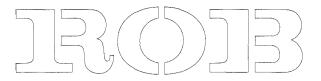


Berichten van de Rijksdienst voor het Oudheidkundig Bodemonderzoek



### Berichten van de Rijksdienst voor het Oudheidkundig Bodemonderzoek

Proceedings of the State Service for Archaeological Investigations in the Netherlands

# Eight Exceptional Medieval Shoes from the Netherlands

Keywords: material study, exceptional leather shoes, description and reconstruction, Medieval period, the Netherlands, 39 references.

Objects and fragments of leather are regularly found in medieval layers during excavations in the Netherlands. Approximately 90% of these finds consists of footwear. With shoes, an important criterion for determination is the fastening: the type, position on the shoe and the way in which it works. Straps, laces, toggles and buckles are found on medieval footwear. Unusual applications or unusual forms of use, as well as combinations of fastenings, may indicate exceptional footwear. Six of the eight shoes presented here are exceptional because of their unusual form of fastening. Of the remaining two, one is remarkable for its painted decoration, and the other for its extremely primitive design in view of its date.

Due to their deviant fastenings, it is virtually impossible to classify the six shoes in a single typology based on variations in fastening. They would then be either under or overvalued; an individual description does more justice to their specific characteristics. The term 'exceptional' is used here, in relation to footwear, to refer to deviations which so far have not been observed in Europe, which were of such rare occurrence that they are unique, or whose individual occurrence is very sporadic in a certain country or in Europe as a whole.<sup>2</sup>

As is often the case when publishing unusual things: similar finds always turn up shortly afterwards. It

I There are as yet no standard typologies for archaeological footwear. Since the study of archaeological footwear is comparatively recent, each shoe description presented tends to have a classification or typology which is individual to the author and adapted to the excavation in question.

reminds one of unidentifiable fragments of leather which were stored away years ago with a question mark and which are now recognisable. In this way, footwear can lose its 'exceptional' aura in the course of time, and, in some cases, can even be included as a new type.

#### MATERIAL AND METHOD

The eight shoes described come from all over the Netherlands; figure 1 shows the seven findspots. The excavation at Bolsward produced two exceptional shoes.

All the shoes date from the Middle Ages. The oldest, the shoe from Deventer, is dated to the ninth-tenth century. The shoes from Bolsward are from the middle of the fifteenth century, and the others date from the period 1200–1500.

With the exception of the primitively-designed shoe from Amersfoort-Hoogland, all the shoes were made in the same way. They were sewn on a last inside out and then turned. Hence the term turnshoe construction. Turning a shoe after it has been sewn together is only possible if it has a single, thin sole which is seldom thicker than 2.5 mm. Even so, the leather has to be wet, therefore very supple, for a shoe to be turned. As can be seen from the two shoes from Bolsward, for example, late Medieval shoes consist of an upper, a sole and a rand. The upper is usually made of several parts, but is occasionally cut from a single piece of leather.<sup>3</sup> The sole is always of cowhide; leather from calves or goats is used for the upper.

up with the exceptional nature of this shoe. When the concept for this article was handed in in 1992, the Deventer shoe was unique for the Netherlands. In the meantime, fragments of this type of footwear have been excavated in Groningen, Wijk bij Duurstede, Kampen and Tiel. Nevertheless, the occurrence of the shoe with the overlap lobes remains unusual.

<sup>2</sup> In the case of the shoe from Deventer (fig. 2) time has caught

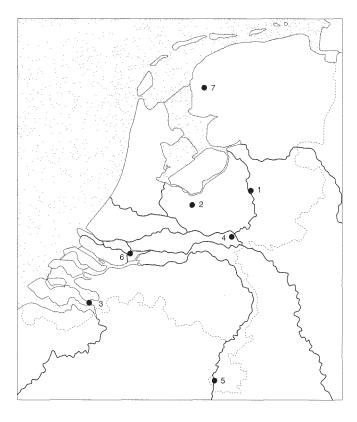


Figure I The Netherlands: location of the findspots. Legend: I Deventer (Overijssel); 2 Amersfoort-Hoogland (Utrecht); 3 Reimerswaal (Zeeland); 4 Huissen (Gelderland); 5 Maastricht (Limburg); 6 Dordrecht (South Holland); 7 Bolsward (Friesland).

All sewing holes in the leather were first pricked with an awl and the seams sewn by hand. The sewing threads were made of flax or hemp, a material which, in contrast to leather, quickly decays in the soil. Different stitches were used to sew the shoes. The choice of stitch depended on the tension exerted on the seams.<sup>4</sup> The patterns reproduced in this article are made from the original pieces of leather. They show the pieces from

the inside, usually the flesh side of the leather, where the stitches and seams and other technical details are visible. In most cases, the reconstruction sketches were made after the original pieces of leather had been attached on a last, in order to obtain the reliable shoe shape.

The shoes from Bolsward, Huissen and Maastricht are virtually complete and were preserved and restored in the restoration laboratory of the State Service for Archaeological Investigations in the Netherlands (ROB) in Amersfoort.<sup>6</sup>

#### DEVENTER

#### Description

During the excavation of a pit for a lift shaft in the Klooster-noord building in the centre of Deventer in 1976, a tree-trunk well was discovered consisting of two superimposed hollowed-out trunk sections which had been sawn through lengthwise. 5.50 m below the surface, three fragments of Badorf pottery, two Kugeltopf sherds and the upper of a shoe were found in the fill of the pit. Although the Badorf pottery points to an early dating, it is the shoe itself which indicates a ninth-tenth century dating, on the basis of a number of parallels.

Despite the absence of a large portion of the shoe, it is easy to reconstruct (fig. 2: c). The only part of the shoe to remain uncertain is the type of sole and especially its shape at the heel, because the upper is incomplete here. Figure 2: a-b shows the fragment with the missing sections marked by a dotted line. When reconstructing this pattern it was assumed that the shoe had a sole with a normal round heel. In figure 2: b which shows the outer side of the leather, the other possibility has been projected by giving the sole a pointed end at the heel. In this type of shoe, as in other types from the eighth—eleventh centuries AD, soles often have a pointed heel section. 9

<sup>3</sup> This does not apply to footwear from before AD 1000, which usually has an upper consisting of a single piece of leather.

<sup>4</sup> Goubitz 1984.

<sup>5</sup> Goubitz 1984. Unless otherwise stated, all drawings presented here are done by the author. The reconstructions are drawn to a scale of 1:3; the patterns to a scale of 1:4.

<sup>6</sup> The preservation and restoration was done by the author.

<sup>7</sup> Pers. comm. H. Lubberding (Department of Environmental

Planning and Public Works, Deventer Council). The archaeological investigation was carried out by the AWN, dep. Twente.

<sup>8</sup> The shoe fragment is to be found in the depot of the Archaeology department of the Department for Environmental Planning and Public Works, Deventer.

<sup>9</sup> See also the specimens mentioned below from Haithabu and Dorestad (figs. 3 and 6).

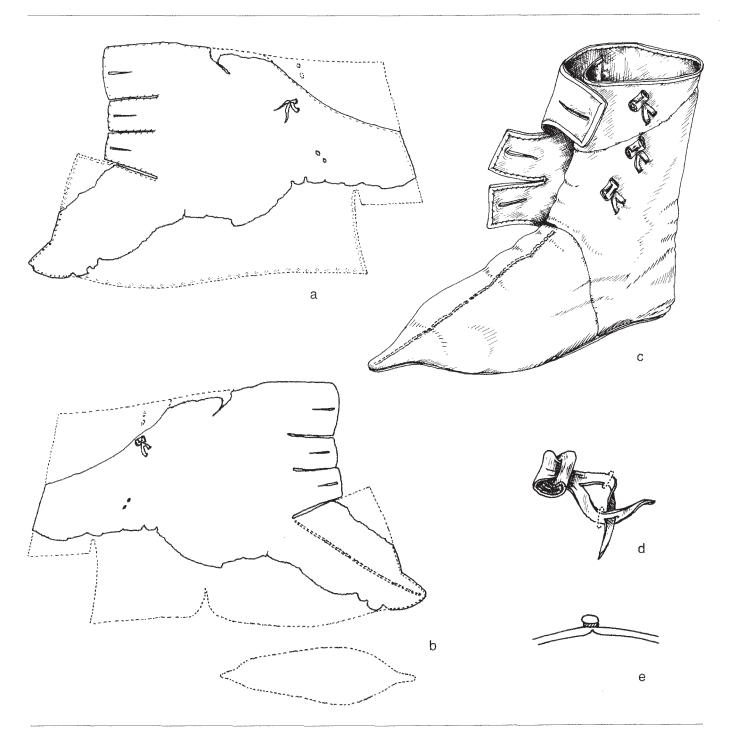


Figure 2 Deventer: a-b drawing of the in and outside of the fragment found (ninth-tenth-century); c reconstruction sketch; d toggle; e section through the decorative seam across the instep. Scale d and e 2:1.

From the reconstruction of the pattern it was possible to measure a shoe length of ca 25 cm. Although the surface of the leather was badly decayed, it could be determined that the shoe was made of cowhide. The unusual thing about the Deventer shoe is its socalled overlap fastening, with togglehole lobes connecting with three leather shank toggles on the side of the high shaft. The overlap fastening is rarely found in footwear and the type used here appears to date mainly from the ninth-tenth century. One of the toggles was still present on the shoe fragment which is how we know its shape and the way in which it was attached to the shaft (fig. 2: d). The toggle itself was made by rolling up part of a strip of leather ca 8 mm wide and 60 mm long and making an incision through the roll. By pushing the remnant of the strip through the slit and pulling it firmly, one gets a toggle on a shank (see also fig. 22). The shank is then split and with the two ends the toggle is attached to the shoe by means of two small holes in the shaft. On the inside of the shoe, one of the split ends is inserted through the other so that the toggle is firmly held. The three toggleholes for the toggles are situated in rectangular lobes. These lobes and the upper edge of the shaft are edged with narrow leather bands.

#### Similar finds

As a result of finds in Haithabu (Germany), the Deventer shoe is no longer an exception, <sup>10</sup> although its form is still comparatively rare in the Netherlands. Nevertheless, excavations in the city of Groningen, <sup>11</sup> Wijk bij Duurstede (province of Utrecht), <sup>12</sup> Kampen (province of Overijssel), <sup>13</sup> and Tiel (province of Gelderland) <sup>14</sup> have yielded good parallels. <sup>15</sup> The question is whether this type of shoe was a local product, or whether it originated from a neighbouring region, for example Germany.

The parallels from Haithabu, Groningen, Wrocław (Poland), Wijk bij Duurstede and Tiel also have a triple-lobed overlap. The shoe from Kampen is the only

one to have four togglehole lobes. Haithabu, Wijk bij Duurstede, Kampen and Tiel have round pointed lobes, and the specimen from Groningen has rectangular lobes like the Deventer shoe.

The decorative seam running over the fore foot may be considered a typically Carolingian feature. With the Deventer shoe, the stitching of the decorative seam continues just under the surface of the leather (fig. 2: e). By pulling the thread tightly a clear seam ridge is made. Decorative seams are a relic of the real seams which were found on the vamps of shoes particularly at the beginning of the Carolingian period, around 700 AD. The fragment of a leather upper from Deventer reveals a definitely pointed toe, although this point is shorter than the Haithabu specimen. What is also remarkable about the Deventer shoe – and its parallels – is the position of the closing seam. Closing seams are usually on the inside of the foot. It is, therefore, understandable that, when describing a shoe from Middelburg<sup>16</sup>, Hald wondered whether Hendriks<sup>17</sup> had not previously been mistaken when stating that this was a left shoe. Hald was under the assumption that a closing seam always had to be on the inside of the foot, and she was not yet familiar with the other parallels which also have lateral closing seams. That the closing seams in this type of shoe run along the outside is confirmed by the soles belonging to a number of specimens, which are clearly left or right.

The closest, and also finest parallels to the Deventer shoe were excavated in the early-medieval trade settlement of Haithabu in Germany. The footwear finds, dating to between the eighth and tenth centuries, have been classified in ten different types. <sup>18</sup> The parallel to the Deventer shoe belongs to type 8. Of this type, ca twelve specimens were found in Haithabu; the soles of most of them were missing or could no longer be linked to the uppers, which were complete and of good quality. For this reason, new leather reconstructions of nine types were made by the author. <sup>19</sup> Among them was also a specimen of type 8 (fig. 3: a). The original fragment

<sup>10</sup> Groenman-van Waateringe & Guiran 1984, 28: type 8.

II BAI excavation 1987.

<sup>12</sup> ROB excavation Wijk bij Duurstede-Willigenburg 1974.

<sup>13</sup> Kampen-Blokker 1988, Municipal archaeological department.

<sup>14</sup> ROB excavationTiel-Koornmarkt 1995.

<sup>15</sup> The shoes were preserved and documented by staff members of the scientific laboratory of the ROB at Amersfoort. A publication on the finds from Wijk bij Duurstede, Tiel and Kampen is in

preparation (O. Goubitz).

<sup>16</sup> Hald 1972, 108-11.

<sup>17</sup> Hendriks 1964, 112-16.

<sup>18</sup> Groenman-van Waateringe & Smith 1984, 28.

<sup>19</sup> The reconstructions were made at the request of

Dr K. Schietzel of the Archäologisches Landesmuseum Schloss Gottorf, Schleswig. They were handed over to the museum in 1980.

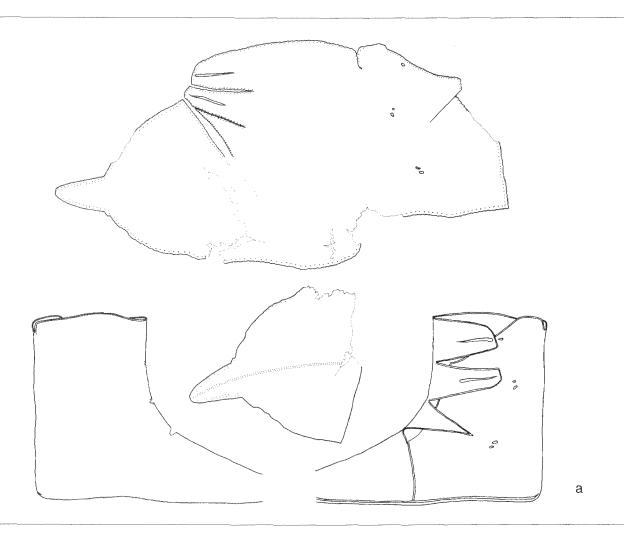
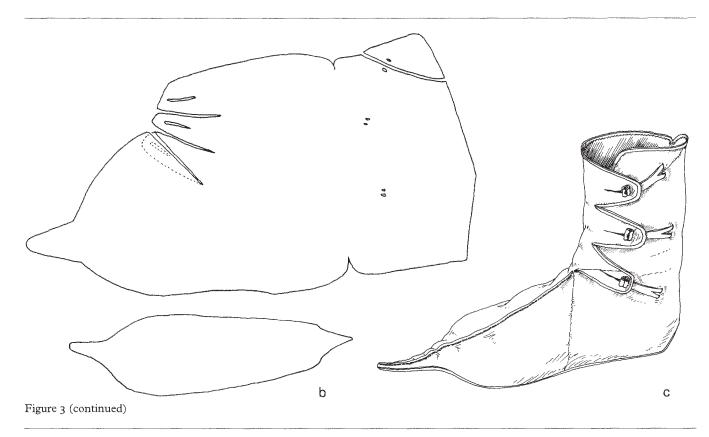


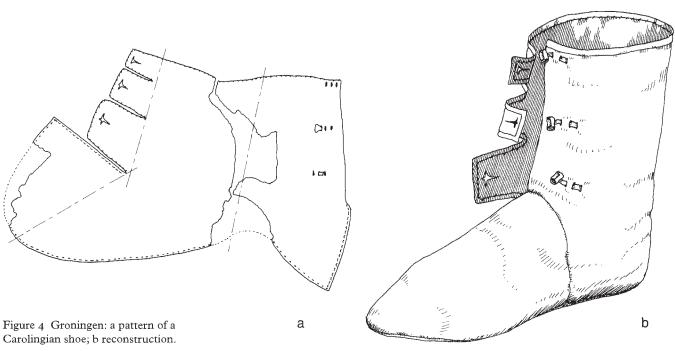
Figure 3 Haithabu: a Carolingian shoe-type 8 (from: Groenman-van Waateringe 1978a, Tafel 3: 1, scale 1:4); b the corrected pattern of fig. 3: a; c drawing after the new leather reconstruction.

had several distortions around the heel and deep folds in the overlap. Figure 3: b shows the pattern as it was reconstructed from the original and from prototypes on a foot form. The shape of the sole was only revealed after the upper of the new leather construction had been sewn together (fig. 3: c). The parallel from Haithabu illustrated has, as does the Deventer shoe, a decorative seam over the fore foot and the closing seam

20 See Groenman-van Waateringe & Guiran 1984, Abb. 13: Schuhtype 8.

on the outside of the foot. The leather edges of the shoe are all, even including the bottom overlap lobe, edged with a narrow leather band. Although the shoe illustrated has rounded lobes, most specimens of type 8 from Haithabu have rectangular lobes like the Deventer shoe. In the reconstruction, the extra length of the toe was filled with flax fibres, as was usually done in the original shoes in order to retain their extreme shape. Moss, wool or hair were also used. All fragments of the type 8 shoe proved to have been made of goatskin. The type is not uncommon in Haithabu among the total amount of footwear.20 An excavation in the Netherlands with a similarly rich yield of Carolingian material might possibly produce more specimens of this type. During excavations of the Martini-churchyard in Groningen in 1989, the remnants of a shoe with an





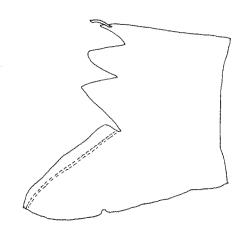


Figure 5 Wrocław: pattern of a Carolingian shoe. From: Kasmierczyk 1977, Abb. 45.

extremely high shaft were found among the leather finds (fig. 4).21 After cleaning at the ROB preservation laboratory, it proved to be a very good parallel to the Deventer shoe. The rectangular togglehole lobes, edged with a narrow leather band, are identical. The position of the toggles on the shaft and their method of attachment however, differ from those of the Deventer shoe and the parallels from Haithabu. The single shank is threaded through the shaft leather by means of three vertical incisions, and the toggles are more to the front of the shaft. The Groningen shoe has no decorative seam over the vamp and the toe is just bluntly rounded. Just as the Deventer specimen and the examples from Haithabu, the shoe has the closing seam on the lateral side. The height of the shaft is ca 20 cm, and the length of the sole ca 24 cm. The shoe is made of cowhide. During an excavation in the Polish city of Wrocław in 1977, the upper of a high shoe with a three-lobed overlap fastening was discovered (fig. 5).22 This shoe has a decorative seam over the instep and a lateral closing seam. Figure 5 was copied from the excavation report in Wrocław, and it looks as if the sole was rounded at

21 The excavations were carried out in 1987 by the Biologisch-Archeologisch Instituut Groningen (BAI), now the Groninger Instituut voor Archeologie (GIA) of the Rijksuniversiteit Groningen. The leather fragments are in the Groninger Museum voor Stad en Lande, Groningen.

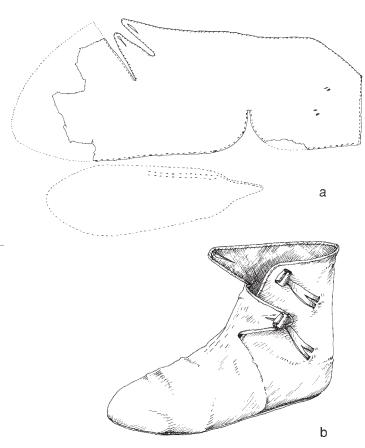


Figure 6 Wijk bij Duurstede: a pattern of shaft fragment of a Carolingian shoe with reconstructive addition and sole; b new leather reconstruction.

the heel. The top overlap lobe still has a thong fragment of the fastening. It does not show how the fastening worked. The Polish find dates from the tenth century. Excavations by the ROB of the Carolingian trade settlement of Dorestad, present-day Wijk bij Duurstede, only yielded a small number of footwear, but these are very interesting.<sup>23</sup> Among them, was the upper of a shoe with two overlap lobes each with a togglehole (fig. 6).<sup>24</sup>

- 22 Kázmierczyk 1979, Abb. 45, 171.
- 23 Groenman-van Waateringe 1976.
- 24 The fragment was stored in 1991 under find no. WbD-
- de Geer, 789-3-92-16.

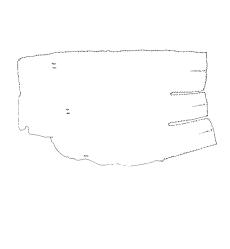
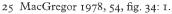


Figure 7 Tiel-Koornmarkt: shaft fragment of a ninth-century shoe with three togglehole lobes (find no. 1-7-55).

The toggles were no longer present. From the holes, two close together twice, it was obvious that the two toggles had been attached to the shaft by a shank split in two. At the heel, the fragment clearly revealed that a sole with a pointed heel had once belonged there, and so a reconstruction in new leather was made from the pattern of this shoe. With its two overlap lobes, this shoe takes up an intermediate position between the three-lobed shoes already mentioned and the singlelobed shoes as found, for example, in York.<sup>25</sup> The ROB excavation at the Koornmarkt in Tiel in 1995 excelled, mainly for its ceramics and wood finds from the seventeenth century. All the more remarkable then are some finds of leather from before the tenth century, all with features of Carolingian footwear.<sup>26</sup> These are two vamp fragments (still!) with real seams over the vamp, and one shaft fragment with triangular togglehole lobes (fig. 7).27



<sup>26</sup> ROB excavation Tiel-Koornmarkt, find nos. 1-7-55-35.

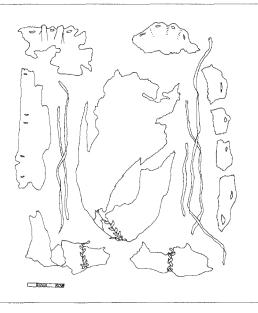


Figure 8 Amersfoort-Hoogland: the main parts of the twelfth-century shoes from Hoogland.

#### AMERSFOORT-HOOGLAND

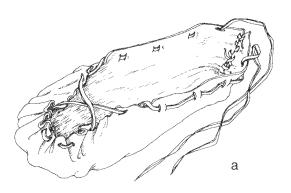
#### Description

In 1987, an investigation was carried out by the Amersfoort department of historic buildings and archaeology at Hoogland (municipality of Amersfoort, province of Utrecht) into possible remains of older settlement at the site where, earlier that year, the farm 'De Oude Hoef' had been demolished. The name of this farm appears on a list of farmsteads of 1648.<sup>28</sup> Under the farmyard, only deep-lying traces of ditches, trenches and wells were found. In one of the wells, a treetrunk well, fragments of four identical shoes were found (fig. 8). A twelfth-century Pingsdorf pottery sherd was discovered in the sand under the well. On the basis of this, the shoe find cannot be dated before the twelfth century.<sup>29</sup> What is surprising is that the footwear found still occurs at such a late date. If one compares the reconstructed models (fig. 9: a-b) with, for example, those of the shoes from Reimerswaal (fig. 13)

<sup>27</sup> A separate article will be devoted to the early leather finds from Tiel due to the unusual technique used for the seam over the vamp.

<sup>28</sup> Farms participating in the commons.

<sup>29</sup> Thanks are due to Mrs F. Snieder (Municipal Archaeological Department of Amersfoort Council) for the information supplied.



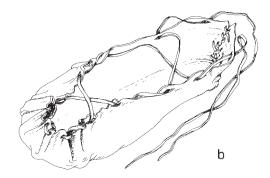


Figure 9 Amersfoort-Hoogland: a reconstruction of the shoe with vertical slits; b reconstruction with horizontal slits.

which are equally old, the Hoogland find seems very primitive. It resembles far more the footwear from the peat bogs of Drenthe, Schleswig-Holstein, Denmark and Ireland dating from the Iron Age to about the fifth century AD.

The fragments discovered consist of the heel fragments of four shoes, two toe sections, five edge pieces from the opening with thong holes, and at least ten pieces of the lace thongs. In addition, the well also contained a number of fragments of the other parts of the shoes, some pieces of which probably originate from the sole section, in view of the heavy wear (fig. 8).30 From the fragments, a shoe type can be reconstructed which is made of a single piece of leather. A piece like this is rounded along the toe end and more or less rectangular at the heel (fig. 10: a). Along the straight heel end there are ca ten short incisions in the leather. Folding together the piece of shoe leather in the middle produces the heel seam, which is laced together with a leather thong. The seams with the leather thong were still reasonably intact in the heel sections. Although the toe section is also laced with leather, the heel seam stands out for two reasons: first, because of its perpendicular position with regard to the ground surface, and second, because of the way it is laced which makes it impossible to loosen easily as in the case of a fastening. This can be seen in two of the heel seams by the way in which the two ends of the lace thong are tucked back under the lacing (fig. 10: b). In order to put the shoe on

and take it off, the thong which laces the shoe leather around the toes must be free to run through the laceholes. These holes are clearly bigger than the holes of the heel seam. The thong can be laced in different ways: only around the opening of the shoe, or crossed over the front part of the foot, zigzag or crisscross. From lace-holes in the section of the shoe between toe and heel it appears that at least one shoe has vertical incisions along this part, through which the thong passed (fig. 9: a).

Other fragments reveal horizontal lace-holes (fig. 9: b). In this type of footwear, the thongs are usually so long that after lacing up the shoe they can still be wound around the ankle one or more times before being tied. In one of the two toe sections there was still a fragment of thong. However, the toe sections proved too fragmentary for an accurate lacing pattern to be established. It was possible, though, to establish that the shoe leather was laced together across the toes and fore foot. From this, and from the perpendicular position of the heel seam it was possible to reconstruct the pattern of this shoe as well as the model it produced. Vertical lace-holes are often found in Merovingian and Carolingian footwear. Several shoe-types which are found until into the thirteenth century occasionally also have vertical paired incisions which form the slots for lace and ankle thongs.31 In more 'primitive' models, horizontal incisions are most common. From the reconstructed patterns of these shoes it appears

From the reconstructed patterns of these shoes it appears that they are suitable for feet several sizes larger or smaller than the actual shoe, since the supple leather is drawn into folds around the foot when the thong is pulled.

<sup>30</sup> After cleaning and conservation, the fragments were stored at the Municipal Archaeological Department of Amersfoort Council.

<sup>31</sup> Groenman-van Waateringe & Guiran 1984 and Wiklak 1960.

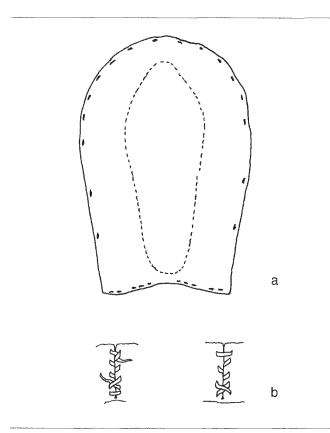


Figure 10 Amersfoort-Hoogland: a the reconstructed pattern of the shoe; b the heel seam, left inside and right outside.

The material of the four Hoogland shoes is calf leather. It is from the same thin leather that the professionally-made 'fashion' shoes of the twelfth century were made. The use of fine calf leather is, in itself, an indication for a much younger dating than prehistory, when thick leather was used.

The shoe of approximately the same design from Wijk bij Duurstede (Dorestad) and dating from the eighth–ninth century is also made of this thin leather (fig. 12: a).

#### Similar finds

A number of specimens described in the literature are more or less directly comparable to the Hoogland shoes. Starting from the pattern, the shoes from Elisenhof (North Germany) and Ballyhagan (Ireland) come closest (fig. 11: a–b). The pattern of the shoe from the Elisenhof terp has both horizontal and vertical thong slots.<sup>32</sup> It is remarkable that the Elisenhof shoe, which dates from the ninth century, is the only one which is directly comparable to the Hoogland specimen, and that shoes of older date are far less primitive in appearance due to the often extremely complicated patterns.<sup>33</sup> There is no reliable dating known for the shoe from Ballyhagan, which is classified by Lucas as type 4.<sup>34</sup> Shoes with the same pattern but laced across the fore foot and referred to by Lucas as type 3, are dated to AD 200–900.<sup>35</sup>

The incomplete shoe from Wijk bij Duurstede (Dorestad), from the second half of the eighth centuryfirst half of the ninth century, has no heel section (fig. 12: a).<sup>36</sup> In view of the date, we may assume that this shoe also had a heel seam. The expectations are that, as our knowledge of prehistoric footwear grows, the occurrence of a heel seam will prove to be a dating criterion. The form of the heel seam and the technical development of the seams throughout time may also be useful aids to dating footwear. As such, the shoes from Emmererfscheidenveen and Klazienaveen (Drenthe) may be compared to the finds from Hoogland, Elisenhof and Ballyhagan (fig. 11: c-d). The shoes from Drenthe are dated to between the Late Bronze Age and the Iron Age: the shoe from Emmererfscheidenveen on the basis of pollen analysis and the shoe from Klazienaveen on the basis of typological features.<sup>37</sup> The basic principle, however, a piece of leather with a round toe and rectangular heel section with a heel seam and lacing around the foot, remains the same in all the examples mentioned. In the complete state and in use they are all the same style, even though heel seam and thong lacing may vary per specimen.

The heel section of the shoe from Emmererfscheidenveen, which was found in 1933, was badly damaged, but a reconstruction of the pattern proved possible, partly by copying the shoe in new leather (fig. 12: b).<sup>38</sup> In the case of the shoe found earlier during peat cutting at Klazienaveen in 1929, the heel was present. Groenmanvan Waateringe rightly points to the remarkable tab

<sup>32</sup> Hald 1972, 95.

<sup>33</sup> Hald 1972.

<sup>34</sup> Lucas 1956, 381.

<sup>35</sup> Lucas 1956, 375: fig. 7, 381.

<sup>36</sup> ROB excavation 1975; the shoe is now at the Kantonaal Museum, Wijk bij Duurstede.

<sup>37</sup> Groenman-van Waateringe & Smith 1984, 41; 1988, 36-7.

<sup>38</sup> Groenman-van Waateringe & Smith 1984, 33-42.

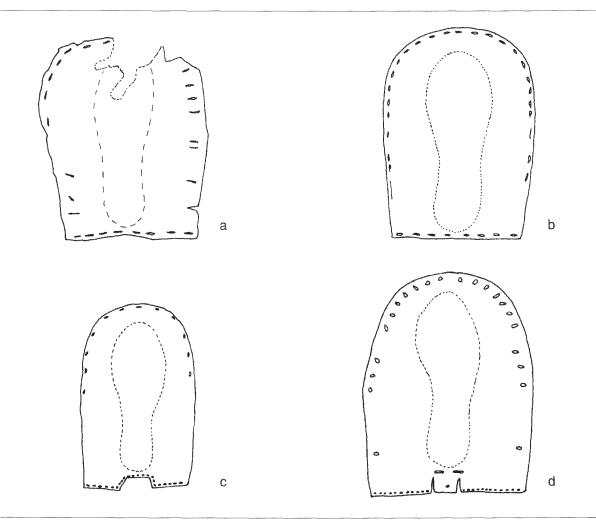


Figure 11 Patterns similar to the shoe from Amersfoort-Hoogland: a Elisenhof, North Germany (after Hald 1972, ninth century); b Ballyhagan, Ireland (after Lucas 1965, date unknown); c-d Emmererfscheidenveen and Klazienaveen, Drenthe (after Groenman-van Waateringe 1984b, late Bronze Age–Iron Age).

which, after closing the heel seam, either sticks out – which is illogical although it is found in Indian moccasins – or is folded inside the shoe (fig. 11: d).<sup>39</sup> It is also possible when lacing the heel seam to lace up this tab too via the small hole in it so that it remains in place, inside or outside the shoe.

#### 39 Groenman-van Waateringe 1988, 34-8.

#### REIMERSWAAL

#### Description

In the 1970s, amateur archaeologists and also treasure-hunters visited the remains of the small town of Reimerswaal (province of Zeeland) which was submerged at the end of the sixteenth century. At low tide in the Oosterschelde, one had several hours in which to look for remains of the town in the heavy clay, mainly deep-lying foundations of buildings, cesspits and wells. The pits and wells especially often yielded interesting finds, including the fragments of dozens of shoes. These shoes, collected by various people at various spots in Reimerswaal, were offered to the ROB in the course of time. Apart from the fact that they originated from a cesspit or well, nothing is known about the find

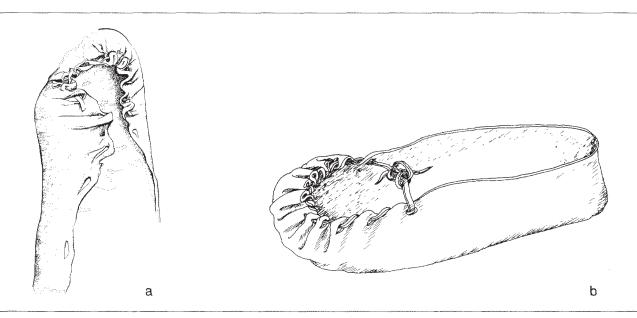


Figure 12 Shoes similar to the shoe from Amersfoort-Hoogland: a Wijk bij Duurstede, early-medieval shoe fragment, find no. WbD 424-3-22 (from: Groenman-van Waateringe 1978a, afb. 5); b Emmererfscheidenveen, reconstruction of a late-Bronze Age-Iron Age shoe.

context and the accompanying finds. Nevertheless, the shoes can be easily compared with finds from other places and date themselves.<sup>40</sup>

At least twelve shoe types could be reconstructed from the leather fragments. One type, a so-called cow-mouth shoe, dates from the first half of the sixteenth century, nine types are from the fourteenth and fifteenth centuries, and two date from the thirteenth century. Among the twelve types there is certainly one exceptional shoe, with features of footwear from the beginning of the thirteenth century.

The incomplete upper and the sole of this shoe are present (fig. 13: a). There was an idea of what this type of shoe should look like, but more definite clues were not provided until 1986 and 1990 respectively by a shoe fragment from Pelsterstraat in Groningen (fig. 14),<sup>42</sup>

and a shoe fragment from Vlaardingen (fig. 15).43 By comparing these finds, it was possible to reconstruct the shoes from Reimerswaal and Groningen with a reasonable degree of certainty.<sup>44</sup> The shoe in question belongs to a type with a short overlap which is fastened by one or more leather toggles. These may be leather shank toggles or tailed toggles. The specimen from Reimerswaal is a ankle-high shoe, though this type might also be higher and would in that case be fastened by two to four toggles. It is apparent from the pattern and from the folded model that one part is missing and that a piece has been cut away from the leather along the opening (fig. 13: a-b). In the reconstruction, we opted for an ankle-high model with one toggle (fig. 13: c). The broad edging along the opening and overlap is due to the seam in the underlying overlap section (fig. 13: a, arrow). This kind of seam is seldom used to attach edgings. It is usually used to sew on wider pieces of leather which exert more tension on the seam. The same seam is also used for the side seam and the missing part of this shoe, for which it is more suitable. It would be also be suitable for a wide edging of firm leather.<sup>45</sup>

<sup>40</sup> Goubitz 1983b, 274-83.

<sup>41</sup> The shoes were preserved by staff members of the ROB scientific laboratory and are now in the finds depot of the ROB at Amersfoort.

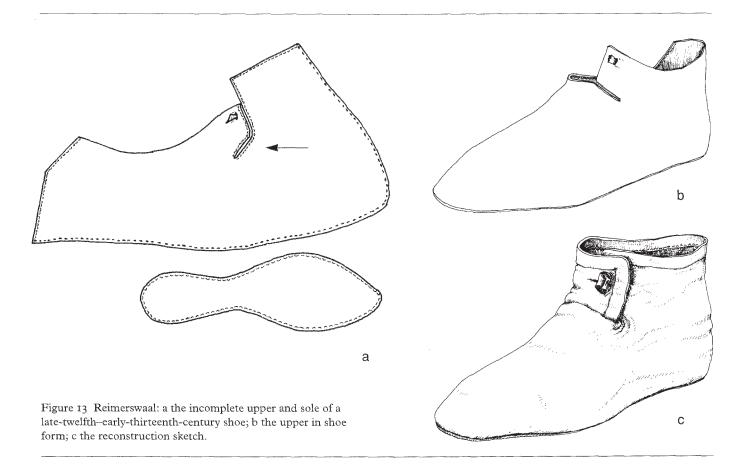
<sup>42</sup> Goubitz 1987a, 159 fig. 6, 164 fig. 45. See also note 67.

<sup>43</sup> Goubitz & Ter Brugge 1996, fig. 6.

<sup>44</sup> On the basis of the reconstruction, a shoe which had

previously been excavated in Deventer in 1952 was identified as a third similar find. The shoe was published by Dorgelo 1960–61; see also fig. 17: a in this publication.

<sup>45</sup> In Schleswig at least fifteen shoe types were found – whether or not with a toggle or strap – with a short overlap and occasionally a very wide edging. Schnack 1992, Tafel 51–62.



The pattern of the parallel from Groningen shows that the underlying overlap section may be very short (fig. 14: a). When the shoe from Reimerswaal was cut up, part of the fastening toggle was lost. Only its shank was left. The reconstruction has a leather shank toggle, as was still present in the Groningen parallel. The upper as well as the 24 cm sole is of cowhide. A rand had originally been sewn between sole and upper.

#### Similar finds

Between 1976 and 1985, leather remains were found during excavations at various sites in Groningen. 46 In Pelsterstraat these were footwear from the fifteenth century, and originated from late-medieval raising layers. However, an unusual piece of upper proved to

48 Dorgelo 1960–61, 453–61; see for the second parallel which was previously unrecognised, 456 fig. 2: 4.
49 Wiklak 1960, 23–8.

date from the twelfth century. After preservation at the ROB laboratory, the fragment could be put on a last and

reconstructed into a shoe (fig. 14).47 During the recon-

struction, use was made of the knowledge acquired by

are found in the twelfth, and still also in the thirteenth

century. One feature of these types is the hook-shaped

seam visible in their patterns (fig. 15: a–b, arrow). <sup>48</sup> The Groningen parallel has a decoration along the opening which, although non-typical of this type of

shoe, is an indication for a twelfth-century dating.

A number of the shoes excavated in Dantzig (Poland)

incisions may also have served to twist coloured threads

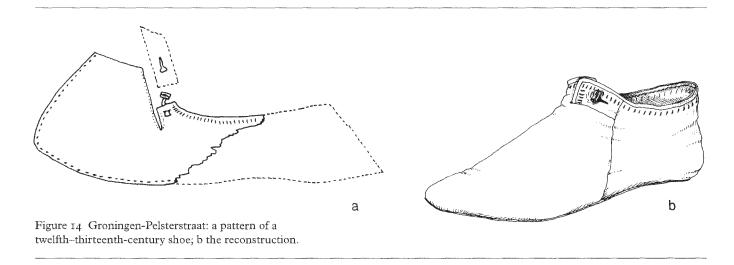
in 1960 and dated to between the tenth and twelfth

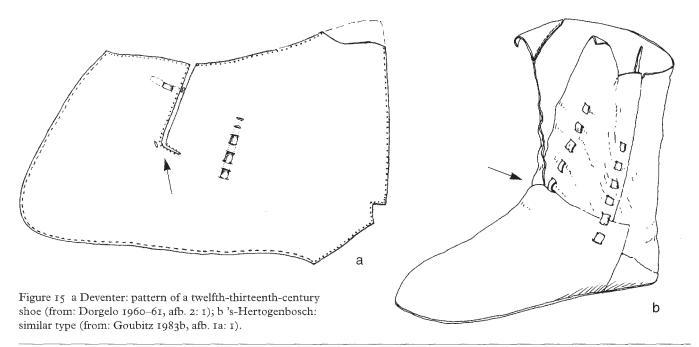
centuries, also have this decoration.<sup>49</sup> The short

studying other shoe types with the same features, which

<sup>46</sup> See Goubitz & Ketel 1992, 484 fig. xv-12, for another parallel from the excavation on the site of the former Wolters-Noordhoff buildings.

<sup>47</sup> Goubitz 1987a, 159.





through, for example. This has been observed in the case of the Dantzig shoes. <sup>50</sup> It was not possible to establish whether the shoe from Pelsterstraat also had such an additional decoration.

Excavations in Vlaardingen (South Holland) yielded in 1990 ca 300 fragments of leather from the tenth up to

50 A shoe found in 1990 during the excavation project 't Waaigat near Vlaardingen, still contained remains of thread in the short decorative slits along the opening. The shoe is now in the depot of

and including the thirteenth century.<sup>51</sup> Apart from the shoe already mentioned above in note 50 which had remains of thread in the decorative incisions, a fragment of a shoe with a short overlap was found, which, as a result of this feature can be dated to the twelfth century (fig. 16). As in the fragment from Groningen,

the AWN at Vlaardingen.

51 Project 't Waaigat, carried out by the AWN, dep. Helinium, Vlaardingen. Goubitz & Ter Brugge 1996, 208–24.

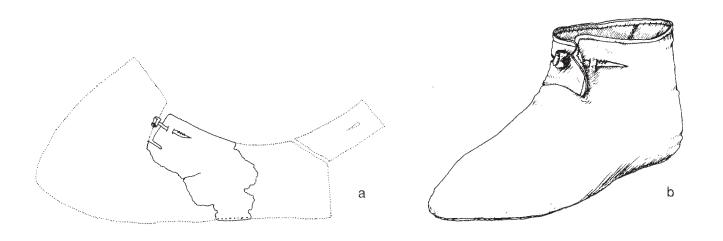


Figure 16 Vlaardingen: a upper fragment of a shoe from the twelfth–thirteenth century; b the reconstruction sketch.

it is a piece of the upper with a fastening toggle. This fragment too has a short hooked seam at the instep bend. From the experiences with the Groningen find, this fragment could easily be interpreted as originating from a shoe with a short overlap. By placing such fragments on a foot form, one gets a good idea of where and how they fit into the shoe model and how the fastening worked. Subsequently, the rest of the pattern can be filled up with paper, for example, or more pliable material, making a reconstruction possible. During the ROB investigation in 1951–1952 of the Oude Bisschopshof at the Nieuwe Markt in Deventer which had already been demolished before 1610, various shoe fragments were discovered in the bottom layers of a former canal fill.52 They were found together with twelfth and thirteenth-century ceramic sherds, mainly of Pingsdorf pottery. One of the shoes is fairly similar to the specimens from Reimerswaal and Groningen.53 Figure 17: a-b shows the original drawing from Dorgelo's publication and the completed pattern, which made a reconstruction of this shoe possible (fig. 17: c). What is interesting is the decoration of short incisions along the edge of the opening which is identical to that of the Groningen parallel. The model of the shoe which is

certain.55

## HUISSEN Description

During excavation activities on the site of a smithy which had been destroyed by fire on the Burchtgracht at Huissen (Gelderland), traces were revealed in 1977 which required further archaeological investigation.<sup>56</sup> Apart from a well, made from two barrels and whose

ankle-high, is, however, more similar to that of the shoe

from Reimerswaal. It is still uncertain what purpose the

holes along the upright edge of the underlying overlap

assumed shoe type by the three shoes described above,

verified if a complete specimen is found. Examples of

Basle.<sup>54</sup> In view of the many waste products, this foot-

workshops which were active there until the eleventh

shoe to that from Reimerswaal may be found among

the footwear discovered, although this cannot be

century. It does not seem unlikely that a similar type of

Although a fairly clear picture is produced of the

they still remain reconstructions which can only be

other possible parallels were found in Petersberg,

Switzerland, thought to be the oldest settlement in

wear may originate from a number of shoemakers'

section served (fig. 17: a, arrow).

- 52 Dorgelo 1960-61, 453-61.
- 53 Dorgelo 1960-61, 461 fig. 6: shoe 8; 458 fig. 4: 2 (the pattern).
- 54 Gansser-Burckhardt 1940, 10-29.

55 See the very summary drawings in Gansser-Burckhardt 1940, 17, Abb. 3: 5, 21, 22 and 37; 18, Abb. 4: 60 and 128. 56 The investigation was carried out by the AWN Nijmegen, under the auspices of the ROB at Amersfoort.

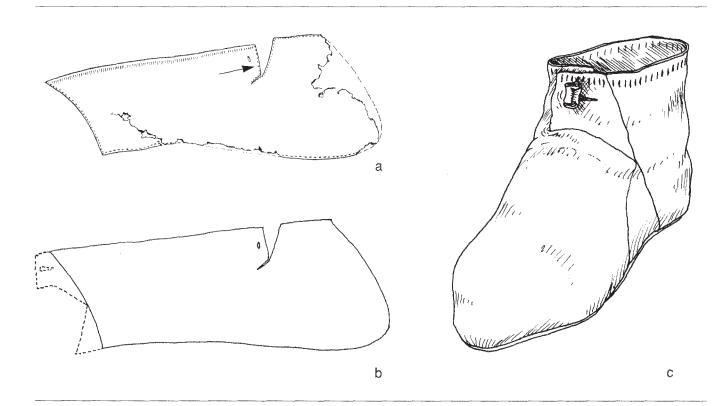


Figure 17 Deventer: a pattern of a twelfth-thirteenth-century shoe (after Dorgelo 1960–61, afb. 4: 1); b the completed pattern; c the reconstruction sketch.

base was 5.37 m below the surface, numerous pottery and stoneware sherds were found. Dating from the twelfth and thirteenth centuries there were fragments of Pingsdorf-like spouted pots and sherds of Andenne and Paffrath pottery.<sup>57</sup> Among the finds were also leather remains from thirteenth-century ankle strap shoes, fourteenth-century toggle and buckled shoes,<sup>58</sup> and an unusual boot with a painted decoration (fig. 18: a–b).<sup>59</sup> In the late Middle Ages, the boot is common footwear, but is only rarely found among shoe finds. When the sole had worn away, the shaft leather could still be used for other purposes, making the leather unrecognisable as a boot. The rarity of the boot as a recognizable object is illustrated by the late-medieval finds from

Dordrecht, where three boots were found among a total of 15,000 shoes. <sup>60</sup>

The boot from Huissen is of turnshoe construction, has a shaft made from a single piece of leather and is of calfskin. The length of the sole is ca 17 cm. An exact dating of the boot is difficult on typological grounds, but from its method of construction, the other shoe finds and the pottery fragments the boot may very well date to before 1300. On cleaning the boot, what had at first appeared to be damage from fungus turned out to be the stripes and dots of a painted decoration. Because of the risk of the decoration dissolving in the preservative, the leather was first photographed and drawn while lying under water. This was the only way that the painting could be easily seen. Several small snippets of leather with paint remains were kept separate in a specimen bottle for analysis.

Chemical analysis of the paint dots, visible as closed or

<sup>57</sup> Janssen 1978, 200.

<sup>58</sup> Goubitz 1983b, 274-83.

<sup>59</sup> Janssen 1978, 195–204, Figs. 3 and 11. After preservation at the ROB in Amersfoort, the boot was placed on a wooden last and

stored in the archaeological depot of the Historische Kring Huessen at Huissen.

<sup>60</sup> Based on counts of vamps from 1685 find numbers from the Dordrecht excavations 1969–1985.

ring-shaped spots, made it clear that only a mixture of white lead and chalk was left of the original paint. 61 In it there were some darker grains, possibly of a pigment whose colour could not be ascertained. In view of the difference in brightness of the dots, several colours were probably used. The stripes, for example, are lighter than the dots between them on the fore part of the boot. The four-by-four pattern of dots on the medial half of the shaft reveals alternate differences in brightness in vertical rows. There is also a difference between the large dots and the small ones surrounding them on the medial half of the fore foot. Judging from the white lead base, the colours used would have been light, which is logical since the vegetable-tanned leather of the boot was dark. The painting of leather objects was common in the Middle Ages. These were usually objects of hardened leather such as sheaths and cases or objects of wood or metal covered with leather. 62 The painting of supple leather which could be easily bent was less frequent, because paint on this kind of base often cracks or even flakes off. Since it was used on a boot, it is not surprising that the decoration consisted mainly of an interrupted pattern, in the form of dots and stripes. The dots were probably applied with a round wood or bone stylus because they are all the same size and regularly round, something which could never have been achieved with a brush. Because of the size of the dots, styluses of five different thicknesses must have been used. In view of the abrupt transition of the decorative pattern at the closing seam, it is likely that the decoration was applied before the boot was sewn together.

Apart from painted dots, the boot may also have been trimmed with a fur edging. Along the upper edge of the shaft, the leather has small sewing holes which are typical of something which was sewn on to the leather with easy stitches (fig. 18: a). A strip of fabric, for example, is attached with many small and also more regular stitches. An edging with a leather band would be attached differently, as would sequins, beads or other appliqués. Figure 18: c shows the shoe from the medial side with the assumed fur edging. Though the decoration of painted dots was probably done by the shoemaker, the fur edging could have been added later

<sup>61</sup> The chemical analysis of the paint dots was done by J.A. Mosk (Central Laboratory for Research of Objects of Art and Science in Amsterdam).



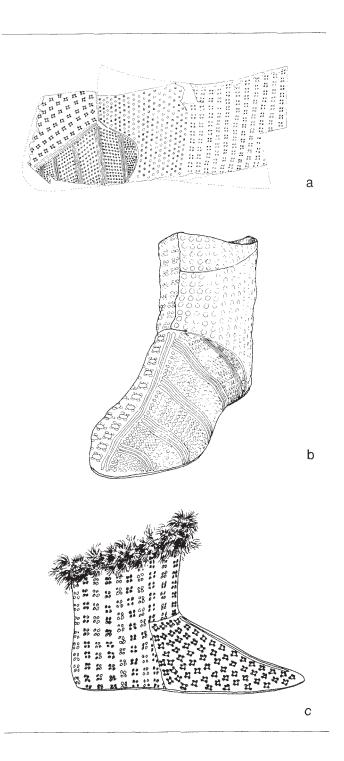


Figure 18 Huissen: a pattern of a thirteenth-century painted boot; b the reconstruction sketch, seen from the lateral side; c the boot from the medial side with the assumed fur edge.

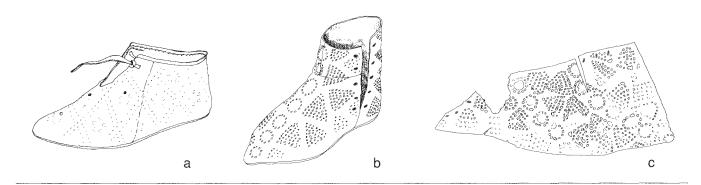


Figure 19 Dordrecht: a reconstruction sketch of a fourteenth-century painted child's shoe (find no. 1031); b-c reconstruction sketch and pattern of a fourteenth-century painted child's shoe (find no. 821).

by the wearer of the boot. For the rest, both painting and fur edging are well in keeping with each other.

#### Similar finds

As far as the painting is concerned, the only known parallels in Northwest Europe are from Dordrecht. 63 Excavations in the centre of Dordrecht have yielded more than 15,000 shoes, as well as several cubic metres of pottery and other finds.<sup>64</sup> Among these were two painted children's shoes with sole lengths of ca 14 cm. One of them is fastened with a single tailed toggle on a front fastening (fig. 19: a). 65 The tailed toggle fastening is frequently found on children's shoes in Dordrecht, with an average of three toggles. 66 Shoes with six toggles are rarely found in Dordrecht, and only two shoes with a single toggle were found. Apart from the decoration, then, the single fastening toggle of the Dordrecht boot is also exceptional. The other shoe (fig. 19: b) has the fastening on the side of the shoe which is laced up by means of ten (2x5) lace-holes.<sup>67</sup> The decoration on both shoes consists only of a pattern of dots. Here too, only a residue of white lead has remained of the paint. In the shoe shown in figure 19: a, double rows of small dots form a diamond pattern. The diamonds are filled with five larger dots in a circle. The shoe in figure 19: b has a more dense pattern<sup>68</sup>

consisting of triangles of dots separated by a single row of circles also made of dots along the front of the foot as can be seen on the incomplete upper in figure 19: c. Since the pattern of dots continues over the seams, the decorations were applied after the shoes had been finished, in contrast to the boot from Huissen. Footwear fastened by tailed toggles and with side lacing is found in Northwest Europe in the fourteenth and fifteenth centuries, which makes the finds from Dordrecht somewhat younger than the boot from Huissen.

The use of painting appears to be detached from both shoe type and period, although three shoes are too few for this assumption to be based on. It is uncertain whether this type of decoration is exceptional, because it is not known how well or how badly paint on leather is preserved in the soil. It is quite possible, going by the colourfulness of medieval costume, that footwear was also coloured, far more than we would suspect, either by using coloured leather or by painting it. The decorative motifs used on the three shoes correspond well to medieval textile designs, which, apart from plant and flower motifs, mainly consisted of geometrical patterns. <sup>69</sup>

#### MAASTRICHT

#### Description

In 1979, various fragments of leather were recovered from a late-medieval dung-heap in Boschstraat,

<sup>63</sup> The shoes originate from the 1976 and 1978 excavations done

by the ROB. They have not yet been published.

<sup>64</sup> Sarfatij 1972, 620-7; 1990, 102-11.

<sup>65</sup> ROB excavation Dordrecht, find no. DDT 1031.

<sup>66</sup> Goubitz 1983b, 275 type 4a.

<sup>67</sup> Cf. Goubitz 1983b, 275 type 3.

<sup>68</sup> ROB excavation Dordrecht, find no. DDT 821.

<sup>69</sup> Boucher 1965, 173-216; Davenport 1976, 124-373.

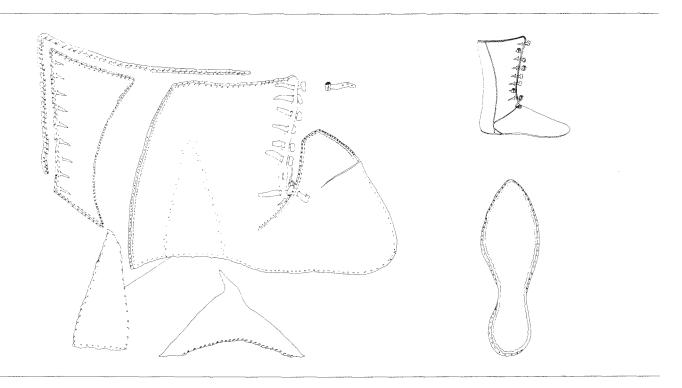


Figure 20 Amsterdam: pattern of the common ankle-high to high type of shoe with toggles, fourteenth century. From: Baart 1977, afb. 15, not to scale.

Maastricht (province of Limburg).<sup>70</sup> The fragments were discovered about 1.3 m below the present surface. On the basis of the pottery found with the leather fragments, the footwear can be dated to about AD 1400.<sup>71</sup> From the approximately 150 fragments it was possible to distil at least 26 shoes, by establishing a minimum number of parts. It was not possible to determine the type of twelve of the shoes since there were no characteristic features present; eleven specimens belong to a type of shoe that is fastened with leather toggles (fig. 20).<sup>72</sup> The three other shoes, one of which was virtually complete, appeared also to belong to this type,

70 Observation of 20–8–1979 by the archaeological staff of the Department of Urban Development and Landownership, Town Planning Department of Maastricht.

71 Pers. comm. W. Dijkman (archaeological staff of the Department of Urban Development and Landownership, Town Planning Department of Maastricht).

72 This type is described by, among others, Baart 1977, 86–7 afb. 15; Grew & De Neergaard 1988, 58–61; Van de Walle-van der Woude 1989, 72–5; Goubitz 1983b, 279; Fingerlin 1995, 232–3,

but after reconstructing the model and supported by later restoration it became clear that this was an exceptional variant.<sup>73</sup>

As an illustration, the description of such a common type, an ankle-high to very high shoe, found in Den Bosch now follows. 74 The shoe is fastened first with the toggle on the instep, and subsequently with the three or more toggles on the shaft. The tongue is always long and pointed. 75 In a more recent article, the high model is combined with low models, and there may be different variants and derivatives within one type. 76 We are confronted here with a familiar problem regarding typologies: what is to be done with new finds which partly fit and partly do not fit into the existing typology. After the publication on footwear from Den Bosch, different types and sub-types with many variants were

Tafel 16-7.

73 The common type, which is usually a high shoe with a pointed tongue and which is fastened by sometimes more than ten leather tailed toggles above each other, is depicted with all its variants in Goubitz 1987b, 24, fig. 30. The Maastricht specimen is also illustrated here.

74 Goubitz 1983b, 275, type 6b.

75 Goubitz 1983b, 257, fig. 6b.

76 Goubitz 1987b, 24, fig. 30.

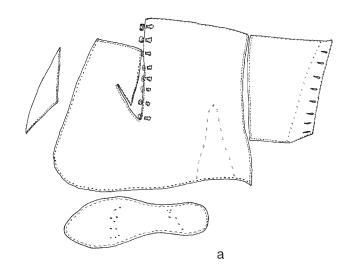




Figure 21 Maastricht: a pattern of the shoe with instep/shin fastening, ca 1400; b the reconstruction sketch.

discovered during excavations elsewhere. The larger the number of distinguishing possibilities and variations, the more one is forced to think on broad lines if one does not want to get lost in details. This has resulted in a number of types c.q. sub-types being combined into a single type which is described as a shoe with front/shin fastening with toggles. This is what happened in the case of the type to which the eleven Maastricht shoes belong. The criteria which shoes of this ankle-high to very high type which is fastened with leather toggles must meet are:

- turnshoe construction and single-soled footwear;
- a vamp reaching to the instep bend and, together with a separately sewn pointed or rounded tongue on the instep curve, forming a transverse instep split;
- the first fastening toggle on the vamp;
- extensions of the shaft reaching as far as the instep/ middle of the shin for the fastening;
- low variants with o-3 shaft toggles, higher variants with 3-10 or more shaft toggles.

From the experiences of the ROB conservation laboratory, it appears that almost every delivery of shoe leather, regardless of its place of origin or date, yields new information. As a result, insights change and one

77 The shoe and the other leather finds are in the municipal depot for archeological finds of Maastricht, inv. no. 1979-MACA R.

becomes more experienced in naming and describing forms and form elements which are still nameless. The terms shank button and tailed button for example, have been changed into shank toggle and tailed toggle. Nothing is actually buttoned; the parts function as a toggle. Of the three exceptional Maastricht shoes, the most complete specimen was restored (fig. 21).

Figure 21: b shows the drawing made of the restored shoe. 77 The shoe is clearly related to the general type described above: turnshoe construction, single-soled, high shaft with 8 shaft toggles (fig. 22). The toggles are the usual shank toggles. What makes this shoe exceptional, is its one-sided transverse instep split. The tongue is sewn on to the closed half of the shaft. There is no question here of any later alteration as is often found in the case of footwear if it suits the wearer better. Because of the closed half of the shaft, the shoe has no instep toggle to act as a first connection between the front and rear sections.

The height of the shoe is 23 cm, as is the length of the sole. The leather is cowhide. It is a right shoe. The dating, like the common type, is about 1400. No parallels are known, and here too it is possible that this may be a very local or even individual piece of work.

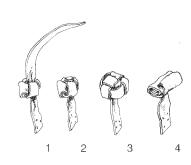


Figure 22 Four examples of leather toggles from 1200–1500: I tailed toggle; 2 false braided toggle; 3 real braided toggle; 4 shank toggle.

#### DORDRECHT

#### Description

From 1968 until the end of the 1980s, almost without interruption, the ROB carried out excavations in the old city centre of Dordrecht (province of South Holland).<sup>78</sup> This investigation yielded, among other things, the 15,000 shoes previously mentioned. In 1987, a number of leather fragments were found in a fifteenth-century cesspit on De Waag, including one fragment that clearly differed from the usual idea of fifteenth-century footwear as known from countless finds throughout Northwest Europe.<sup>79</sup>

The deviant fragment was the vamp of a low shoe (fig. 23: a). 80 The short opening on the side of the instep is unusual. The tongue which covered the whole opening was still in place, although the thread had virtually disintegrated. The reinforcement tab for the lace-holes in the vamp was also in place. A small section of the vamp had been cut away. As a result, it is impossible to say whether the missing heel section formed a whole with the front part or was joined to it by a seam – as drawn in figure 23: a. The lace too is missing. The continuation of the lace would probably have been as shown in the reconstruction sketch figure 23: b. Another possibility is that the lace ran from the vamp towards the side seam. In that case, though, the

78 The excavation was under the scientific direction of H. Sarfatij, then provincial archaeologist for South Holland, later project manager urbanisation with the ROB in Amersfoort.
79 London: Grew & De Neergaard 1988; Lübeck: Groenmanvan Waateringe 1978b; Oslo: Schia 1977; Bruges: Goubitz 1988;

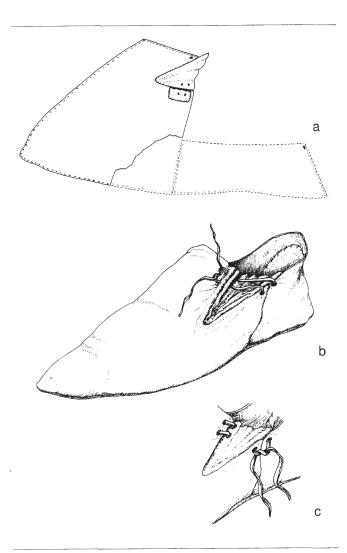


Figure 23 Dordrecht: a vamp of a fourteenth-century shoe with (dotted) addition; b the reconstruction sketch; c detail of the fastening considered to be less logical.

ends of the lace would have run under the tongue, causing it to fold outwards when the shoe was laced up (fig. 23: c). The attached reinforcement tab for the lace-holes in the vamp also indicates that the lace was probably used as in figure 23: b.

's-Hertogenbosch: Goubitz 1983b.

80 ROB excavation Dordrecht, find no. DDT 66-4-12. The vamp and all the other leather finds from Dordrecht are in the finds

depot of the ROB in Amersfoort.

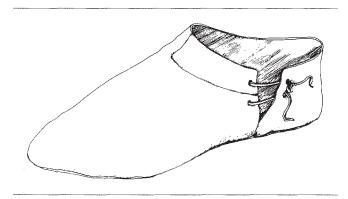


Figure 24 Reconstruction of a late-medieval standard type of shoe with vertical side fastening.

The edge of the heel section was probably not edged with a top band, since the edge of the vamp over the instep is not edged either.

In the reconstruction sketch a heel stiffener has been drawn, although its presence cannot be proven due to the absence of the heel section (fig. 23: b). The side seam with on either side a lace-hole and the emerging lace, is a reliable reconstruction, because it is frequently found in other shoe types. The continuation of the heel section around the heel has been drawn straight. This is the most usual form. In figure 23: b, the lace is made of leather, but it could also have been a cord. The material

of the shoe is cowhide; the tongue and the reinforcement tab are of calfskin.

#### Similar finds

In 1987, two similar shoe finds were discovered during excavations in Heveskesklooster (province of Groningen) and Kampen (province of Overijssel).

Among the late and post-medieval material found in the terp Heveskesklooster were dozens of shoes. <sup>81</sup> One of these is a fourteenth-century shoe with a slightly diagonal side fastening, of which only the upper and sole have been preserved. Although damaged and not altogether complete, the leather remains nevertheless provide enough clues for a reliable reconstruction. Following the 'tradition' of the type of shoe with the usual vertical side fastening (fig. 24), the lace here also runs from front to back; i.e. in this case from top left to bottom right (fig. 25). No tongue was used in this shoe, but there are small holes along the top edge for attaching a top band.

During excavations in Kampen in 1987–1988, a remarkable vamp was discovered, dating from the fourteenth century. Be Despite the damage, it was easily recognizable and the shoe was reconstructed. The split for the fastening is almost vertical and set very much to the front of the shoe (fig. 26). This shoe had no tongue either. However, a reinforcement tab for the lace-holes had been sewn against the inside of the vamp. A strip of

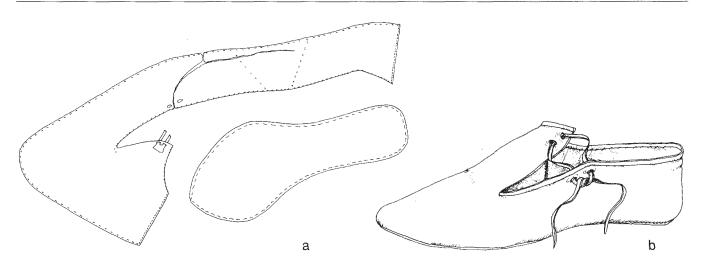


Figure 25 Heveskesklooster: a pattern of a thirteenth-fourteenth-century shoe; b the reconstruction sketch.

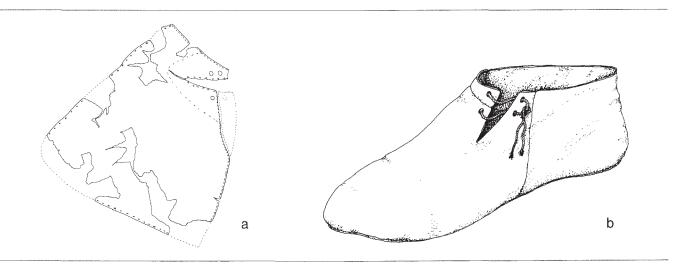


Figure 26 Kampen: a vamp of a fourteenth-century shoe; b the reconstruction sketch.

leather with the fourth lace-hole in it is missing from the vamp. It is not known what type of lace was used in this shoe. The lace-holes present are large enough for a leather lace.

During the clearing of two late-medieval wells at Oud-Turnhout (Belgium) in 1981, leather remains were found from which four shoe types, including a type with side fastening, could be reconstructed (fig. 27).83 Of the shoe with side fastening, only the vamp and sole remained. This vamp also has a diagonal fastening. This shoe has previously been described as a model with a single lacehole on either side of the fastening split.84 The assumption was that the seam marked with an arrow in figure 27: a was intended for the edging because a whip stitch had been used there. The shoe from Kampen (fig. 26: a) has a similar seam at the same place, clearly intended for the attachment of an additional piece of leather with another lace-hole. This shows the importance of interpreting seams and stitches correctly when reconstructing a leather object. The assumed addition of a tongue in the Oud-Turnhout specimen still stands. This tongue was sewn on along the instep side of the fastening split. On the inside of the shoe, the lace-holes were reinforced with a sewn-on tab. The sole belonging to this vamp is one which was added to the shoe, which means that

this shoe had an extra sole in addition to the single-layered sole usual in the Middle Ages. The addition of an extra sole sets this find at the end of the fifteenth century when footwear was sometimes made into a more durable product by means of a second sole. With the finds of these parallels to the Dordrecht shoe, we may speak of a new type variant with a fastening opening somewhere in-between a side fastening and a front fastening. Because the fastening here is to the side and runs obliquely, the term diagonal side fastening is appropriate.

#### BOLSWARD

#### Description shoe 1

In 1977 the ROB carried out an investigation in Bolsward (province of Friesland) of a site in Witherenstraat and Hoogstraat. Among other things, an attempt was made to trace the course of the former Middelzeedijk. The sloping bank line in the profiles, a palissade and parts of a road together with raised layers of sods or turves appeared to confirm the incidence of the late-medieval dike. The excavations also yielded two virtually complete and exceptional shoes (figs. 28 and 30). So One of the shoes is a new type for the Netherlands and the other has a particularly deviant form.

As yet, there is no dating information on the accom-

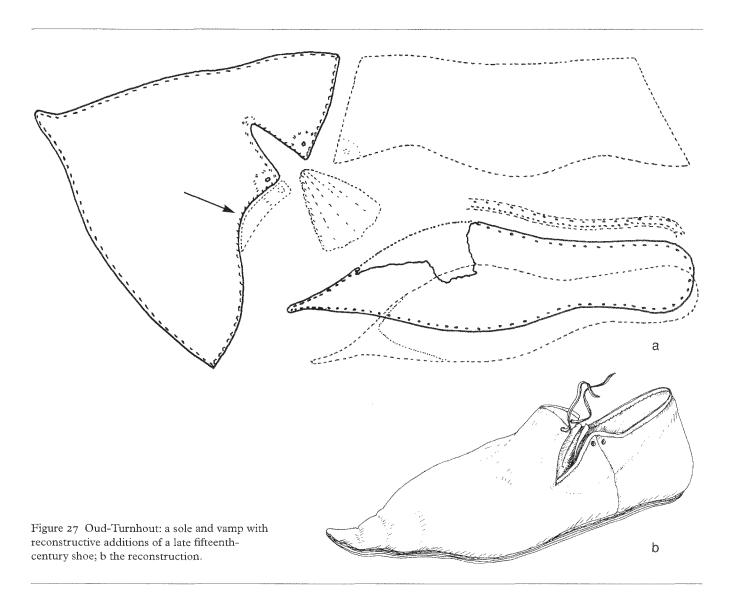
<sup>81</sup> Boersma 1988. A publication on footwear is in preparation.

<sup>82</sup> Barwasser & Goubitz 1990, 78.

<sup>83</sup> Goubitz 1983a, 61-2.

<sup>84</sup> Goubitz 1983a, 62.

<sup>85</sup> ROB excavation Bolsward-Witherenstraat/Hoogstraat, pit 7, find no. 134.

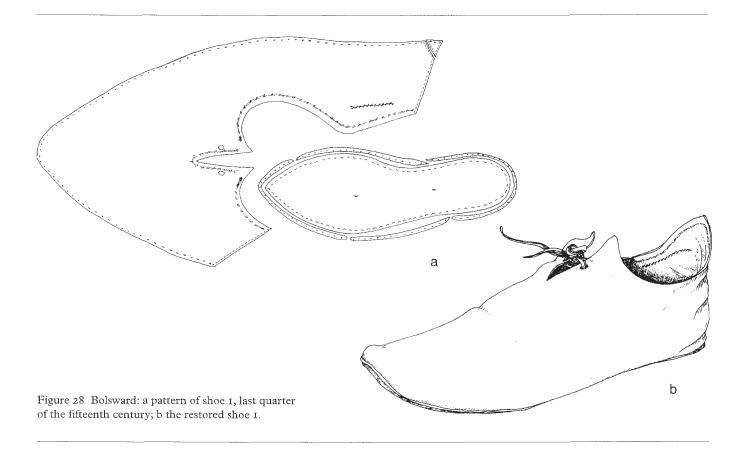


panying finds such as pottery. However, the shoes date themselves extremely well. Both according to style and technique they can be dated to the last quarter of the fifteenth century. Thanks to the rapid and expert method of transport, immediately after discovery, the leather was able to be preserved in the ROB laboratory. The shoes were subsequently sewn together again and shaped. 86

The first specimen belongs to a type commonly found in Northwest Europe, which is a low shoe with a knotted

86 Both shoes have meanwhile been handed over to the Oudheidkamer at Bolsward.

lace fastening. With regard to the height of the heel section at the ankle, there are at least four variations in design: a deep, sharp ankle bend (fig. 29: a); a lightly rounded bend (fig. 29: b); a straight ankle line (fig. 29: c); and a somewhat higher line reaching to the ankle (fig. 29: d). Apart from these variations, the fastening opening may differ in form: from very short (25 mm) to very long (70 mm), and from a normal vertically cut opening to an oval or diamond-shaped opening. The opening may also have a tongue. In addition, the shape of the toe may vary from round to pointed and may even have an extra short or long toe point. This depends on the period in which this type of shoe was popular



and on the status of the wearer. The first representatives of this type date from the beginning of the fourteenth century. The leather is then thin, calf but very often goatskin, and the shoes are sometimes decorated with punched and cut out motifs. The ankle line is clearly curved. The soles are thin with a clear waist and a pointed nose. This type regularly occurs in the fifteenth century too, although decorations are less frequent and the leather tends to be a little thicker. Towards the end of the fifteenth century shoes generally become heavier, with a thicker sole and a far less pronounced ankle bend. The same applies to the other shoe types from the fifteenth century. As a type, the shoe is still found in the first half of the sixteenth century. By then the toe is bluntly rounded, the sole thick and often consisting of two layers. The models are low and the upper consists of a vamp and a heel section. Furthermore, most heel sections are divided in two with a seam over the heel, just like most other types from the sixteenth century. What all these types have in common, regardless of the date, is the identical method of fastening the shoe,

which is also the characteristic feature. On either side of the fastening opening at the centre front there are two lace holes. Both ends of the lace, made from a single piece, project on the medial side of the shoe. The lace consists either of a single piece of leather which is inserted from the inside with its two ends through the medial lace holes, or of a strip of leather split lengthways apart from the last 5 to 10 mm, which is inserted with both loose ends through the lace holes from the inside. In the latter case the lace cannot shift, thus preventing unequal ends. The shoe is fastened by inserting the lace ends, again from the inside, through the lateral lace holes and then knotting or tying them. The remarkable thing about the first shoe from Bolsward is that it only has a single lace-hole for the short fastening opening on either side (fig. 28). The whole style emphasises the unusual character of this shoe, but particularly the high point of the heel leather, the pointed ends of the fastening opening and the long vamp. A good example of a pointed transition between fastening opening and instep opening is a shoe from

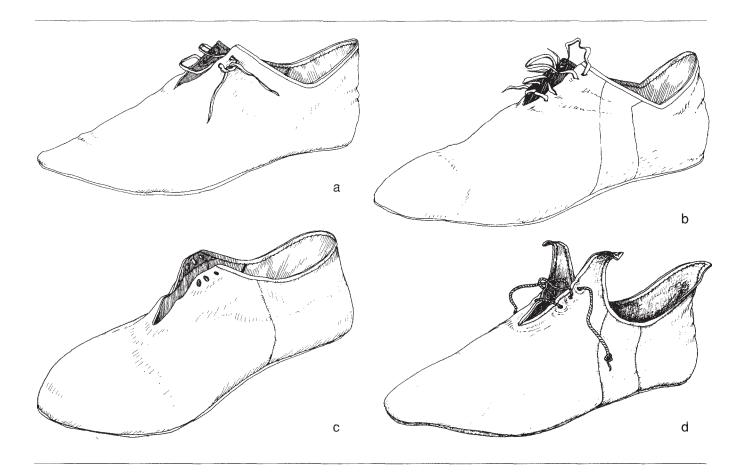


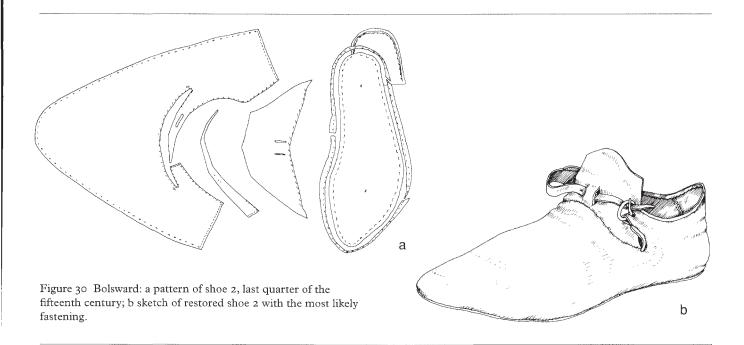
Figure 29 Examples of low shoes from the fourteenth century: a common type of low shoe with a knotted lace fastening; b the same type with two pairs of laces from Dordrecht; c shoe from Dordrecht with 2x3 lace-holes; d deviant shoe type from Dokkum.

Dokkum, which strongly resembles footwear usually reserved for dwarves and elves (fig. 29: d). 87 Shoe I from Bolsward is a left shoe. It is of turnshoe construction, as are all shoes made before 1500. The upper is made of a single piece of leather. Only at the closing seam which is on the inside of the shoe, has a small triangular additional piece ca 2x2x2 been attached. The leather along the instep opening on the inside of the foot has been reinforced with a sewn-on cord, as has the leather along the fastening opening. The leather at the heel has a cut ca 4 cm long on the inside, which proved to have been sewn up with a whip stitch. It is not clear whether this cut was made before, during or

after the manufacture of the shoe. All parts of the shoe are of cowhide. In order to complete the shoe during restoration, a lace of new leather was added.

#### Similar finds

Parallels to shoe I from Bolsward are unknown. However, several other variations within this type with regard to the normal fastening opening with 2x2 laceholes are known. There is, for example, the Dordrecht shoe with 2x4 laceholes, and another shoe from Dordrecht with 2x3 laceholes (fig. 29: b-c respectively). The former shoe has two pairs of laces. In the second shoe one lace was used; this can be seen from the leather reinforcement strip which is sewn against the inside of the shoe along the laceholes. Similar reinforcement strips are also found in other shoe types which are fastened with a lace. The previously-mentioned shoe from Dokkum (fig. 29: d) also has 2x3 laceholes.



#### Description shoe 2

The second exceptional shoe from Bolsward has a remarkable fastening which gives the impression of being incomplete (fig. 30: a). The shoe has clearly been worn, and the fastening parts also show traces of wear. How it all worked, is not quite clear; there are certainly three possibilities (fig. 31). Only one of these, the third possibility, appears the most logical (fig. 31: c). In the first method of fastening, the long strap, having passed through the loop in the tongue, is drawn through the slit in the short strap and then secured with a pin or something similar (fig. 31: a). Although a pin or small nail is used to secure the fastening of patten bands, in this case it is a very clumsy method, certainly if the straps have been thoroughly intertwined. A shoe was found in Dordrecht with probably the same method of fastening, and it too seems just as illogical (fig. 32).88 In the second method of fastening, the long strap first has to be drawn through the short strap and then through the slit in the tongue (fig. 31: b). In this case, the short strap would be too short, but it is quite possible that the band was longer and that it now ends where the opening originally was. However, this is an awkward method of fastening, and it is not adjustable either.

88 ROB excavation Dordrecht 1978, find no. 1062.

The third and most logical possibility is that shown in figure 31: c; not only from a practical point of view, but also because several good parallels exist (figs. 33 and 34). The problem, though, is that the short band does not bear any traces indicating that there might have been a buckle. There is, however, an elongated hole, necessary for the spike to move freely, but there are no stitch holes to sew the leather holding the buckle on to the band. Neither are there any holes in the long strap for the buckle (fig. 30). The shoe was probably intended as a buckled shoe, but in practice the fastening was used differently. For this reason the shoe is (temporarily) considered to be a buckled shoe.

So far, the Bolsward shoe is the only example in the Netherlands from the fifteenth century with this kind of fastening. The tongue was added separately. The leather around the instep opening is finished with a strip of leather sewn on as an edging. The lower edge of both fastening straps are also finished in the same manner. The beginning of these short edging bands are stuck into the vamp. The upper consists of three parts: vamp and heel section in one piece, the tongue and the sewn-on continuation of the buckle strap (fig. 30: a). The edging bands belonging to the shoe are not present. At the heel, the sole has had an extra piece sewn under it. In the restored shoe, the edging bands have not been added, nor was the fastening completed with a buckle.

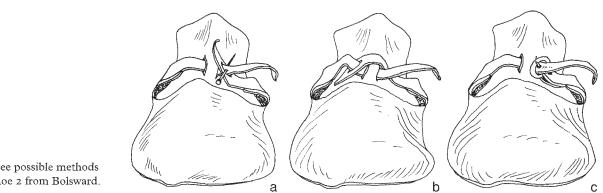


Figure 31 Three possible methods of fastening shoe 2 from Bolsward.

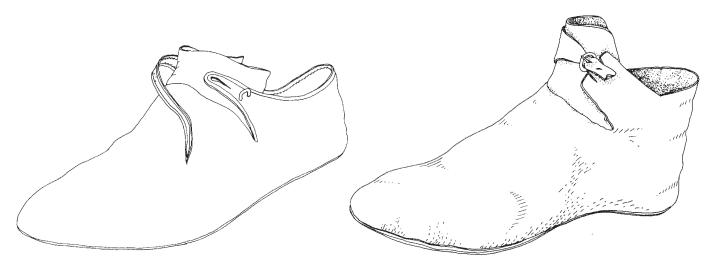


Figure 32 Dordrecht: reconstruction of a fourteenth-century shoe with a fastening somewhat similar to that of figure 31: a.

Figure 33 Lübeck: shoe with a similar buckle fastening, ca 1200. Sketch of new leather reconstruction.

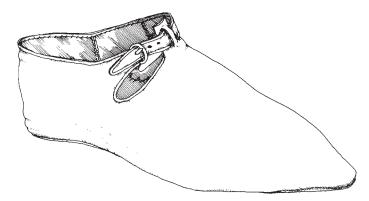


Figure 34 Schleswig: twelfth-thirteenth-century shoe similar to shoe 2 from Bolsward. Sketch of new leather reconstruction.

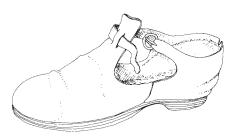


Figure 35 Zwolle: seventeenth-century child's shoe with similar buckle strap fastening. From: Goubitz 1985, 20.

The finishing and buckle are shown in the reconstruction sketch to illustrate what is meant (fig. 30: b). The whole shoe is made of cowhide. The length of the sole is 27 cm.

#### Similar finds

Parallels to shoe 2 are known from Lübeck and Schleswig (Germany). The Lübeck shoe is dated between the thirteenth and fourteenth century.<sup>89</sup> Figure 33 is the sketch of the reconstruction of this shoe in new leather, made for the museum collection in Lübeck.90 Restoration of the original shoe proved impossible, due to the absence of the sole and tongue, among other things. The style of the shoe and the high-set fastening justify the reconstructive addition of a rather long tongue. The bronze buckle was still present in the original. During excavations in the centre of Schleswig from 1971-1975, numerous shoes from the tenth up to and including the thirteenth century were found.91 Several uppers belonged to shoes which were fastened with buckles. In these models too, the buckle strap ran via slots in a separately sewn-on tongue or via a slot in a small tab in the centre of the instep of the vamp.92 Figure 34 shows a shoe with the latter possibility. 93 This parallel in particular supports the reconstruction of the Bolsward shoe as illustrated in figure 30.

There is an interesting similarity in fastening with a seventeenth-century child's shoe from Zwolle (fig. 35).<sup>94</sup> No shoes with similar fastenings are known from the intervening centuries.

#### CONCLUSION

Despite the fashion trends appearing every century or less, medieval footwear is always characterised by highly individual features, due to the fact that shoes were made to measure. Add to this the individual demands of the wearers of this footwear, plus the individual solutions to these demands and the shoemakers' experiments, and it is not surprising that there are sometimes exceptional products. Eight random examples from the early and late Middle Ages have been described here. Yet they may also be found among prehistoric or Roman footwear or among shoe finds from the modern age, where, among all the mass-produced articles, they may even attract attention sooner as being exceptional.

Address of the author: O. Goubitz, ROB, P.O. Box 1600, 3800 BP Amersfoort, the Netherlands, E-mail: Olaf.Goubitz@archis.nl

<sup>89</sup> Groenman-van Waateringe 1978b, 171, Abb. 67: 44. 90 The new leather reconstruction, together with five other Lübeck reconstructions, is to be found in the Archäologisches Landesmuseum Schloss Gottorf in Schleswig.

<sup>91</sup> Schnack 1992.

<sup>92</sup> Schnack 1992, Tafel 45: 2.

<sup>93</sup> Schleswig find no. 11007. The new leather reconstruction, together with the nineteen other reconstructions and the originals, is to be found in the Archäologisches Landesmuseum Schloss Gottorf in Schleswig.

<sup>94</sup> Goubitz 1985, 224-5.

#### REFERENCES

Baart, J., et al. 1977: Opgravingen in Amsterdam: 20 jaar stadskernonderzoek, Amsterdam.

Barwasser, M., & O. Goubitz 1990: Leder, hout en textiele vondsten, in: H. Clevis & M. Smit, Verscholen in vuil: archeologische vondsten uit Kampen 1375–1925, Kampen, 71–99.

Boersma, J.W., 1988: Een voorlopig overzicht van het onderzoek van de Wierde Heveskesklooster (Gr.), in: M. Bierman et al. (red.), Terpen en Wierden in het Fries-Groningse kustgebied, Groningen, 61–87.

Boucher, F., 1965: Histoire du costume, Paris.

Davenport, M., 1976: The Book of Costume, New York.

Dorgelo, A., 1960–61: Middeleeuws schoenwerk te Deventer, *BROB* 10–11, 453–61.

Driel-Murray, C. van, 1984: Schoeisel van de opgraving van het St. Agnietenklooster en het St. Michielsklooster te Leiden, *Jaarverslag Bodemonderzoek in Leiden* 1984, 143–65.

Fingerlin, I., 1995: Die Latrine des Augustinereremiten-Klosters in Freiburg im Breisgau: der Lederabfall, Materialhefte zur Archäologie im Baden-Württemberg 31, Taf. 16–7.

Gall, G., 1965: Leder im Europäischen Kunsthandwerk, Braunschweig.

Gansser-Burckhardt, A., 1940: Die frühzeitliche Handwerkerssiedlung am Petersberg in Basel, Zeitschrift für Schweizerische Archäologie und Kunstgeschichte 2, 10–29.

Goubitz, O., 1983a: Laat-middeleeuwse waterputten te Oud-Turnhout: de ledervondsten, *Taxandria* n.r. 55, 61–2.

Goubitz, O., 1983b: De ledervondsten, in: H.L. Janssen (red.), Van Bos tot Stad: opgravingen in 's-Hertogenbosch, 's-Hertogenbosch, 274–83.

Goubitz, O., 1984: The Drawing and Registration of Archaeological Footwear, *Studies in Conservation* 29: 4, 187–96.

Goubitz, O., 1985: Archeologische Kroniek van Overijssel 1982–84: een 17e-eeuwse kinderschoen, Overijsselse Historische Bijdragen 100, 224–5.

Goubitz, O., 1987a: Lederresten uit de stad Groningen: het schoeisel, *Groningse Volksalmanak*, 147–69.

Goubitz, O., 1987b: Calceology, the Drawing and Recording of Archaeological Footwear, in: D.E. Friendship-Taylor, J.M. Swann & S. Thomas (eds.), Recent Research in Archaeological Footwear, Northampton (Technical Paper 8 of the Association of Archaeological Illustrators & Surveyors), 1–28.

Goubitz, O., 1988: Brugge op grote en kleine voet: laat-Middeleeuws schoeisel en andere lederresten, in: H. De Witte (red.), *Brugge Onder-Zocht: tien jaar stadsarcheologisch onderzoek 1977–87*, Brugge (Archeo-Brugge, 1), 151–9.

Goubitz, O., 1990: Vijf eeuwen schoeisel uit Dokkumer grond, Jaarverslag 1990 Streekmuseum Het Admiraliteitshuis te Dokkum, Dokkum, 37–52.

Goubitz, O., & A. Ketel 1992: De ledervondsten, in: P.H. Broekhuizen et al. (red.), Van boerenerf tot bibliotheek: historisch, bouwhistorisch en archeologisch onderzoek van het voormalig Wolters-Noordhoff-Complex te Groningen, Groningen (Stichting Monument en Materiaal), 475–500.

Goubitz, O., & J.P. ter Brugge 1996: Vlaardingen, Het Waaigat 1990–91: leder, textiel, haar, touw en hoorn, *Westerheem* XLV–IV, 209–24.

Grew, F., & M. de Neergaard 1988: Medieval Finds from Excavations in London, II: Shoes and Patterns, London.

Groenman-van Waateringe, W., 1976: Schuhe aus Wijk bij Duurstede, *BROB* 26, 189–97.

Groenman-van Waateringe, W., 1978a: De spaarzame of fantasieloze(?) schoenmaker, *Spiegel Historiael* 13, 263–6.

Groenman-van Waateringe, W., 1978b: Das Leder von Lübeck, Grabung Königstrasse 59, Lübecker Schriften zur Archäologie und Kulturgeschichte 1, 161–73.

Groenman-van Waateringe, W., 1988: Een prehistorische schoen uit Klazienaveen, NDV 105, 34–8.

Groenman-van Waateringe, W., & A.J. Guiran 1984: *Die Lederfunde von Haithabu*, Neumünster (Berichte über die Ausgrabungen in Haithabu, 21).

Groenman-van Waateringe, W., & A.F. Smith 1984: Een schoen uit de late Bronstijd, NDV 101, 33–42.

Hald, M., 1972: *Primitive Shoes*, Copenhagen (Archaeological Historical Series, 1: 13).

Hendriks, A., 1964: Karolingisch schoeisel uit Middelburg, *BROB* 14, 112–6.

Janssen, Th.H., 1978: Aspecten van het stadskernonderzoek in Huissen, *Westerheem* 27, 195–204.

Kázmierczyk, J., 1979: Forschungsarbeiten auf der Dominsel in Wrocław im Jahre 1977, Silesia antiqua 21, 171 Abb. 45. Lucas, A.T., 1956: Footwear in Ireland, County Louth Archaeological Journal 13: 4, 381.

MacGregor, A., 1978: Industry and Commerce in Anglo-Scandinavian York, in: R.A. Hall (ed.), *Viking Age York and the North*, London, 34–57.

Sarfatij, H., 1972: Dordrecht: opgravingen in Hollands oudste stad, *Spiegel Historiael* 7, 620–7.

Sarfatij, H., 1990: Dordrecht, van streekdorp tot eerste stad van Holland, in: H. Sarfatij (red.), Verborgen Steden: stadsarcheologie in Nederland, 102–11.

Schia, E., 1977: Skomaterialet fra 'Midets tomt', in: E. Schia (ed.), De arkeologiske utgravninger i Gamlebyen, Oslo, I: Feltet 'Mindets tomt', Oslo etc.

Schnack, Chr., 1992: Die mittelalterliche Schuhe aus Schleswig, Ausgrabung Schild 1971–75, Schleswig (Ausgrabungen in Schleswig, Berichte und Studien, 10).

Walle-van der Woude, T.Y. van de, 1989: Een 14e-eeuws industriecomplex te Monnickendam – het leer, in: H.A. Heidinga & H.H. van Regteren Altena (red.), *Medemblik and Monnickendam: Aspects of Medieval Urbanization in Northern Holland*, Amsterdam, 69–103.

Wiklak, H., 1960: Obuwie Gdańskie w x-xIII wieku, Gdansk Wczesnośredniowieczny 3, 23-8.