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SACRIFICIAL LANDSCAPES

CULTURAL BIOGRAPHIES OF PERSONS, OBJECTS AND 'NATURAL' PLACES
IN THE BRONZE AGE OF THE SOUTHERN NETHERLANDS, C. 2300-600 BC

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Non multo post in Cantabriae lacum fulmen decidit repertaeque sunt duodecim secures, haud ambiguum summae imperii signum.

(Suetonius, book VII: Galba, Otho, Vitellius)

Und dast Sterben, dieses Nichtmehrfassen
Jenes Grunds, auf dem wir täglich stehn,
Seinem ängstlichen Sich-Niederlassen -:

In die Wasser, die ihn sanft empfangen
Und die sich, wie glücklich und vergangen,
Unter ihm zurückziehn, Flut um Flut

(R.M. Rilke 'der Schwan')

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8 Late Bronze Age

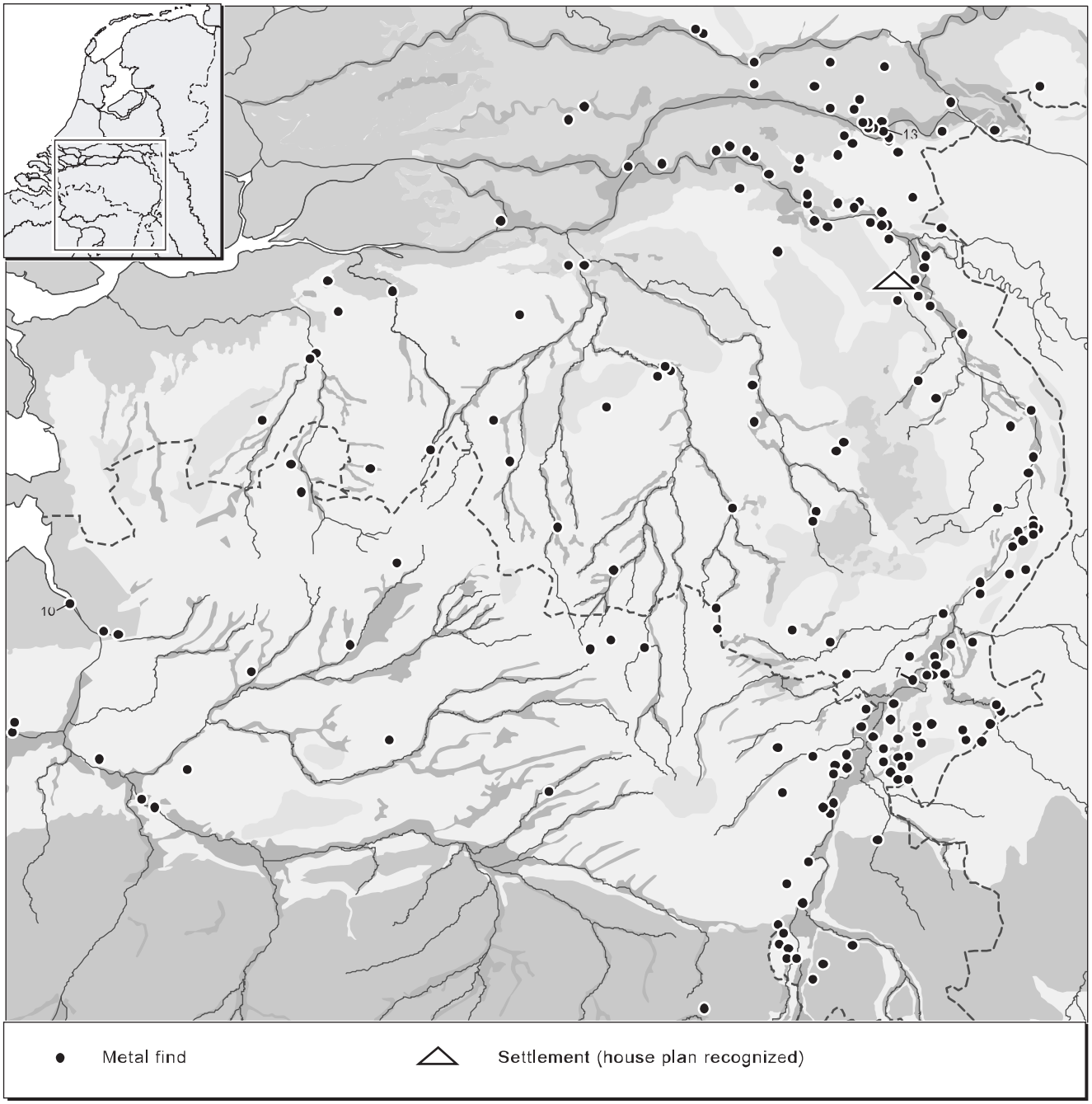

Figure 8.1 Distribution of LBA metalwork finds and settlement sites. Not depicted are finds from urnfields (for these, see fig. 9.1).

8.1 Introduction

The Late Bronze Age is a pivotal period in any discussion on bronze deposition in north-west Europe. It is during the Late Bronze Age that the rate at which deposition is practised reaches a peak, to be followed by a dramatic decrease during the transition to the Iron Age. In many European regions, this remarkable tradition of bronze deposition that we have been able to follow for many centuries seems to disappear almost completely at the end of the Bronze Age (Kristiansen 1998). The bronze finds from the Late Bronze Age in the southern Netherlands are rich when compared with those of preceding periods. Not only do we know of large numbers of single finds; for the first time there are also several multiple-object hoards known consisting of dozens of bronzes and a high variety of bronze artefacts. The available evidence begs the question whether the practice of bronze circulation and deposition also reached unprecedented heights during this period. Was deposition essentially the same kind of practice as before, or did it undergo fundamental transformations? And with regard to the sharp decrease of deposition recorded for many European regions, the following question should be answered: did a similar development take place in the southern Netherlands as well? It may be clear that for a study that focuses on the phenomenon of bronze deposition, all these questions are vital ones. They will be central to the present chapter, which describes the evidence on bronze deposition of the Late Bronze Age.

The beginning of the Late Bronze Age has traditionally been defined in the Low Countries by the first urnfields (around 1050 BC in the southern Netherlands; Van den Broeke 1991b). This date is quite meaningless for most metalwork typo-chronologies used here, however, (fig. 1.4; fig. 8.2). In the Late Bronze Age and Early Iron Age, a threefold typo-chronological division can be made:[1]

1 the period coinciding with Ha A2 to B1 (more or less *Bronze final IIb/IIIa):* 1025-925 BC
2 Ha B2/3 (*c.Bronze final IIIb)*: 925-800 BC
3 Ha C: 800-625 BC, the first 75 years or so are known as the Gündlingen phase. Ha C heralds the start of the Dutch Early Iron Age

The discussion on the life cycles of Late Bronze Age metalwork will follow the same format as that of the previous chapters, although the evidence is more complex than before since it is much more diverse and includes material dating to a period that saw the bronze-iron transition. A brief introduction to society and landscape in the Late Bronze Age defines the general issues involved (section 8.2). Then, following a short outline of the nature of the evidence (8.3), the different object categories are dealt with (8.4 to 8.7), excluding burial gifts. To keep the discussion to manageable proportions, the latter are dealt with separately in chapter 9. Then, we will discuss the place of metalwork among contemporary material culture (8.8), to be followed by general conclusions on patterns in the cultural biography of metalwork. As before, this will be done for the different stages in their life-path: production (8.9), circulation (8.10) and, finally, deposition (8.11). The different findings will be brought together and placed in the context of more general developments in society and landscape (8.12).

8.2 Society and landscape during the Late Bronze Age

8.2.1 North-western Europe

From a European perspective, the Late Bronze Age is generally seen as a period of major change. Almost everywhere in Europe it is considered to be one of the most densely populated eras of later prehistory (Kristiansen 1998, 104). A characteristic element of many European societies in this period is the custom of burying incinerated human remains in urn graves in large cemeteries, the so-called urnfields. These are known from an area stretching from eastern France to the Carpathian Basin, and from northern Italy to the north European plain (Roymans 1991, 14). The demographic increase is seen as having led to increased pressure on the land and sometimes to economic crises (Champion *et al.* 1984, 278). All sorts of economic and social changes taking place at the transition from Middle to Late Bronze Age have been thought to be related to it (Fokkens 1997). An open, intensively exploited landscape is assumed to have been a recurrent feature of Europe by now (Kristiansen 1994, 8).

Especially significant to the present research is the theory that the Late Bronze Age was also a period that saw a tremendous increase in the quantity of metalwork in circulation (Fokkens 1997). Rowlands (1980) and, more recently, Kristiansen (1998) have argued that this also involved the development of intra-regional bronze exchange networks that had a degree of reciprocal interaction that was so far unprecedented in European history. More precisely, they propose that several regions in Europe acted as 'regional systems or economies'. By this term, borrowed from Wallerstein's theory of 'modern world systems' (1974), they mean that different political or cultural entities depended upon economic exchange with each other for their self-maintenance. They were linked to each other through their different roles in production and exchange (Rowlands 1980, 37-8). Kristiansen (1998) has worked out this concept in detail for the specific case of the Bronze Age, and it is his understanding of the term that is used here. He argues that in the Late Bronze Age different regions functioned as a system in the sense that the frequency of interaction between them was high enough to maintain a common pace of change in metal and ceramic production. The several constituting regions may be culturally distinct but they were

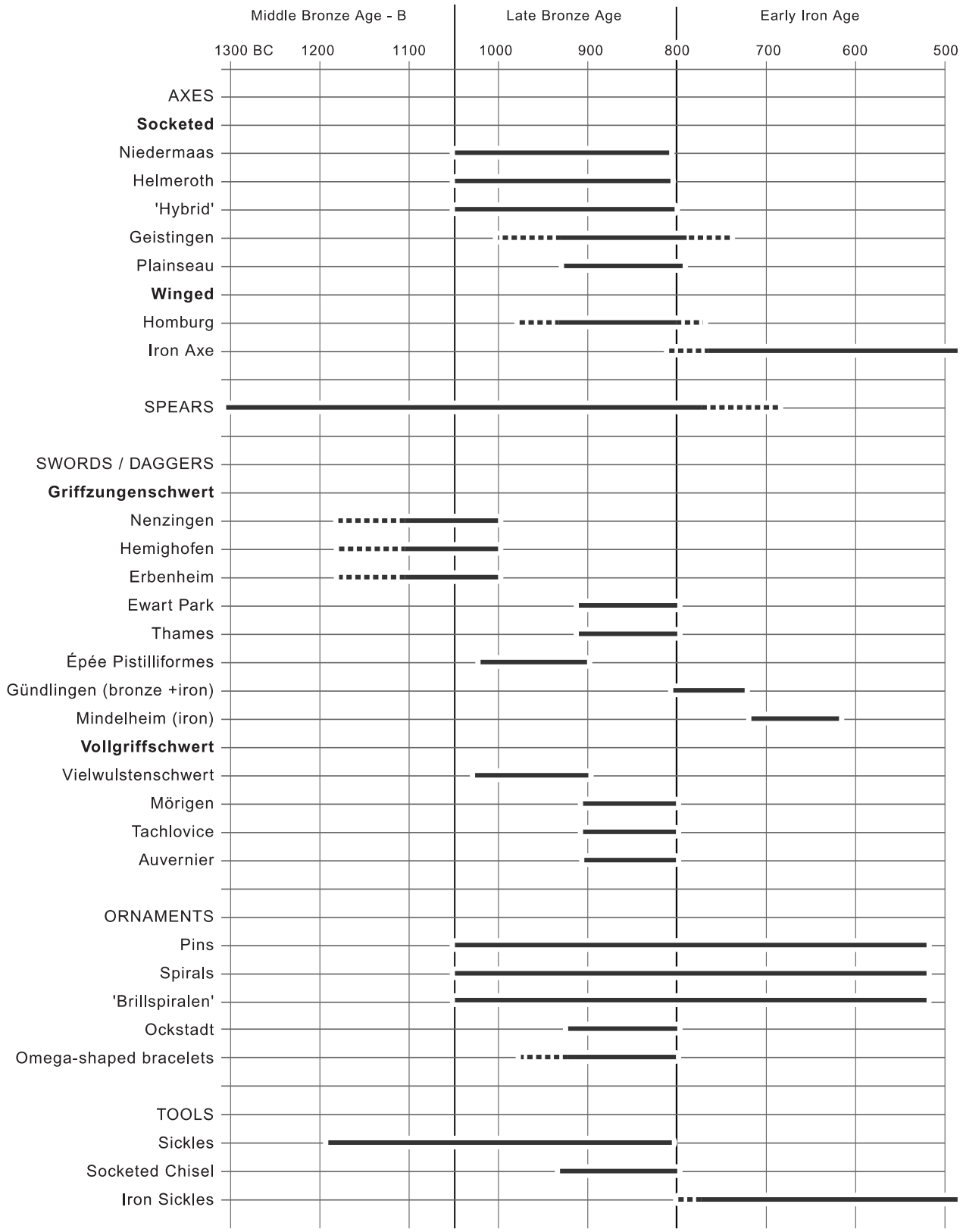

Figure 8.2 Dating ranges of the most important object types discussed in the text.

highly dependent upon each other for the circulation of the badly needed metalwork, both for social (prestige goods) and practical (tools) reasons. The bronze circulation patterns between different entities within the system were so tight that they followed the same developmental pulses, the spread of new ideas and institutions.

All over north-west Europe, intra-regional bronze circulation seems to cease or at least to diminish considerably during the 8th to 6th centuries BC. Consequently, the practice of bronze deposition, which was in many regions (southern Britain, north-west France, southern Scandinavia) practised at a much higher rate than ever before, and involving unprecedented high quantities of metal, seems to cease almost entirely. In many regions, iron objects replace ones formerly made of bronze, both everyday tools and highly prestigious ones. The apparent 'breakdown'of international bronze circulation is generally seen as a consequence of the increased inter-dependence between regions that came into being in the last centuries of the Late Bronze Age. After all, it is inherent to such a system that changes, when triggered in one of the regions, affect the other ones as well (Kristiansen 1994, 7). As recently set out by Kristiansen (1994; 1998, chapter 4), we may be dealing here with a very complex process. Among other things, it has to do with historical changes causing a fundamental re-orientation of the dominant exchange axis in Europe, the result being that the western and northern areas were deprived of one of their major sources of metal supplies (central Europe).

8.2.2 Southern Netherlands

With regard to the Late Bronze Age in the southern Netherlands, we are dealing with groups traditionally termed *Niederrheinische Grabhügelkultur*. For the discussion in the present chapter, the following points are of specific importance.

Continental influences and the Urnfield burial ritual

The spread of urnfield cemeteries and new burial rites is the defining characteristic of the Late Bronze Age in the Lower Rhine Basin as well. It was clearly much less a 'new' phenomenon, however, than in the case of some other European regions: the cremation rite was already widespread in the Middle Bronze Age, and barrow cemeteries were also known. Nevertheless, there were undoubtedly 'new' developments, like for example a new kind of high-quality, thin-walled pottery with German and central European affinities and new types of graves (*lange bedden* or long barrows).[2] In many European regions, the shift to continental affinities is marked (for example: west Belgium, Verlaeckt 1996, 46), and it may be expected that the re-direction to the continental tradition as seen in pottery styles and burial rites is also reflected in the bronze exchange networks.

Demographic growth or processes of fission?

According to Roymans (1991), the Late Bronze Age was also a period that witnessed a sharp demographic growth. In the foundation of new cemeteries, Roymans and Kortlang (1999, 38-9, note 15) see a reflection of a process of 'filling up' the landscape by new local groups, often at the expense of existing territories. Fokkens (1997) is of the opinion that such a demographic growth actually never took place, but in the gradual shortening of houses during this period he sees arguments for another transformation: *large extended families splitting up into smaller social units* (nuclear families), coinciding with the shrinking of households. Both views, although opposed, see a rise in the number of elemental social units peopling the land. If such units are the core entity practising deposition, then their gradual increase must have affected the number of depositions practised in total.

A structured, territorial landscape

Related is an increased commitment to the land during this period, which goes hand-in-hand with a growing significance of laying claim to the land (Roymans/Kortlang 1999). *Territoriality* is assumed to become more important in the Late Bronze Age than it was before (Roymans/Kortlang 1999, 40). The adoption of Celtic field agriculture in the Late Bronze Age is also seen in such a way, as it seems to demand a higher level of collective regulation than the small dispersed plots of arable land that characterize the Middle Bronze Age agriculture (Roymans/Kortlang 1999, 51). Gerritsen has argued that the long-term process by which the land was gradually reclaimed, structured with man-made elements like houses, barrows and field systems since the Late Neolithic, now seems to have resulted in a landscape that was seen as profoundly historical and ancestral. Settlements were still 'unsettled': unbounded by visible boundaries like ditches or palisades, and shifting their location once in a generation.[3] Urnfields, however, were stable, formal, central places that now provided a fixed point of reference in the landscape for centuries in a way not seen before. Hence, the following question may force itself upon us: what was the place of object deposition in such a structured, 'ancestral' and 'historical' landscape?

8.3 Discussion of the available evidence

The evidence of the Late Bronze Age is different from that of preceding periods in a number of ways. First of all, there are considerably more finds. Table 8.1 lists 696 metalwork objects! Also, a much larger number of hoards is known from this period, and some of these contain dozens of objects (fig. 8.3 and appendix 1). Such lavish hoards are – as we have seen – totally unknown from all preceding periods. Next, the dating ranges of many types are shorter, allowing

Type / Object type	Context: Major river	Stream valley	Marsh	Wet hoard	Dry	Dry hoard	Burial	Settl.	?	Totals
Swords										
Ha A2-B1										
Erbenheim	2	-	-	-	-	-	-	-	-	2
Sprockhoff I	-	-	-	-	-	-	-	-	1	1
Nenzingen	1	-	-	-	-	-	-	-	-	1
Hemigkofen	-	-	-	-	-	-	-	-	1	1
Vielwulstschw.	1	-	-	-	-	-	-	-	-	1
Other	5	-	-	5	-	-	-	-	1	11
HaB2/3										
Thames	1	-	-	-	-	-	-	-	-	1
Ewart Park	5	-	-	-	-	-	-	-	-	5
Carp's Tongue	5	-	-	-	-	-	-	-	-	5
Vollgriffschwert	2	-	1	-	-	-	-	-	-	3
Other	1	-	2	-	-	-	-	-	1	4
Early Iron Age										
Gündlingen br.	7	-	1	-	-	-	7	-	1	16
Iron swords	2	-	-	-	-	-	6	-	2	10
Spears										
LBA-dating*	3	-	1	8	-	1	5	-	-	18
MBA/LBA	22	14	10	-	4	-	-	2	61	113
arrowhead	2	-	-	-	-	-	-	-	6	8
Ornament										
Pins	6	1	-	-	-	-	32	-	1	40
Ockstadt pin	2	1	-	-	-	-	-	-	1	4
Spirals	2	-	-	1	-	-	5	-	1	9
Rings, all sizes	-	-	-	1	-	6	13	-	1	21
Bracelet	-	-	-	7	-	8	38	-	-	53
Bracelet dec.	1	-	-	-	-	2	4	-	-	7
Beads	-	-	-	-	-	3	8	-	-	11
Socketed axes regional										
Niedermaas	2	3	4	6	-	9	-	-	17	41
Helmeroth	5	1	4	3	-	-	-	-	1	14
Geistingen	2	-	-	-	-	33	-	-	3	38
Socketed axes import										
Plainseau	4	4	1	16	-	77	-	-	18	120
Wesseling	3	4	4	2	2	-	1	-	12	28
Others**	13	2	4	12	-	1	4	-	24	60
Winged axes										
H&S	2	-	-	2	-	-	-	-	4	8
Homburg/others	4	-	1	1	-	-	-	-	5	11
Tools										
Gouges	-	-	-	1	-	-	-	-	-	1
Chisels	-	-	-	3	-	-	-	-	-	3
Sickles	2	1	2	3	1	1	-	-	8	18
Knives	3	-	-	-	-	-	2	-	3	8
Smith's tools										
Bronze mould	1	-	-	-	-	-	-	-	-	1
Totals	111	31	35	71	7	141	125	2	173	696

Table 8.1 Metalwork finds from the Late Bronze Age and Early Iron Age (single finds and from hoards), excluding Ha C horse-gear, wagon parts and iron axes but including items for which a more precise dating than Middle or Late Bronze Age is not available (pegged spearheads, a number of sickles and arrowheads). In view of their dating range, the H & S axes and pseudo-flame spearheads are listed both here and in table 7.1. * LBA-spears are those dated to the period by C14-datings or associations in hoards and burials up until the Gündlingen-phase. Ornaments from burials are those dating from the Late Bronze Age/Early Iron Age urnfields studied here (see appendix and chapter 9), excluded are finds from urnfields which were founded in the Early Iron Age. Virtually all urnfield ornaments are broken and incomplete The Early Iron Age brooches said to have been found in Nijmegen are excluded as well, in view of their unreliable provenances.. ** 'Hybrid', north Dutch types, faceted and Sompting axes. Armorican and iron axes are not included. Dec.= decorated.

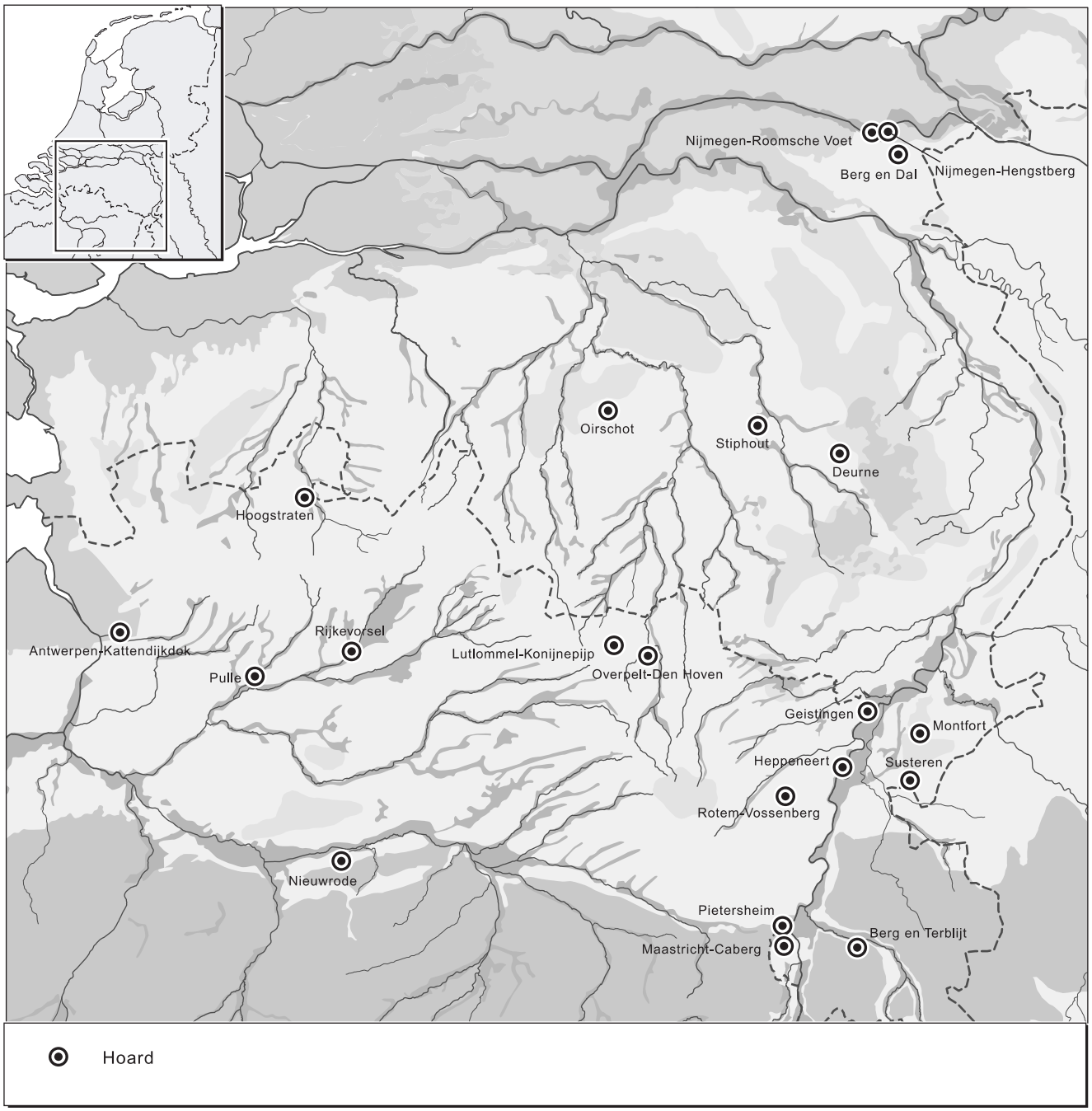

Figure 8.3 Distribution of LBA hoards.

the threefold distinction in sub-phases mentioned in the introduction: Ha A2-B1, Ha B2/3 and the Gündlingen phase of the Early Iron Age. Another feature which sets the Late Bronze Age apart is the large number of bronze (and later iron) objects from burials (chapter 9). Leaving these aside, most other objects are from the same sort of find contexts as before (dredge finds from rivers, and many from inland streams and marshes) and from the same micro-regions (fig. 8.1). The rectangular man-made 'cult place' from Nijmegen-Kops Plateau represents a new kind of depositional context. In contrast to the Middle Bronze Age B, however, there is no evidence of settlement finds or production sites. This probably has to do with the remarkable situation that so far hardly any Late Bronze Age settlements have been excavated in the southern Netherlands (Fokkens 2001).

8.4 Socketed and end-winged axes

Although palstaves might occasionally still have been used for some time in the Late Bronze Age (for example: type Portrieux and Rosnoën, see previous chapter section 7.4.1), as are some mid-winged axes (Head & Shoulders variety, section 7.4.3), the socketed axes are the most predominant axe form. With 301 objects recorded, they outnumber the axe types of previous periods by far. End-winged axes, the other axe form of this period, are a striking minority when compared with the socketed axes (11). As recently remarked by Butler and Steegstra (in press), this is a peculiar feature of the southern Netherlands and northern Belgium, since the adjacent middle west German region studied by Kibbert shows a clear predominance of winged axes over socketed ones (Kibbert 1984).

As in the case of the palstaves, socketed axes can be divided into regionally produced forms (type Niedermaas, Helmeroth, a hybrid form having affinities to both south and north Dutch axes and Geistingen; fig. 8.4) and imported ones (fig. 8.8), of which Plainseau axes are the most important. The numerous type Wesseling axes are probably imports as well, although this is not quite clear. The end-winged axes, then, must again all have been imported. There are a few Armorican axes which are said to have been found in the study region. Most of them are from antique dealers, however, and the information on their provenance is often in contradiction to their patina (appendix 2.15). It seems better to leave these axes out of consideration, although it cannot be ruled out that one day more reliable finds will come to light.

8.4.1 Regional socketed axes

Niedermaas

The Niedermaas or Lower Meuse type comprises a variety of axe forms, characterized by a fairly large D-loop (three to four centimetres and more or less circular in section). It springs directly from the collar. Most have plastic 'wings' on their body and sometimes a pellet (fig. 8.5). They do not have a neck-ring nor facial arch facets (thereby differing from the north Dutch Hunze-Eems type, Butler/Steegstra in press). The Niedermaas axes from the region are listed in appendix 2.10.The original definition of the type (Butler 1973) also included axes that are now grouped with axes of type Helmeroth (Kibbert 1984, 139-41). In their most recent treatise of Niedermaas axes, Butler and Steegstra (in press) adjust the original type definition, and distinguish some subtypes mostly on the basis of presence/absence of wings and pellet, and form of the collar.

Butler and Steegstra' s study (in press) shows that Niedermaas axes are indeed an artefact characteristic to the southern Netherlands. It is almost completely absent from the northern Netherlands, and surprisingly few finds are known from the adjacent German region (Kibbert 1984). Find associations in hoards suggest that they were contemporary to late artefacts like Plainseau axes (*Bronze final Atlantique IIIb*; Heppeneert, Lutlommel and Hoogstraten hoard) and Wesseling axes (last part of Late Bronze Age-beginning Early Iron Age; Susteren-Eilandje hoard). The presence of Niedermaas axes in the Berg en Terblijt hoard (Ha A2/B1) in particular suggests that they were in use in an earlier phase as well.

There is no reason to doubt that Niedermaas axes were designed as work axes, although the presence of one such axe in the Pulle weapon hoard suggests that it had a weapon function as well. They are generally crudely produced items, with often ragged casting seams and irregular collars (Butler/Steegstra in press). There is considerable variation among the objects recorded, and there is no reason to assume that they were made as a series of identical tools. As Butler and Steegstra (in press) remark each example rather seems to be endowed with a degree of individuality.

The majority of axes known to us come from wet locations like stream valleys, bogs, or major rivers. These axes usually show traces of a use-life. A few are from hoards. Wet context hoards are Berg en Terblijt, Pulle, Montfort, Susteren-Eilandje. Other (dry or unknown) types of context are Rotem, Heppeneert, Lutlommel, Hoogstraten and Nieuwrode. It is remarkable that in only two cases (Montfort and Nieuwrode) these hoards consist solely of Niedermaas axes, and here the number of axes in the hoard is small (two and five respectively). This is in marked contrast with the rich hoards like the ones from Heppeneert or Lutlommel which consisted of dozens of axes of just one type: the Plainseau axes. This implies that in terms of the quantity of axe types in circulation and deposition, the regional Niedermaas axes were not on the same level as the imported Plainseau axes.

Helmeroth

Kibbert's publication of the axes from middle West Germany (1984) has made it clear that some of the Dutch axes that

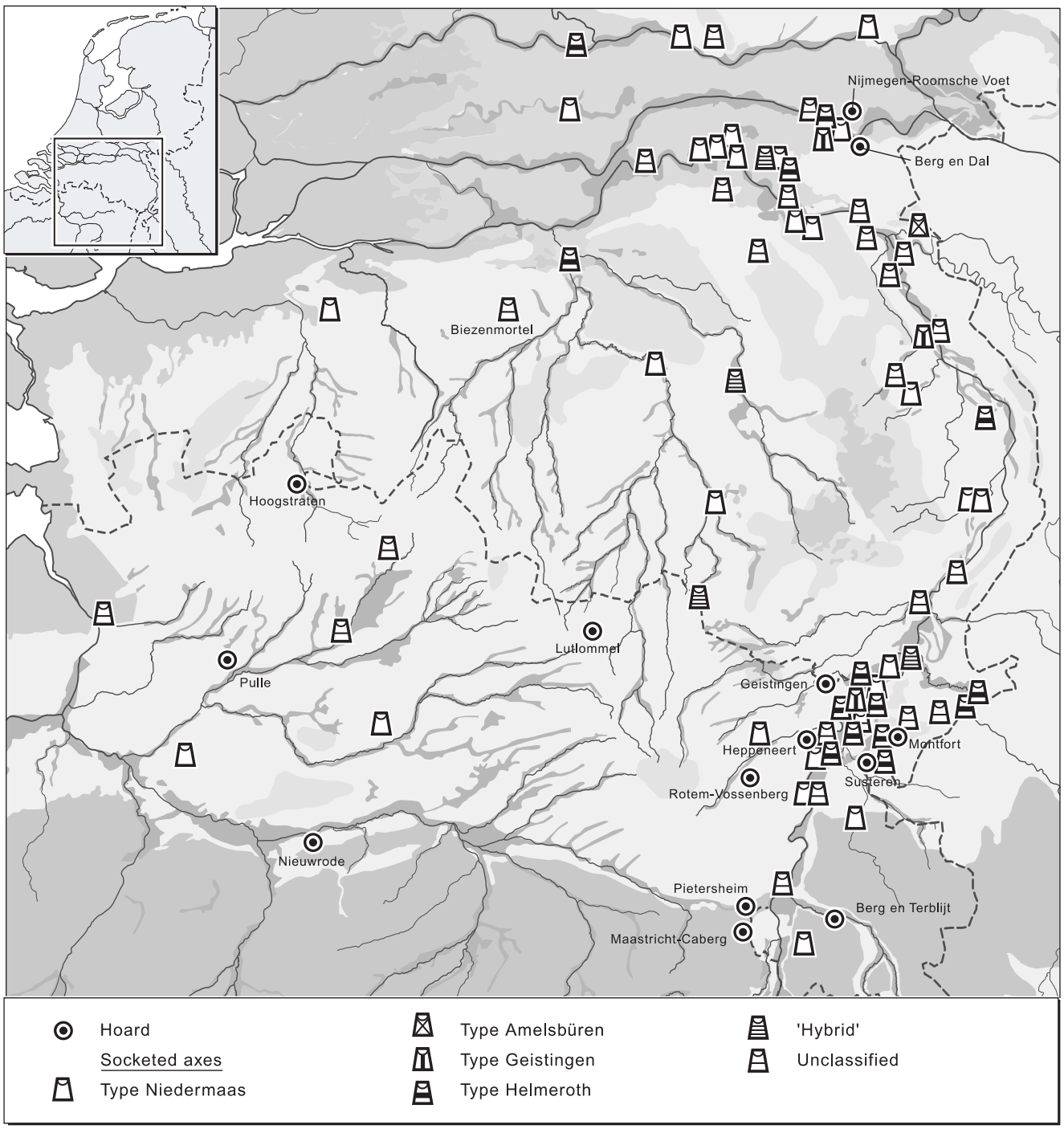

Figure 8.4 Distribution of regional and unclassified axes.

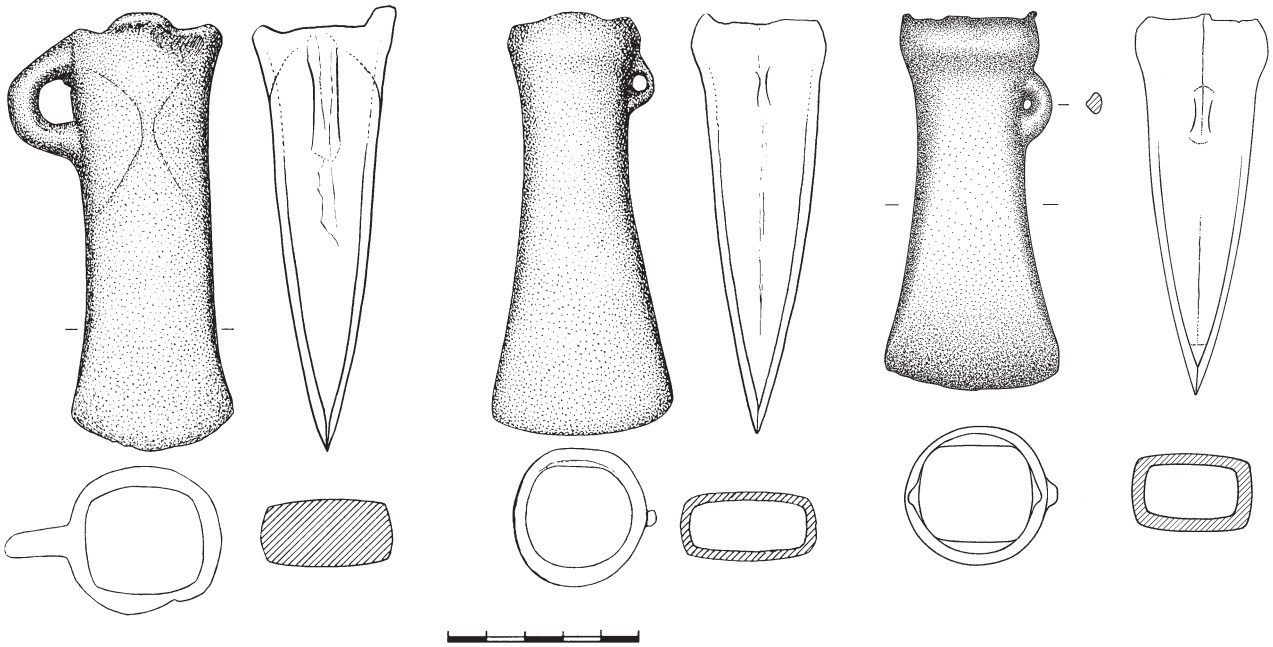

Figure 8.5 The Susteren-eilandje hoard, containing one Niedermaas axe (left) and two Wesseling axes (centre and right) (scale 1:2; after Butler/Steegstra in press).

were originally designated as 'Niedermaas' but which had some deviating features like vertical furrow ornaments, had better be classified as axes of Kibbert's *Form* Helmeroth, mainly his Kirchhoven variety (1984, 139-41).This comprises slender axes with a flattened D-shaped loop, like Niedermaas axes, but unlike the latter this has a ribbon cross-section. As in the case of Niedermaas axes, there is no neck-ring, but there mostly is a conspicuous type of vertical furrow decoration on their body. A few have pellet decoration (Butler/Steegstra in press). The bronze axe in Susteren with which I began this book can actually be interpreted as of the Helmeroth type. See appendix 2.11 for a list of finds from our region.

The axes show a grouping in the Meuse valley, slightly expanding across the German border which makes it reasonable to see them as a product characteristic of the region, rather than as an import from far (fig. 8.4). Moreover, the half of a bronze mould that was dredged from the Meuse near Roermond[4] is in all likelihood a mould in which such axes were produced (Butler/Steegstra in press).

Like Niedermaas axes, Helmeroth ones must have been designed as functional tools and used as such. Most recorded examples ended up in the same sort of wet places where we find the Niedermaas axes: streams, marshes and major rivers. Unlike the Niedermaas axes, there is no good example of a Helmeroth axe from the study region being deposited together with other objects. This can be suggested only for three Helmeroth axes from the former marshes in the municipality of Echt (two from 'Peij', one from 'Diergaarde') which in view of similar patination may originally have formed one (bog) hoard (the 'Echt' hoard; appendix 1).

North Dutch imports and hybrid forms

The axes described above are in marked contrast to the regional axes of the north Dutch Hunze- Eems type (Butler 1961c). Characteristic for the northern products is for example a large, angular 'elbow' loop, arch facets on the face, and often neck-rings imitating rope or a saw-tooth motif. Only two of such north Dutch axes are known from the southern Netherlands (appendix 2.15). A few others display similarities to these Hunze-Eems axes in their biconical profile, the large loop and the decoration around the neck (Van der Sanden 1980, 170). This is most clear in the case of the finds from Wijchen and Budel (appendix 2.15). They lack arch facets, however, and the outline of the body is not dissimilar from that of most Niedermaas axes either. This sets them apart from the true Hunze-Eems axes. We seem to be dealing here with some sort of hybrid form, perhaps made in the south, but influenced by northern stylistic traits. In other ways, however, these 'hybrid' axes do not depart from the life-paths of socketed axes described so far: the known examples were used, and most ended up in watery places, just like Niedermaas and Helmeroth axes.

Geistingen axes

Geistingen axes are without any doubt the most remarkable regional axes from the southern Netherlands (fig. 8.6; appendix 2.12). They have relatively long and narrow outlines without neck-ribs and a small low-placed D-shaped loop (Butler 1973, 339-41; Kibbert 1984, 166-8, 214; Butler/Steegstra in press). Most conspicuous, however, are their extremely thin walls (1 to 2 mm). Their thin walls and their light weight (approximately half of an average socketed axe; Butler/Steegstra in press) make it highly unlikely that these axes were made with an eye to practical use. Although most axe edges are sharpened, there is indeed no additional evidence to suggest that they were in any way practically used as tools or weapons (see also Butler/Steegstra in press). In addition, the axe from Herten-Ool and one from Nijmegen (Butler/Steegstra in press, nos. 560 and 562) have metal protrusions inside the socket which would have made the insertion of a haft into the socket impossible: they were apparently not even hafted as axes![5] They are more than simple crude as cast products however, as their fine external finish and impressive large length suggests (up to 16 cm; Butler/Steegstra in press). As they have not been found in associations with other artefacts, they cannot be accurately dated. In western Europe afunctional axes are mainly a feature of the Ha C period (Kibbert 1984, 167-8), and for that reason a dating in the later part of the Late Bronze Age/beginning Early Iron Age seems feasible.

Geistingen axes are only known from the eastern part of the study region and the adjacent German region (a few as far as the Rhine-Main area; Kibbert 1984, Taf. 89C). Its distribution and shape suggest that they were also produced in the study region or the adjacent German area. Remarkable, particularly in view of the striking 'individuality' of other axe types (Niedermaas and Plainseau in particular), is the homogeneity of this type. Both Butler and Steegstra (in press) and Kibbert (1984, 168) go so far as to argue that for this reason it is likely that *all Geistingen axes are the product of a single workshop over a short period of time*. To this Butler and Steegstra (in press) add that such a production of thin-cast walls with varied metal to work with (judging from the few German specimens with analysed metal content) requires highly skilled smiths. With regard to production, there is another feature that needs elaboration. Geistingen axes may be symbolical objects that evoke the image of an axe, but are we dealing with ceremonial objects in their own right, or objects made to resemble true axes? The idea that the symbolical axes were in form referring to practical ones is interesting, since we saw something similar in the case of the ceremonial swords of the Middle Bronze Age A (chapter 6: the Plougrescant-Ommerschans type). A similar thin-walled socketed axe from the middle West German region, type Amelsbüren, seems to be such an afunctional version of an existing functional one (in this case the Plainseau axe, Butler/Steegstra in press). Butler and Steegstra (in press) recently suggested that Geistingen axes have features in common with regular Wesseling axes, and that perhaps this was deliberate. Their long, unparalleled slender form, however, suggests that they were much more designed as a category in themselves, contrasting with other forms.

Figure 8.6 Geistingen axe from Herten-Ool (l. 15 cm).

The life-paths of the Geistingen axes must have differed considerably from those of other types of axes. First of all, if Butler, Steegstra and Kibbert are right about these axes being produced in one workshop and subsequently distributed over a large area, then we are dealing with a circulation pattern that is unknown in the case of other axes. Their individual peculiarities in form and style imply that these must have come from a heterogeneity of workshops. If Geistingen axes were being produced in different workshops, their circulation remains deviant: why would different smiths make objects that are so similar to each other in size and finish? This becomes particularly acute if we realize that Geistingen axes are surely among the more difficult axe forms to produce. Second, we are dealing with a life-path in which axes were sharpened, but never used and probably not even hafted. Yet they are carefully finished, elaborate examples, much too elaborate just to fulfil a role as a unit of metal. For the first time, we are dealing with an entire axe category *that was not made with an eye to practical use, never used in a practical way, yet made in some numbers*.

It is the way in which the life-paths of Geistingen axes ended that shows a further departure from current axe biographies. Geistingen axes are known as single finds and from a few hoards. As far as we know, the latter are hoards consisting of Geistingen axes only. Contrary to what we generally see, the hoards are all from dry contexts on high plateaus (Maastricht-Caberg, the possible hoards from

Nijmegen and Berg en Dal). The eponymous Geistingen hoard is on a high plateau on which there are gullies that seasonally may be watery (Van Hoof 2000, catalogue). The exact find-spot of the hoard is unfortunately unknown, but one remarkable observation on their find context has been preserved: the 26 or 28 axes were said to have been tied together with a cord, which had crumbled and was not preserved (Butler/Steegstra in press and references cited therein). Apart from these deviating ways of deposition there is the observation that other Geistingen axes, at least the examples from Herten-Ool, are from major rivers (fig. 8.6). So, these ended up in exactly the same way as hundreds of bronze axes did before them. The same is true for Geistingen axes from the adjacent German region (Kibbert 1984, 167).

8.4.2 Imported socketed axes

Type Plainseau

The most significant imported axes are without any doubt those of the Plainseau type (120 objects; see fig. 8.7 and 8.8; appendix 2.13). Plainseau axes are a characteristic artefact type of the French *Bronze final IIIb* phase (Blanchet 1984; Gaucher 1981; Van Impe 1994; Warmenbol 1987), the last phase of our Late Bronze Age (Ha B2/3). They are distributed over a wide area, ranging from northern France to the southern Netherlands (a few also known from more northerly locations, Butler/Steegstra in press). In France, they occur in huge numbers in hoards like the eponymous Plainseau hoard (Van Impe 1995/1996, 28). They are a recurrent feature of hoards containing a characteristic set of (north-French) artefacts, especially ornaments, but also some tools like chisels and gouges. Such hoards are known from northern France to the southern Netherlands, and their wide distribution has been interpreted as a cultural phenomenon, the *Culture du Plainseau* (Gaucher/Verron 1987). As a cultural trait, it would be a rather peculiar one, as it is only visible in hoards. In burial ritual, settlements, ceramics and so on, there are striking differences between the different groups that would have been part of this 'Plainseau culture'. Later on in this chapter, I shall come back to the meaning of this widely shared 'hoard tradition' (section 8.6.3). For the moment, suffice it to say that it existed, and that the Plainseau axe is one of the most prominent objects in such hoards.

The most lavish hoards of Plainseau axes are from northern France, sometimes consisting of hundreds of axes (Gaucher 1981, fig. 120). The northernmost Plainseau axe hoards can be found in the study region, all on the Belgian side of it: Hoogstraten (some 20 axes), Antwerpen-Kattendijkdok (9), Lutlommel-Konijnepijp (originally 20, or even 44), and Heppeneert (47, almost all of the Plainseau type). The Lutlommel and Heppeneert hoards are depicted elsewhere in this book, see fig. 12.1 (Lutlommel) and 13.2 (Heppeneert). These hoards contain several dozens of axes at most, and are as such actually in no proportion to the lavish French hoards. Nevertheless, hoards like the ones from Hoogstraten and Heppeneert are practically unparalleled in the study region, and must therefore represent special deposits. No other axe type figures in such large numbers in hoards apart from the Plainseau axe. There is only the eponymous Geistingen hoard that can be mentioned (26 to 28 axes), but this one seems to be without counterparts, whereas there are plenty of lavish Plainseau-axe hoards.

The quantities in which Plainseau axes must have been produced, circulated and deposited are probably much higher than for any other axe type. Nevertheless, there is a tremendous variety among the individual axes, brought out in differentiation in ornamentation. Butler and Steegstra (in press) even speak of individualization, which could perhaps be interpreted as evidence for the existence of individual property rights, or perhaps of an exclusive right of use for the object concerned. We saw a similar 'individualization' in the case of the Niedermaas axes, whilst the Geistingen axes rather seem to have been produced as objects neatly similar to one another. Butler and Steegstra (in press) and Van Impe (1994) have recognized all kinds of sub-types, which we shall not take into consideration here. An important point which requires further attention, however, is that some types seem to be typical for the study region. This applies particularly to those with 'jail-window' decoration (in the hoards of Antwerpen-Kattendijkdok and Hoogstraten, Warmenbol 1987a). We seem to be dealing with local adaptations of foreign types. Although the remarkable 'jail-window' decoration seems to emphasize a local identity, the axes are in other respects still very close to the original imported ones. It would go too far to suggest that we are now for the first time dealing with local styles which are closed rather than open.

Most Plainseau axes found have been sharpened, and were probably used as well, as Van Impe's analysis of those preserved from the Lutlommel and Heppeneert hoards shows. We are therefore not dealing with objects like Geistingen axes, although it is remarkable to see that Plainseau axes are sometimes significantly lighter than regular ones.[6] Many are single finds, coming from the same sort of watery places as the other axes, and therefore must represent deliberate depositions. The Plainseau axe from Cuijk which is said to have been found in a giant urn should be regarded with some caution and cannot serve as a good argument that such axes were also deposited in burials.[7] There are also differences between Plainseau axes and others, and these come to the fore in the phenomenon of the lavish axe hoards. Some of these axe hoards are from the traditional type of context. The Antwerpen hoard, for example, comes from a boggy area of a stream (fig. 13.4), and so do the smaller Oirschot (fig. 8.7) and Stiphout hoards. It is remarkable, however, that the

Figure 8.7 The Oirschot hoard: two Plainseau axes (l.11.8 and 11.2 cm).

Antwerpen axes were deposited in this small stream, removed from the higher terrain on which present-day Antwerpen is built, and also removed from the Scheldt itself (cf. fig. 13.4). In this major river, numerous objects were deposited during the Late Bronze Age. Why were these axes deposited in the smaller river? More deviant is the context of the Heppeneert, Lutlommel and Hoogstraten hoards. All are situated on dry or semi-dry, high terrains. In the case of the Lutlommel hoard, we are dealing with objects placed halfway a gentle slope, and as we will see later on (in section 8.6.3), there are reasons to suppose that it was (at least seasonally?) wet. Moreover, it seems to have been situated in a place that was in some kind of 'no-man's land', surrounded by cemeteries and at least one settlement (see also chapter 12; fig. 12. 2). The environmental position of the Hoogstraten hoard has similarities with that of Lutlommel, although here nothing can be said on the cultural landscape. The Heppeneert hoard seems to have been deposited on dry high grounds, which are transected by shallow gullies that carry water in autumn and winter (Van Hoof 2000, catalogue). The fine preservation of the axes may be in keeping with this.

Type Wesseling

A considerable number of socketed axes from the Netherlands can be attributed to a type that was hitherto not recognized as one (Butler 1998/1999). These are the so-called Wesseling axes (28 objects, see fig. 8.5 and appendix 2.14), as defined by Kibbert (1984, 126-31). They are more or less evenly distributed across the north and south of the Netherlands and the adjacent German region. A bronze mould for such an axe was found in Erkrath, Germany (Kibbert 1984, no. 599), indicating that it was produced in the German Rhineland, but it can certainly not be ruled out that they were made in our region or the northern Netherlands as well. Whereas all other types that were current in the south hardly seem to have been deposited in the northern Netherlands, the Wesseling type is the only type that is important in both regions. Most of the finds in the southern Netherlands are plain, undecorated forms mostly of Kibbert's Traben-Trarbach variety. Characteristic is the prominent socket-mouth, with a very small, often unperforated D-shaped loop. On typological grounds, Kibbert (1984, 130) argues that such axes date from the later part of our Late Bronze Age, or the beginnings of the Early Iron Age. A Wesseling axe was found in the rich Ha C 'chieftain's grave' of Rhenen, suggesting that it might still have been in use as late as Ha C (Van Heeringen 1998/1999, 83; Butler 1998/1999).

The biographies do not seem to deviate from those of regular axes like Niedermaas or Helmeroth. As a matter of fact, two Wesseling axes were deposited in a marsh together with a Niedermaas axe (the Susteren hoard: fig. 8.5). Wesseling axes must have been effective work axes, apart from their unpractical small loop. Most are from watery places, as are most other axes. Exceptional finds, however, are the examples from Rhenen (mentioned above) and from Nijmegen-Kops-Plateau. The former because it was part of a very rich burial equipment, which is very uncommon: there is still no convincing case of a socketed axe being deposited in a burial, apart from this one and the burnt axes from the Wijchen Ha C chieftain's grave (see chapter 9). On the Kops Plateau, a blunt Wesseling axe was placed at the northeastern corner of what must have been a rectangular open-air cult place (section 8.13.3 and Fontijn 2002; Fontijn/Cuijpers 1998/1999, 55-60). Both examples date from the Early Iron Age (Rhenen) or the Bronze Age-Iron Age transition, both periods in which profound changes appear to have taken place in depositional practices (section 8.13).

Others

There are numerous axes of other types or type unknown (fig. 8.8; appendix 2.15). A number of them represent imported axes, like the unique decorated axe from the Nijmegen-Hengstberg hoard, or some faceted axes and axes of the Sompting type (some of which must represent British imports; Butler/Steegatra in press). A remarkable larger number of Armorican axes are from antique dealers or from other dubious provenances (see the remarks in appendix 2.15). Therefore, I decided to leave them all out of consideration here. This brings the number of objects down to 60.

Apart from the hoards mentioned, most of these axes seem to have ended up in marshes, rivers or bogs, and as such they were not treated differently from other axe types. There is a vague old find record of three socketed axes of unknown type that are said to have been found in an urngrave in the cemetery of Biezenmortel.[8] If this is true, then it would be the first example of axes being deposited in Late Bronze Age

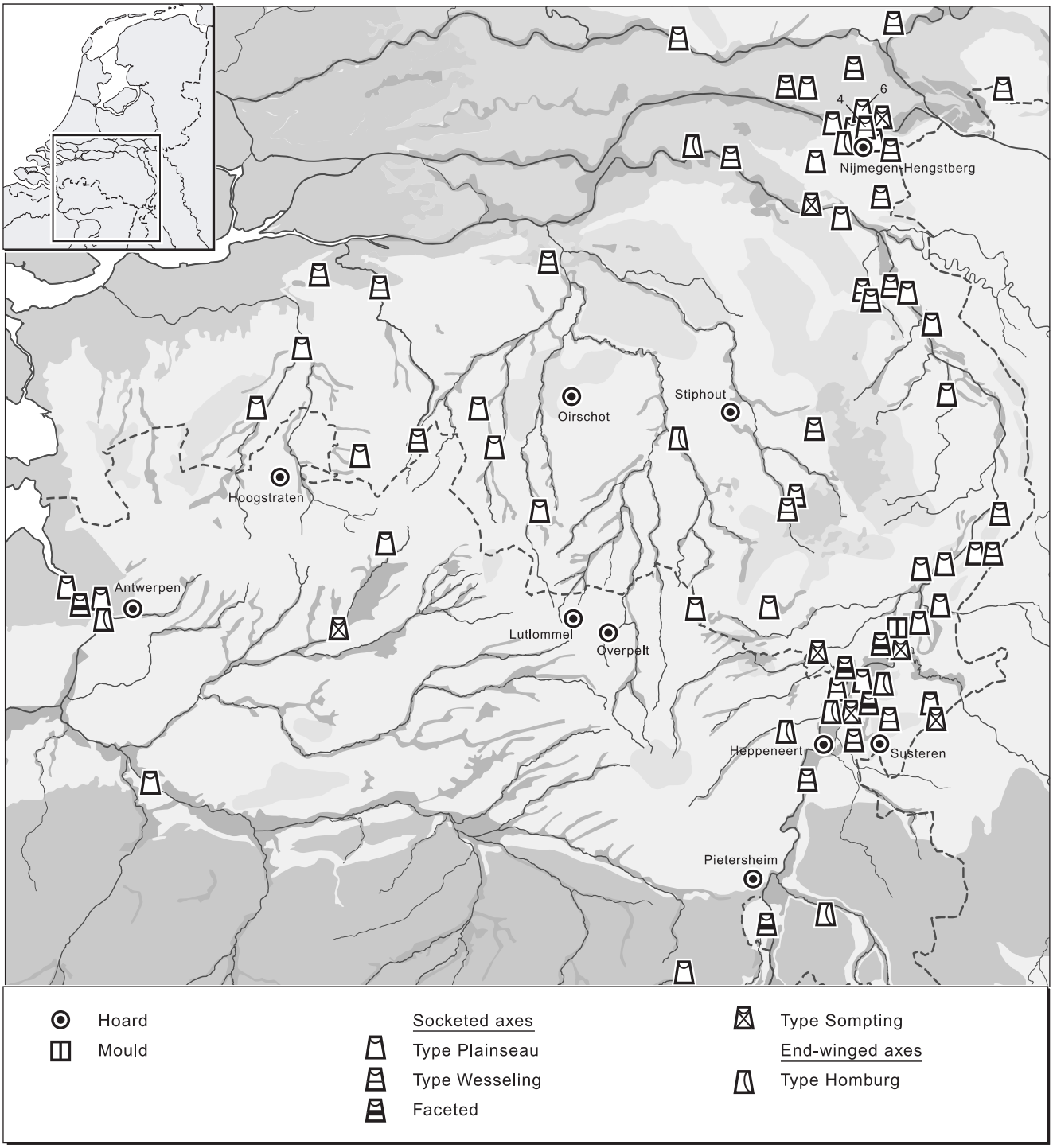

Figure 8.8 Distribution of imported socketed and end-winged axes.

burials. Since then, many professional excavations of urnfields have been carried out, but so far there has never been another find of axes in urns (see also above on the Plainseau axe, allegedly found in an urn in Cuijk).

An unparalleled axe that deserves special attention is the one found during the reclamation of a peat bog in Milsbeek-Ven Zelderheide (fig. 8.9). Its form vaguely echoes that of Plainseau axes, but it is its thin walls which make it stand out from the rest. Like the Geistingen axes, this one was not produced for practical use. It is somewhat closer to axes of the German Amelsbüren type, which have similar remarkable thin walls. Like the afunctional Geistingen axes of Herten-Ool, this one also seems to have been deposited in a watery place, just like regular work axes were.

8.4.3 End-winged axes

There is a small number of bronze axes with an entirely different kind of hafting: the end-winged axes (fig. 8.8; appendix 2.16). Virtually all finds known to me can be considered as (varieties) of Kibbert's type Homburg (Kibbert 1984, 90-7). Such axes are numerous in the adjacent middle west German region studied by Kibbert, but remarkably absent from the southern Netherlands. Like the earlier winged axes (chapter 7), they are practically unknown in the northern Netherlands, again illustrating the remarkable north-south dichotomy in exchange networks. In chapter 7 I presented some arguments that the earliest mid-winged axes (type Grigny) had a different kind of biography when compared to other axes. For later winged axes, this no longer seems to be true. Apparently, the deviating axe form was now accepted as a normative form in indigenous conceptual classifications. Although they never seem to have been produced locally, the wing decoration on socketed axes (Plainseau and Niedermaas in particular) seems to emphasize that these different types of axes were seen as affiliated. The end-winged axes mostly show traces of use, and were deposited in a way similar to regular socketed axes. The Pietersheim hoard, allegedly consisting of five Plainseau axes and one Homburg winged, axe is a case in point (Heymans 1985).[9]

8.4.4 Iron axes

Although bronze Wesseling axes must have remained in use throughout the Early Iron Age, there are no other bronze axe types that can be ascribed to this phase with certainty. As a matter of fact, from the Middle Iron Age on, axes are almost unknown from the archaeological record. As we will see later on, there are arguments to suppose that this relates to three new developments. First, it concerns the transition from bronze to iron axes, the latter being preserved far worse in most milieus, including waterlogged ones, than bronze items (iron axes are listed in appendix 2.15). Second, we should take into account the decline of the age-old tradition of axe deposition itself during the earliest part of the Iron Age (see the discussion in section 8.11). Third, the few iron axes we know cannot be dated by typo-chronological means. One comes from the Ha C chieftain's grave of Oss, and therefore should be of Early Iron Age date. Furthermore, there are two iron axes with preserved wooden shaft from the southern Netherlands: one from Rijnwaarden (unlooped) and one from Lith-Kessel (looped; fig. 8.10). Their ^{14}C-datings are 2520 ± 60 BP (UtC-1356) and 2540 ± 50 BP (GrN-12807) respectively (Lanting/Van der Plicht in press).

Figure 8.9 Thin-walled socketed axe from the swamps near Milsbeek-Ven Zelderheide (l. 7.8 cm).

Figure 8.10 Iron looped axe, dredged from the Meuse near Lith (l. 9.8 cm) (after Verwers 1988, fig. 21).

Calibration of those dating at a two σ-standard deviation level makes it clear that neither find can be dated precisely. Both ranges vary from the beginnings of the Early Iron Age to *c*. 400 BC cal. Although far from satisfying, these dating at least show that iron axes were in use since the first half of the Iron Age. For the present research, it is interesting to see that both are finds from major rivers. These iron axes thus seem to have been deposited in a watery place, just like their bronze predecessors.

8.4.5 Conclusions

As before, and in spite of a thriving regional production, axes were still imported from other regions as well. The dating of the different types discussed varies. Apart from a group of axes that is current throughout the entire Late Bronze Age (Niedermaas axes), and those for which there is no good dating evidence (Geistingen), Plainseau axes clearly date from the last century of the period, and Wesseling axes even extend into the earlier part of the Early Iron Age.

Production

An entirely new element in the production of axes is the evidence for axe types that are so fragile that they could never have been used (the Geistingen axes). These axes were not single, ceremonial aggrandisements of existing types (as we saw in case of the ceremonial sword of the Middle Bronze Age, chapter 6); rather, they are a type in themselves, with no clear references to existing types, and made in a regionally specific form. They were probably also produced in considerable numbers, as the Geistingen hoard implies. Something like this is entirely new, and it is important to realize that we are not dealing with imported objects from other regions, but with axes in all likelihood produced in the southern Netherlands itself! The Late Bronze Age thus seems to herald an important development: if symbolical aspects were relevant to axes before, we are now dealing with a situation where they were brought out in a specialized form. I shall come back to the implications of this later on and in chapter 13.

In general, the element of display seems to have been much more important in the case of socketed axes than earlier on with the palstaves. It is remarkable, however, that the regional axes (the decorated Niedermaas axes) have a much more conspicuous regional identity than the regional palstave types. The decoration itself is quite interesting: it may be one that gives the axes a characteristic 'local' touch, but the type itself clearly refers to other, non-local styles in its ornamentation. The style is 'open' rather than 'closed'. The best example are the Niedermaas axes that are in form comparable to axes from the adjacent regions, but in decoration (the pseudo-wings) refer to central European axes.

Another characteristic, observed by both Van Impe and Butler and Steegstra, concerns the enormous variety and even something close to individuality (both observed on axes of the Niedermaas and Plainseau type). Although similar in general outline, the individual Plainseau axes from, for example, the Heppeneert hoard are very different. It would be a bridge too far to suppose that we are dealing with axes with an individual identity, but clearly there has been an attempt on the part of the smith to create axes that are similar in general characteristics, but different in details.

Circulation

For the Middle Bronze Age B, the conclusion was drawn that our region was apparently no longer connected to Nordic networks. With regard to axes, this situation seems to continue in the Late Bronze Age. I know of not one convincing Nordic import, apart from two Hunze-Eems axes. Plainseau, end-winged and Geistingen axes, on the other hand, are hardly known from the north. We thus seem to be dealing with two different, almost exclusive exchange networks, one for the north and one for the south of the Netherlands. Only the Wesseling axes occur in both regions, but this axe type dates somewhat later. In terms of style, only the 'hybrid' type shares characteristics with North Dutch products, but this kind of axe is not found very often. As argued, it is likely that Plainseau axes were actually made in more than one region, perhaps even in the research region (this applies at least to the 'jail-window' sub-type). What remains, however, are 'imported' axes which are predominantly Atlantic, French ones. Atlantic-affiliated axes, most notably the Plainseau axes, are especially prominent in the last phase of the Late Bronze Age (parallel to the French *Bronze final IIIb* phase). In the Early Iron Age, bronze axes are predominantly of the Wesseling type, believed to have been produced in the German Rhineland. The high number of Atlantic axes in the last centuries of the Late Bronze Age seems to reflect an intensification of exchange relations with the north-west French area, that later on almost entirely made way for relations with the continental, German regions.

Deposition

With regard to axe deposition, the Late Bronze Age saw both continuity and change. To start with the former: most axes deposited must have had life-paths similar to those of axes in previous periods. They were produced, circulated and put to use, and some were finally deposited individually in a stream, marsh or river, but never in a burial.

From now on, axes were deposited in watery places that had not only never been used, but had even been made in such a way that they could not have been used in the first place (Geistingen axes and the axe related to type Amelsbüren from Milsbeek-Ven Zelderheide). Some of these ended up in

exactly the same kind of contexts that ordinary, used axes did (marshes, swamps, rivers). In other words: having been used to be crucial for axes to be selected for sacrifice. Use was *elemental in the generalized biographies of axes ending up in wet places*. Moreover, we have seen that it was a vital element of the tradition of axe sacrifice since the beginnings of the Bronze Age for all periods up till the last phase of the Bronze Age. Now, with the deposition of Geistingen axes in these same places, however, we see a break in this practice for the first time. Whatever the use-life of a Geistingen axe, it was not used for wood cutting, clearance, house-building, and so on. The life of Geistingen axes thus must have been fundamentally different from that of normal axes, in spite of their formal similarities to normal axes. The traditional views of the kind of biography axes should follow in order to be selected for deposition were gradually changing apparently.

From now on, axes were not only deposited as single items, although this still applies to the majority. Now, there is also a number of large deposits of axes known. Most of the times, these consists of axes only, with one predominant type, which is usually the Plainseau axe. In one case, dozens of axes were deposited in conjunction with ornaments (Lutlommel). These axe hoards are often in environments that differ from the usual. Still, the fact that such axe hoards are a recurrent phenomenon suggests that they are not simply unretrieved trade-ware, but intentional deposits. Chapter 13 will deal with these hoards in details, for the moment it suffices to say that for the Late Bronze Age, divergent deposition modes came into being.

8.5 Weapons: spears, swords and chapes

Again, weapons consist mostly of spears and swords (fig. 8.11). Apart from a find from the Scheldt near Antwerpen ('left bank complex'; Verlaeckt 1993) daggers are unknown to me and so are spear types that are characteristic for the Late Bronze Age only (like flame-shaped ones for the Middle Bronze Age B. ^{14}C-dating of the wood in two spearheads from Belgium indicates that plain pegged spears, of which numerous finds are known, were in use in this period as well, and even continue to be used into the Early Iron Age (based on the Bornem find and the one from Battel (Iron Age-dating); Verlaeckt 1996). This is corroborated by the observation that similar spearheads are also known from Late Bronze Age hoards (Pulle, Berg en Terblijt, Heppeneert). Undoubtedly, many, if not most, of the bronze spearheads from the region date from the Late Bronze Age[10] and it is likely that they were regionally produced. They were apparently not subjected to special treatment in terms of decoration or characteristic blade form. This is quite different in the case of swords, and for that reason we will further on focus on these, and on a remarkable weapon hoard (Pulle).

8.5.1 Early Griffzungenschwerter

In the last chapter, reference was already made to a new type of sword, the *Griffzungenschwert*, or flange-hilted sword. With its secure hilt-blade connection it is a clear improvement of the earlier *Griffplattenschwerter*. Moreover, these swords are the first to have truly leaf-shaped blades, and as such they are close to the real 'cut-and-thrust swords' we know from the mature Late Bronze Age (like those of the Ewart Park type). It is argued that the first *Griffzungenschwert* in our region probably were the Hemigkofen swords and those of type Erbenheim (fig. 8.14), Nenzingen, and Sprockhoff type I swords (fig. 8.14). It was already remarked in chapter 7 that these types probably became common not before the Ha A2 phase, although an occasional piece is earlier (the Sprockhoff type I sword which is traditionally considered the earliest flange-hilted sword from Northern Europe[11], and the Hemigkofen sword; O'Connor 1980, 115; table 10). This places them in the period of 1125 to 1025 BC, just around the transition from the Middle to the Late Bronze Age (following Lanting/Van der Plicht in press). The Locras swords are generally dated somewhat later (O'Connor 1980, 142). It is somewhat remarkable that swords typical for the next phase (after Ha A2, but before Ha B2/3) are known in smaller numbers. One could think of swords of the Mainz or Wilburton type, or 'Atlantic leaf-shaped swords' (O'Connor 1980, 142-6).

As before, the majority of these swords comes from river deposits, and the unprovenanced examples display a wet-context patina as well (appendix 5.3). A remarkable exception is the find from Neer. At the 'Kappersberg', a fragment of an early *Griffzungenschwert* was found. Although data on its original patina are not available, it seems likely that we are dealing here with a find from a dry context, probably from a high terrain. Are we dealing here with an element of a scrap hoard, a burial find, or with an intentional deposit of a complete sword that was broken in recent times?

8.5.2 The Vielwulstschwert *from Buggenum*

Recently, a remarkable sword was re-discovered that originally came to light around 1964 during dredging activities near Buggenum-De Geer. According to the finder, P. Peters from Haelen, it came fromm a former bedding of the river Meuse between Buggenum and Horn (*Oude Maas*), coordinates approximately. 195.75/358.5 (Butler/Steegstra 2000). The sword has been studied by Butler and Steegstra (2000), and myself.[12] What follows is based on our joint findings (fig. 8.12).

We are dealing with a sword with a richly ornamented bronze hilt (l: 68.5; w: 3.8 cm; weight: 920 g). It has a nearly circular pommel, decorated on both sides (fig.). It is topped by a smaller projection which is also decorated. The top and the bottom side of the pommel are decorated with

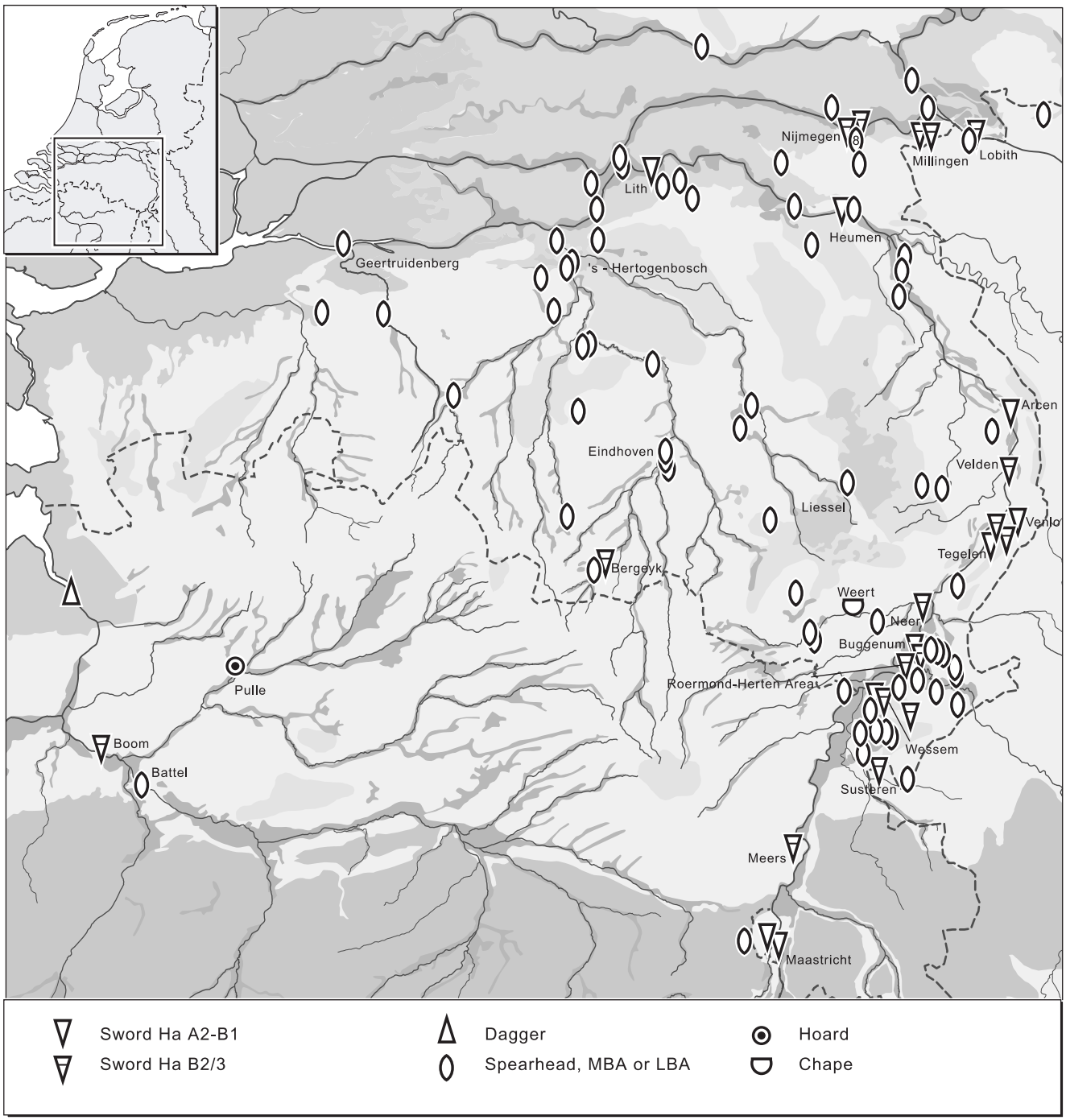

Figure 8.11 Distribution of LBA swords, a chape and a dagger, and spearheads, which cannot be precisely dated.

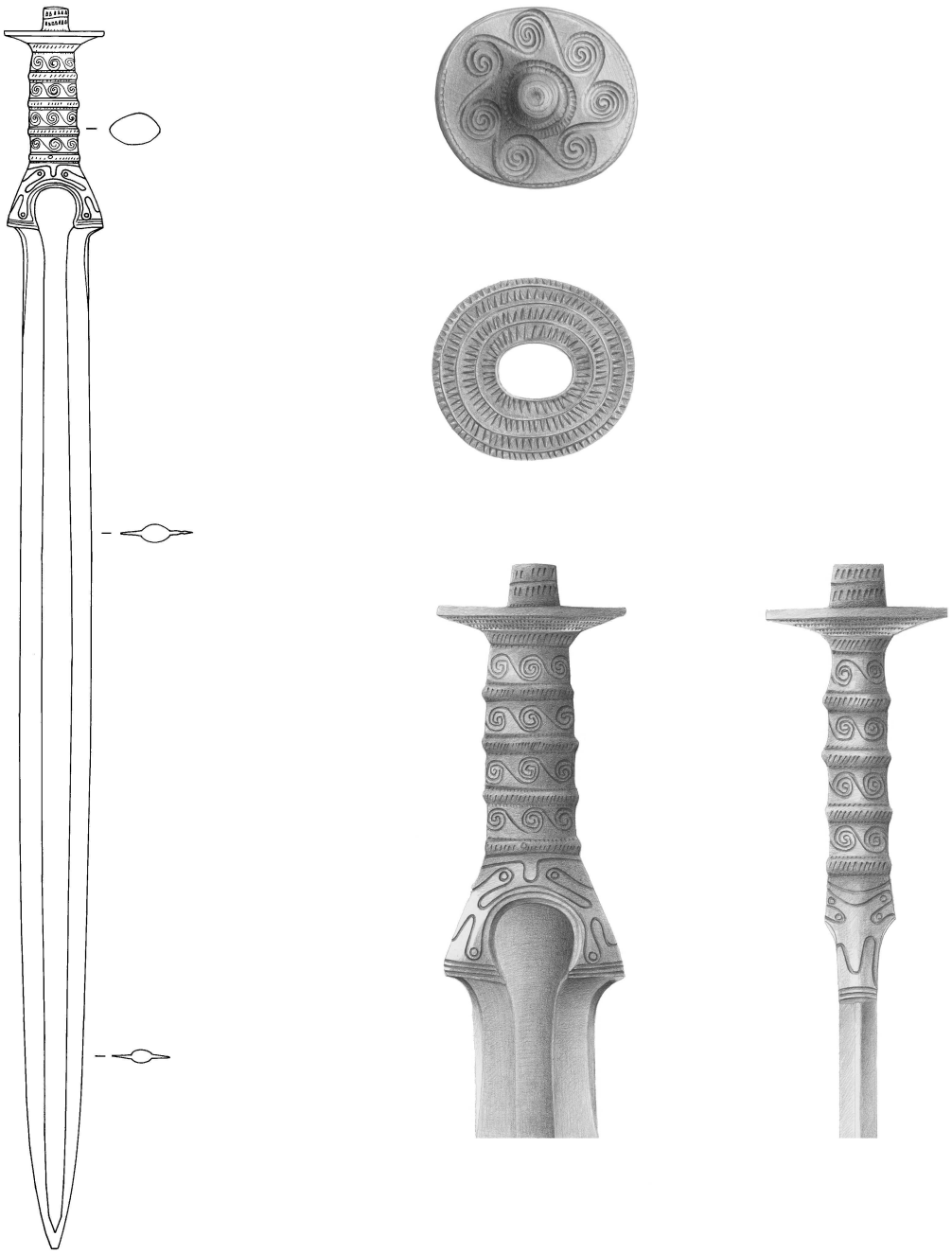

Figure 8.12 The Buggenum *Vielwulstschwert* (left, 1:4) with details of its hilt and pommel (right, scale 1:2).

Kerbschnitt-like incisions, the upper part of the pommel with a series of seven connected running spirals. On the handgrip there are four and a half ribs, the spaces between each are again filled with encircling rings of running spirals, carried out in exactly the same technique and style as those on the upper part of the pommel. Although giving the impression of being strongly symmetrical, closer inspection makes clear that they are actually placed in an irregular mode. At first, the artist who was preparing fig. 8.12 and I myself had considerable problems in understanding how this pattern had been constructed by the smith. By trial and error, we found out that all running spirals were made according to a similar logic: every new spiral starts from the innermost part of another one. Having broke this 'code' it was quite easy to draw the decorative pattern. Apparently, in the material culture forms of the region where this sword was made this logic of making decorations was as common as it is alien to us. Below the handgrip, there is a trapeze-shaped grip, decorated with incised lines and smaller circles. Seen from the side, this pattern has some similarity to the head of an animal, but this may be coincidental and subjective.

The blade is sharpened, but obviously it was never used; it lacks sharpening facets. It is parallel-sided, and clearly was not meant to have the leaf-shaped form of some cut-and-thrust swords. It is remarkably well preserved, with a dark bronze patina with black patches.

As said, it was found in the sediment of a former Meuse channel while dredging. This stretch of the Meuse has yielded more sword finds (fig. 14.1). It seems obvious that we are dealing here with a sword that was deposited in the river. A remarkable detail is that it was bent when found. Was it ritually destroyed before deposition? The fact that it was found during dredging activities suggests that it might just as well have been bent as a result of the dredging process itself.

It is obvious that we are dealing here with a *Vollgriffschwert*, more particularly with the variety known as the *Vielwulst-schwerter* (Butler/Steegstra 2000; von Quilleveldt 1995, 142-88). In decoration and general outline, they are a well-defined group. The individual swords are not as close to one another as are the ceremonial swords of the earlier Plougrescant-Ommerschans type. Thus, we are probably not dealing with sword types that were made by the same smith or workshop. Neither does a strict visual similarity seem to have mattered. The decoration motifs are also not characteristic for these swords only; the running spiral motif is known from bronze ornaments as well, and the *Kerbschnitt* motif is characteristic for Late Bronze Age pottery.

Such swords are primarily known from southern Germany; the Buggenum find is way outside this distribution. With its ostentatious decoration and non-functionality it seems to have been some sort of *Fremkörper* among the more regular swords. Typo-chronologically, this type is dated in Ha A1, or slightly later. Therefore it is is a relatively early sword in the Late Bronze Age, and broadly contemporary to the early *Griffzungenschwerter* described above.

8.5.3 The weapon hoard from Pulle

Special mention should be made of a weapon hoard from Pulle, Belgium. There are two reasons why this weapon hoard departs from the general patterns of deposition. The first is that we are dealing with a set of weapons (eight spears, fragments of at least five swords and one socketed Niedermaas axe) that *were intentionally broken and some of which had been burnt before deposition* (Van Impe 1973). This treatment deviates from the normative: generally, swords were deposited in undamaged, unburnt condition. The second reason is that we are dealing with an entire collection of weapons including swords that were deposited together in a marshy stream valley. As we have seen, swords were generally placed in major rivers. Occasional finds of spears are known from stream valleys outside the major river valleys, but never in such large numbers. We are clearly dealing with an offering that must have been extraordinary. The find report also mentioned remains of pointed wooden posts, but unfortunately these have not been preserved for ^{14}C-dating.

Van Impe (1973, 10-1) sees the leaf-shaped blades and their decoration (six incised lines on both sides of the midrib) as comparable to the Atlantic *épées pistilliformes*, and more in particular to the category of swords of the *Saint-Brieuc-des-Iffs* group (cf. Briard 1965, 176-98). This would date the swords to the *Bronze final IIb-IIIa* phase (Van Impe/Creemers 1993, 48), that is, still before the Ha B2/3 phase. In retrospect, Van Impe's dating still seems defendable, particularly in view of the fact that the decoration with multiple incised lines is not characteristic for Ha B2/3 or *Bronze final IIIb* swords.

The edges of the swords and some spears have been (slightly) sharpened. On some of the sword fragments a sharpening facet has been observed (Van Impe 1973: Pl. I: nos 1 and 2; II: no. 3), suggesting that they were used during their life. Before deposition, almost all seem to have been deliberately broken, and at least some of them, burnt. The cutting edge of the axe and the tips of the spears no. 7, 8, 10, 12 and 13 have clearly been bent to make them unusable. It is not likely that burning in itself would cause only the tips to bend. Perhaps the metal was heated and then the tips were crushed. The collective destruction of weaponry is most uncommon for our region, and it suggests that something unusual was going on here. The fact that so many weapons were deposited undamaged, and sometimes even specially prepared (with sharpened edges) implies that this completeness and usefulness was considered important. What happened in Pulle is

in sharp contrast with this. Are we dealing here with the ritual destruction of 'polluted' weaponry, like booty for example? We shall probably never know, but the recognition of this treatment as non-normative is important, I think.

Van Impe remarked that the finds were scattered around an area of several square metres, and not concentrated. Yet it is hard to belief that the concentration of these objects is not the result of one deliberate mass deposition of material, especially in view of the fact that the objects are similarly treated (broken, burnt). We can only guess as to the presence of a deposition platform (the wooden posts), but it should be mentioned that remnants of a platform are also known from the famous Late Bronze Age cult place of Han-sur-Lesse (Warmenbol 1996). Again, we do not know whether this platform really dates to the Late Bronze Age.

8.5.4 Griffzungen- *and* Vollgriffschwerter *from the Ha B2/3 phase*

Roymans (1991, 20-6) has already paid ample attention to the swords from the Ha B2/3, what allows me to deal with this category more briefly (see appendix 5.4 for all finds from the region). The main typological difference is between *Griffzungenschwerter* and *Vollgriffschwerter*. Among the latter are those of types Mörigen, Tachlovice, Auvernier. These are all central European types. According to Harding (2000, 277), they are predominantly ceremonial swords, although some nevertheless seem to have been used. Indeed, traces of use or wear were not recorded on the specimens listed here. Also, the blade-hilt connection seems impractical for thrusting, although they allow stabbing movements. Moreover, a general characteristic is that they often have decorated hilts. Clearly, their hilts have an element of display.

Griffzungenschwerter are known in larger quantities. Among them are both central European types (type Mâçon, Port-Nidau) and Atlantic types. The latter are known in larger numbers: carp's tongue swords, characteristic for the French Plainseau industy, British swords of the Ewart Park type and the later Thames type (fig. 8.13). Most of them seem to have been intended as cut-and-thrust swords. A number shows resharpening facets, implying that they were used for cutting at least. The impact marks on the blade's edge that Bridgford recognized on so many British/Irish swords, however, have not been recognized on the swords studied here. Also, some swords are relatively long and fragile (for example, the Mâcon sword from Wessem), implying that these *Griffzungenschwerter* at least were not made for practical use.

As before, the majority of these swords are river finds. A few swords originally published by Roymans have a dealer's provenance, but as a group the river finds must represent a genuine find category. Some have been dredged from the same location (Roermond, Millingen-Biesterveld). Therefore, these sites must represent either deposition of

Figure 8.13 Swords from the river Meuse near Wessem: an Ewart Park sword (left; l. 56 cm) and an unclassified *Griffangelschwert*, (l.43.3 cm) (after Willems 1986, fig. 8).

several pieces of weaponry, or repeated visits to one place in the river. We saw a similar concentration of swords for Middle Bronze Age B Rosnoën swords near Roermond (chapter 7). It is striking to see that all swords are undamaged; York (2002) recently showed that the Late Bronze Age swords from the river Thames in England are often bent, burnt or otherwise destroyed. Deliberate destruction seems to have been a recurrent treatment of swords before deposition. This certainly is not the case for the material of the southern Netherlands. The swords are undamaged; the sharp edges of many a sword even implies that they were sharpened before deposition. Thus, they seem to have been prepared *as if for use*, rather than for being destroyed. The Late Bronze Age swords from the German lower and middle Rhine area (Weber 1993; Wegner 1976), and the Scheldt valley in Belgium are also mainly undamaged swords. The deposition habits in southern England thus seem to depart from those on the continent in this respect.

The occasional presence of a type of contemporary bronze chape among the dredged-up material implies that swords were deposited with their (leather) scabbards. Whether the scabbard was deposited separately, or with the sword sheathed within is unclear.

Although there seems to have been a clear preference for depositing such swords in rivers, some Ha B2/3 swords are known from other contexts. A sword from Montfort probably comes from the large swamps that yielded a large number of other Middle and Late Bronze Age bronze deposits. Swords are totally unknown from Late Bronze Age urnfield graves, however, as are spears. There is one exception: a bronze object that must have been the chape of a sword is said to have been found in the large urnfield of Weert-Boshoverheide. Although old, it seems to be a reliable find (Warmenbol 1988, 247-8). There is no indication at all, however, that it was deposited with a sword. It seems unwise to see deposition of a chape as similar to deposition of weaponry. So, for the Ha B2/3 phase there is no compelling reason to doubt the general validity of the theory that weaponry was generally kept outside graves.

8.5.5 Gündlingen swords

Roymans (1991, 34-7), following Pare (1991b; 1996), has recently re-emphasized the significance of the Gündlingen sword as the guiding artefact for a short phase between Ha B2/3 and the Ha C (fig. 8.14; fig. 8.15 and appendix 5.5). He introduced the concept of a 'Gündlingen phase', a concept that seems very useful from the point of view of the typo-chronology of metalwork, since Gündlingen swords herald the gradual transformation of sword biographies for two reasons.

The first reason is that these swords are not only made of bronze: there are iron ones as well. The short iron swords with bronze hilt from Battel are the best example

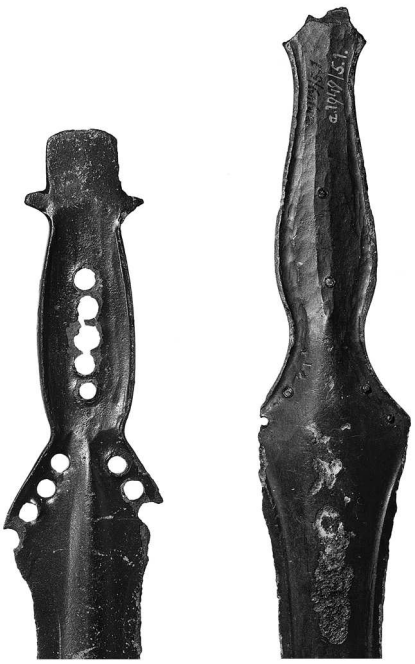

Figure 8.14 Hilt of an Erbenheim sword from the river Meuse near Tegelen (left), and hilt of a Gündlingen sword allegedly from the Meuse near Overasselt/Heumen (right).

(Warmenbol 1987b, 60; fig. 30). A new typological study of the iron ones is badly needed, but the overall similarity of iron swords with bronze ones suggests that the first iron swords were made to look like the bronze ones (O'Connor 1980, 246).[13] Although the technology of iron working is much different (forging instead of casting), the first iron swords seem to have been modelled after bronze cast ones. Both Atlantic and continental version are known (Schauer 1971; Roymans 1991). In spite of its German type name, the Gündlingen sword does not signal the complete replacement of Atlantic types by continental ones. The current Steinkirchen variety is now generally accepted as a type originating in the Atlantic rather than in central European (O'Connor 1980, 240-6; Roymans 1991, 35 and his table 5; Warmenbol 1988).

The second reason for assuming a change in the general views on the life-paths of swords, is that now for the first time in centuries swords were deposited in burial context (fig. 8.15). Clearly, Gündlingen swords were still deposited in major rivers as well (including the iron specimens!), but a number of bronze swords are indisputable burial gifts. The best example is grave 72 from the Neerharen-Rekem urnfield, in which fragments of three bronze Gündlingen swords, three spearheads and two winged chapes were deposited in a cremation grave. Another, less-well documented, example may be from Weert-tumulus O and Maastricht-Vroenhof. Chapter 9 will deal with those graves in depth.

A possible third reason might be evidenced by the remarkable winged chapes that belong to these swords. Cowen (1967, 418-20) argued that such chapes only make sense if they were part of scabbards that were worn by mounted warriors. While riding his horse, the winged chape allowed the warrior to anchor the scabbard with his foot, while drawing the sword with his other hand. The implication, therefore, is that Gündlingen swords may be the first swords to have been used in a kind of warfare involving mounted warriors.

The presence of Gündlingen swords in burials is a remarkable break with past practices. It is all the more conspicuous that in the Atlantic world burial deposition of Gündlingen swords only seems to have been practised in the southern Netherlands and Belgium. This is in sharp contrast to what happened elsewhere in the Atlantic world, where such swords were still deposited in rivers (Warmenbol 1988).

8.5.6 Mindelheim swords

The Mindelheim sword is generally seen as the successor to the Gündlingen sword, dating form the later part of the Ha C phase (appendix 5.5; fig. 8.15; Cowen 1967, 384-91). The examples found in our region are made of iron and have a considerable length. Outside north-west Europe, bronze versions are also known, although bronze swords now seem to be the minority (O'Connor 1980, 247). The sword from Oss – the best preserved example – also has a pommel decorated with gold inlay (Fokkens 1993. fig. 19). This sword, and most other ones that are more difficult to attribute to a specific type because of their damaged state, are from burials (Roymans 1991). These burials, generally known as 'Ha C chieftains' graves' are characterized by a number of grave gifts, such as bronze vessels, horse-gear, and elements of wagons. They will be dealt with more extensively in chapter 9, which focuses on burial finds. It will be argued there that they introduce new aspects to existing ideologies of warriorhood. During the Ha C phase, iron now seems to have completely ousted bronze as the material for making swords, but as before, the swords still seem to have been imported from far. Swords now seem to be an integrated part of a characteristic warrior burial set. Not one Mindelheim sword is known from a wet context. So, in the Early Iron Age, the transformation from sword deposition in rivers to deposition in graves seems to have been completed.

8.5.7 Conclusion: sword biographies

When compared with their Middle Bronze Age B predecessors, the *Griffzungenschwerter* are different in more than one way. Their design is meticulous and allows more options for decoration. Particularly for the Ha B2/3 and the Early Iron Age, the remarkable similarity between swords in north-west Europe is conspicuous (Ewart Park, Thames, Gündlingen types). It suggests a significant integration of intra-regional exchange networks and metallurgical traditions. By their very design, almost all Late Bronze Age swords can be seen as true (cut-and-thrust) swords. The element of display seems to have gained in significance, both on regular and ceremonial swords. Of the latter category, a number of decorated central European *Vollgriffschwerter* were deposited in our area, both in the early and in the later phase of the Late Bronze Age. As the lavishly decorated Buggenum *Vielwulstschwert* illustrates, such ceremonial objects could be masterpieces of bronze-working which circulated across vast areas. The ceremonial swords were, remarkably, deposited in the same stretches of the river as were the more regular swords (fig. 8.11). This might be taken as an indication that regular and ceremonial swords were considered to be complementary categories. It is interesting that some of the regular swords lack clear battle damage as well. Were they not used? Whatever their precise use-life, in the Late Bronze Age, swords were now almost exclusively deposited in major rivers, often in the same places, suggesting repeated events or one contemporary act involving larger audiences than before. Swords never seem to have been damaged prior to deposition, but instead, deposited intact. The one exception is the remarkable weapon hoard of Pulle, which in all aspects indicates a deviant kind of deposition: objects were deliberately bent and burnt, and deposited together in a marsh.

The major shift in the nature of sword biographies takes place during the first part of the Early Iron Age (table 8.1). Gündlingen swords are not only traditionally placed in rivers, but by this time in graves as well. The age-old 'taboo' on placing weapons in graves is broken. Also, Gündlingen swords seem to have had different evocations, being horsemen's swords rather than foot soldier's weapons. On top of that, these swords were made of bronze or iron, or both (the Battel iron sword with bronze hilt). Also, swords deposited in burials were – contrary to river deposits –generally broken or otherwise damaged before deposition.

The new material iron seems to be used as an imitation of bronze and was probably imported as well. Later on, in the Ha C-phase of which Mindelheim swords are the guiding artefact, swords were made of iron only, and no longer placed in rivers but only in – often exceedingly rich – burials. These so-called 'Ha C chieftains' graves' seem to represent a break with the past in the other burial equipment as well (chapter 9). Summing up, we can say that profound changes took place in the cultural biographies of swords.

8.6 Ornaments and dress fittings

When compared to the preceding period, the Late Bronze Age is characterized by a much larger number of bronze ornaments in deposits (appendix 4.2; fig. 8.16). The increase is due in the first place to the larger number of bronze ornaments placed in (urnfield) graves, but they are known in

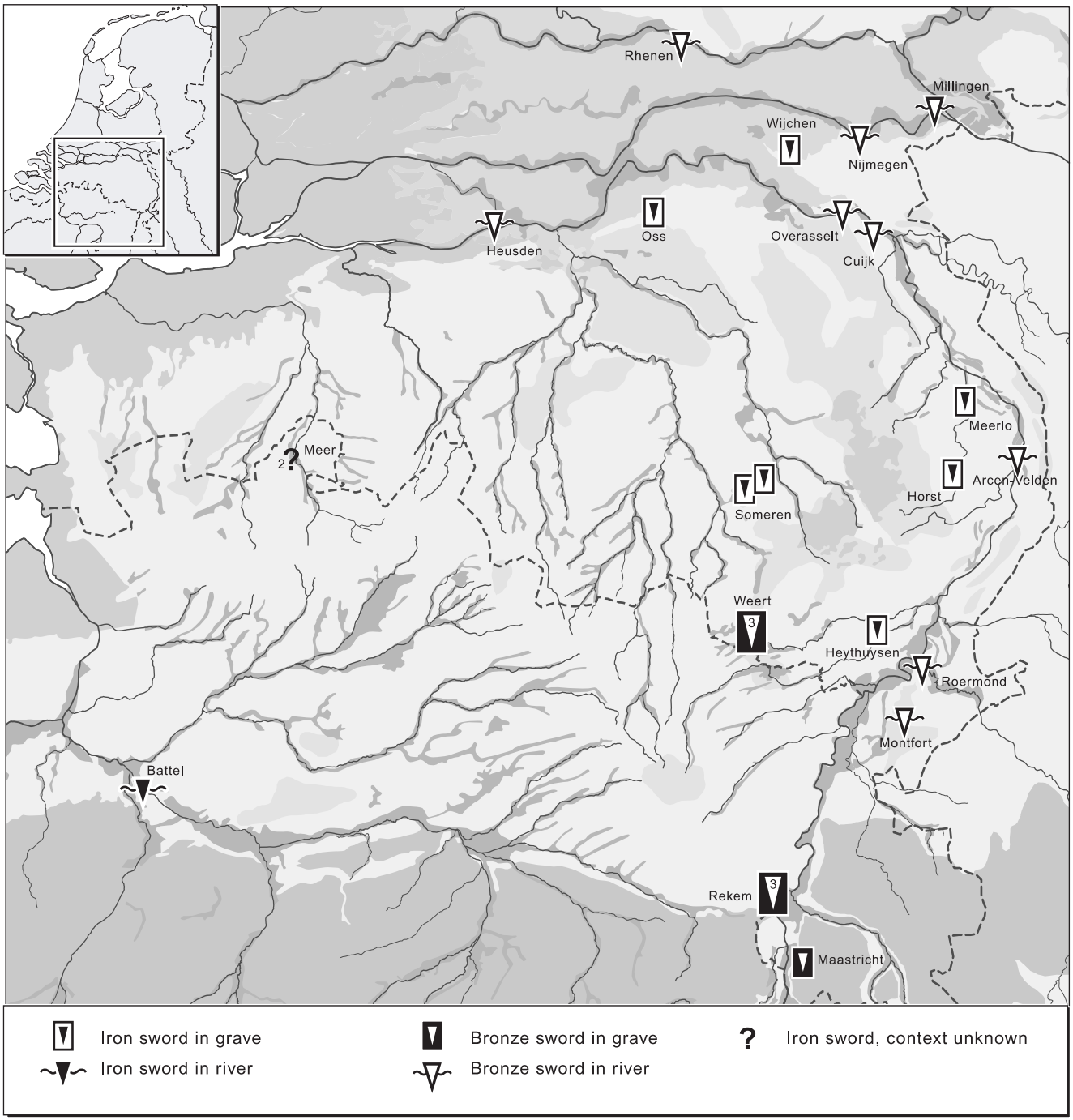

Figure 8.15 Distribution of Early Iron Age swords and their depositional contexts.

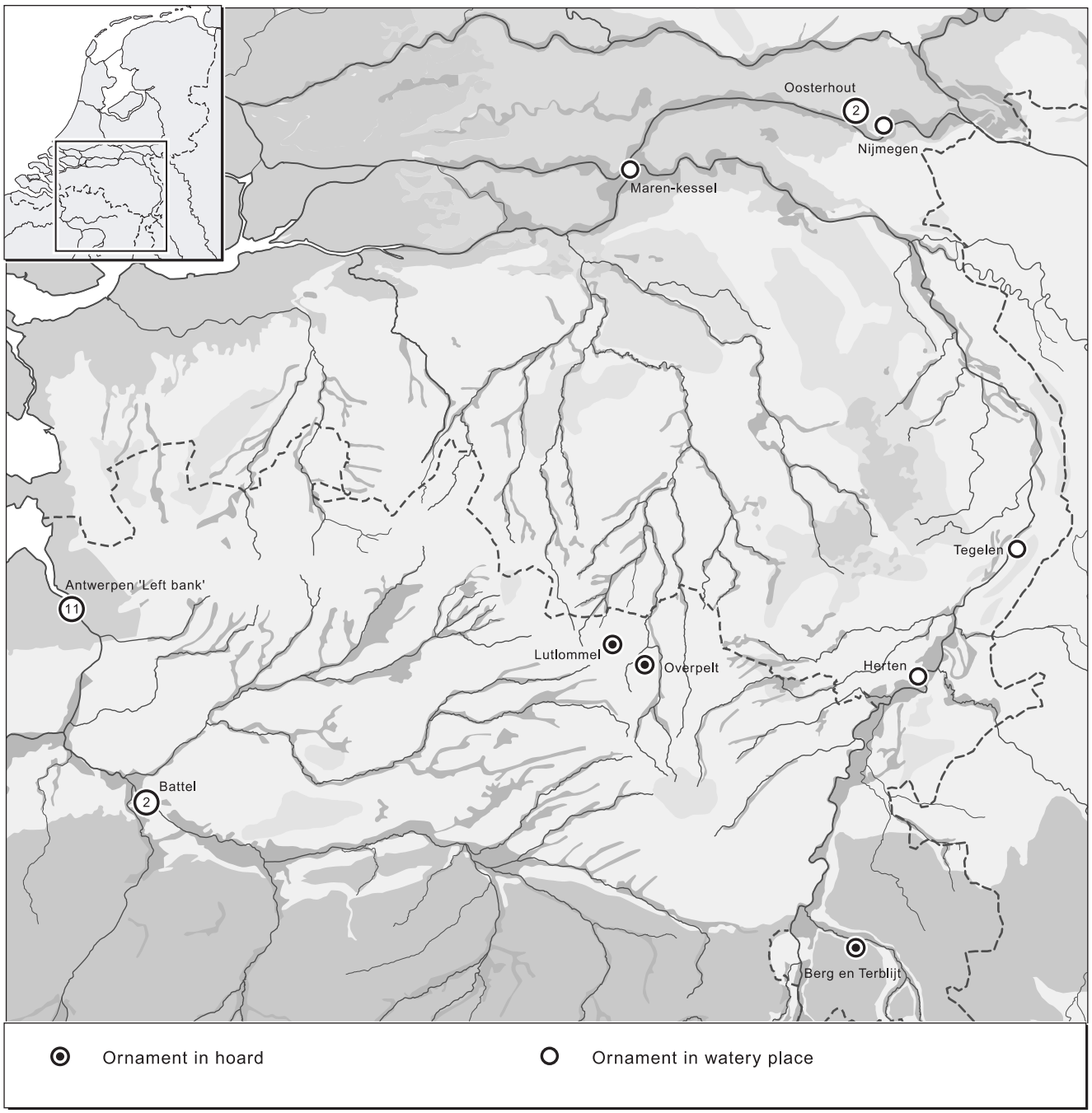

Figure 8.16 Distribution of ornaments and their depositional contexts.

some numbers from deposits in natural places as well. In the research area the latter are particularly multiple-object hoards consisting of tools and ornaments and in river deposits. To keep the description and discussion of the finds to manageable proportions, the ornaments from urnfield burials are discussed in the next chapter. This section will be restricted to those from rivers and hoards only.

8.6.1 Deposition in major rivers

A number of ornaments has been dredged from the major rivers. There is a slight concentration of find material from the Scheldt near Antwerpen, and incidental finds from the Dutch Meuse and Waal. It is obvious that the river finds are biased in a way that burial finds are not. In the case of urnfields, we are generally dealing with material from excavations. As finding artefacts is a goal in itself here, chances are high that inconspicuous, damaged bronzes are still recorded. River finds are the result of dredging activities. Inconspicuous ornaments like spirals, undecorated bracelets and Late Bronze Age ornaments of bone, stone or glass and so on are likely to escape wider attention for two reasons. First, they are prone to get lost during dredging because of their small size. Second, in urnfields undecorated bracelets can be dated to the Late Bronze Age due to associated finds. In dredging situations, contextual information is lost, and undecorated and undiagnostic Late Bronze Age ornaments that are current among urnfield finds tend to remain undated or unrecognized as such. This prevents us from making statements on the absence in river depositions of ornament types that are characteristic for urnfields.

Some years ago, Verlaeckt (1993) published a collection of Late Bronze Age finds that had been dredged up from the river Scheldt. They were found by Mr. Waterschoot in the Krankeloonpolder at Melsele, among heaps of dredged-up material. It is unclear where exactly the finds had been dredged from. Theoretically, the find spot may have been situated everywhere in the river Scheldt between Bath (the Netherlands) and Melsele (Belgium) close to Antwerpen. Following Verlaeckt, I refer to these finds as the 'Antwerpen-left bank' find complex.

The find complex is interesting because it contains a number of smaller objects that generally get lost during dredging. The collection is of interest to the present discussion because it contains ornaments: eight Late Bronze Age pins, two fragments of *Brillspirale* and a penannular bracelet that is hard to date on typo-chronological grounds. Other finds are two Plainseau axes, twelve bronze fish hooks of unknown date (Bronze Age?), a knife (designated as a leather knife type Roth II by Verlaeckt), a fragment of a dagger/sword blade, and a stud.

An interesting observation is that among the dredged-up material, there are both ornament types that we know from urnfields and ornaments that are unknown from such contexts. A plain, penannular bracelet would not be out of place in an urnfield grave, and neither would the *Brillspirale* and most of the pins. This does not seem to apply to the two decorated pins, one of which can be considered the largest Bronze Age pin from Belgium (l. 31.1 cm; Verlaeckt 1993). The entire find complex is dated to the French *Bronze final IIIb* stage.

Other finds are scarce. One example are the *Bombenkopfnadel* to be discussed in the next section. Apart from these, finds from Lith and Tegelen can be mentioned. In Lith, a lavishly decorated bracelet of an almost unique type was found among sediment dredged up from the Meuse. Its decoration motifs have similarities to those of a bracelet known from a grave in the Neerharen-Rekem urnfield (chapter 9; fig. 9.5 and De Boe 1986, fig. 3: 9). Two pins from Tegelen-river Meuse may be another example of ornament deposits in rivers. Of one the head was preserved (convex-headed type), of the other only a pointed shaft fragment decorated with horizontal grooves. They were found 'along the Meuse' (Bloemers 1975, 28). It is likely that they are from river sediment, and not from disturbed urnfield graves. In contrast to the Lith bracelet, these pins belong to the types one may encounter in an average urnfield (chapter 9).

8.6.2 Deposition of ceremonial ornaments: The giant Bombenkopfnadel of type Ockstadt

A small but remarkable find category of ornaments that is totally missing among the grave gifts in urnfield burials in our region are the *Bombenkopfnadel*. The most conspicuous variety of these pins are those of type Ockstadt (Wassink 1984). This type comprises giant bronze pins with large, hollow, globular heads (fig. 8.17). Inside these heads there are circular holes. At present, five of these pins are known (Oosterhout, Nijmegen, Rhenen, Heerde, Herten), one of which is situated north of the study region (Heerde). Comparable finds are 'from the Meuse in the province of North Brabant' and another one from Heerde. The Heerde finds are from the same hoard, which consisted of the two pins mentioned, a pseudo-flame-shaped spearhead and a tubular ferrule (Elzinga 1957/1959). The Oosterhout pin is the largest specimen (total length 52.2 cm; diameter of head 5.8 cm). Apart from the holes that had been created during production, all heads have holes that were made secondarily. Wassink argues that these are not simply the result of occasional damage, but intentionally produced holes. Another element shared by all the pins mentioned (apart from the find from the Meuse) is the faceted rectangular shaft directly underneath the head, that changes into a round one a few centimetres below. This is unknown from finds outside the Netherlands (Wassink 1984, 343).

The pins can all be interpreted as comparable to the *Bombenkopfnadel* of type Ockstadt described by Kubach

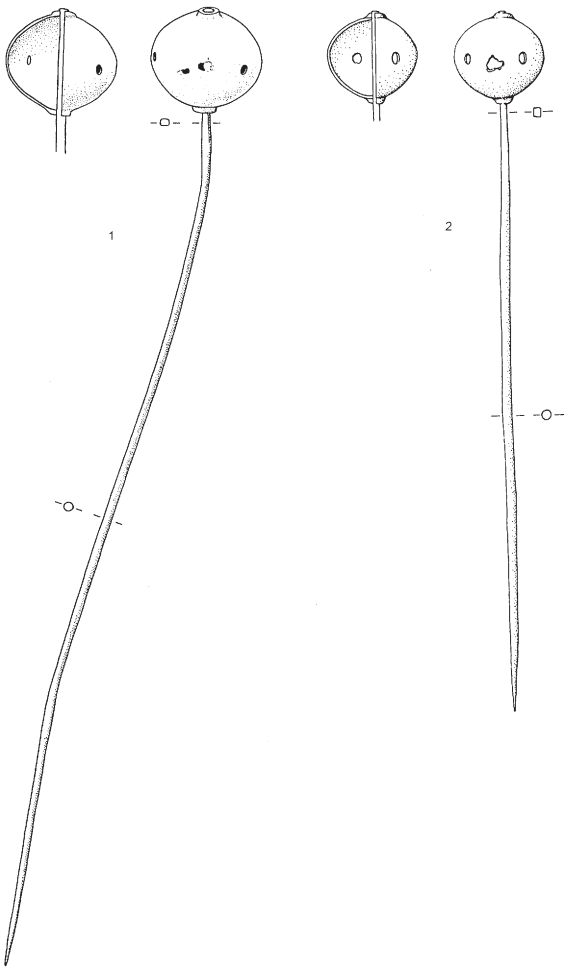

Figure 8.17 *Bombenkopfnadel* of type Ockstadt from Oosterhout (left; l. 52.2 cm) and the river Waal near Nijmegen (right; l. 38.6 cm) (after Wassink 1984, fig. 1)

(1977, 505). The Ockstadt type is dated to Ha B2/3 and is considered to be a middle-Rhine product. Wassink (1985, 343) argues that the Oosterhout, Heerde, Nijmegen and Rhenen specimens are very similar to each other. They share unique traits (the rectangular section on the shaft), and the group of Dutch finds is cut off from the main distribution of finds of this type. She therefore assumes that the Dutch variety is a local product, constructed in one and the same workshop. A few other *Bombenkopfnadel* are known from the research region. These are of normal pin-size and lack the holes in the head (appendix 4.2). In Oosterhout, such a normal pin was found on the same find spot as the exaggerated version (fig. 8.18).

A ceremonial life-path

What were these pins? The most conspicuous characteristic to us seems to be their exaggerated size. Clearly, they are much too large to be safely worn on the body as a brooch or dress fastener. Wels-Weyrauch (1989, Abb. 8 A and B) shows that extremely large pins are known from inhumation graves where they were positioned in pairs on the body, in the same way as cloak fasteners are supposed to be. However, it is hard to imagine that such large pins were practical; rather they were dangerous both for the one who wore them and for others. I therefore side with Wassink, who regards them as ceremonial ornaments in the first place, but I would like to add a few things to her conclusion.

First, the object seems to have been used. The original holes in the head might be explained in relation to the production process (for example for connecting the clay core to the wall of the head), but for the secondarily made holes this is inconceivable. Since we find these secondary holes on almost all pins and *not* on those of normal size, they seem to have been vital to the use of this pin. 'Use' then should probably be read as *ceremonial* use. The eponymous find from Ockstadt may give a clue as to this use: the head of

Figure 8.18 Small Bombenkopfnadel from Oosterhout (l. 10.5 cm).

this pin had several rings attached to it (Kubach 1977, *Tafel* 80: no. 1296). The function of these rings is unclear, perhaps they merely served to make a noise when moved (the rings clinking against the pin's head). Studying the well-preserved Oosterhout pin, I could not find worn places on the head that would result from such use. Moreover, whatever the function of these holes, if bronze rings had been attached in them, they were apparently removed before deposition.

Second, the giant version existed side-by-side with normal sized pins of the same type. We can state that the Ockstadt version is an exaggerated version of a normal one. We have seen this before in the case of ceremonial swords of the Middle Bronze Age (chapter 6). I argued that these were also exaggerated versions of regular types. It is difficult to imagine that the fact that in Oosterhout a normal and a giant version were found on the same find-spot is merely coincidental. Also, in the case of the ceremonial Middle Bronze Age swords of Plougrescant-Ommerschans type it was argued that all the ceremonial swords were highly similar, very well made, and in all likelihood the product of one workshop or smith (chapter 6). We can argue the same for the Ockstadt pins.

Third, although affiliated to continental ornament types, *Bombenkopfnadel* are certainly no regular item in urnfield burials. This not only applies to our own region, but to Belgium, north France and middle Germany as well (O'Connor 1980, 203 and list 186 and Kubach 1977). Among the few finds from graves, the Gering-Kehrig find (Kreis Mayen, Germany) is probably the most informative one (Desiterre 1968, fig. 5). It contained a fragment of what seems to have been a sword. Contrary to what is the case in the southern Netherlands, swords were occassionally deposited in graves in this German region, but this is still quite exceptional. Another German burial find (Rheinbach-Flerzheim) only yielded some sherds and burnt bronzes (Joachim 1984, 1). The probable association with a sword suggests that *Bombenkopfnadel* were associated with male, martial identities. Two observations from the Netherlands suggest the same. The Heerde hoard, containing two such pins, a spearhead and a ferrule is another example of the association between this ornament type and weaponry. Elzinga (1958/1959) observes that these objects were found standing in upright position. This remarkable placement suggests that it was a deliberate deposition (in a dry place). Furthermore, the pins from Herten and Oosterhout come from river deposition zones where relatively large numbers of Late Bronze Age weapons have been found (the Roermond and Nijmegen area respectively). Summarizing, we may tentatively conclude that this remarkable ceremonial ornament was linked to specific martial values. As we shall see below, this makes it stand out among contemporary ornaments.

Deposition

Having been made and apparently used as an object in unknown, but possibly martial ceremonies, the pins under discussion here all seem to have been deliberately sacrificed in the end. In the southern Netherlands, it can be argued that all *Bombenkopfnadel* finds, large and small ones, are from the major rivers. North of the research area, the Heerde hoard offers a different situation. Here, deposition took place in a dry environment, where a larger and a smaller one were placed upright in the ground together with a spear and the ferrule, and covered with earth. The Nijmegen pin clearly was a river find, although its precise provenance is not generally considered reliable (Elzinga 1958/1959, 17).
A more reliable river find is the one from Herten. The same applies to the 'Meuse' and 'Rhenen' finds, although the exact find-spot of these pins is unknown. The Oosterhout find was dismissed by Wassink as a find from a wet context, although the excellent preservation would certainly be in agreement with it. It has now become clear, however, that at the location of the find-spot (the Verbrugtskolk, near the present bed of the river Waal), a smaller tributary river flowed into the predecessor of the Waal.[14] It was found *in situ* by an amateur during a period of extremely low water levels. The two pins were found 'close to each other'. Another find was a decorated spearhead, dated by myself to

the Middle Bronze Age (see chapter 6, fig. 6.11). Prehistoric pottery shards have not been found. Wassink suggested that the objects might have been moved by the water, but the excellent preservation of both makes this not very likely. At least it can be argued that the bent shaft was not the result of dredging or careless behaviour of the finder; the shaft must have been bent or damaged already before deposition.

Conclusion

Together with some sword types (*Vollgriffschwerter),* the giant Ockstadt pins are the few examples of objects explicitly designed for ceremonial use only. In form, they clearly refer to normal-sized pins. Such pins, however, are still not among the various pin types regularly encountered in urnfields. It suggests that *Bombenkopfnadel* were perceived as special ornaments, perhaps associated with special identities. The suggestion has been made that these were in the field of the martial. This would be in line with the general Late Bronze Age attitude of dissociating weapons and burials. According to Wassink, we are dealing with ceremonial pins that were made in the region itself. It is therefore interesting to see that such pins were still made in a style that copied ornaments from other regions, and it is far from a pronounced regionally-specific style. The practice of making exaggerated ceremonial versions of regular items has also been recognized for the Middle Bronze Age (chapter 6). It was then argued that such ceremonial items celebrate special or even key values of the society in question. Unfortunately, with regard to the question of what those values were in the case of the Ockstadt pins, we can – apart from a possible association with the significance of martiality – only guess.

8.6.3 Ornaments in multiple-object hoards

The Berg en Terblijt hoard

The most diverse hoard of the entire study region is the hoard that was found in 1863 in Berg en Terblijt. It consisted of axes, sickles, spears, a knife, a chisel, a number of decorated spiral ornaments, and bracelets (fig. 8.19). On basis of the original find report (Habets 1865, 207) it is clear that the number of spirals must have been much higher. The finder mentioned that he could fill an entire basket with the spirals he found while ploughing. Although originally thought to contain material with a long dating range, and hard to place to a phase within the Late Bronze Age (O'Connor 1980, 418: no. 209), Warmenbol (1985) has shown that the objects can all be dated to the Ha A2/B1 horizon. Apart from a number of regional products (the Niedermaas axe, some objects are probably imports from the middle or south German regions (winged axe, sickles). Focusing on the ornaments, we can see that they are of types that are also known from urnfield graves, although I do not know of any parallels for the decorated spirals from this context. If we may believe the find report, a massive amount of such spirals was originally present here.

Obviously, we are dealing with a deposition containing almost every object type current at the time. It recalls what Needham (1989, 59) has termed a 'community deposit'. The question to be asked is whether the hoard represents one deposition or an accumulation of several deposits. Unfortunately, we can no longer answer this question, apart from seeing that all finds probably belong to the Ha A2/B1 phase. The Berg en Terblijt hoard is situated in hilly terrain, in the small dry valley that descends into the valley of the Geul. According to Habets, there is a natural source near the find-spot (Habets 1865, 207). Apparently, the bronzes were deposited at or near the place where water springs from the hill. This would be in agreement with the fine preservation of most bronzes.

The Lutlommel-Konijnepijp hoard

An ornament hoard dating to a later phase is the hoard found at Lutlommel-Konijnepijp (Belgium; fig. 12.1; appendix 1). As Van Impe's most recent publication of this find illustrates, this hoard can neatly be dated to the last phase of the Late Bronze Age, contemporary to the French *Bronze final IIIb* (Van Impe 1995/1996). This hoard originally consisted of at least 19 or 20, but possibly even 44 socketed axes, 15 of which have been recorded. At least 15 ornaments are known to have been part of this find, but the original number was undoubtedly much higher. The axes have already been dealt with in section 8.4. As mentioned there, the majority is of the Plainseau-type, whereas a few have affinities to the Niedermaas type. I want to focus here on the ornaments. Van Impe was able to record the following items, all made of bronze:

- *Six small rings* of a function unknown (diameters ranging from 2.9 to 3.0 cm). Such small rings are current among most north French and Belgian hoards, and in urnfield burials. Although their function is unclear, the recurrent association with ornaments in hoards suggests that they were part of composite body ornaments (Van Impe 1995/1996, 26).
- *Three biconical beads* (diameters ranging from 14.4/14.9 to 19.6/20.3) and *three large tubular ribbed beads* (length/diameter proportion ranging from 49.1/9.7 to 49.7/13.9), which must have been part of elaborate necklace(s), belt ornaments, or perhaps even used as head dress[15] (Van Impe 1995/1996, 25-6). The tubular beads are rare ornaments that are only known from hoards. The biconical beads, however, have been deposited in urnfield burials as well. For example, Meerhout-Zitaart grave 8 contained four such beads, two of which were burnt (appendix; Van Impe 1995/1996, 26).
- *Two decorated bracelets* with small everted terminals, so-called 'omega-shaped bracelets'. The best parallels for

these bracelets are from the hoard found in the fill of a ring-ditch of grave 4 in the urnfield of Drouwen, northern Netherlands (Butler 1965). This hoard contains an unusually rich set of ornaments, the most conspicuous element of which is a decorated cast-bronze bowl, undoubtedly a Scandinavian import (Butler 19657). Van Impe (1995/1996, 23-4; 31-2) makes the interesting point of showing that these bracelets are not as exclusively Nordic as has always been thought; comparable bracelets figure in several north French hoards. I do not know of comparable bracelets in urnfield graves in our region.

– Twelve fragments of one *spiral arm ring*. This is remarkable not only because we are dealing with a type of ornament that only rarely figures in hoards, but also because this is not an Atlantic but a continental type of ornament.

Although certainly incomplete, the contents of this hoard are comparable to those often designated as hoards of the 'Plainseau culture' (Gaucher/Verron 1987). This designation includes rich hoards containing a number of characteristic ornament types, Plainseau axes and weapons, dating from the *Bronze final IIIb Atlantique*. The nearest finds are in Belgium, and include both ornament-only hoards, like Gent-Port Arthur (Verlaeckt 1996, 91-2; nos 45-56), and axe-ornament hoards like Jemeppe-sur-Sambre or Zandbergen (Verlaeckt 1996, nos. 272-273). Carp's tongue swords and scrap are usually encountered in the north French hoards, but not in the Belgian hoards closer to our region. Although far from heterogeneous, defining ornaments in these hoards are the Lyzel pendants and diverse types of bracelets with everted terminals (Van Impe 1995/1996, 32). The former are missing in Lutlommel and in the research area as a whole, a variety of the latter are represented here by the omega-shaped bracelets. The (tubular) beads of the Lutlommel hoard also have parallels in 'Plainseau hoards', although they are certainly not regular.

As the term 'La culture du Plainseau' implies, Gaucher and Verron (1987) see the hoards in the first place as a phenomenon typical to a specific Atlantic culture. They have been criticized for this by others, because the defining 'cultural' element (a specific set of bronzes, among which ornaments) is only to be found in hoards (cf. Van Impe 1995/1996). To this another objection can be added: such hoards are found in areas that are different in other aspects, for example in burial ritual, ceramic traditions and so on. I shall return to the phenomenon of the 'Plainseau culture' later on, but I wish to make it clear here that there is something about these ornament hoards that deserves more attention than it receives now, specifically in relation to the present research. Dispersed across different regional groups, we find hoards displaying a similar (but not identical) number of ornaments *that are nevertheless absent from other contexts like burials or settlements*. The bracelets, pendants, and necklaces are essential for a way of bodily adornment that is shared between regions that are different in other respects. Since the hoard has been incompletely recorded, personal sets cannot be recognized anymore. We do not know whether we are dealing with the ornament set of just one person or of more. At the least, the ornaments testify to different usage: bracelets, an arm ring and necklace/belt or head ornamentation, perhaps the lavish appearance of one person, probably a female. Admittedly, the evidence for the gendered character of these ornaments is meagre. An argument that can be put forward in favour of this idea is that similar omega-shaped bracelets are known from a hoard of which the female character is not in dispute: the Drouwen hoard.[16] What seems more important is something we are able to observe: although there is some overlap with ornaments from average burials (the biconical beads, perhaps arm-rings as well), some of the ornaments (bracelets, tubular beads) are unique to this hoard only. They do have parallels with items from hoards in other regions, but again, the richer ornaments of these hoards are also absent from contemporary burials or settlements, and only known from rich depositions. I side with Van Impe (1995/1996, 32) in assuming that this way of adornment was restricted to females of special rank only. Stated more precisely: in the case of the Plainseau hoards, we are often dealing with the deposition of special ornaments, related to special female identities shared at the supra-regional level.

Finally, some words needs to be said on the place where all these ornaments and the axes were deposited. Van Impe (1995/1996, 26-8) has investigated this subject in depth. He concludes that the hoard was buried halfway down the gentle slope of a sand ridge, in between an area from which several urnfields and at least one settlement are known. He supposes that it was deliberately situated in this 'in-between'-position, in some sort of no man's land. The latter seems hard to prove on the basis of the archaeological evidence. He argues that it was deposited in dry ground, in a zone that forms a watershed. Its position is comparable to that of the Hoogstraten axe hoard. The fine preservation of the finds is not entirely in keeping with the dry position claimed for by Van Impe. We should probably leave the possibility open that it was deposited in a place where the ground water table was very high, or sharply fluctuating, which nowadays is still the case in some places (Van Impe 1995/1996, 26-7). Historical maps also show that there were formerly two fens in this area, now drained. It is well possible that these fens go back to prehistoric times, as do many of the marshes and fens in this area. Since we have no data on the precise location where the hoard was found, we cannot even rule out the possibility that it was originally placed in one of these fens.

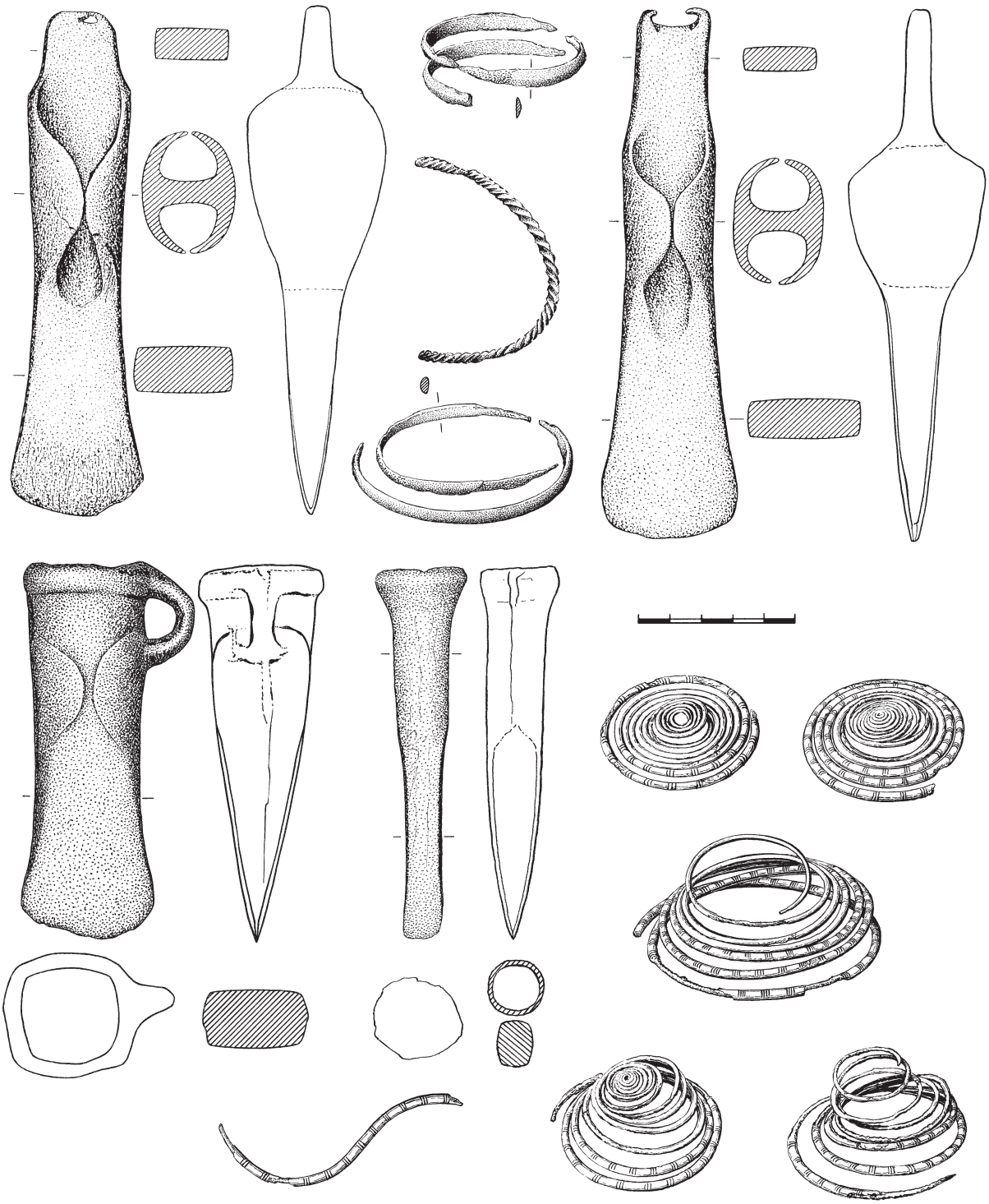

Figure 8.19 Contents of the Berg en Terblijt hoard (scale 1:2, after Butler 1973, fig. 14).

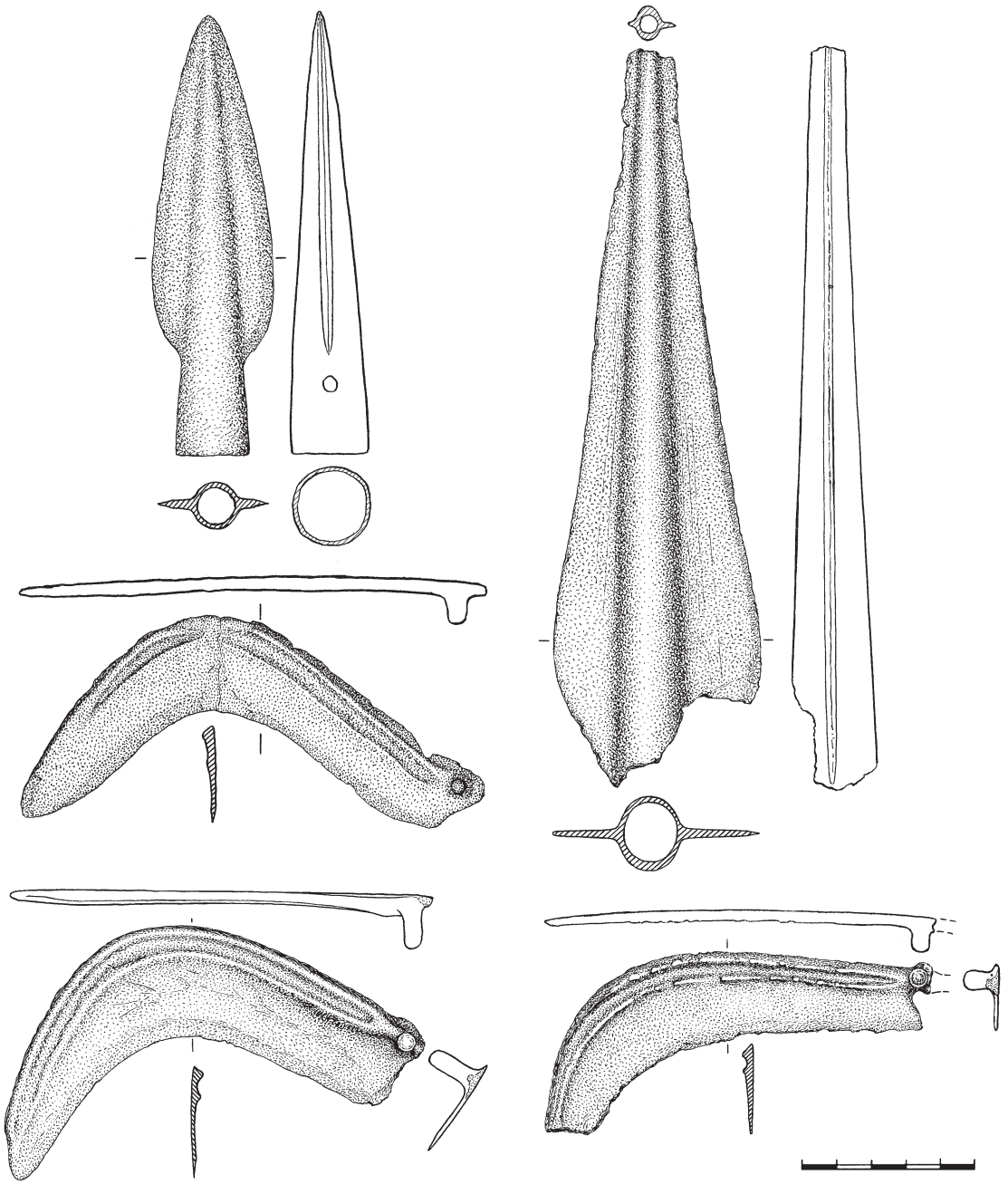

Figure 8.19 Continued.

The Overpelt-De Hoven hoard

Unfortunately, not much can be said on the hoard that was found at Overpelt-De Hoven. The find circumstances were poorly documented and described, leaving the most essential questions unanswered. What can be inferred from the find report by Inderherberg (1984) is that spirals and two socketed axes were found in each other's immediate neighbourhood during road construction. The author mentions the find of a leg or arm spiral, and fragments of other spirals and a ring. As such, it recalls the find of the arm-ring from Lutlommel. Allegedly Late Bronze Age pottery and a fragment of burnt (human?) bone has also been found, as is a large stone. It is unclear whether these traces can be interpreted as the remains of an urnfield or a settlement. What can be said, is that leg/arm rings that are complete and axes are uncommon for both contexts, suggesting that we are probably dealing with material deposited for other reasons.

Conclusion

Although all ornament hoards described here have been incompletely documented, two conclusions can be drawn. Multiple-object hoards on the land are rare in a region where the prevailing offering rite seems to have involved the deposition of single items. Only in the case of deposition in major rivers, larger quantities of material may have been left there at one time. None of the hoards described seems to have been an ornament-only hoard; in all cases there were associations with tools (most notably axes). The ornaments deposited at the Berg en Terblijt source and at Overpelt do not fundamentally differ from those placed in burials, only in their treatment (in complete, undamaged, unburnt state (Overpelt)), or in their numbers (the large number of spiral ornaments deposited at Berg en Terblijt). The ornament type that is most current in burials, the pin, is remarkably absent from these hoards, but this can just as well result from the incomplete recovery of the hoards. In case of the Lutlommel hoard the situation is different. Here we are dealing with special, elaborate ornaments that are not known from burials at all. It has been argued The argument that they were part of a special, possibly female, dress, that refers to personal identities shared at the supra-regional level.

8.6.4 Conclusion: selective deposition of ornaments

After this long review of the evidence on ornament deposition, the question should be addressed whether there are depositional patterns that show that different kinds of ornaments had different kinds of biographies. To the finds from rivers and hoards, I shall add my conclusions on ornaments from burials that will be described in chapter 9. The most important conclusion is that there is an overlap between the type of ornaments deposited in graves and those in other types of rivers and hoards, but there are differences as well.

In urnfield burials, bronze and other ornaments are generally quite simple objects. We can assume that most were made in the region itself, but there is not much that indicates a conspicuous local or regional style. Ahead of what will be concluded in chapter 9, it can already be said here that the meanings of ornaments differ from place to place and time to time. Also, ornaments in urnfield burials are often deposited incompletely (*pars pro toto*) or damaged by fire (chapter 9). Ornaments from rivers or hoards partly consist of the same types, but these were not burnt or otherwise intentionally damaged.

Among the river finds, there are some special ornaments that are unknown from burial context. The ceremonial *Bombenkopfnadel* is the only type of ornament that seems to have been constructed for ceremonial purposes only. These giant pins, probably regional products like most urnfield ornaments, are exaggerated versions of regular *Bombenkopfnadel* that are also known from riverine, and not urnfield, contexts. There are some arguments to suppose that these ornaments had something to do with the celebration of martial values.

The few multiple-object hoards also testify to the deposition of the same kind of ornaments that we encounter in burials, but in a different way. The ornaments are generally complete and unburnt, and they are known in much larger numbers, suggesting repeated visits, extraordinarily lavish gifts or more givers. In the only Plainseau-ornament hoard from our region, Lutlommel, we encounter ornament types of probably foreign origin that are related to special ways of female dress, unknown from urnfields. The special character of ornaments in such hoards is a characteristic shared by Plainseau hoards from other regions as well. If we are dealing with ornaments related to *local* identities in urnfields, then we are dealing with ornaments related to *supraregional, female* identities in these hoards.

8.7 Other tools

The number of bronze tools known is higher in the Late Bronze Age than before, illustrating that bronze had become more important as the raw material for the tools of everyday life (cf. the discussion in chapter 7). There is no reason, however, to suppose that it had now replaced the Middle Bronze Age flint tool-kit that was vital to everyday life. For example, the Late Bronze Age Dilsen settlement, situated not far from the axe-sickle hoard of Rotem-Vossenberg to be described below, shows that most tools were made of flint and not bronze (Van Impe/Creemers 1993, 48).

The most currents tool are sickles (fig. 8.20), although it is often difficult to date these more precisely than to the Middle or Late Bronze Age (see chapter 7). There is a find of a socketed knife and a leather knife (Antwerpen-left bank find complex; river context, see 8.6.2). Below, attention will be paid to the biographies of sickles and chisels/gouges.

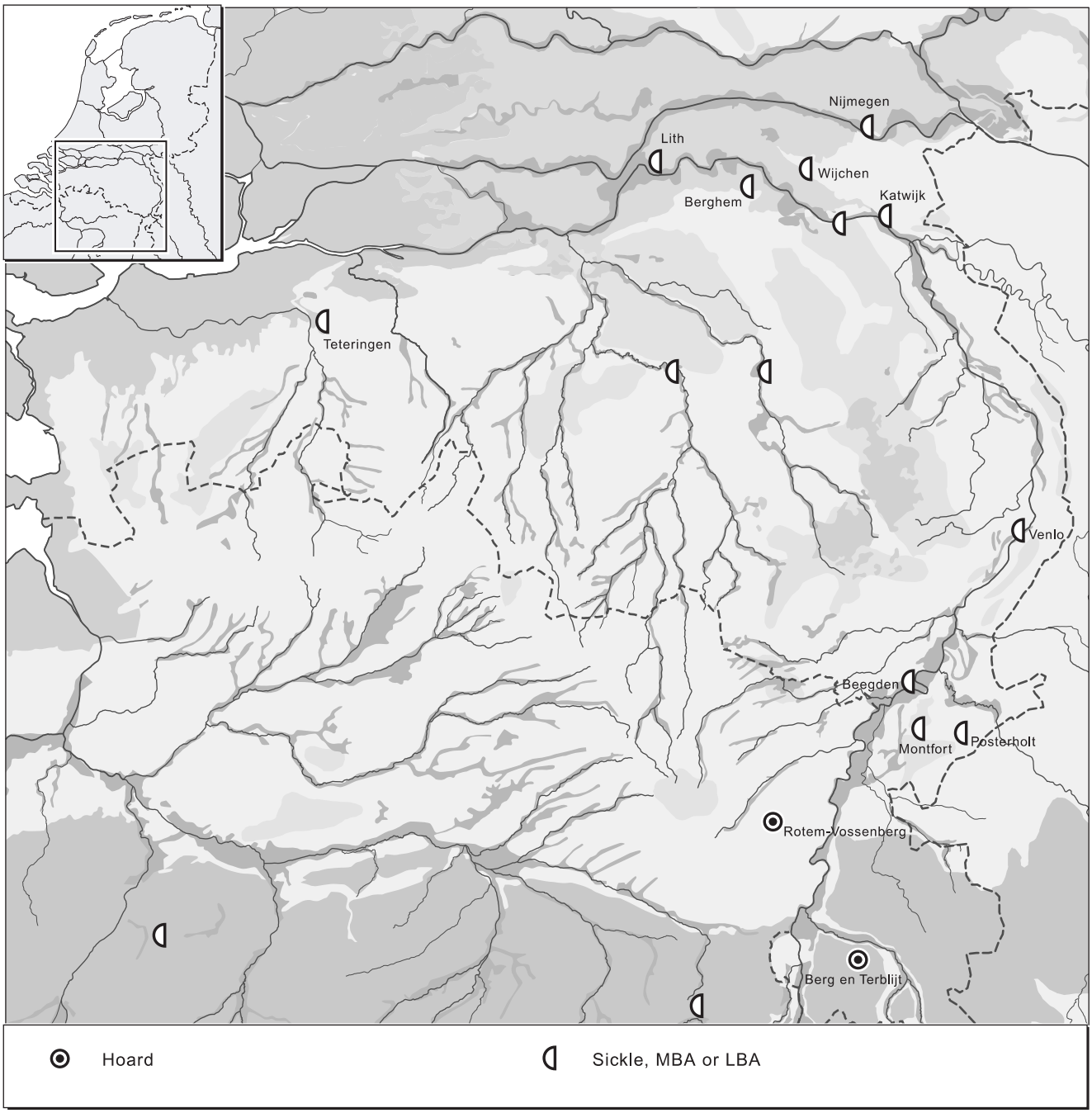

Figure 8.20 Distribution of sickle finds, including those without precise dating.

Sickles

Sickles from the southern Netherlands are predominantly knob-sickles. In southern Belgium, other forms are current (faucilles à languette; Warmenbol 1985). Sickles are known in large quantities from the adjacent middle and southern German regions and from eastern France and Switzerland. In all these regions, sickles lack outspoken regional styles, and it is therefore hard to make out where the sickles of our region were imported from, or whether they were locally produced. Apart from a few sickle finds from hoards, it is not possible to make out which single sickle finds in the appendix 3 date from the Late Bronze Age.

Like axes, sickles are known from a diversity of contexts: major rivers, marshes, dry places and in hoards. Most of the sickles deposited show traces of use (resharpening). Again like axes, they are unknown from urnfield burials. Only in the case of the Rotselaar-Heikant find, a sickle find was made on the terrain of a Late Bronze Age urnfield (Van Impe/Creemers 1993, 45). We do not know, however, whether it came from a grave or whether it was deposited individually.

In Berg en Terblijt a number of sickles was part of the material deposited in or around the well at this place. It is probably no coincidence that a whole array of other tools was offered here as well (axes, a gouge, knives).

Another hoard find is the one from Rotem-Vossenberg (Van Impe/Creemers 1993). Here, four Niedermaas axes were found together with one sickle in a conspicuous, dry place: near the eastern edge a the high terrace before it descends sharply. The hoard was found by an amateur, but the deposition site itself was excavated by the Belgian IAP. In a trench measuring 13 by 13 m not one archaeological trace was found, however, apart from two additional fragments of the sickle. So far, this has been the only professional excavation of a deposition location in our region. Although nothing was found, this lack of evidence may be interesting in itself. It shows that we are not dealing here with an urnfield location, or a settlement, but with some other kind of place. Some 1500 m to the south, traces of a Late Bronze Age settlement have been excavated. Also, at the foot of the plateau, other bronzes have been found[17] (Van Impe/Creemers 1993, 47-8). It therefore seems to have been a place unaltered by human hands on a prominent location.

There is so far no evidence that bronze sickles were still used in the Early Iron Age. There is one unpublished find of an iron sickle from Early Iron Age context (Huissen; a settlement), but this find alone cannot testify to the complete replacement of bronze sickles by iron ones.

Socketed gouge and chisels

Socketed chisels and gouges are relatively rare. Unlike the Nordic regions where they appear much earlier, they seem to occur not before the Late Bronze Age in our region (O'Connor 1980, 175). It is nevertheless hard to make out whether the finds from the southern Netherlands were imported objects or locally made. Gaucher and Verron (1987), for example, see the specimens from Deurne as products of their 'Culture du Plainseau'. Surprisingly little attention has been paid to the kind of use to which such implements were put. Their relative rarity and their regular presence in the rich French Plainseau hoards suggests that they were no ordinary tools. They may well indicate that the craft of wood working was socially held in high esteem. It might be ventured that it was even linked to bronze production: were gouges and chisels perhaps used to make wooden models for clay moulds like those from Ireland (cf. Coghlan 1975, 53-9; fig. 8)?

The few chisels and gouges that have been found in the research region are all from watery contexts, implying that they held special meanings in this region as well. The gouge from the Berg en Terblijt hoard has already been mentioned. In Deurne, two chisels and one gouge are said to have been found. From their patina, which is very similar, they might be from the same spot. Butler (1963, 126; fig, 35) has argued that they belonged to the same hoard, which in view of the black-bronze patina should be a wet place, probably a bog (Deurne is situated on the fringes of the large Peel peat bog).[18] The objects show traces of intensive use. Another find of a socketed gouge was dredged from the Waal near Rossum.

8.8 The place of metalwork among contemporary material culture

Having described the main object categories and the characteristics, we should now return to the fundamental questions involved: what can be said about the life-cycles of metalwork, and what evidence is there on selective deposition? First of all, however, we have to zoom out, and consider the role of metalwork among contemporary material culture. A similar analysis was carried out in the last chapter on the Middle Bronze Age B material. We shall now review the categories recognized in that analysis, and see what has changed in the Late Bronze Age.

The place of bronze objects among tools of everyday life

When compared to the preceding period, there are no new object types added to the tool repertoire, apart from bronze gouges. These, however, are so rare that their impact was only superficial (section 8.7). Axes, chisels, (leather) knives are all known in bronze form. Unfortunately, the lack of excavated settlement sites makes it hard to make out in what way bronze had replaced flint and stone ones (cf. 7.10). The stability of the prevailing bronze types when compared with the Middle Bronze Age B, however, indicates that no fundamental changes took place. In spite of the large number of

bronze axes known, the Late Bronze Age is the first period since the Early Bronze Age from which a number of *stone* axes are known, termed *Nackengebogene Äxte* (Achterop/Brongers 1979). The function of these axes is unclear. A number of them come from riverine context, suggesting that they were deposited in ways similar to bronze axes. Achterop and Brongers have argued that their function was probably specialized. They would not have been normal wood-cutting axes, but rather axes used for working iron ores (Achterop/Brongers 1979, 277). This hypothesis is interesting, but it should be remarked that there is not one piece of evidence so far suggesting that iron objects were used in the Late Bronze Age of the southern Netherlands.

Weaponry/hunting equipment

As in the Middle Bronze Age B, the category of specialized weaponry is one where a full bronze set dominates: swords, spears (in a variety of sizes) and arrowheads. For the latter, there is even an example illustrating that flint versions still existed (the Donk urnfield grave no. 44). It is noteworthy that there is not one find that indicates that the bronze shields we know from other regions (Britain, Ireland, Scandinavia; Harding 2000, 285) were in use in the southern Netherlands. Similarly, there is no evidence at all for bronze helmets, greaves, corslets. The harnassed 'urnfield warrior' that figures in so many accounts of the European Late Bronze Age (Kristiansen 1998, fig. 59) seems never to have existed in our region or the entire Lower Rhine Basin. From west Belgium only one find is known that comes close to it: a bronze helmet dredged from the river Scheldt (Warmenbol 1992, 100-2). So far, hardly anything seems to have changed in the Late Bronze Age. Only for the Gündlingen swords, a new element can be seen: the winged chapes that have been interpreted as related to the use of swords on horseback. During the Ha C phase, bronze swords were entirely replaced by iron ones, whereas bronze spears were probably still in use, as Belgian ^{14}C-dating suggests (section 8.5). These were only replaced by iron ones during the Ha D-La Tène A phase (Ball 1999; Fontijn 1995).

Horse-gear and wagons

A category in material culture that becomes now only visible consists of items related to horse-riding (horse-gear) and wagons. Horse-gear and wheeled vehicles, often in association, are known from central Europe during the urnfield period. The latter seem to appear at an even earlier date in Scandinavia (O'Connor 1980, 152). Horse-gear is only known in north-west Europe from the surviving bronze, and later iron, elements (cheek-pieces, *phalerae*, buttons and studs; O'Connor 1980, 149-50). Of the regions surrounding the southern Netherlands, it is virtually only the British Wilburton and Isleham hoards that have yielded convincing examples of Late Bronze Age horse gear (O'Connor 1980, 365-71). For the study area, it has been suggested that small rings found in some urnfield burials might well have been part of horse-gear (chapter 9), as is the occasional find of a stud (Antwerpen-left bank complex), but these finds are too ambiguous to see them as clear evidence of horse-gear present in our region during the Late Bronze Age.[19] Convincing examples of horse gear our only known from the Early Iron Age Ha C 'chieftains' graves' (Roymans 1991). These graves also contain the earliest unambiguous examples of wagons. The majority of the horse-gear and wagon elements from these graves are then made of iron. Only in the richest grave of all, Wijchen, wagon parts (linch-pins) and the horse-gear (bit) are made of bronze (Pare 1991a, 219-20).

Vessels, cauldrons, pots, bowls and cups

The contrast between the crude, undecorated and large Middle Bronze Age pottery, and the more refined and varied pottery of the Late Bronze Age implies that its social significance altered. The variety of forms implies that pottery was designed to serve both as containers, for serving food and drinks (bowls and cups), as well as for preparing meals. In British, north-west French and Scandinavian regions, the changed appreciation of pottery, and hence the social appreciation of eating, drinking, communal meals and feasting behind it, resulted in the addition of bronze vessels and cauldrons to the pottery repertoire (O'Connor 1980, 147-8; 191-3). The technology needed for this – constructing forms out of sheet metal or casting vessels – had probably not yet been mastered everywhere. The vessels and cauldrons from the Atlantic and Nordic regions all are elaborate, large items, implying that they were used for special occasions only. They are generally seen as ceremonial items. Bronze flesh hooks, known from sites along the Atlantic façade (Sørensen 1998, 257), may be seen in the same context. All such items are entirely absent from the Late Bronze Age of the southern Netherlands, both as imports and as regional products. Metal does not play any role in this field of material culture. It is only in the Early Iron Age that such items come to play a role as goods in the Ha C chieftains' graves.

Body ornaments

As we have seen in the lengthy section 8.5, bronze ornaments are known from the Late Bronze Age in much larger numbers than before. In urnfield burials they outnumber non-metal ones, like glass beads or stone pendants (chapter 9). In the Early Iron Age, pins and small rings are gradually replaced by iron versions, but bronze does not seem to lose its role in this field at all. Large, elaborate ornaments like neck rings and torques keep on being made of bronze until far in the Iron Age (Ball 1999).

Conclusion

The European Late Bronze Age is generally seen as a phase of invention in bronze technologies (8.1), yielding new bronze object types. For the north French, British, and Scandinavian regions this probably holds true, but not for the southern Netherlands. Essentially, the metalwork categories of the Late Bronze Age are similar to those of the Middle Bronze Age B. New items in which bronze was used, like horse-gear, wheeled vehicles, vessels, cauldrons or flesh hooks are unknown from our region. With regard to the metalwork we can therefore dismiss any ideas on the Late Bronze Age as a period of change in existing views on indigenous material culture. It was not until the Early Iron Age that some of these items acquired a place in existing material culture, but then the changes are for an important part related to iron instead of bronze objects.

8.9 Regional bronze production

The same traditionality that characterizes the material culture categories of the Late Bronze Age can be recognized in the regional bronze production of this period. Reviewing the evidence for regional products described in this chapter, the following conclusions can be drawn with regard to the regional production of bronze.

As in the Middle Bronze Age B, we are dealing with regional production that seems to have focussed largely on axes. Tentatively, we can assume a regional production of spears, simple ornament (pins, rings, bracelets), and ceremonial ornaments (*Bombenkopfnadel* of type Ockstadt). Only in the case of axes a regional style can be recognized (in particular the Niedermaas axes). Regional-specific styles are unknown for ornaments, tools or weapons. Again, the local axes are not idiosyncratic for the region, however, like the Hunze-Eems axes of the northern Netherlands. Rather, it is a style borrowing elements from other ones. An example is the wing-shaped ornament, that is a clear reference to the contemporary imported winged axes. Like in the Middle Bronze Age B, the style can be characterized as open rather than closed.

Similar to the Middle Bronze Age B, the openness to styles of other regions is selective. Nordic forms do not seem to have mattered, which is in sharp contrast to the situation in the northern Netherlands. Only the 'hybrid' axes have affinities with the products of the northern Netherlands, but not with those of Scandinavian or North German regions. The metalwork styles from continental regions seems to have mattered much more than in the Middle Bronze Age B. This can be seen in the copying of ornament styles like the *Bombenkopfnadel*, or in the references to continental winged axes on the Niedermaas axe type. New among the products produced regionally are objects produced in some numbers that look like tools, but can never have been used as such: the Geistingen axes.

When compared to the adjacent regions, the regional bronze production did not witness major technological progress. The more complex technique needed for making socketed axes, or chisels was itself not new; it had already been practised in the Middle Bronze Age B on spearheads. Sheet metal working, practised in Nordic and Atlantic regions, seems not to have been mastered here.

Finally, it is interesting to see again that the only (bronze) mould we have comes from a watery place (the river Meuse near Roermond).We saw the same in the Middle Bronze Age B, and can therefore again suggest that the practice of metalworking had religious aspects as well.

8.10 Metalwork circulation

In the last chapter, it was argued that the Middle Bronze Age B saw a reorientation of bronze exchange networks. The southern Netherlands severed the connections with the Atlantic regions, north France in particular, without loosening the ties with the continental mid and south German and east French realm. Products from north German or Scandinavian regions, however, turned up only rarely present among the deposited bronzes. For the Late Bronze Age, the situation is largely similar. Particularly for the last phase of the Late Bronze Age, the lavish Plainseau products in hoards show that the ties with the Atlantic regions were very close. It is only with the Early Iron Age that the situation changes. First of all, the much smaller quantity of metalwork finds from the Early Iron Age shows that metalwork deposition decreased significantly (chapter 10). This is a phenomenon that can be witnessed in most north-west European regions (section 8.2), and must ultimately be related to a general disintegration of intra-regional exchange networks. Huth (2000, fig. 12.7; in press) recently showed that the decrease in deposition did not occur everywhere at the same time, but it was something which happened to every region. He illustrates this by seeking out to which periods most multiple-object hoards date. The peak in the construction of hoards in the southern Netherlands seems to be contemporary to those from lowland England and northern and western Germany, but much earlier than in the French regions Languedoc and Armorica. Although the rate of deposition is not the same as the rate of circulation, the two are related. The link is particularly clear in this case, as the period following the peak in deposition is the Early Iron Age, the phase in which bronze was increasingly being replaced by iron and therefore a phase in which bronze circulation must have dropped significantly.

In the Early Iron Age, Atlantic objects become far less common than before, to the benefit of German ones. The most current bronze axe must have been of the Wesseling type. In the southern Netherlands, we have nothing in the way of early Iron Age French imports. The only likely candidate, the Armorican axes, probably did not reach the

Southern Netherlands until modern times, not in prehistory (Butler/Steegstra in press). Among the Gündlingen swords that reached the study region, however, there are still Atlantic products (section 8.5; Warmenbol 1988). After the Gündlingen phase, however, the shift to continental exchange relations must have been completed. From the Ha C chieftains' graves, almost all imported products must have come from central Europe (Roymans 1991). The shift from predominantly Atlantic to continental exchange networks now seems to have been completed.

8.11 Deposition

For every period studied so far, the distinction between personal valuables and communal valuables seems to have been vital. Among the personal valuables there were body ornaments and martial objects. In the latter category, the difference between high-status weaponry (swords, some spear types and specific ornaments) and more regular ones (spears, regional axes) was important. It was also noted that axes may have been valuables that were less outspokenly associated with stages in the personal life-cycles, and more with concerns and ideals in the communal realm. During the Late Bronze Age, the differentiation between these two types of valuables seems to have continued instead of changed. What differs is primarily the scale on which deposition took place. In the field of deposition of communal valuables, other tools than axes gained in significance (sickles in particular). In the field of deposition of personal valuables, the same happened with ornaments, which were offered in relatively larger quantities. It can be argued, however, that at the end of the Late Bronze Age, a break in the age-old depositional traditions did take place.

8.11.1 Axe and tool deposition

The traditional way in which axes were deposited in the Bronze Age of our region was the deposition of a single axe that had been extensively used during its life. Such axes were placed in a variety of locations, but the majority of these were natural, wet places. This does not change throughout the Late Bronze Age. Most axes in appendix 2.10 to 2.16, socketed and winged alike, seem to have been single finds in stream valleys, marshes, rivers and so on. Again, a considerable part of these axe deposits consists of imported axes, but there is not much to indicate that these were treated differently from regional ones in deposition. Sickles were deposited in locations comparable to axes, and in some cases both were deposited together (Rotem, Berg en Terblijt). In the case of sickles we are also dealing with deposition of tools that show the traces of a use-life, and similarly, they never seem to have been placed in graves. It might therefore be concluded that the biographies of axes and sickles had much in common. As will be set out in another chapter (13), there is a further argument in favour of this, which is that both axes and sickles had widely recognized dual roles, being both tool and exchange item.

There are, however, three developments that show that the traditionally held views of axe biographies ending up in depositions were on the wane in the Late Bronze Age.

The mass deposition of axes

The first is that at the end of the Bronze Age not only axe deposition in general increased, but axes were now also deposited together in much larger quantities than before. Before the last century of the Late Bronze Age, these are axe-only hoards (Nieuwrode), axe-sickle hoards (Rotem-Vossenberg), or hoards containing ornaments and almost any kind of tool available at the time (Berg en Terblijt). In the last century of the Late Bronze Age, however, this becomes more marked. Instead of deposition of a handful of axes, we are now dealing with hoards of dozens of axes (Heppeneert, Antwerpen, Lutlommel, Hoogstraten). It is probably no coincidence that all these hoards consist almost exclusively of axes and nothing else, and that these axes are all of the same type: the Atlantic Plainseau axe. Similar hoards, but containing even much larger amounts of Plainseau axes, are known from northern France. The predominance of the Plainseau axes, it was argued in the last section, should be seen as the result of a historically situated intensification of the Atlantic branch of the bronze exchange networks connecting the southern Netherlands to the world around. What we observe archaeologically of this phenomenon is that dozens of Atlantic axes were deposited on one occasion, on types of locations deviant from those where single axes were usually placed, but also outside the places that saw the massive deposition of the other prestigious bronzes: the major rivers. These peculiar mass axe hoards will be dealt with more extensively in chapter 13. For the moment, suffice it to say that they represent a deviant and so far unprecedented depositional act, contrasting with the age-old practice of offering single axes in watery places. What is important for the present argument is that the very existence of such axe hoards implies that these tools were perceived differently than before. That axes were now deposited *en masse* either implies that many more people than before were involved in axe deposition, and/or that the significance of the individual axe had diminished.

The decline of the essentials of axe deposition: Geistingen axes

Ample attention was given to the Geistingen axes and what they implied: regionally made objects that in form refer to real ones, but nevertheless can never have functioned as such. We have seen that as early as the Middle Bronze Age A, but probably even much earlier (chapter 5), single axes were deposited in watery places. It was recognized time and time again that these were not simply, 'symbolical', 'ritual'

items: these were tools that had been used in a variety of ways, a use-life that its resharpened edges, its damages spoke of. It seems to have been this involvement in daily life, and the entanglement with the people who used it, that made the object meaningful and a potential valuable to the community. Well into the Late Bronze Age, we see that it is predominantly the used axes that were selected for deposition. It is in this light that the deposition of the Geistingen axes and the comparable thin-walled axe from Ven-Zelderheide should be seen. Some of these axes were also selected for axe deposition in watery places, as if they were equivalent to those that had really been used. But the undeniable fact is that such axes never had a kind of biography that was in any way comparable to those of regular axes. They were not used for reclamation, house building, wood working or fighting; they were practically unsuitable for it. If we accept that it was the object's intended life-path by which it acquired its culturally recognized meaning (chapter 3), then the deposition of Geistingen axes, in some ways similar to that of normal axes, cannot but signal the decline of the fundamental idea that the object's life really mattered. Although the number of Geistingen axes deposited in such a way is low, it nevertheless is another indication that traditional views on object biographies were gradually losing significance.

The significance of iron axes

Much more difficult to grasp is a possible decline of the general meanings attached to axes in the face of the increasing adoption of iron axes. We have already seen that bronze socketed axes continued to be used throughout the Early Iron Age. Regular axes even figured as grave gift in the most prestigious Ha C chieftains' graves, as the bronze axe from the richest grave of all, the wagon burial of Wijchen, indicates. The other example is the recent find of a bronze axe of type Wesseling in another rich grave, that of Rhenen (section 8.4; appendix 2.14). This very find category of Early Iron Age chieftain's graves, however, also provides arguments that iron axes were at that time considered more or less equivalent to bronze ones. The rich Ha C chieftain's grave of Oss contained such an iron socketed axe. The river finds from Rijnwaarden and Lith imply that iron axes also seem to have figured in deposition in ways similar to the age-old deposition of bronze ones (section 8.4). Small as the number of iron axes recovered may be, the conclusion seems inevitable that they were rapidly considered equivalent to bronze ones. Although this does not necessarily imply that the ritual significance of bronze axes was emulated, it must imply that at least it changed.

8.11.2 Weapon and ornament deposition: evidence for a structured sacrificial landscape?

We have seen that with the coming of specialized, prestigious weaponry, weapon deposition sites came to occupy a specialized location in the landscape. From the very introduction of swords and spears in the Middle Bronze Age A, we have also seen that they were conspicuously concluded from graves. Instead, for the 13th century BC, there is evidence of locations in rivers where several swords seem to have been sacrificed, either testifying to repeated visits or to larger gatherings. At any rate, in both cases we can deduce that some zones in major rivers had acquired the status of specialized, martial offering places. As we have seen in this chapter, the very same riverine zones where concentrations of sword finds were uncovered continue their significance as weapon deposition zones throughout the Late Bronze Age. Particularly for the last century of the period (Ha B2/3), weapon deposition zones can be recognized near Nijmegen, Millingen and Lobith (river Rhine and Waal), and near Roermond-Herten and in the Scheldt valley. This observation has already been made in an influential article by Roymans (1991), who saw the existence of such zones as indicating the ritual activity of a Late Bronze Age elite. Having considered metalwork deposition from a long-term perspective covering the entire Bronze Age, without focussing on a single kind of deposit, like Roymans did in case of swords, what can we make of this generally accepted theory in the face of the new evidence?

River deposition zones and local elites: a revision

Roymans (1991, 28) interpreted Late Bronze Age (Ha B2/3) sword depositions as a form of public display of wealth, associated with the activities of a sword-bearing elite. In his view, these were the places where elite competition was most intense. Since Roymans' seminal article, the 'Nijmegen-Millingen', 'Roermond' and 'Scheldt' area tend to be seen as elite cult places, core regions for an elite whose power base lay in the monopolization of supra-regional bronze exchange. Crucial for their participation in such networks would have been the local economic base. According to Roymans,'the region in which deposition of fine metalwork is concentrated –the Scheldt valley and the Lower Meuse/Rhine valley –can be referred to as economically superior regions. These areas had a high agrarian productivity' (Roymans 1991, 28). In another paper, Roymans and Fokkens (1991, 14-5) argue that near these sword deposition zones we may expect settlements that functioned as elite residences. Amongst other things, these should yield traces of bronze production (since they were seen as functioning as some sort of redistribution place for imported bronzes). I think this view must be nuanced for a number of reasons.

First of all, the wide spatial extension of sword deposits in rivers makes it less likely that it simply reflected activities of local elites, with spatially defined residences that were situated on the land nearby. The available evidence does not suggest that there was one place in the river where prestigious

metalwork was offered; such objects have been recovered in rivers everywhere over stretches of more than ten kilometres. Moreover, in chapter 4 we have already seen that both the Roermond and the Nijmegen-Millingen find concentration are artefacts of intensive dredging and amateur activity. Indeed, swords are occasionaly also found beyond those zones. Seeing sword deposition locations as indicating the activity centres of local elites would then imply that almost the entire Belgian-Dutch Meuse valley, the Scheldt valley and the Rhine/Waal in the Eastern River Area inhabited by local elites.

Second, these zones became the locations where deposition of fine metalwork and prestigious weaponry was concentrated as early as the later part of the Middle Bronze Age B. Thus, sword deposition zones are strikingly traditional. Interestingly, there are other places where fine metalwork was deposited, but these are situated outside the area where sword deposition took place at the same time. Mapping the finds of rich Plainseau hoards, containing axes and often prestigious, imported Atlantic ornaments (Lutlommel, for example), it can easily be recognized that the rich hoards are generally found outside the major river valleys (fig. 8.21). Although there is an overlap in the deposition of axes (both in hoards and in rivers), the rich hoards are thus situated outside the sword deposition zones, making it unlikely that conspicuous elitarian deposition only took place near the rivers. Rather, fig. 8.21 seems to suggest a pattern of selective deposition. Prestigious, female (?) ornaments were probably deposited at inland sites, rather than in the river plain, which seems to have been preferred for prestigious, male weaponry.

Third, if depositional acts became relevant for acts of conspicuous, competitive consumption, then we would expect a strong upsurge in the practice of river deposition in the last phase of the Late Bronze Age, as is known from other regions, like the Scheldt in west Belgium (Verlaeckt 1996, 45). Apart from a slight increase in numbers of swords deposited, there is not much that can sustain the idea of competitive consumption of prestige goods at the end of the Late Bronze Age. Moreover, this same rise in deposition can be seen in the inland sites (the 'Plainseau' hoards).

Fourth, during the last ten years, there have been extensive excavations near the places where elite residence were expected (for example: Nijmegen and Roermond; Fontijn 1996a and b; Tol 2000). So far, nothing has been found that indicates the presence of special settlements or bronze production centres.

The alternative: a structured, specialized sacrificial landscape?
Summing up, we see that the special, martial connotations of zones in the major rivers that were already recognized for the Middle Bronze Age, now become fully visible. Their long-term existence and the contrast with the inland Plainseau hoards, that sometimes contain rich, female (?) ornaments, now suggests that river deposition is not simply the result of the fact that the local elite was living there and therefore claimed leadership by prestigious acts of metalwork deposition; rather, rivers seem to have been seen as preferred places to offer weaponry for reasons that were primarily religious. This of course does not imply that an element of competition was wholly absent in such acts. What we seem to have laid bare here, is the fundamental, deep-rooted structure governing which kinds of objects should be placed in which places in the landscape. A look at fig. 8.22, mapping the ornament/axe hoards and sword deposits of the Ha B2/3/*Bronze final IIIb* phase for a much larger area, indicates that this pattern is true for Belgium and the southern Netherlands as a whole, crossing cultural boundaries (like that of the *Niederrheinische Grabhügelkultur* in our region and the *Group Rhin-Suisse Oriental* to the south of it). It should also be noted that this particular contrast between the deposition of rich ornaments and prestigious weaponry can only be fully recognized for the last phase of the Late Bronze Age. Before, ornament deposition is relatively rare. The contrast between weapon and ornament deposits is not idiosyncratic to our region alone. Bradley (2000, 55-60) recently identified similar ones for Scandinavian deposits. His argument builds on the ethnographic observation that particular locations and practices were limited to particular groups of people, on the basis of age, gender and occupation. He recognized contrasts between weapon deposits (male), ornament hoards containing sets (females), scrap hoards (smiths) and deposits of ceremonial items (ritual specialists). For Scandinavia, the number of supposedly female deposits increased throughout the Bronze Age, suggesting that hoarding became a largely female domain in the course of time. In the southern Netherlands, we can also see that rivers acquired a strictly martial emphasis since the last centuries of the Middle Bronze Age B. Politically correct statements aside, it is likely that these were primarily the domain of a male, warrior elite. The recurrent presence of high-quality ceremonial swords among the weapons sacrificed (section 8.5) implies that emphasis on weaponry have a much wider, ideological, significance than the socio-political alone. If we now consider the ornament-axe hoards situated on the land itself, it is certainly telling that these never contain swords in our region and southern Belgium, but they do consist of elaborate ornaments. We have seen that there are arguments to link these with important female identities (Lutlommel). Taking into account that such ornaments differ from those deposited with the dead in the contemporary urnfields, what we seem to be dealing with is a system of selective deposition of valuables that are related to different, personal identities. With regard to the supposedly

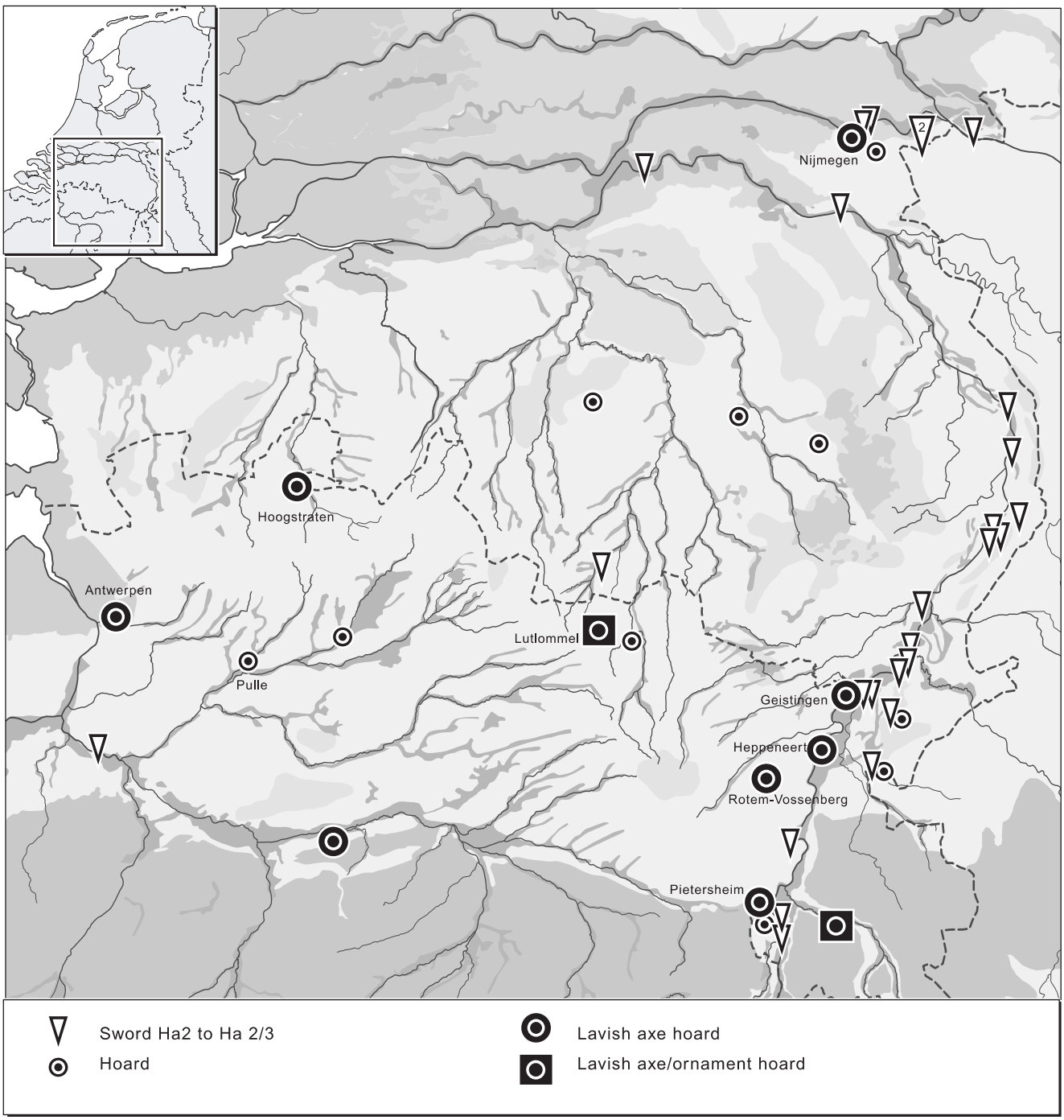

Figure 8.21 Distribution of sword deposits in relation to depositions in multiple-object hoards.

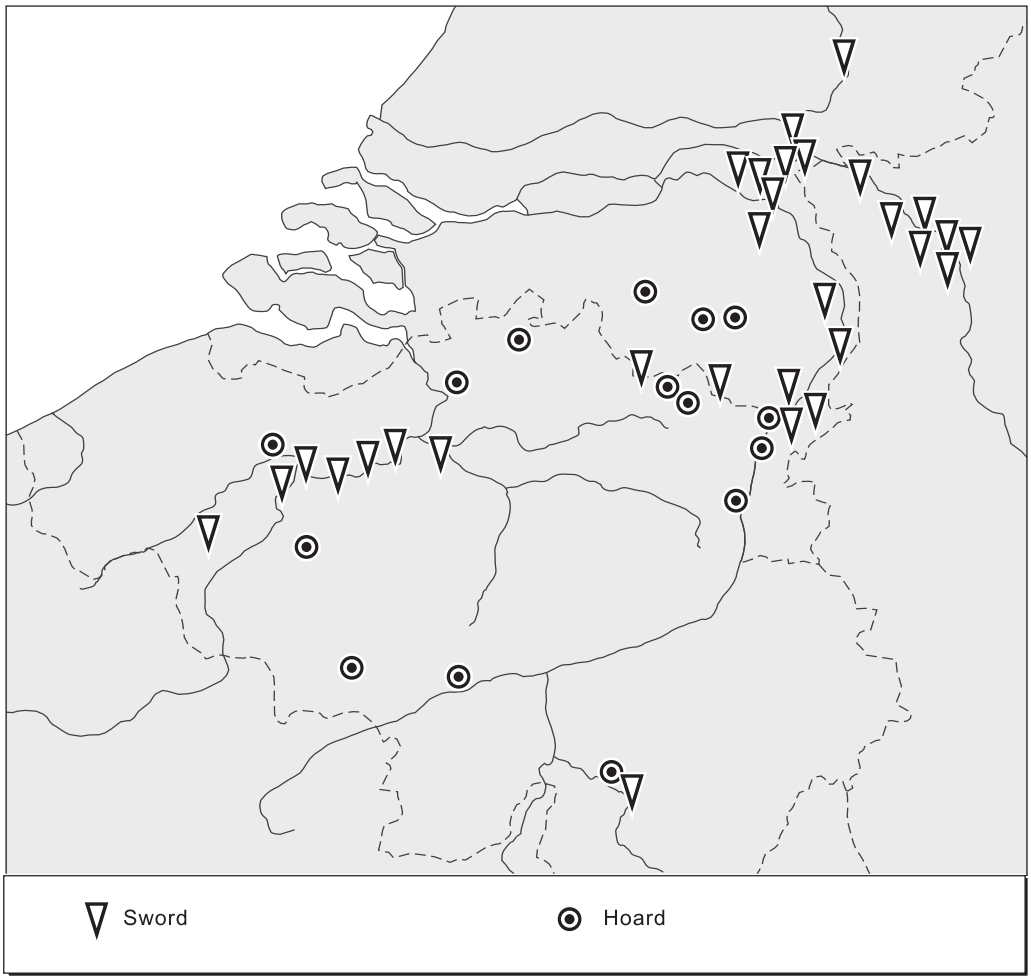

Figure 8.22 Distribution of swords deposits in relation to depositions in multiple-object hoards for the southern Netherlands and Belgium. Finds from France and Germany outside the Rhineland are not mapped (after Van Impe 1995/1996, fig. 5, with changes).

female element in ornament hoards, it should be remarked that ornament-only hoards are relatively rare. More current are associations with axes and ornaments. This does not suggest that this way of hoarding was a female enterprise, or at least one focussing on the deposition of female valuables, but rather that it was a specific kind of community deposit.

Chapter 14 will deal more extensively with the way landscape was structured by depositions. For the moment, it suffices to have noted the indications for it, and that it is only in the later part of the Late Bronze Age that the almost exclusive emphasis on the male, martial domain is accompanied by indications that other kinds of lavish offerings were carried out as well.

8.11.3 New places for deposition?

Finally, some words need to be said on the indications that the transition to the Early Iron Age also heralded deposition in new types of places and of new materials.

Starting with the former: in spite of all the variation in depositional locations, a common element of such places seems to be that they were 'natural' places, unaltered by human hand. The excavation at the site of the Rotem-Vossenberg hoard neatly illustrates this. Man-made cult places, used for depositions are unknown from our region. In the northern Netherlands, there is the so-called temple of Bargeroosterveld. It is a small wooden structure, erected in a peat bog (Waterbolk/Van Zeist 1961). Although this structure indeed

seems to have been a ritual building, it did not function as the place where metalwork was deposited. Hoards are known, however, from the peat surrounding the structure, suggesting that the entire area itself was considered ritually significant (Butler 1961). For the Bronze Age of north-west Europe, a few other man-made cult places are known, but everywhere metalwork deposition seems to have been practised preferably in natural, watery places (Harding 2000, 309). A few years ago, a rectangular enclosure was found in Nijmegen-Kops Plateau (Fontijn/Cuijpers 1998/1999; Fontijn 2002). This structure can be interpreted as a new type of cult place, constructed by human hands.

A rectangular cult place: Nijmegen-Kops Plateau
On a conspicuous high place, hundreds of pebbles were used to mark out a rectangular space situated along the edge of a plateau. The enclosure measures 24 by at least 15 m, and was probably marked by posts as well. The area enclosed was probably an open space. Only the traces of a few pits were found, directly inside and outside the structure. Directly to the east of the structure, a large number of traces of posts and pits were found, a few of them containing high amounts of Early Iron Age sherds, stones and a complete iron knife. Part of the pottery and stones were burnt. One of the pits was constructed in a remarkable way: the upper part of a large pot was placed in upright position in the upper part of the pit, covered with pebbles. Pits containing Early Iron Age (or Late Bronze Age) pottery were also found within the enclosure. The northeast corner of the enclosure adjoins a 42 m long, 0.8 m wide and northeast-southwest oriented stone pavement, which links the enclosure to a large Middle Bronze Age stone platform, interpreted as the remains of a Middle Bronze Age barrow that was reused for burial at least twice in the Late Bronze Age or Early Iron Age (Fontijn/Cuijpers 1998/1999). Among the stones of the rectangular structure, on the exact spot where the pavement was connected with the northeast corner of the enclosure, a bronze socketed axe of type Wesseling was found. In view of its specific location, it must represent an intentional deposit. The axe and the pottery found in the fill of a few postholes make clear that the structure should be dated to the later part of the Late Bronze Age, or the earlier part of the Early Iron Age. The enclosure has been interpreted as an open-air cult place, in form and size well comparable to those of the Middle and Late Iron Age (for parallels: Fontijn 2002; Gerritsen 2001, 162-73). In view of its clear links to burial monuments (the formal stone-paved road connecting the enclosure to the large barrow, that was re-used as burial location during the Late Bronze Age/Early Iron Age), I argued that the cult place was primarily related to the veneration of ancestors and burial ritual (Fontijn 2002; see also Gerritsen 2001, 167-8). During these rituals, objects were deposited. In the first place this is the socketed axe, but we should also think of the large number of pots and the iron knife just outside the enclosure, the former suggesting that funeral feasts took place.

Deposition in or around farmyards
For the Middle Bronze Age B, we already saw evidence for the deliberate deposition of metalwork in and around houses, related to a variety of occasions (from founding to abandoning the house, see chapter 7). Gerritsen (2001, table 3.13) made it clear that, particularly for the Early Iron Age/Middle Iron Age, more examples can be found, this time primarily related to the abandonment of the house. A variety of items was deposited, but it is clear that metalwork was not prominent among these. Gerritsen particularly recognized deposition of pottery (with food?) and grains. In all, it suggests that the house became a focus of ritual in its own right. Although this was not a new phenomenon, its seems to have been current particularly in the Early Iron Age and the first part of the Middle Iron Age.

Conclusion
The evidence from deposition on farmyards and rectangular cult places implies that by the end of the Bronze Age, other locations than natural places acquired significance. Farmyard deposition was already practised in the Bronze Age, and the relative large number of Early Iron Age farmyard deposits at best illustrates that it was now more widely done (Gerritsen 2001; chapter 3; table 3.13). Rectangular cult places, however, are a wholly new phenomenon. The Nijmegen structure can be seen as the oldest forerunner known of similar structures from the southern Netherlands and beyond (the German *Viereckschanzen* and the north French *sanctuaire de type belge*, see Fontijn 2002). Such cult places retained their link with mortuary rituals until well into the Iron Age, but at the end of it they acquired different meanings (more closely associated with settlements). Although rectangular cult places and farmyard deposits are known from the period that heralded the drastic decrease of metalwork deposition in natural places, they cannot have replaced the traditional offering locations. First of all, because so far only one Early Iron Age rectangular cult place is known, and second, because among the material deposited there seems to have been virtually no metalwork.

8.11.4 Change and tradition in the practice of deposition

Finally, we have to address the question of what happened to the entire system of deposition. Did it change fundamentally, and did it cease to exist at the end of the Bronze Age, as happened elsewhere?

To start with the first question: it is only in the last phase of the Late Bronze Age (Ha B2/3/*Bronze final IIIb*) that real

changes took place. These are the mass deposits of axes and ornaments, the latter being a first indication for deposition of personal valuables related to female identities. For the rest, the practice of deposition of individual axes and other tools seem to have continued to be practised, and so did the practice of weapon deposition. Deposition of ornaments in rivers was already practised before the Late Bronze Age as well (chapter 7). There is a striking traditionality in the overall biographies of bronzes and the kind of places where they were deposited. Using bronzes as grave goods (chapter 9) is largely unknown from the Middle Bronze Age B, but realizing that metalwork in burials is an exceptional phenomenon even in urnfields (chapter 9), the difference with the Middle Bronze Age B burials is not so large. After all, urnfields probably represent the burials of almost any member of a local group, whereas in the Middle Bronze Age B only the graves of a very small fraction (10-15 %) are known. Moreover, just like before, in the Late Bronze Age, weaponry seems to have been deliberately kept out of graves and to have been deposited elsewhere.

As said, a first hint of changes can be seen in the rich hoards of the last part of the Bronze Age. A more fundamental one is the introduction and deposition of the unusable Geistingen axes. It was argued in 8.13.1 that their incorporation in deposition to some extent undermined traditional views on axe biographies.

The first traces of a true transformation of tradition can be observed in the subsequent Gündlingen phase. In this phase, the age-old taboo on placing weapons in graves seems to have given way for the first time. Swords were now deposited both in their traditional locations, the rivers, and in burials. Another new element is that these swords were not only made of bronze, but of iron as well (modelled after bronze forms). It was the bronze swords, however, and not the new iron ones that were deposited in graves. Also, the depositions of these swords in burials all had a collective rather than an individual character (Chapter 9). In both Neerharen-Rekem and Weert, the swords were deposited in collective rather than individual graves. It seems as if an outspoken association of a sword with a specific individual was mystified under a collective veil. Was this to bring it in line with the general egalitarian nature of the urnfield burial ritual at that time? Moreover, all swords were deliberately damaged, which may be in keeping with the age-old taboo on placing weaponry in graves, and contrasts with the deposition of undamaged Gündlingen swords in rivers. The warrior outfit itself, however (spear-sword association), is – apart from the possible reference to riding on horseback – a traditional Bronze Age one. Finally, the swords themselves are still Atlantic rather than continental products, although the latter gain importance (Roymans 1991, table 5).

This changes altogether with the Early Iron Age. Sword deposition in rivers ceases altogether, and continues to take place in graves only. This time, bronze swords are replaced by iron ones. Often accompanied by wagon parts, horse-gear and bronze vessels, we can speak of the adoption of a new warrior ideology, based entirely on central European ideas (chapter 9). Unlike the collective Gündlingen graves, these are straightforward individual elite burials. Atlantic products and ideas now hardly seem to be relevant anymore. On the whole, metalwork deposition in natural places ceased, which is primarily due to the much lower amount of what was the most frequent deposited item: bronze axes. They are gradually replaced by iron ones, probably made from local iron ores, but these axes are hardly known as depositions, however. Mass deposits of Early Iron Age axes, like the Armorican axes in north-west France, are unknown from the southern Netherlands (Huth 1997). In urnfields, bronze items are also gradually replaced by iron ones (chapter 9). Bronze ornaments continue to be deposited, but at a much lower rate than before. New depositional locations (a rectangular cult place, farmyards) seem to date from the Early Iron Age, rather than the Late Bronze Age. As they seem to have involved deposition of predominantly non-metal items, they stand in no relation to the decrease in deposition of metalwork in natural places

In conclusion, we can say that in the southern Netherlands only the last part of the Late Bronze Age seems to indicate changes in the practice and frequency of metalwork deposition. A real decline in depositional frequency and true transformations of the practice were not achieved until the Early Iron Age (Ha C), with the Gündlingen phase as transitory period (see also chapter 10, especially fig. 10.4). The general decrease of bronze deposition in watery places is largely contemporary to those of other regions. It is hard not to see this as related to a general decrease in the bronze supply, and the adoption of the locally available iron (Huth 1997, 197). A strong reorientation at central European rather than Atlantic networks, unseen in the Bronze Age, becomes visible in the prestigious imports from the Hallstatt core region. Undoubtedly, these must also have been the channels by which the new elite ideology as visible in the Ha C chieftains' graves reached our region.

8.12 Conclusions

After this lengthy discussion, a number of general conclusions can be drawn on the nature of metalwork biographies and how these changed during the Late Bronze Age and Early Iron Age.

Metalwork and contemporary material culture

The metalwork categories of the Late Bronze Age are largely similar to those of the previous period. There still seems no reason to suggest that the majority of the tools of everyday life were now made of bronze. The large *Bombenkopfnadel*

of type Ockstadt are perhaps a single example of locally made ceremonial items. New bronze objects introduced in adjacent regions at this time are helmets, greaves, corslets, horse gear, elements of wagons, vessels, cauldrons and flesh hooks. These seem do not seem to have reached the southern Netherlands. Truly new items in material culture were not introduced until the Early Iron Age.

From bronze to iron
The earliest documented iron finds are prestigious weapons, the Gündlingen swords, probably modelled after bronze ones. Although locally available, iron enters the region first in the form of imported prestige goods, like bronzes before them. Bronze spears, however, continue to exist at least until the Ha D phase, when they are replaced by iron ones. Other prestige goods made of iron are horse-gear and wagon linch-pins, all dating from the Early Iron Age. Bronze axes continue to exist well into the earliest half of the Early Iron Age, probably contemporary to iron ones. Thus There is a progressive replacement of bronze by iron, starting off at the level of imported prestige goods. A wholesale replacement was never achieved, however; particularly ornaments and prestigious metal vessels continued to be made in bronze during the Iron Age.

Production: an open, unsophisticated system
No fundamental changes seem to have taken place in the regional bronze production. Production was still focussed on axes, and probably spears, ornaments and dress fittings. Exceptional are the ceremonial *Bombenkopfnadel*. A local production of swords has not been attested. As in the Middle Bronze Age B, the regional style is only conspicuous in the case of axes. It is an open rather than closed style, constituted by elements borrowed from Atlantic and – this time also –continental traditions. Nordic elements are wholly absent. The production is far from technologically advanced, and seems to have lacked the innovations that characterize bronze technologies from other regions.

Circulation: reorientation from Atlantic to continental regions
As we have seen, the imported products in the region have always been from both Atlantic and continental regions. After having grown in significance during the Ha B2/3 phase, the Atlantic element largely disappears in the early Iron Age Ha C, after the Gündlingen phase. By that time, the flow of bronzes, however, had decreased considerably and among the central European imports, a considerable part was now made of iron instead of bronze. Another, noteworthy, development is that for the first time there is evidence for the production and circulation of axes functioning as exchange items instead of axes. That such specialized exchange items were made in the southern Netherlands itself, tells us about the complexity of regional bronze exchange at that time, involving the circulation of ready-made objects and bronze currency as well.

Selective deposition in the Late Bronze Age: a structured sacrificial landscape
The Late Bronze Age in the southern Netherlands is generally seen as a period in which a structured, territorial landscape came into being. In this landscape, urnfields became formal, central places in the ritual topography of the land. The same can be said for depositional locations. These also had long-term histories of specialized use, essentially going back to the Middle Bronze Age B (most notably: sword deposits in rivers). Male, martial places seem to have been other kinds of places than those where in the last part of the Bronze Age rich, supposedly female, ornaments were deposited.

Transformation of depositional practices in the Early Iron Age
Just like elsewhere in north-west Europe, deposition of bronzes achieves a peak in the last phase of the Late Bronze Age, but it does not fundamentally change. During the subsequent Gündlingen phase, the most significant change to take place is the shift from sword deposition from wet places to burials, which is completed in the Ha C. By that time, deposition of metalwork in natural seems to have decreased considerably, but does not wholly stop. The decrease in wet-context deposition is for the larger part caused by the decrease, and ultimately ending, of deposition of bronze axes. The iron axes do not seem to have replaced bronze ones in deposition at all.

notes

1 Following Lanting/van der Plicht in press and Roymans (1991, 20; fig. 5). The concept of a Gündlingen-phase is borrowed from Roymans' work.

2 For the Netherlands Fokkens (1997) has recently also emphasized that another new element introduced with the urnfield is that we are now dealing with a burial ritual in which almost any member of society was buried in an individual grave that was part of the entire cemetery and archaeologically visible.

3 It should be remarked here that in spite of this idea, and of the general theory about a sharp demographic increase, so far not one house plan in the southern Netherlands can comfortably be dated to the Late Bronze Age (personal comment H. Fokkens). This is in sharp contrast to the Middle Bronze Age B, from which a large number of house sites are known (Fokkens 2001; this book, compare fig. 7.1 and 8.1).

4 Originally erroneously attributed to Maastricht (Butler 1973, 338; Abb. 15).

5 There are no metal analyses available for the finds from the southern Netherlands, but similar afunctional axe types from western Europe also often have a relatively high lead percentage,

making the casting too soft for the production of effective tools (Huth in press).

6 Verlaeckt (1996, 24), based on west Belgian finds.

7 In the first find report of this axe no mention was made at all of this axe coming from an urn. This was only remarked in later one. This leads one to suspect that somehow information from different finds was mixed up.

8 W.H.Th. Knippenberg 1959, *Brabants Heem* XI, 50.

9 Butler and Steegstra (1999/2000, fig. 7b: no 473) illustrate a find with preserved parts of the wooden shaft, indicating that this specimen was deposited in the condition in which it was during its use-life. Unfortunately, it is without provenance and we do not know whether it is from the southern Netherlands.

10 Table 8.1 lists all the spearheads which cannot be precisely dated. Although a large number of them are likely to date from the Late Bronze Age, there is no claim that all spears listed in 8.1 are of Late Bronze Age date!

11 The Maastricht-Bosserveld find is the only example of this early type. It is, however, a very old find, the reliability of which can be questioned. Moreover, its form is remote from the general type. For that reason, its determination as a Sprockhoff type I sword is not without problems (cf. O'Connor 1980, 104).

12 In the meantime, the sword has been bought by the museum of Antiquities of Leiden (RMO).

13 Compare for example the similarities in the hilt of the iron 'Hallstatt sword' from the chieftain's grave barrow 1 in Morimoine (Belgium; Mariën 1952, fig. 278b) with a bronze Gündlingen sword.

14 This information was provided to me by the finder, and P. van den Broeke. *Raaprapport* 155 (Haarhuis 1997) shows the location of a prehistoric residual channel close to the place where the pin was found. It can be assumed that it was this channel into which the two pins were deposited.

15 Van der Sanden (1981: grave 13a) recorded bronze beads being attached to skull fragments in the urnfield of St. Oedenrode. This suggests the use of beads for head dress.

16 The Scandinavian belt box in this hoard is characteristic for females in the Scandinavian regions from whence it came. In its content, this hoard is closest to what a personal set might look like (Huth 1997, 188).

17 Unfortunately, these have not been published.

18 In the archive of G. Beex, former provincial archaeologist of the province of Noord-Brabant, I found a note that these objects are from the urnfield 'Sint-Josephshof'. This would have been based on information by Bursch, unavailable to me. The patina of the finds seems irreconcilable with a burial context, but this conflicting evidence amply shows that we should be careful with drawing conclusions on the basis of this find.

19 Verlaeckt (1996, 29) mentions the find of two phalerae from the Scheldt near Schellebelle (west Belgium).

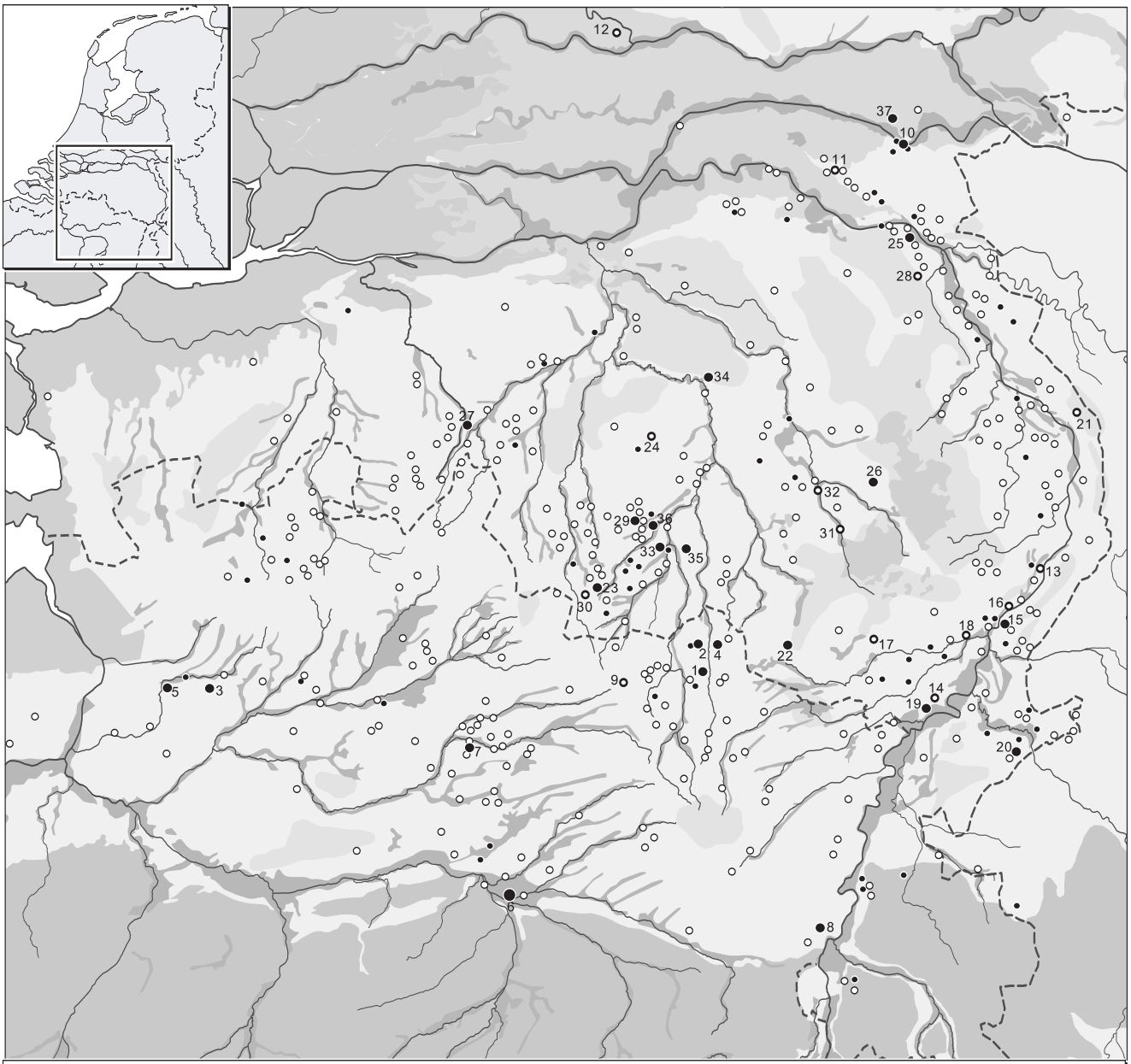

Figure 9.1 Distribution of all known Late Bronze Age and Early Iron Age urnfields (after Roymans 1991, fig. 21 with changes).