 Excavation history

The first excavations of the monastery area were undertaken in 2005 by the firm Hollandia Archeologen, commissioned by the municipality of Alkmaar. The city of Alkmaar planned to reorganise this area and therefore ordered exploratory excavations in order to study the archaeological importance of the Paardenmarkt. During this particular excavation campaign, Hollandia Archeologen excavated six 2x2m trenches. Four of them yielded human skeletal remains, indicating that at least part of the cemetery was still intact and would be destroyed if any underground construction would take place. Therefore, complete excavation of the area was deemed necessary before the reorganisation of the area could commence (Vaars 2005).

In June 2010, large-scale excavations started on the Paardenmarkt under the responsibility of Hollandia Archeologen. The excavation of human remains was carried out by a large team of osteology students of Leiden University, who were supervised by Prof. Dr. Menno L.P. Hoogland. The burials were all excavated by hand and documented thoroughly with skeletal recording forms and photography. The burial taphonomy was described in great detail. In total, 189 primary inhumations, several ossuaries and loose bones from disturbed contexts were found. The primary inhumations were coffin burials; this was indicated by the still visible outline of the coffin and coffin nails, as well as by the position of the bones in the grave which suggested decomposition in an open space (Duday 2009). Figure 2.9 shows a map of the excavation. Examples of typical burials at the site of the Paardenmarkt are shown in figure 2.10.
Figure 2.9: Map of the Paardenmarkt excavation (Hollandia Archeologen).
In addition to the primary inhumations, two mass graves containing victims of the siege of Alkmaar, comprising 22 and nine individuals respectively, were identified. Considering the context of the mass graves, it cannot be assumed that the individuals are representative of the Alkmaar population. Therefore, these remains are not included in the present study. For a detailed discussion on the mass grave remains see Schats (2015a) and Schats et al. (2014).

2.5 COMPARATIVE HUMAN SKELETAL MATERIAL FROM THE NETHERLANDS

2.5.1 Introduction

The human skeletal material discussed above allows for study into the influence of the socioeconomic developments during the medieval period in Holland and Zeeland. The individuals from the Blokhuizen, Klaaskinderkerke, and Alkmaar collections are analysed by the author in order to create comparable results. Additionally, data from other skeletal assemblages, collected by other researchers, are used to supplement the skeletal information and place the discussion of the current results in a broader context (chapter six).

For comparison, results from already published skeletal analyses of various other medieval sites in Holland and Zeeland have been used. Specifically, skeletal collections from Vronen, Cruyskerke, Delft, and Dordrecht are selected for use in this research (figure 2.11). These assemblages are suitable for comparison since they are from Holland, date to the medieval period, represent individuals from both rural and urban environments, and are expected to have had a similar socioeconomic status. The incorporation of this additional
Osteoarchaeological data increased the sample size and provides a broader context geographic context. Although not all data were collected in the same way, hence the reason why the results are only incorporated in the discussion and not the results section, the combination of published data with the results from new skeletal analyses not only gives more depth to this research, but it also allows for more nuanced and informed conclusions.

In total, published data on the remains of 946 individuals are used for comparison in the discussion (chapter six) in this research. For Dordrecht, Cruyskerke, and Vronen the skeletal data have been recently published and available to be used for comparison. The skeletal data for the Delft material are not published as of yet, however, Mike Groen has kindly agreed to supply the necessary results. The information on the comparative human skeletal assemblages is summarised in table 2.2.

Table 2.2: Human skeletal remains used in this research for comparative analysis

<table>
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<th>Site</th>
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<th>Type</th>
<th># of individuals</th>
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<tr>
<td>Vronen</td>
<td>AD 1000-1297</td>
<td>Rural</td>
<td>132</td>
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<tr>
<td>Cruyskerke</td>
<td>AD 1200-1421</td>
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<td>316</td>
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<td>Delft</td>
<td>AD 1251-1572</td>
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<td>182</td>
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<td>Dordrecht</td>
<td>AD 1275-1572</td>
<td>Urban</td>
<td>316</td>
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</table>

Figure 2.11: Map of The Netherlands with the provinces of Holland and Zeeland and the locations of the sites analysed by the author (black) and those used for comparison (gray) indicated.