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Introduction to the pottery research of Wijnaldum-Tjitsma

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THE EXCAVATIONS AT WIJNALDUM

VOLUME 2:
HANDMADE AND WHEEL-THROWN POTTERY
OF THE FIRST MILLENNIUM AD



Annet Nieuwhof (editor)



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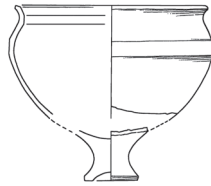
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The Excavations at Wijnaldum

Volume 2: Handmade and Wheel-thrown Pottery of the first Millennium AD



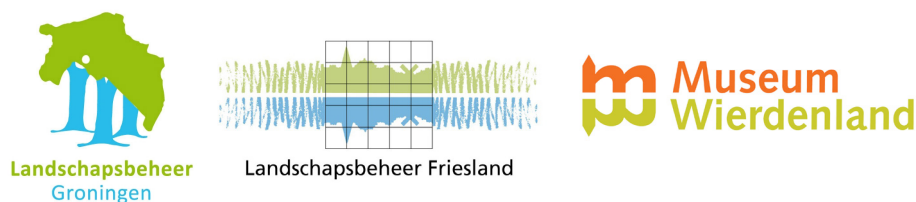
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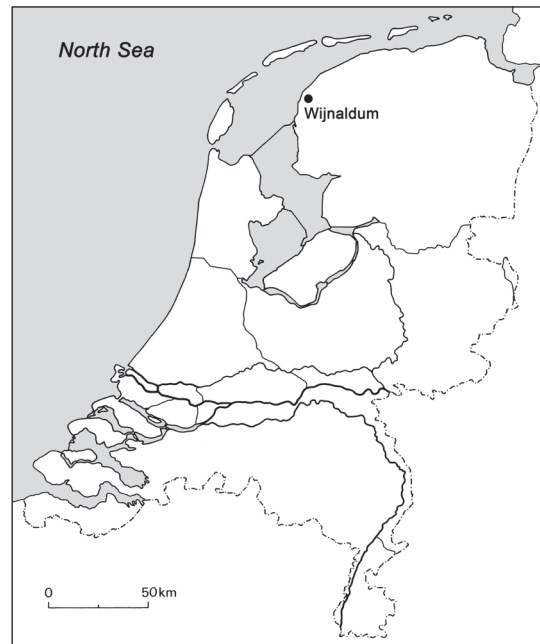
Preface

Wijnaldum is nowadays an unassuming rural village in the north of the province of Friesland, no more than a small dot on the map of the Netherlands. But during the Early Middle Ages, this was a lively political centre, a kingdom, with intensive contacts with other kingdoms along the North Sea coasts, and with the Frankish realm to the south.

The search for the king that resided at Wijnaldum was the major goal of the excavations that were carried out at the terp Wijnaldum-Tjitsma between 1991 and 1993. These excavations yielded a wealth of information, although tangible remains of the king or a royal residence were not found. The first results and an overview of the habitation phases were published in 1999: Volume 1 of *The Excavations at Wijnaldum*. However, major material categories such as animal bones, metal objects and pottery were left waiting until a next volume. As time went on, researchers became occupied with other work, and Wijnaldum faded into the background.

In 2014, a grant from the Dutch *Waddenfonds*, in the context of the project *Terpen- en Wierdenland. Een verhaal in ontwikkeling* (The terp region. A developing story) made it possible to resume the analysis and publication of the results of the excavations at Wijnaldum, and publish a second volume on the ceramic assemblage. Resuming the analysis of the pottery was by no means easy. The digital archive had become partly inaccessible, and the first drafts of texts, which seemed of topical interest at the time, had lost their relevance due to advancing insights, and needed updates and additions. As one of the authors, Ernst Taayke, wrote to me: The Wijnaldum project is like a pot that has fallen to pieces; the broken pot is being reconstructed as completely as possible now, after 25 years, although we do not have all the shards anymore.

Despite some missing shards, we did succeed in completing this volume. It not only includes major chapters on the pottery of the Roman Period and the Early Middle Ages (Chapters 2-7), but also an extensive overview of the research carried out in Wijnaldum (Chapter 1), an illuminating account of new survey research at Wijnaldum, which provides additional information on the habitation history (Chapter 8), and a synthesis, which presents an overview of the habitation history at Wijnaldum, with special attention to the search for the king on the basis of finds of precious metals and of the pottery assemblage (Chapter 9).

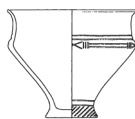


Several organisations financed and successfully cooperated in the Waddenfonds project *Terpen- en Wierdenland. Een verhaal in ontwikkeling*: the Terp Research group of the Groningen Institute of Archaeology (University of Groningen), the Province of Fryslân (Friesland), the Province of Groningen, Landschapsbeheer Groningen, Landschapsbeheer Friesland, the Museum Wierdenland at Ezinge, and the municipalities of De Marne and Eemsmond (now merged into the municipality of Het Hogeland), and Delfzijl. The present book was financed by this project. We thank these organisations for their generosity.

We would also like to thank all those who allowed us to use illustrations: the Fries Museum at Leeuwarden, Johan Nicolay, Saartje de Bruijn, Frans Andringa, Beeldredactie Leeuwarder Courant, Frans de Vries (Toonbeeld), the Northern Archaeological Depot at Nuis (notably Jelle Schokker for all kinds of help, and Henk Faber Bulthuis who made photos), Peter Vos and Sieb de Vries (Deltares/TNO), and Mirjam Los-Weijns and Siebe Boersma of the Groningen Institute of Archaeology (GIA, University of Groningen), who made and edited many object drawings. Siebe Boersma designed the layout of the book. Johan Nicolay read an earlier draft of the synthesis and gave valuable comments. Xandra Bardet not only read and corrected the English texts, but also pointed out inconsistencies. We owe them all our sincere gratitude.

On behalf of the authors,
Annet Nieuwhof
Editor

2. Introduction to the pottery research of Wijnaldum-Tjitsma



Jan de Koning and Annet Nieuwhof

2.1 Pottery research

During the three summer campaigns of fieldwork at Wijnaldum in 1991, 1992 and 1993, most of the material remains that were found during the excavation were processed (cleaned and split into material categories) by a large group of volunteers. This publication is a very late recognition of their painstaking work. Thanks to their efforts, specialists could start with the analysis of the huge amount of find material immediately after the excavation ended. Priority was given to the identification and dating of pottery types, because that information (providing *termini ante* and *post quem*) was needed for establishing the chronology and phasing of the settlement, and continuity or discontinuity in habitation. Pottery dates combined with the stratigraphy of the features resulted in the chronology of the settlement of Wijnaldum-Tjitsma that was presented in Volume 1 of “The excavations at Wijnaldum”.¹

All the pottery was analysed during the years between the end of the fieldwork and the beginning of 1996 (Figure 2.1). Ernst Taayke was responsible for the handmade pottery of the Roman Iron Age, so-called ‘terp ware’, for the pottery of the 5th and 6th centuries also known as Anglo-Saxon-style pottery, and for the grass-tempered² ovoid pots, so-called Tritsum ware.³ Danny Gerrets and Jan de Koning analysed the pottery of the Early Middle Ages: the ovoid pots with grit temper, also known as Hessens-Schortens ware⁴ or (in Germany), *weiche Grauware*; the globular pots of the later Early Middle Ages; and imported, wheel-thrown pottery, starting with coarse-ware late-Roman-type pottery; and ending somewhere in the 10th century with Pingsdorf-type pottery. Some chapters on relatively small categories were already published in the first volume: *terra sigillata* by Tineke Volkers and Roman wheel-thrown pottery by Marjan Galestin.⁵ The large majority of the pottery that played an important role in the chronology, however, still awaited publication in the second volume. After a delay of more

than twenty years after the appearance of Volume 1, it is finally presented in this book.

2.2 Method

When the excavations started, in the early 1990s, computers were used to store and analyse the data. These computers and the software that was used now seem ancient. All the data that had been noted on paper forms, in the field and during the analysis of the finds, was immediately after entered into a relational database in the program Dbase IV, on a personal computer with the MS-DOS operating system. The relational database had two main branches, one for the features, with feature number as the primary field, and one for the data of specialists with find numbers as primary field. The two were connected by a finds-and-features table. These tables can still be opened in Ms-Excel and, if necessary, imported in Ms-Access if queries need to be made, but the relational database as such is no longer operational.

For the analysis of the pottery, two separate tables were created. The first is a general table (VONAW), recording numbers and weights of fragments of the same fabric and pottery category per find number, and also recording the kinds of fragments (rim, body, base, handle), earliest possible date and latest possible date. Three 5-inch floppy-discs were needed to record this table, so it was split into three parts.

In the second table on pottery (AWVOLG), again with find numbers as primary key, the evidence relating to diagnostic pottery was recorded. This included mostly rim fragments and sometimes decorated wall sherds, and a very small number of more or less complete pots. Each individual entry received a unique identification number. The minimum number of individuals (MNI) per find number or per type can thus be derived from this table. Besides the find- and identity numbers, this table includes a code for the pottery type, codes for fabric, surface treatment, vessel part (rim, body, base or handle), thickness of the wall, diameter of the rim, colour (outside and inside), the earliest and latest possible dates, and remarks on any decorations and additions.

Since the focus was on dating, it was regrettably decided to discard all fragments of the handmade pottery of the Roman period without characteristics (fragments not described in the AWVOLG table) after they had been

1 Besteman et al. 1999, in particular the contribution by Gerrets & De Koning.

2 *I.e.* tempered with any kind of plant material or dung.

3 Waterbolk 1961; Taayke 2007; Taayke & Knol 1992.

4 Tischler 1956, 79-87.

5 Volkers 1999; Galestin 1999.



Fig. 2.1 Danny Gerrets (left) and Ernst Taayke analysing the Wijnaldum pottery in one of the offices of the Groningen Institute of Archaeology. Photo © University of Groningen, Groningen Institute of Archaeology.

counted and weighed and recorded in the VONAW table. At the time, it seemed the right thing to do at the time, in order to make the excavation material more manageable and in view of the limited storage space. A number of potential lines of investigation, however, were closed off or severely hindered by this clear-out. Such lines of investigation are, for instance, the study of ritual deposition on the basis of breakage patterns and the completeness of pots.⁶ We also have hardly any complete archaeological profiles, since no attempt was made to reconstruct pots.

Several copies of the tables and database were in circulation, with unwanted consequences. In the course of time, changes were made to these different copies by different specialists. None of the spreadsheets seems to have all the information complete. There is no paper trail that can help us to restore the original entries: it appears that the paper forms were thrown away after the information was digitised. This was a period of modernisation in archaeology, in which digitisation was considered the ultimate in storing data. Hardly anyone was concerned about the long-term sustainability of the digital data. Luckily, what remains of the basic dataset is now stored safely, and as completely as possible, in the national data repository DANS-EASY.⁷ The chapters on pottery in this volume refer to numbers of fragments per pottery group and their weight; considering

the problems with the digitised data, these are not derived from the spreadsheets and tables that we now have at our disposal, but from the original notes and calculations that were made right after the excavations.

2.3 The pottery assemblage

A total number of 71.162 fragments of pottery were collected and documented, weighing nearly 790 kg. These fragments can be divided into different, roughly dated categories of pottery (Table 2.1 and Figure 2.2). The main periods at Wijnaldum are the Roman period (AD 175-325), the Migration period (425-550), the Merovingian period (500-750) and the Carolingian period (750-900). There is no pottery from the period between AD 325 and 425. A small amount of pottery belongs to post-Carolingian periods.

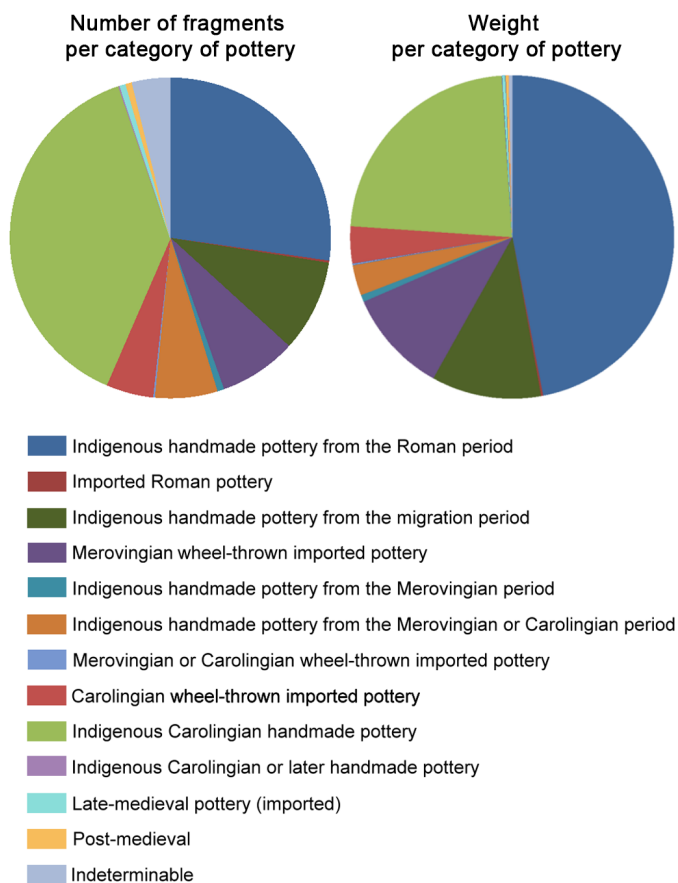
The diagrams show that handmade pottery from the Roman period, so-called 'terp ware', and from the Carolingian period, mostly globular pots (*G. Kugeltopf Ware*), are the most numerous by far. A comparison of these two categories shows a striking difference: there are many more fragments of Carolingian handmade pottery than of handmade pottery of the Roman period. This ratio is reversed, however, for the total weight of these categories. The average weight per fragment is considerably larger for Roman-period terp ware than it is for the Carolingian globular pots: 19.1 vs 6.6 g. This difference is partly caused by the thickness of wall fragments. Terp ware has, on average, considerably thicker walls than Carolingian globular pots. Nevertheless, the latter also

⁶ Compare Nieuwhof 2015.

⁷ Data Archiving and Networked Services: <https://doi.org/10.17026/dans-zpn-6kwf>

Table 2.1 Total number of fragments and total weight per category of pottery from Wijnaldum-Tjitsma.

Category of pottery	Number of fragments (n)	%	Weight (g)	%	Average weight/ sherd (g/n)
Indigenous handmade pottery from the Roman period	19,417	27.3	370,790	47.1	19.1
Imported Roman pottery	151	0.2	1,560	0.2	10.3
Indigenous handmade pottery from the Migration period	6,614	9.3	86,570	11	13.1
Imported Merovingian wheel-thrown pottery	5,564	7.8	81,773	10.3	14.7
Indigenous handmade pottery from the Merovingian period (partly discussed in Chapters 4 and partly in Chapter 7)	479	0.7	5,548	0.7	11.6
Indigenous handmade pottery from the Merovingian or Carolingian period	4,471	6.3	24,015	3.1	5.4
Imported Merovingian or Carolingian wheel-thrown pottery	123	0.2	1,368	0.1	11.1
Imported Carolingian wheel-thrown pottery	3,387	4.8	29,238	3.7	8.6
Indigenous Carolingian handmade pottery	27,231	38.3	180,784	22.9	6.6
Indigenous Carolingian or later handmade pottery	104	0.1	351	0.1	3.4
Late-medieval pottery (imported)	432	0.6	2,778	0.4	6.4
Post-medieval	461	0.6	2,284	0.3	5.0
Indeterminable	2,728	3.8	2,639	0.3	1.0
Total	71,162	100	789,698	100	11.1

**Fig. 2.2** Pie charts with the proportions of the main pottery groups, based on number of fragments and their weight (see Table 2.1).

seem to be more fragmented than the former, despite the harder fabric of globular pots. Perhaps the round shape of these pots is more easily fragmented than the more angular and sturdy shapes of terp-ware.

In the diagram of Figure 2.3 the minimum number of pottery individuals is distributed over the four main periods. Some categories, in particular imported coarse ware, may occur in more than one period, but the number of coarse-ware pots that predate the 6th century is probably quite low and therefore of minor importance for the MNI.

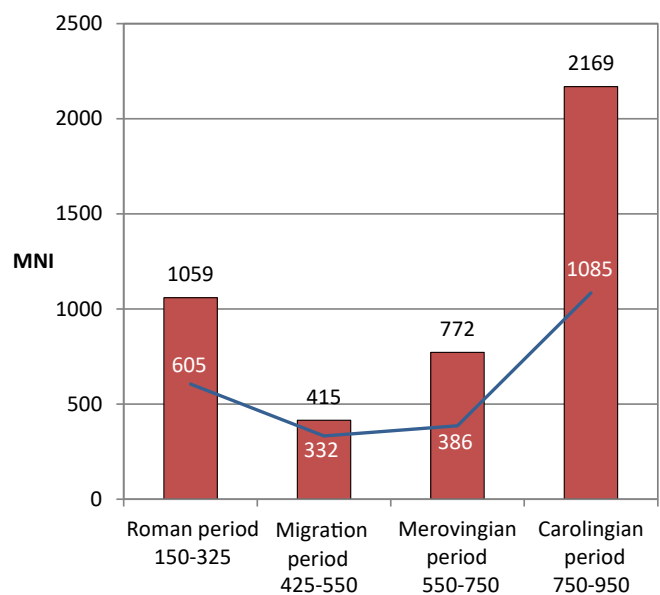
**Fig. 2.3** The Minimum number of individual pots during the four main habitation periods at Wijnaldum-Tjitsma, based on rim fragments and decorated wall fragments, the latter mostly of the Migration period. The blue trend line represents the average number of pots per century for each period, taking account of the different lengths of these periods.

Figure 2.3 shows that the MNI from the Carolingian period is more than twice as high as the MNI of pots from the Roman period, also if the difference in length of these periods is taken into account. The relatively low number of pots from the Roman period compared to the total weight of the pottery from this period is due to the much greater average weight of terp-ware pots. The number of fragments apparently is a better indicator of the MNI than their weight.

There is no direct relationship between the MNI per period and the habitation history of Wijnaldum-Tjitsma. In the first place, the excavated trenches do not cover the entire settlement in all phases of habitation. The excavation was primarily aimed at early-medieval features (see Chapter 1); deeper and older features were not excavated, to keep the investments in time and costs manageable.

Table 2.2 Pottery fragments per period from dated features (terp layers, wells, pits, ditches, postholes etc.), and average numbers per feature and per year of habitation.

Period	Number of dated features	Number of fragments from dated features	Fragments/feature	Fragments/year
Roman Period (AD 175-325)	518	19,417	37.5	129.4
Migration Period (AD 425-550)	841	6,614	7.9	52.9
Merovingian period (AD 550-750)	761	6,043	7.9	30.2
Carolingian period (AD 700-850)	1,496	30,618	20.5	204.1

Table 2.3 Radiocarbon dates from Wijndaldum. Data from excavation database, and from Gerrets & De Koning 1999; Lanting & Van der Plicht 2010; 2012; Nijboer & Tulp 1997. Dates were calibrated with OxCal v4.3.2; $2\sigma = 95.4\%$ probability.

Find no.	Sample no.	Sample material	Radiocarbon date	Date in calendar years	Pottery types	Context (Trench - Level - Feature)	Archaeological context and phase (see Ch. 9)
9830/9835	GrA-511	Rope	2070 ± 35 BP*	cal 185 BC-AD 5	V4c (see Fig. 3.10)	34-7-204/289	Ditch; Period I
5119	GrN-21393	Animal bone	1870 ± 30 BP	cal AD 75-225	Gw6a, Gw7a, Gw7b, Gw8b, K4c, V4c, V4d	1-6-112	Occupation layer; (end of) Period I
5155	GrN-21394	Animal bone	1830 ± 30 BP	cal AD 85-250 (95%)	G7, Gw8a, Gw8b, Terra nigra-like cup	1-6-10	Occupation layer; Period II
9903	GrN-22068	Charcoal	1780 ± 50 BP	cal AD 130-380		35-3-177	Floor in metal workshop; Period II
4570/4671/ 4840	GrA-44595 and 45845	Cremated bone	1780 ± 35 BP 1795 ± 35 (average 1787 ± 25)	cal AD 130-335	A2	5-0-448	Cremation burial; Period IIIA (see Ch. 4)
3794	GrN-21392	Animal bone	1625 ± 30 BP	cal AD 350-535	A1, A2, A3?	8-5-696	Ditch; Period III
6897	GrN-21397	Animal bone	1615 ± 30 BP	cal AD 385-540	A1, A1/A2, A2, A3?	8-8-126 or 868	Ditch; Period III
6704	GrN-21396	Animal bone	1570 ± 30 BP	cal AD 415-555	A2, S2, S3, MWI, fine biconical ware	6-7-1233	'Ditch'; Period III (See Ch. 6)
7448	GrN- 21400	Animal bone	1560 ± 30 BP	cal AD 420-565	A2, atypical	6-8-1233	'Ditch' Period III (See Ch. 6)
5359	GrN-21395	Animal bone	1480 ± 30 BP	cal AD 540-645	A3, MWII, early globular pots	6-5-997	Well 7; Period V
6438/6451	GrA-1531	Charred food residue on the inside of a sherd that was used to pave a hearth	1470 ± 40 BP	cal AD 535-655 (92.3%)	A1, A3, atypical	8-7-797	Hearth 15; end of Period III or Period IV (see Ch. 4 and 6)
1470	GrN-21391	Animal bone	1380 ± 30	cal AD 605-680	A3, MWIH2, early globular pots	6-4-1138	Occupation layer; Period V
7363	GrN-21399	Animal bone	1355 ± 25 BP**	cal AD 640-690 (93.8%)	MWIF2, MWIJ1	25/26-2-1547	Occupation layer or ditch? Period VII
7301	GrN-21398	Animal bone	1245 ± 30	cal AD 680-875		26-1-1537	High in the fill of Well 24; Period V

* Too old for unknown reasons (see Lanting & Van der Plicht 2012, 305).

** Too old, bone probably dug up from older layer.

Table 2.4 Dendrochronological dates from Wijnaldum. Data from Gerrets & De Koning 1999, 96 and 98.

Context (Trench-Level-Feature)	Sample	Dendrochronological date	Pottery types	Period
1-4/5-37 (Well no. 31)	Wood from the lining of a well	AD 263	Ge6; V4c; G7	II
5-4-479 (Well no. 4)	Stave from a barrel-lined well	AD 852 ± 8	Pingsdorf ware in the fill	VIII

The relatively large number of pots from the Carolingian period is related to a large number of 1496 excavated features from this period, almost three times more than the 518 features of the Roman period and also more than the larger numbers of features from the Migration period and the Merovingian period. The lower amounts of pottery from the Migration period and the Merovingian period can also be observed in the number of fragments per feature and per year (see Table 2.2).

Settlement features from the Carolingian period covered a large part of the excavated area, while the central core of the terp from the second century, and the features that directly followed in the stratigraphy from the 3rd and the 5th to the 7th centuries, took up a much smaller area. These phases therefore yielded fewer material remains than the Carolingian period. The relatively large number of pots from the Roman period compared to the Migration and Merovingian periods may have been caused, at least partly, by a larger number of pots per household in the Roman period. This can also be observed in many other terps, for instance at Ezinge in the province of Groningen.⁸ Households in the Roman period probably had at least five pots of different sizes at their disposal. That number, as well as the variability in shapes and sizes, decreased in the early Middle Ages, if we assume the same average life-span.⁹ The pottery of the Migration and Merovingian periods, moreover, is usually fired harder. It may be that therefore pots in that period were more long-lived, and that the number of pots per household was therefore larger than might be inferred from these numbers.

2.4 Dates

The pottery datings were supplemented with a considerable number of radiocarbon dates. Samples were chosen strategically, to provide the necessary information for establishing the general chronology and habitation phases. The chapters throughout this book make use of these dates for the chronology of the pottery. Table 2.3 presents an overview of all the radiocarbon dates, and Table 2.4 of the two available dendrochronological dates, together with the pottery associated with the sampled features. Some of the dates are older than the archaeological datings. This probably is because the preservation of bone in terps is very good; some of the animal bones that were sampled may have been dug up from deeper features

at the time of habitation, and not belong to the contexts in which they were found.

2.5 To conclude

Future research will have to deal with a number of problems with the dataset. Still missing are parts of several tables, and the daybooks of the excavation campaign of 1992. With a view to future research, the available field drawings have now been digitised in a GIS environment,¹⁰ but several drawings still are missing. The find numbers are not all in the drawings. And, worst of all: since the excavation was aimed at early-medieval features in the 'quest for the king of Wijnaldum' (see Chapter 1), deeper levels were only excavated in a small number of trenches. In many trenches, we therefore lack the evidence from deeper terp levels that is necessary for understanding the stratigraphy and the structure of the terp, and earlier periods of habitation.

The study of the pottery was largely carried out when the memory of the excavation was still fresh. The following chapters are based on the tables that were completed then and the first drafts of chapters. These texts served as the starting point for the chapters of this book. The following analysis and discussion of the pottery of Wijnaldum-Tjitsma starts with two chapters on handmade pottery, from the Roman period (Chapter 3), and the Migration period and Merovingian period (Chapter 4). Chapters 5 and 6 will deal with the wheel-thrown imported wares of the Merovingian and Carolingian periods. The globular pots from the Carolingian and later periods and their ovoid predecessors from the late Merovingian period will be presented in Chapter 7. Chapter 8 is quite different in character. It presents the findings of a recent field survey on the same terp, and compares them with the excavation results. The concluding chapter combines all these data into an overview of the settlement's habitation history.

References

- Besteman, J.C., J.M. Bos, D.A. Gerrets, H.A. Heidinga & J. de Koning, 1999: *The excavations at Wijnaldum. Reports on Frisia in Roman and Medieval times. Volume I*. Rotterdam/Brookfield.
- Galestin, M.C., 1999: Roman wheelthrown pottery, terra nigra-like bowls and tiles. In: J.C. Besteman, J.M. Bos, D.A. Gerrets, H.A. Heidinga & J. de Koning (eds), *The Excavations at Wijnaldum. Reports on Frisia in Roman and Medieval times. Volume I*, Rotterdam/Brookfield, 157-170.

⁸ Nieuwhof 2014, 113ff.

⁹ E.g. Verhoeven 2008, 312.

¹⁰ As part of the Terpen-en Wierdenland project.

- Gerrets, D.A. & J. de Koning, 1999: Settlement development on the Wijnaldum-Tjitsma terp. In: J.C. Besteman, J.M. Bos, D.A. Gerrets, H.A. Heidinga & J. de Koning (eds), *The excavations at Wijnaldum. Reports on Frisia in Roman and Medieval times. Volume I*, Rotterdam/Brookfield, 73-124.
- Nieuwhof, A., 2014: De geschiedenis van Ezinge in scherven. Handgevormd aardewerk van 500 v.C. tot 1500 n.C. In: A. Nieuwhof (ed.), *En dan in hun geheel. De vondsten uit de opgravingen in de wierde Ezinge* (= Jaarverslagen van de Vereniging voor Terpenonderzoek 96), Groningen, 30-128.
- Nieuwhof, A., 2015: *Eight human skulls in a dung heap and more. Ritual practice in the terp region of the northern Netherlands, 600 BC - AD 300*. Groningen.
- Taayke, E., 2007: Tritsum. In: H. Beck, D. Geuenich & H. Steuer (eds), *Reallexikon der Germanischen Altertumskunde, Band 35*, Berlin/New York, 264-267.
- Taayke, E. & E. Knol, 1992: Het vroeg-middeleeuwse aardewerk van Tritsum, gem. Franekeradeel (Fr.). *Paleo-aktueel* 3, 84-88.
- Tischler, F., 1956: Der Stand der Sachsenforschung, archäologisch gesehen. *Bericht der Römisch-Germanischen Kommission* 35, 21-215.
- Verhoeven, A., 2008: Handgemaakt en gedraaid aardewerk uit de middeleeuwen. In: J.A.W. Nicolay (ed.), *Opgravingen bij Midlaren. 5000 jaar wonen tussen Hondsrug en Hunzedal* (= Groningen Archaeological Studies 7), Groningen, 308-325.
- Volkers, T.B., 1999: The terra sigillata from Wijnaldum-Tjitsma in regional perspective. In: J.C. Besteman, J.M. Bos, D.A. Gerrets, H.A. Heidinga & J. de Koning (eds), *The Excavations at Wijnaldum. Reports on Frisia in Roman and Medieval times. Volume I*, Rotterdam/Brookfield, 151-156.
- Waterbolk, H.T., 1961: Beschouwingen naar aanleiding van de opgravingen te Tritsum, gem. Franekeradeel. *It Beaken* 23, 216-226.



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Wijnaldum is nowadays an unassuming rural village in the north of the province of Friesland, no more than a small dot on the map of the Netherlands. But during the Early Middle Ages, this probably was a lively political centre, a kingdom, with intensive contacts with other kingdoms along the North Sea coasts, and with the Frankish realm to the south. The search for the king that resided at Wijnaldum was the major goal of the excavations that were carried out at the terp Wijnaldum-Tjitsma between 1991 and 1993. These excavations yielded a wealth of information, although tangible remains of the king or a royal residence were not found. What was found was a lot of pottery. The ceramic assemblage from the first Millennium consists of local handmade and imported wheel-thrown pottery, revealing contacts with the wider world.

The first results and an overview of the habitation phases were published in 1999, in Volume 1 of *The Excavations at Wijnaldum*. The ceramic assemblage, and its consequences for the habitation history of Wijnaldum, are the main subjects of this second volume of *The Excavations at Wijnaldum*.



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