ABSTRACT: A comprehensive study is offered of the Bronze Age finds of metal work and amber in the Netherlands. Parts I and II concern the Early and Middle Bronze Age. Part I (this part) is a presentation, in the style of the *Inventaria Archaeologia*, of the more important associated finds, both richer graves and hoards. Part II will be concerned with the stray finds, their typology, distribution, origins and cultural context; followed by a concluding synthesis. Parts III and IV will deal in similar fashion with the Late Bronze Age.

KEYWORDS: Netherlands, Early and Middle Bronze Age, amber, bronze, tools, weapons, ornaments, hoards, graves.

1. GENERAL INTRODUCTION

As background for our presentation of the material, section 2 summarizes our present view of the comparative chronology of the Bronze Age in the Netherlands and neighbouring areas.

Section 3 describes a series of finds of Early and Middle Bronze Age amber necklaces, with a prefatory essay on their probable origins.

Section 4 details other richer grave finds and hoards of the Early and Middle Bronze Age. Many of these finds have been published previously (not infrequently by myself in the course of the last thirty-odd years); we have thought it useful to repeat the drawings and find data here for the sake of affording a convenient overview, to provide an update of the bibliography, and, where necessary a revision of interpretations in accordance with current views.

Here we use the term 'hoard' to describe two or more objects found together, without evidence that they belonged to a grave deposit. Single-object depositions, possibly belonging to the category *Einstickhort*, will be catalogued together with stray finds.

It may be noted that there are a number of objects in burial mounds which, though possibly deposited in connection with burial rites, were not themselves from a grave, or at least are not known to have been in a grave; such finds are therefore classified as hoards.

It should not be supposed that the hoards and richer graves of the Early and Middle Bronze Age provide a balanced picture of the regional production of metal-work in those phases. Quite the contrary: these finds contain few locally produced articles, and are mostly stocked with imports from diverse directions. This may have various causes:

1. In the Early Bronze Age the regional production of bronzes was, as far as the evidence goes, rather slight. There may even have been a preponderance of flint and other stone tools and weapons (i.e. axes and daggers) in use. It is difficult to document this because they were rarely deposited in graves and hoards; but, for example, finds of flint daggers (practically all stray finds) far outnumber finds of Early Bronze Age metal daggers.

2. The grave or hoard deposits containing personal possessions evidently belonged to individuals of higher social status, who, it can be presumed, would have required a wider range of weapons and ornaments than could be provided by local craftsmen; who in any case seem to have produced mostly axes.

3. In the case of some other hoards, we may be dealing with imports from other areas of discarded objects intended for recycling. Since there were no copper or tin ores to be found in the alluvial soils and subsoils of the Netherlands, all such metal had to come from a distance. There is no evidence for the Bronze Age importation of ingots. Imports were therefore in the form of finished objects, either for use or as scrap for re-melting. The Early Bronze Age hoard from Wageningen (Find No. 10) seems to contain objects of both sorts. A small hoard consisting of two mis-cast Scandinavian-type palstaves from the Emmerdennen seems to represent the import of founder's waste from Denmark or North Germany; some or all of the North Welsh palstaves in the Voorhout hoard (Find No. 14) may have the same significance, if from the opposite direction. Imports of this sort are likely to have been far more common than the record shows, as they would normally have disappeared into the melting pot.

In general, then, the typology and distribution of the stray finds (thus material for a subsequent volume) will
FIG. 1. LOCATION OF FIND NOS 1-24 (FIND NO. 3, 'DRENTHEN, NOT MAPPED).

provide better insight into the character and extent of local bronze production. The hoards and richer graves are, rather, of special importance for the contacts they demonstrate with other regions, for the establishment of the chronology, and for the insight they provide into the way of life of the elites of the time.

Part III will deal with the richer Late Bronze Age finds similarly. In the cataloguing of the finds in Part I interpretation will be held to the minimum necessary, reserving more detailed comment for the concluding synthesis which will follow the cataloguing and study of the stray finds.

In general the work is based on the personal study of the objects and their documentation in the museums and other collections.

2. COMPARATIVE CHRONOLOGY (cf. table 1)

A detailed chronological framework for the prehistory of the Netherlands was created by Lanting & Mook (1977) on the basis of \( ^{14}C \) datings; for the Bronze Age consisting chiefly of grave monuments and settlement sites, with their associated pottery types and other finds. This structure is still valid, but has been improved at some points by newer datings, by the calibration in calendar years of the conventional \( ^{14}C \) scale, and by the application in other areas of dendrochronology.

A separate chronology of richer graves and hoards, datable by contacts especially with central, northern and western Europe (and occasionally farther afield) was built up by the present writer in various studies (see References). The relations between these two chronological structures is, necessarily, a theme to be discussed in the present work. Table I is offered in advance of the detailed discussion in order to provide a convenient frame of reference for the reader.

In this table we have not attempted to interpret fine detail, but rather to provide a broad orientation, generalized to a century-by-century scale.

Since comparative relative datings are not, for the most part, particularly controversial at the moment, we have taken the chief interest to be the comparison of datings by archaeological correlation with those obtained by recent work on dendrochronology and calibrated \( ^{14}C \).

Phase names italicized in the table have dendro-datings placing the indicated phase in the indicated century. Those marked by a plus sign (+) have one or more calibrated \( ^{14}C \) datings centering in the century indicated. (Their statistical ranges spread, however, a century or more in either direction). The other placements in the table depend on archaeological correlations.

All \( ^{14}C \) dates utilized were calibrated with the Calibration Program of the Groningen Laboratory for Isotopic Research (C.L.O), available on computer diskette. Details will be given in a later section.

3. THE EARLY AND MIDDLE BRONZE AGE GRAVES AND HOARDS WITH AMBER NECKLACES

3.1. Introduction

In the province of Drenthe there is a noteworthy series of Early to Middle Bronze Age necklace finds. The necklaces consist predominantly of amber beads, occasionally supplemented by beads of faience, tin and sheet bronze (Exloërmund, Find No. 1), rock crystal (Emmerdennen, Find No. 2), and glass (Emmer-compascuum, Find No. 7). Altogether eight necklaces contain nearly 200 amber beads, more or less equally divided between the grave necklaces and the bog hoards.

The earliest of these necklaces is the well-known Exloërmond bog hoard (Find No. 1), which is more or less on the borderline between what is understood as Early and Middle Bronze Age in the Netherlands. In the Middle Bronze Age there are seven major necklace finds: four found in tumulus graves (two near Weerdinge, one from the Emmerdennen, one at Hijken) and three bog hoards (Emmer-compascuum, Roswinkelerveen and 'Drenthen').

It is remarkable that all the major necklace finds of the Early and Middle Bronze Age are from the province of Drenthe, and have not occurred in the rest of the country. The largest amber bead finds in the other provinces are those from graves at Zwaagdijk, North
Table 1. Comparative chronology.

<table>
<thead>
<tr>
<th>Century</th>
<th>Central Europe</th>
<th>North Europe</th>
<th>N.W. Germany</th>
<th>Netherlands</th>
<th>U.K., F.</th>
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<tr>
<td>XI</td>
<td>Ha A2</td>
<td>MIV</td>
<td>ZG. IV</td>
<td>Gasteren+</td>
<td>L.B.(I)</td>
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<td>MITTL. UF.</td>
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<td>PENARD II: Flynhonnau, B.f.lhb</td>
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<tr>
<td>XII</td>
<td>Ha A1</td>
<td>M III</td>
<td>ZG. III</td>
<td>Swalmen-H.</td>
<td>M.B.B/ L.B.</td>
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<td>B.f.IIa</td>
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<td>XIII</td>
<td>D</td>
<td>M III/III</td>
<td>ZG. III</td>
<td>Holset</td>
<td>M.B.B</td>
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<td></td>
<td>SPATE HSG/ FRUHE UF.</td>
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<td>PENARD I: APPLEBY: B.f.; Rosnoen</td>
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<td>XIV</td>
<td>C2</td>
<td>M II</td>
<td>ZG. II</td>
<td>Weerdinge+ Epe</td>
<td>M.B.B</td>
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<td>JÜNGERE Hg., Arentskolen</td>
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<td>XV</td>
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<td>MITTLERE Hg., Goggenhofen</td>
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<td>XVI</td>
<td>B A2c</td>
<td>M IB</td>
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<td>ÄLTERE Hg., LOCHHAM</td>
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<td>ACTON PKI, TRÉBOUL, B.m.I</td>
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<td>LANGQUAID</td>
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<td>XVII</td>
<td>A2b</td>
<td>LANGQUAID</td>
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<td>M IA, Woring</td>
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<td>WESSEX 2+</td>
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<td>IX</td>
<td>A2a</td>
<td>LNC Pile</td>
<td>Emenen axes</td>
<td>E.B.</td>
<td>WESSEX 1+</td>
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<td>LEBRINGEN</td>
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<td>Bush Bw., Wilkby W.</td>
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<tr>
<td>X</td>
<td>A1b</td>
<td>LEBRINGEN</td>
<td></td>
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<td>WESSEX 1+</td>
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<td>Migdale</td>
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<td>XXI</td>
<td>A1a</td>
<td>Singen+, Niira+</td>
<td>Wage-</td>
<td>E.B.</td>
<td>St. Adrien+</td>
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<td>ningen (St. Wallrick+)</td>
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Holland (below, Find No. 24), with four small beads, and Mander in eastern Overijssel, with three beads (Find No. 15). And of these necklaces in Drenthe, five are from the gemeente Emmen, in the southeast corner of the province. The Exloermond find, some 15 km to the north, and the Hijken grave find, some 30 km to the WNW, are outliers. The distribution of these finds is shown in figure 2.

Similar amber finds are not only absent in the rest of the Netherlands: they are also absent in the adjacent regions.

Denmark, Schleswig-Holstein and the Lüneburg region have a reasonable to large number of Early to Middle Bronze Age amber finds, as does South Germany; but in North Germany west of the Weser there is a near blank; nor do we have comparable finds in Belgium and northern France.

For Northwest Germany, Bergmann (1970: pp. 137-138, Liste 153, Karte 61) lists only four amber finds west of the Weser. But of these Ostrhauderfehn, Kr. Leer (his No. 23) is a Late Bronze Age bog hoard, and Aurich (his No. 24) is an undated stray find. That leaves only the two finds from Kr. Grafschaft Diepholz. Of these, Vorwohnde, Tumulus B, secondary female grave (Sprockhoff, 1930: pp. 197-202, Abb. 5-10) with 14 medium-sized to small beads, is certainly Middle Bronze Age; the other Grafschaft Diepholz find he lists is unpublished and we have no information as to its dating or context.

Not in Bergmann’s list is a find just east of the Weser: near Bremen was found a necklace with numerous amber beads, in a Middle Bronze Age bog hoard (with Radnadel, wire spiral ornaments, etc.) from Schmelbeck, Kr. Osterholz (Brandt, n.d.: p. 152, No. E 91).
A recent find in the area between Elbe and Weser is a rich female grave in a tumulus at Wahnbek, Kr. Ammerland (Eckert, 1990), which yielded eight small discoid amber beads (none wider than 10 mm). The grave goods also included a burial with a double wheel-headed pin (similar to, but smaller than, the Weerdinger-Kampereschje pins in our Find No. 4), a pair of ribbed bracelets, and sheet bronze tubes.

The closest amber-rich region is thus the Lüneburger Heide. In that area, Laux (1971: p. 48, with footnotes) knew of eight finds, containing a total of 92 amber beads. Our Drenthe group has approximately the same number of amber beads in grave finds, and roughly an equal number again in the bog hoards: a comparison which we should hardly expect, considering the fact that the Lüneburg region is in other respects infinitely richer than Drenthe.

For Denmark and Schleswig-Holstein, a browse through the presently available volumes of Aner and Kersten (1973-1986) shows a considerable number of

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Fig. 2. Middle Bronze Age amber necklaces in and around Emmen (S.E. Drenthe). Legend: ● = amber necklace (find number as in catalogue); ■ = settlement Angelslo-Emmerhout; * = wooden temple of Bargerooterveld; — = Middle Bronze Age trackway; fine stippling: raised bog; coarse stippling: fen peat. Adapted from Casparie (1984), with additions.

Fig. 3. Iron Age amber beads from the bog hoard of Nieuw-Weerdinger (Drenthe); found with bronze torque and pair of bronze knobbed bracelets. Scale 1:2.
3.2. Origin of the amber

3.2.1. The raw material

Formerly one assumed that amber was always imported from the Danish-North German area; in recent years there has been increasing emphasis on the occurrence of raw amber at various places along the North Sea coasts, and inland along the elongated geological belt, extending as far as South Russia, in which 'Baltic' amber naturally occurs.

Brongers & Woltering (1978: pp. 104-107) emphasize the possibility of local procurement of raw amber: there are occurrences along the North Sea coast (especially

amber finds in Periods I-III. Mostly the beads are rather small; it is remarkable how very few examples there are in these finds of the larger-sized beads such as occur in some of our Drenthe finds, and in other regions of Europe.

In this section, we present a catalogue of the major necklace finds. (Here we omit finds containing only one bead, or a small number of beads). A few finds with one or two amber beads are, however, described below (section 4) as part of other grave assemblages, i.e. at Elp, Mander, Hijken, Zwaagdijk and other sites.

The Southeast Drenthe group of amber necklace finds must be seen against the background provided by the unusual concentration of Bronze Age finds and sites in the neighbourhood of Emmen, at the southern end of the Drenthe sand ridge, the Hondsrug, facing the Bourtanger Moor to its east (cf. fig. 2). The Bronze Age settlement of Angelso-Emmerhout, extensively excavated, with its numerous long houses and other timber buildings and its Middle and Late Bronze Age cemeteries, has not yet been published; but it seems, on the basis of 14C datings, to have been occupied from the Early Bronze Age until the end of the Late Bronze Age (summary van der Waals & Butler, 1976; Lanting & Mook, 1977). Related thereto is surely the barrow cemetery and urnfield situated between the Emmerdennen and Angelso excavated by Bursch, Tumulus 11 of which yielded the amber necklace described below (section 3.3, Find No. 2). Also from the Emmerdennen is a small bronze hoard referred to above consisting of two Scandinavian/North German palstaves, poor castings evidently representing scrap metal import.

Eastward from the Angelso-Bargeroosterveld area, three Middle Bronze Age trackways in the bog have been identified by Casparie (1984; 1987), two at least of them apparently pointing to sources of bog iron, and yielding evidence for premature, as yet little understood Middle Bronze Age iron-working. Late Bronze Age activity is shown not only by the settlement and urnfields, but by the series of Bargeroosterveld bronze hoards (Butler, 1960).

We should mention at least en passant the Iron Age amber necklace, bronze torque and bracelets of the bog hoard of Nieuw-Weerdinge (Remouchamps, 1925). The amber beads in this hoard (fig. 3) are large and of flattened globular shape. Most have perforations with a diameter of c. 5.5 to 8 mm, thus rather larger than the perforations of c. 2 mm in the beads of the Drenthe Bronze Age finds catalogued. Beads with the larger perforation were presumably intended to be 'strung' not on a string but on a metal neckring, as is the case with a number of Iron Age finds in the Netherlands and Northwest Germany (Butler, 1984-1985; Wilhelmi, 1979). Although there are no grave or hoard necklace finds from the Drenthe area, or elsewhere in the Netherlands, that can be dated to the Late Bronze Age, the practice of stringing one or more amber beads on a bronze neckring may already have begun in the Late Bronze Age: cf. the Northwest German Period V hoard from Holzhausen, Kr. Wildeshausen (Gandert, 1955). Beads with comparable perforations occur also in Late Bronze Age as well as Early Iron Age finds in Britain: i.e. in the hoards of Balmashanner (2 ex.; Beck & Shennan, 1991: p. 214, fig. 11.20), Potterne (1 ex.; Beck & Shennan, 1991: pp. 166-167, 218, fig. 11.24), and Holyhead (Ty Mawr, 5 ex.; Beck & Shennan, 1991: pp. 192, 217, fig. 11.23).

One of the Nieuw-Weerdinge beads has a still larger perforation (slightly oval, c. 11 x 13 mm, biconical in form), the reason for which is not obvious. At least one bead with very large perforation, such as has the exceptional specimen from the Nieuw-Weerdinge hoard, occurs in the Scottish Late Bronze Age hoard from Glentanar (Pearce, 1979: p. 125, fig. 1:5; Beck & Shennan, 1991: p. 215, fig. 11:21).

Recent research (van der Sanden, 1990) has shown that one of the bog bodies preserved in the Drents Museum, Assen, is of Bronze Age date. The body concerned was found in 1938, at Emmerscheideveen, gemeente Emmen. There is a recent 14C determination (GrN-15459, 2980±35 BP; 2-sigma calibration range 1376-1100), which suggests a date in Middle Bronze B or at the transition Middle-Late Bronze Age, although on the basis of the pollen analysis (van Zeist, 1955) a Late Bronze Age date had been assigned. Possibly we have here the remains of an actual resident of the Angelso-Emmerhout settlement. He/she (the sex is uncertain) is, then, the only Bronze Age bog body presently recognized in Europe. His or her state of preservation is far from ideal; but fragments of clothing preserved with the body have lent themselves to comparison with items of clothing from the contemporary Danish treetrunk coffin burials.

On present estimates, the numerous houses, grave mounds, urn burials and other settlement remains from the Bargeroosterveld area (van der Waals & Butler, 1976) need represent no more than the accumulated remains of a hamlet or a small number of farms, spread out over 700 years or more. Waterbolk (1985: pp. 57-58) has suggested that there must have been some sort of power centre in Southeast Drenthe which tended to attract prestige goods. The amber necklace finds provide support for this conception.
on the Dollard and the Frisian islands Rottum and Ameland) and in Tertiary sands and Quaternary moraine deposits in East Groningen. Whether the amber in geologically deep deposits would have been accessible to Bronze Age collectors is open to question. The seashore occurrences would, however, have been easy pickings; amber collecting is still possible on the beaches of the Frisian islands (Waterbolk & Waterbolk, 1991).

Whatever the source of the raw material, some amber beads at least were shaped in the Netherlands. This is suggested by the occurrence of amber beads of unusual forms in the Veluwe Bell Beaker group of the regional Late Neolithic (see section 3.2.2).

Local fabrication of amber beads in the Early Bronze Age has been attested at a Hilversum Culture site at Velsen-Stationsweg, North Holland (Vons, 1970; cited by Brongers & Woltering, 1978: footnote 236; for the 14C dating of this site see ten Anschel, 1990: pp. 72-73, fig. 22: terminus ante quem: GrN-5972, 3410±35 BP; terminus post quem GrN-5973, 3450±35 BP; 2-sigma calibration range of average between the two: 1878-1684). Distinctive forms are not recognizable in this assemblage.

3.2.2. The forms

It is one thing to show that amber could have been found locally, and quite another to demonstrate that it actually was collected and worked in the region in the Bronze Age.

One might suppose that if amber was imported into the Netherlands the form of the beads and pendants would tend to be the same as those found in other regions, but if the material were found and worked locally, the forms developed might also be local. A third possibility, of course, is that amber might have been imported as raw lumps, and locally worked into necklace components. In the Netherlands, Late Neolithic, Veluwe Bell Beaker finds, such as the cushion-shaped V-bored button from Vaassen, Gelderland and the crescentic bead or pendant from Nieuw-Miillingen, Gelderland (Brongers & Woltering, 1978: p. 105 Afb. 61), the H-shaped V-bored button from Beers-Gassel, North Brabant (Verwers, 1990: pp. 30-31, Afb. 16), and the horseshoe-shaped pendants from Houtdorper Veld, Gelderland (Bursch, 1933: Taf. VI:39, 40), occasionally contain amber beads and buttons of forms unknown elsewhere. This is not, however, the case in the known finds of the Early and Middle Bronze Age.

Little can, of course, be said of beads which are perforated but otherwise left in raw, unworked shapes. Most of our amber beads have, however, been shaped. Simple globular, lens-shaped or biconical forms predominate. Often the beads are not symmetrical; sometimes they can even be called ‘lop-sided’, to use the expression employed by Harding (1984: pp. 57-60, 68-104, 311-313) with respect to the similar Mycenaean beads.

In the Early Bronze Age Exloërmond hoard (Find No. 1) and two of the Middle Bronze Age finds (Roswinkelerveen hoard, Find No. 6, Weerdinge-Paaschberg grave, Find No. 5) are elongated, tubular beads. These have parallels not only in Denmark, Germany, Poland and South England, but also as far afield as Mycenaean Greece (see below, under Find No. 1).

A square-sectioned bead in the Weerdinge grave (Find No. 4) has at least two parallels in southern Germany, as well as in Denmark and in a grave find in Greece (see below under Find No. 4).

Beads with two perforations in the centre, like a button, occur in the finds from Exloërmond, Emmer-dennen (Find No. 2) and ‘Drenthe’ (Find No. 3). They are matched in a Mycenaean find from Spathes (see below, under Find No. 2).

A bead in the Roswinkelerveen hoard (Find No. 6: No. 5) has both a lengthwise and a cross-wise perforation. This unusual feature is matched on a bead in a Jutland Period II male inhumation grave at Hjerpsted (Aner & Kersten VI: p. 18, No. 29 16).

Especially characteristic for the Dutch Middle Bronze Age finds are the beads of the form usually described as ‘flattened biconical’, i.e. of hexagonal section. This form seems to be very rare in Denmark. It is not even mentioned in the summary of Danish Bronze Age amber types by Becker (1954); and in the available eight volumes of Anser and Kersten we have found only one possible (damaged) specimen. It is, however, current in MBA contexts in areas such as the Lüneburger Heide, Mecklenburg, Silesia, Thuringia, and in tumulus Bronze Age contexts in Hessen, Alsace and South Germany (for references see under Find No. 2). Farther afield, it occurs in at least half a dozen finds in the Greek Bronze Age; and not only in the Peloponese (Mycenae, Kakovatos) but also as far afield as Crete and Cyprus. The dates vary from LHII/LMI to LHIII.

Such ‘hexagonals’ are not common in Britain, as the survey of Beck and Shennan (1991) has clearly shown. Their shapes 9A and 9B (their fig. 4.1) are here concerned. 9A is represented by only one Early Bronze Age find and one ‘probably Late Bronze Age’; 9B, with six finds (1 EBA, 1 MBA, 4 LBA, according to the authors) is described as ‘predominantly a Late Bronze Age type’. Possibly relevant is the amber necklace hoard from Sustead, Norfolk (Beck & Shennan, 1991: pp. 101, 173, 207, figs 11.3, 11.14:1); the find-spot attribution is according to these authors open to question. The British authors assign 46 of the 54 beads in this hoard to their Type 9B. They date it hesitantly to the Late Bronze Age, by analogy with British and Irish finds of that period. Unfortunately their illustration does not serve to permit judgment as to whether its resemblance is indeed to the Late Bronze Age finds cited, or whether it could be brought into connection with our Continental Middle Bronze Age finds. Admittedly, the largest beads in the Sustead find are larger than is customary in the Middle Bronze Age on the Continent. In view of all the question-marks,
evaluation of this find must await its fuller publication.

Of special interest in this connection, however, is the '9A' flattened-biconical bead from Colchester, Essex, which was found stuck to a Middle Bronze Age shield-pattern palstave (Davies, 1968; Beck & Shennan, 1991: pp. 99, 152-153, fig. 11.3:8). There is no reason to label this bead as belonging to a 'Wessex type' (Davies, 1968); but it would be quite at home among the Middle Bronze Age 'hexagonals' on the Continent (as indeed recognized already by Schmidt & Burgess, 1981: p. 121). The Colchester palstave is not an Acton Park product; it belongs, rather, to the variety which the present writer once (1963a: p. 53) termed 'East Anglian'. With reference to this specimen, Schmidt & Burgess (1981: p. 125) have created a 'Type Colchester'. We would date it not in the Acton Park phase, but rather in the succeeding Taunton phase; which indeed would make it contemporary with the Drenthe Middle Bronze Age amber necklaces.

A 'hexagonal' bead similar to the specimen from Colchester is the largest of the four beads (assigned to Type 9E, Beck & Shennan, 1991: p. 178; Ashbee et al., 1989: pp. 46-47, figs 43-44, p. 65), found (along with Deverel-Rimbury pottery, and much else of interest) at the bottom of the Wilsford shaft, thus in Wessex near Stonehenge. The Wilsford deposit is well dated by 14C (average of four Ox A dates: conventional 3251±29 BP; 2-sigma calibration range 1515-1400 BC; Housley & Hedges, 1989: pp. 68-70). Both the Colchester and Wilsford specimens are likely to be imports from the Continent, given the admitted rarity of the form in Early and Middle Bronze Age Britain and its Continental abundance.

The rich Lüneburger Heide find from Fallingbostel (Laux, 1976: No. 81, Taf. 55B) shows that the hexagonals were already current in the Sögel-Wohlese phase; in the Netherlands they do not appear in the Early Bronze Age Exloermond hoard, but are present in the Middle Bronze Age finds of Weerdinge-Paaschberg (Find No. 5), Emmerdennen (Find No. 2), Ros winkelderveen (Find No. 6) and Hijken (Find No. 9).

Amber pendants, with a peripheral perforation, have been found in the Exloermond and Emmerdennen hoards and also, for example, in the Spathes-Olympos find already mentioned, and in the Janneby peat hoard (below under Find No. 1).

Three finds in the Netherlands (Exloermond, Emmerdennen, 'Drenthe') contain beads (or pendants?) with one central perforation and another at the edge. These recall, and hypothetically may be in some way derived from, the ring-pendants common in eastern and northern Europe (cf., for example, Gimbutas, 1965: pp. 35-39); although the ring-pendants admittedly have usually a larger central perforation. And in fact the two examples in the hoard from 'Drenthe' do have central perforations slightly larger than the peripheral holes. Gimbutas regards the ring-pendants, whether of amber or other materials, as being characteristic for "the earlier part of the Early Bronze Age". But a recently excavated amber specimen from a grave of the Unterwölbblung group in Austria, from the Franzenhausen I cemetery (Grab Verfärbung 595: Neugebauer-Maresch & Neugebauer, 1988-1989: pp. 110-111, Taf. 4) is associated with a bulb-headed pin with diagonal perforation. This pin type is typical for the last phase of the Early Bronze Age, and should be contemporary with later Wessex (Camerton), and thus with the Exloermond hoard.

That the amber beads from the Early and Middle Bronze Age necklaces in Drenthe are - despite the possibilities that have been shown to exist for the local procurement of raw amber - nevertheless all of forms which are widespread in Europe, tends, in my opinion, to weigh against the idea that they were all or for the greater part shaped locally.

If they were not shaped locally, where were they shaped? Not, as far as the evidence goes, in Denmark ... though we should bear in mind the arguments of Shennan (1982; cf Beck & Shennan, 1991: pp. 109-112, 141) that the Middle Bronze Age Danes preferred to export their amber southward (presumably in exchange for metals) rather than keep it at home, where it was too easily obtainable to have much value as prestige goods. Since there are no claims for natural amber sources in Central Europe, we must continue to assume (as is traditional, and is reaffirmed by most recent commentators) that most, if not all, of the Central European Early and Middle Bronze Age amber was obtained via exchange networks from the Baltic and/or North Sea coastal areas. Since much the same types of beads occur from the North European plain to southern Greece, we may suppose that there were one or more centres in (broadly speaking) the Middle European area in which the types were produced and from which they were disseminated.

The Weser route must, in particular, have been an important north-south highway by which amber and metals were exchanged between Denmark and Schleswig-Holstein, the Lüneburger Heide region, Hessen, and other regions of the Central European Hügelgrabkultur (see below under Find No. 2).

It is therefore worth while to consider hypothetically, as an alternative to direct import from Jutland, on the one hand, or local acquisition and manufacture on the other hand, that the amber in the Drenthe graves and hoards came indirectly, via the Middle European circuit. Weshall see when we consider the bronzes that, although there was some Middle Bronze Age metalwork that arrived in the Netherlands from the South Scandinavian culture area, there was much more that came from the Central European area. It would not be surprising if amber necklaces came along with the bronzes.

Some widespread Bronze Age amber forms are not (so far, at least) represented in the Drenthe finds. Among these are the V-bored buttons, which are widespread in the Late Neolithic and in the Early Bronze Age, and which are well represented at least in Denmark and Wessex. It is also noteworthy that the amber spacer plates which in their simpler and more
complex varieties have played such an important part in discussions over the relations between South Germany, Mycennae, and Wessex, have not, so far at least, been found in the Netherlands.

In some other areas, amber beads are often associated in necklaces with ‘beads’ of coiled bronze wire. Such finds have not occurred in Drenthe; but there is one example of a single coiled-wire bead associated with four amber beads, in a grave find at Mander in Twente (eastern Overijssel) (Find No. 15).

No consensus now exists on the possible origins of the beads of other, exotic materials occasionally associated with the amber in Drenthe: the faience and tin beads from Exloërmont, the rock crystal bead from the Emmersdennen, the glass beads from Emmerscompascuum. As there is no reason to suppose that tin or rock crystal were locally available in southern Drenthe, or that faience or glass were locally manufactured in that area, it is certain that the Drenthe necklace finds contain elements which must have been imported from a considerable distance. The stereotyped provenance attributions of former days – faience from Egypt via Mycennae and Wessex; tin from Cornwall – are no longer accepted; but it cannot be said that satisfactory substitutes have been demonstrated. Such comments as we are able to make are included in the discussion below of the individual finds concerned.

3.3. The catalogue of the graves and hoards with amber necklaces (Find Nos 1-9)

FIND NO. 1. EXLOERMONT, GEMEENTE ODOORN, DRENTHE: BOG HOARD WITH AMBER, TIN, FAIENCE, BRONZE (Fig. 4)

Map reference: Sheet 17 East (Beilen).

Site: Peat bog near Exloërmont (no more detailed information available).

References: (a) Museumstukken Assen, 1881, No. 2; (b) Beck & Stone, 1936; pp. 221, 243, Pl. 66, fig. 1:1; (c) van Giffen, 1944a: p. 452, fig. 43; (d) Glasbergen, 1957: pp. 1-2, Pl. 1: (e) de Laet & Glasbergen, 1959: p. 125; (f) Butler, 1969: p. 55, fig. 20 (2nd ed. 1979, p. 56, fig. 27); (g) van Heemskerk Dikker & Felix, 1942: Pl. 113, (h) Waterbolk, 1977: pp. 42-43, Pl. 42; (i) Clarke, Cowie & Foxon, 1985: pp. 148, fig. 4.82, p. 313, No. 172.

Description of site: None available.

Circumstances of find: Found in April 1881, under 2 meters of peat, by a peat worker, Johan Leutschen of Exloërmont.

Preservation: Drenthe Museum (formerly Provinciaal Museum van Drenthe); purchased from finder 1 May 1881; inventoried under 1881/IV. 1.

Description of the objects:

1. Amber beads and pendants (14 ex.): one bead is yellow, the others light brown. One bead is barrel-shaped; others are disc-shaped to ovoid. Their cross-section is generally oval to rounded-biconical. Several beads are markedly asymmetrical in section. The perforations are cylindrical or nearly cylindrical. Two pendants are trapeze-shaped; two are more or less rectangular.

N.B. Recently published photographs of this find show 13 of the amber objects; the missing bead is unaccounted for.

2. Tin beads (25 ex.): six long, roughly segmented; others short and irregular in shape.

3. Faience beads (4 ex.): colour greenish blue (one more bluish than the others). Three have three segments; one has four segments.

4. Bronze, roughly cylindrical bead (clasp?): Made from approximately rectangular strip of sheet bronze (originally c. 12x5 mm).

Along one shorter edge are three rough perforations, with burrs. The opposite short edge is irregular.


The tubular amber beads (cf. also Ros winkelkeerhoofd, Find No. 6, and Weerdinge-Paasberg grave, Find No. 5) have a number of parallels in Denmark and Schleswig-Holstein (Aner & Kersten, 1973-1986: Nos. 466C, 2535, 2878, 3540A, 3602D, 3789B, 3919B; Röschmann, 1963: Taf. 80). Find No. 3789B is of “Sögel-Wohde” date; others are of Period II and even (No. 3540A) from Period III.

Tubular beads occur also in Wessex Culture finds, such as Upton Lovell G.2e (Gerloff, 1975: No. 272, Pl. 53A), Wimborne St. Giles G.8 (Gerloff, 1975: No. 281, Pl. 52E = Oakley Down; Hachmann, 1957b: Abb. 2 5), Wilsford G.50a (Gerloff, 1975: p. 258 App. 7 No. 2 = Hachmann ‘Lake’ Abb. 12: 13-36).

The tubular beads are also present at least occasionally in the Central European Early Bronze Age (Berk, Kr. Bautzen: Coblenz, 1980: Grab 13: p. 75: Abb. 16-14) and in the Tumulus Bronze Age (Wels-Weyrauch 1978) illustrates some examples from Hessen: Giessen (Wels-Weyrauch, 1978: Taf. 93B), Frankfurt-Berkersheim (Wels-Weyrauch, 1978: Taf. 98A), Urberach Häsenbergie (Wels-Weyrauch, 1978: Taf. 98B).

Beads of this form are apparently not widespread in Mycenaean Greece, but occur in some numbers in the grave find from the Spatahes cemetery, Olympus, dated LH IIIB/C, 13th or 12th century (Demakopolou, 1988: p. 137 No. 86 colour photo).

The trapeze-shaped pendants, with single perforation at the narrow end, have a whole series of close analogies (no less than eight examples) in a single rich grave of the Armoricain Early Bronze Age, found with other beads and pendants in the central chamber of the large tumulus at Kerneon en Plouvorn, Finistère (Briard, 1970; 1984: p. 139, fig. 85: 1-4, 8-11). Neither Briard nor du Gardin (1986: p. 553) could cite further amber examples in France; though there is a similarly shaped pendant in greenstone from the tumulus of Carnoët (Briard, 1984: p. 130, fig. 86). But there is an amber bead of similar form, although damaged, in the Wessex grave group of Wilsford G.7, Wiltshire (Annable & Simpson, 1964: pp. 44, 98, No. 150). This Wilsford grave is according to Gerloff (1975) a female grave of her Wilsford series; but its spherical gold bead has been cited by Barfield (1990: pp. 103-105) as related to, and presumably contemporaneous with, the gold-bound amber bead from the Swiss settlement site at Zurich-Mozartstrasse; and presumed to stem from the Reinecke A2/16th century level there.

A single amber pendant of similar form, but more finely shaped and well-polished, was found at Hauwert, gemeentew Werservooshoof (between Hoorn and Medemblik, North Holland: Sheet 14E, Alkmaar, c. 186 (525.80)) and is now in the Westfries Museum, Hoorn (fig. 4, inset). The bead was a surface find in disturbed ground (where it could have not been long, considering its excellent state of preservation); possibly Early Bronze Age, but also medieval finds are from the same terrain (information from T. van der Walle-van der Woude).

The segmented faience beads: Whether the faience beads of the European Early Bronze Age are imports from the eastern Mediterranean region, or plausibly of local manufacture in eastern and western Europe, cannot profitably be considered in this context. It is, no doubt, sensible to regard the beads found in the Low Countries as imports from the British/Armorican sphere, at least until proven otherwise.

The concentration of segmented faience beads in Wessex (according to Gerloff, 1975: pp. 223-225, occurring chiefly in female graves of her Aldbourne group, which she dates mainly to Wessex II, uncertainly extending into the Middle Bronze Age), and to a lesser extent in Brittany (Briard, 1984: pp. 140-142), have led to the assumption that the Exloërmont beads are imports from the English Channel littoral area; the tin beads would point in the same direction; as would possibly the grooved ogival dagger, probably of British type (three rivets) from Schuilingsoord (see under Dating below). The one example from the British/Armorican sphere, at least until proven otherwise.

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The only other faience bead known in the Netherlands is from a settlement site of the Hilversum culture at Vogelenzang, South Holland. It was found on the excavation dump, along with amber beads (van Heeringen, 1978: p. 288, quoting Mrs. de Raaf, the wife of the finder; see also Groenman-van Waateringe, 1966b: ten Anscher, 1990: pp. 72-73, 77; note the revised 14C date, GrN-14692 3470±60 BP, 2-sigma calibration range 1958-1642).

The faience bead is barrel-shaped and ribbed (length 1.45 cm; thickness 0.5 cm; perforation 0.33-0.4 mm, according to van Heeringen); it resembles specimens from a barrow on Carn Greis, Boscrejan, St. Just in Penwith, Cornwall (Hencken, 1932: p. 74, fig. 21; photo in Ashbee, 1960: Pl. 18:3). The barrel-shaped beads presumably go with the segmented faience beads and Cornish Urn pottery from the same barrow, though the accounts of the find are somewhat confused.

3. The tin beads: A segmented tin bead from Sutton Veney, Wiltshire, was illustrated by Colt-Hoare (1810-1821, reprint 1975: p. 103, Pl. XII). According to Annable & Simpson (1964: Nos 464-466) the tin bead, now lost, was found together with a bronze awl and bone V-bored buttons in a primary grave in a disc barrow.

Dating: Especially the faience beads suggest contemporaneity with Wessex II (Burgess Phase VII: Arreton, etc.). In local terms, this would be contemporary with an early part of the Sögel-Wohld phase. The disc-barrow association of the Sutton Veney segmented tin bead would be consistent therewith.

The amber beads are presumably earlier than those of the other
necklace graves and hoards in Drenthe, as the characteristic large disc and flattened-biconical forms are not present in the Exloërmond find. The trapeze-shaped amber pendants are datable by reference to the Armorican Tumulus grave of Kernonen-Plouvorn, with its eight examples. This lavishly furnished warrior's grave contained, alongside typically Armorican Early Bronze Age furniture as well as various links with Wessex (cf. Gerloff, 1975: esp. p. 97), a wheel-headed pin of the earliest Central European variety (Type Speyer; Kubach, 1977: pp. 133-142, esp. p. 134, No. 130-7), which begins in the Lochham (Early Tumulus) phase; a related pin is in the Sitgel-Wohde period-hoard of Wildeshausen, Kr. Oldenburg in Northwest Germany (see under Find No. 12).

The three-riveted grooved ogival dagger from Annertol, Schuilingsoord, gemeente Zuidlaren, Tum. III, grave of Period 2, is perhaps also a Wessex export of the same phase; but has a conventional \(^{14}\)C date of 3450±45 (GrN-6753C; Butler, Lanting & van der Waals, 1972: pp. 230-231; 2-sigma calibration range 1886-1684), which antedates the Wessex II \(^{14}\)C dates presently available (cf. section 1.1), as does the calibrated date for Vogelenzang with the segmented faience bead (1958-1642).

Further comments: The British-type (though atypically large) basal-looped spearhead also found in the peat at Exloërmond (Butler, 1963a: p. 99, fig. 28b, p. 109, No. 4) should belong chronologically to Burgess Group IX rather than to Group VII, and would thus have no connection with the hoard.

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Fig. 5. Find No. 2. Emmerdennen (Drenthe), Tumulus II of Bursch. 1. All amber; 2. Rock crystal; 3-4. Pottery. Scale 1:2. Tumulus plan re-drawn after Bursch.
Bronze Age metal and amber in the Netherlands (I)
FIND NO. 2. EMMERDENNEN, GEMEENTE, EMMEN, DREN-THE: GRAVE IN TUMULUS 11 OF BURSCH (fig. 5)

Map reference: Sheet 17 East (Emmen), 258.35/533.95.


Description of site: Bursch’s Tumulus 11, excavated in 1932, was a small sod-built mound (7.5 m), built of inverted sods. It was surrounded by a circle of six very widely spaced postholes. There was also a round pit in the line of the circumference of the timber circle, which Bursch interpreted as the trace of a post that had been removed. That is, however, likely, as the lines connecting opposite post holes are cylindricaI or nearly cylindricaI. The beads vary greatly in size and can be divided into four categories: large (14-25, esp. No. 14); central perforations (in Men. I, No. 3; Bursch’s interpretation, but did not actually Iie neatly in the position in which Bursch illustrated it (in his own words, “ook al lagen in de grafkelder”). (That one amber bead has a double perforation hardly seems an adequate basis for the reconstruction by Bursch (his Afb: 47); also, one must note that two of the beads have double perforation).

The two pots were at the west side of the body. (In the second coffin grave, no grave goods were preserved; there were only traces of an extended skeleton).


Description of the objects:

1. Pottery vessel, pear-shaped with concave shoulder; two vertical strap-shaped loops bridging neck; the rim has been pressed flat; from it extend outwards six small D-shaped lugs, spaced regularly between the handles. Stand-ring, slightly expanded at base. Of coarse ware. Height 12.5 cm; rim diameter 1.1.6 cm. Inv. No. II.

2. Pottery vessel of similar shape, but with more pronounced hollow neck. Single D-shaped loop of round section, Cylindrical stand-ring. Height 12.5 cm; rim diameter c. 11.6 cm. Inv. No. 11.

3. 26 amber beads (originally 31 ex.), mostly lenticular to biconical. Several beads are markedly asymmetrical in section. The perforations are cylindrical or nearly cylindrical. The beads vary greatly in diameter. Most are in the size class 17 to 23 mm, but two are smaller (9, 14 mm), some are somewhat larger (2x22 mm, 23 mm, 28 mm, 29 mm, 33 mm, 34 mm); the three largest beads are 44-46 mm. One of the large-sized beads has a pair of perforations in the centre, as in a button; one medium-sized bead has one central and one peripheral perforation. Inv. No. 12.

4. Bead of rock crystal: biconical, with biconical perforation: diameter 1.9 cm; thickness 0.9 mm. Inv. No. 13.

5. Bronze fragments, including a small amunial ring: diameter 1.6 cm; thickness 0.9 mm. Inv. No. 14.

6. Flint splinters. Inv. No. 15.

Parallels and connections: The pots fall under the general heading of Kimmerkeramiik (Sprockhoff, 1941: pp. 12-31); there is no survey for the Netherlands. Generally similar concave-necked pots, but rather variable in details, are not uncommon in Denmark and Schleswig-Holstein (Aner & Kersten, 1973-1986, passim). The rock crystal bead has no parallels in the Netherlands. Similarly formed beads of carnelian from the Caucasus area are illustrated by Gimbutas (1965: p. 90, fig. 47). Rock crystal beads and more elaborate rock crystal work are well represented in Mycenaean shaft graves (e.g. Grave O, Mylonas, 1972).

I. The amber beads:

The bead or pendant with one central and one peripheral perforation has parallels in the Netherlands in the grave find from Weerdinge-Kamperschijde (Find No. 4) and the amber hoard from ‘Drenthe’ (see Find No. 3).

The bead or button with two central perforations has an approximate parallel in a grave in the Olympos-Spathes cemetery in Greece (Demakopoulou, 1988: p. 137, No. 86, attributed to LHIII B or LHIIIC; cf. above, under Find No. 1, for tubular beads in the same grave).

The flattened-biconical (hexagonal) bead s are, as suggested above (section 3.2.2 and Find Nos 2, 5, 6, 8), the most characteristic Middle Bronze Age amber bead form in the Netherlands.

Although not apparently well represented either in Denmark or Britain (for the rare exceptions, see above, section 3.2.2), numerous examples can be cited from the Central European Tumulus Culture and areas influenced by it, from the Lîineburger Heide to Central and South Germany and Weiningen in Switzerland.

Some examples:


Silesia: Kruszyniec (Juppendorf), Grab 1 and 2 (Tackenberg, 1927: Gimbutas, 1965: p. 289, Fig. 195; Gedl, 1983: p. 56, No. 190). Dated by Gedl to jiuge KALAuszt = late period II = late Tumulus. The bead or button with two central perforations has an approximate parallel in a grave in the Olympos-Spathes cemetery in Greece (Demakopoulou, 1988: p. 137, No. 86, attributed to LHIII B or LHIIIC; cf. above, under Find No. 1, for tubular beads in the same grave).

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of amber necklace (9 more or less disc-shaped beads, 94 small cylindrical amber beads, plus one of blue glass); handled pot, pair of decorated bronze bracelets. Earlier Tumulus phase, Stufe Weiningen (Keller-Tamuzzer, 1952: pp. 68-70, Taf. VII:2; Oosterwalder, 1971: p. 87, Taf. 5:7-11).

France:

In the Mycenaean world, specimens belonging to the 'hexagonal' category are not common, but are present in least half a dozen finds, to judge from published drawings in which the flattened-biconical form is clearly indicated: Mycenae, Shaft Grave O (Hachmann, 1957b: Kat.No. 10, Abb. 12: 1-8, esp. No. 5; after Milojevic, 1955: pp. 316-319, Abb. 1:5-16; Demakopoulou, 1988: p. 256, No. 280, with colour photo and further references); Mycenae, Kalkani cemetery, Tomb 518 (Wace, 1932: p. 86, fig. 36; Mook, 1977: p. 257, No. 281), attributed to LH I or LHII; Nauplion (Harding & Hughes-Brock, 1974: p. 164, fig. 6:4-3); and further afield at Arvi, Crete (with LMIA sword: Harding & Hughes-Brock, 1974: fig. 6:9); lalysos, Rhodes (LHIIIC?, Harding & Hughes-Brock, 1974: fig. 6:15); Enkomi, Cyprus (from? Tomb66, LCIII A-B, Harding & Hughes-Brock, 1974: p. 169, fig. 6:21). Finally, we may mention the two 'hexagonals' found, together with three other amber beads and much rich cargo, in the remarkable XIV Century shipwreck of Ulu Burum, off the southern coast of Anatolia, roughly between Rhodes and Cyprus (Bass, 1987: pp. 698, 722; photograph of the beads in the German version, 1989: p. 93).

Whether and to what extent exchanges from the Mecklenburg area might have been responsible for the occurrence of the 'hexagonals' in smaller numbers in such far-flung areas as Mycenaean Greece, Alsace, the Netherlands and even southern England, could perhaps be clarified by detailed study. The possible role of Mecklenburg in this networksystem has, it seems, been rather neglected in the international literature.

From this list, which is certainly far from complete, it seems clear that beads of the flattened-biconical form occur at least occasionally in the Sielig-Wohdle/Early Tumulus phase (Fallingbostel, Weiningen), becoming common and widespread in Northern Period IIa of the Middle and Later Tumulus Bronze Age and Northern Period III/IIIA times; and appearing at least occasionally in the Mediterranean area from LH I to LH III times.

**Dating:** The Glamserben Type 3 post circle indicates a date in Middle Bronze B (cf. Lanting & Mook, 1977: pp. 113-114).

The amber necklace is entirely compatible with this dating.

FIND NO. 3. ‘DRENTHE’. NO FURTHER PROVENANCE DETAILS: PRESUMABLE HOARD (fig. 6)
A group of nine amber beads of Middle Bronze Age character in the Drents Museum, Assen, now (re?)inventoried under the number Drents Museum, Assen, now (re?)inventoried under the number (B.A.I. Sheet 17 East (Emmen), 256.52/538.75.

**Site:** Tumulus 2 is the northernmost but one of an elongated group of tumuli on the Kamperseschje, just north of the village of Weerdinge.

**Documentaion:** Original excavation drawings and excavation photographs (B.A.I. Album 1926: no. 1-14) in Biologisch-Archeologisch Instituut, Groningen.

**References:** (a) Museumverlag Assen 1926, 12 (under No. 15); (b) van Giffen, 1927 (II): pp. 305-306, fig. 18 (excavation plan only); (c) van Giffen, 1930: pp. 76-80, Abb. 66-7; (d) Glasbergen, 1954 (II): pp. 22-23, fig. 48a, 48b; 7:27 (underDrenthe No. 1); (e) de Laet, 1958: p. 117; (f) de Laet & Glasbergen, 1959: p. 124, fig. 50 (photo); (g) Butler, 1969: pp. 114-116, fig. 51, Pl. 12 (2nd ed. 1979: p. 63, fig. 31, pp. 122-124, fig. 83); (h) Loenhout, 1991 (II): p. 45, No. 102-0.

**Description of the site:** The tumulus (diameter c. 12 m) was built of heath sods on a podsolized surface, with a central NW-SE rectangular inhumation grave (partially disturbed; no grave goods found). A
partial packing of stones served presumably to steady a tree trunk coffin. It was surrounded by a single, widely spaced post circle (Glasbergen Type 3) of which 25 post-holes were recorded. Probably another 5 went unnoticed. Inserted in the mound were four secondary, tangentially placed coffin inhumation graves (on the NNW, SE, S and W sides respectively). Grave goods were recovered only from the NNW grave.

Circumstances of find: Excavated February-March 1926 by A.E. van Giffen, for B.A.I., Groningen.

Preservation: Inventoried in Drents Museum, Assen, under 1926/ III.1-3. (The amber beads, collectively No. 7 below, appear to have been lost or misplaced).

Description of the objects: All of the objects lay in a group along the north edge of the coffin trace, approximately in the middle lengthwise. The bronzes are patinated dark green, with patches of pale green to almost white. All are corroded and broken.

1. Pin with oval double-wheel head: four innerspokes, eight outer; loop of horseshoe shape at top of wheel. Cast in two-piece mould. Too small to be a finger-ring (unless for a child).

2. Pin with small horizontal disc head: the upper part of the shaft is decorated with incised transverse ribs; the lower part with longitudinal grooves containing pointill!

3. Pin with rolled head: the shaft is ornamented with longitudinal grooves containing pointill!

4. Pin with double wheel head: identical with No. 1 above, but without nicking. Surface more corroded. Fragment of shaft missing. W. 5.6 cm.

5. Ring, annular, of rounded-rectangular shape, of thin bronze wire. Too small to be a finger-ring (unless for a child).

6. Bracelet, penannular, of C-section; the longitudinal groove is on the outer side.

7. Amber beads, 13 ex., of varied form and size. These are unfortunately at present not available for examination. We noted some years ago, when ten of the thirteen beads were present in the Museum, that the colours varied from dark red translucent to blackish and nearly opaque. The perforations were round or oval to an oval shape.

For the forms, we can only rely on the 1:1 drawings made by Postema for the original van Giffen publication; these are somewhat coarse (made for strong reduction in accordance with van Giffen’s publication practice), but can be presumed to be reasonably accurate: 4 large discoidal beads, the shadow renderings on the drawings indicate that the faces of the beads were somewhat hollowed, diameters: 3.1 to 4 cm; 2 similar but smaller beads, 2.4 and 2.6 cm, one of these with hollowed disc head; 1 medium-sized disc bead with peripheral perforation, one face is strongly convex, the other less so; 1 bead, originally oval-shaped, with two eccentric perforations; part of the bead is broken off; 3 small D-shaped beads; 1 small spherical bead; 1 small squarish bead.


The disc- or nail-headed pin (No. 2) is unusual outside the Netherlands (but cf. Wünnenberg, Kr. Büren, Westfalen, Hügel b: Südhülse, 1964: pp. 55-56, 104, No. 241, Taf. 12). A similarly decorated example is from Hijken (Tum. 5, No. 19; see below, Find No. 8); another was associated with a ‘barbed wire’- decorated Hilversum Urn at Nistelrode, gemeente Vorstenbosch, North Brabant (Modderman, 1959; Butler, 1969: p. 46, fig. 13).

The amber beads: The squarish amber bead has a parallel (but more elongated) in a grave find datable to the jüngere Hügelgräberzeit, Stufe Trasbach. A number of similar pins occurring in the Lüneburger Heide region are grouped by Laux (1976: pp. 18-22) among his doppelseitig profilierte Radnadeln mit Spießerschema C (Doppelsradnadeln); especially those mit trapfenförmigen Ösen (among his Nos 17-30; Taf. 44B) are attributed by him to his Stufe frühreich - Deutsch-Evren fräh = Bergen-Bleckmar = späte Hügelgräber-frühr Urnenfelderzeit (traditionally Reinecke D). Why these pins should appear in the Lüneburger Heide region a stage later than they do in Hessen is unexplained.

The nail-headed pin has shaft decoration like to that occurring on some South German pins with swollen, perforated neck of the Central European Earlier Tumulus/Sügel-Wohld phase, but the wheel-headed pins in this same Weerdinge grave would exclude so early a dating.

At present it seems best to adhere to the Kubach dating for this Weerdinge grave, but to keep in mind the possibility of some retardation. Central European jüngere Hügelgräber would in local terms fall within Middle Bronze B.

Interpretation: This Weerdinge-Kampeneschje grave is by local standards an exceptionally rich female burial. The presence of so many pins, including the pair of wheel-headed pins otherwise unmatched in this region, suggest Central European Tumulus Bronze Age costume practice. The grave itself, however, conforms to local ‘Elp Culture’ burial customs in Middle Bronze B ‘family tumuli’ with timber circles. An inter-regional marriage, of a local male with with a female from Hessen, would be a plausible scenario.

FIND NO. 5. WEERDINGE, GEMEENTE EMMEN, DRENTHE: SECONDARY GRAVE IN TUMULUS 2 (‘DE PAAASCHBERG’) (Fig. 8)

Map reference: Sheet 17 East (Emmen), 257.66/537.25.

Site: Secondary, peripheral NS tree trunk coffin grave, in sod-built tumulus with timber circle.

Documentation: B.A.I., Groningen.


Description of site: two-period tumulus, the earlier with sod structure. The primary central tree trunk coffin grave (NW-SE) contained only traces of a shadow skeleton.

It lay within a semi-circular post setting, approximately the half of a post circle, with a diameter of c. 10.5 m. Some of the missing posts may have been destroyed by the insertion of a ring of seven peripheral secondary tree trunk coffin graves, some of which partially cut through the ends of others. One of these peripheral graves, on the west side, contained as grave goods the pair of simple bracelets (one on each side) and the amber necklace (below, Excavation find Nos 1941/III.1-3). Another peripheral grave, on the south side, contained a bronze pin with disc head and slight central boss, a simple annular bronze finger ring, and a single potsherd (excavation find-numbers IV/IV.6-8).

Preservation: Drents Museum, Assen, under 1934/IV.5-8, 1941/III.1-3.

Circumstances of find: Excavated 1941 by A.E. van Giffen for B.A.I. Groningen. The southwest quadrant of this mound had been excavated by van Giffen previously, in 1934; in the excavation of the other three quadrants were excavated. The grave with the
Fig. 8. (1-3) Find No. 5. Weerdinge. Tumulus 2 'de Paaschberg' (Drenthe), secondary grave. Nos 7-8 from different grave. 1,2,7,8. Bronze; 3. All amber. Plan adapted from van Giffen.
amber necklace (below) was found in the west side of the tumulus, largely under the baulk separating the NW and SW quadrants.

**Description of the objects:**
1. **Bracelet**, simple bronze band of sub-triangular section: diameter 4.8 cm; width 0.6 cm; thickness 0.26 cm.
2. **Bracelet**, as No. 1: diameter 4.4 cm; width 0.4 cm; thickness 0.2 cm.
3. **Necklace of 29 amber beads**: colour dull brown, opaque. The forms include: 1 large, slightly irregular flattened bead, with rounded edges. The faces are slightly hollowed. Central perforation, worn to oval shape. Diameter c. 3.0 cm maximum; thickness c. 1.2 cm; perforation 3 to 4 mm; 1 cylindrical bead; length 1.9 cm; width 0.7 cm; 1 small, somewhat rectangular bead (1.2x0.9 cm), of uneven thickness (max. 0.6); the others are small to medium-sized more or less globular to discoid or flattened-biconical beads, varying from 0.7 to 1.7 cm in diameter.

**Parallels and connections dating:** The (incomplete) Type 3 timber circle provides a Middle Bronze B terminus post quem for the secondary graves.

The amber beads are of forms occurring in Middle Bronze Age necklace finds here described; the disc-headed pin and the simple bracelets have no specific dating value, but are in no way inconsistent with a Middle Bronze B dating.

**FIND NO. 6. ROSWINKELERVEEN, GEMEENTE EMMEN, DRENTHE: BOG HOARD (fig. 9)**

**Map reference:** Sheet 18 (Roswinkel), 226.8/534.8.

**Site:** In Roswinkelerveen (peat bog). The exact location was given as ‘Place 38, on the south side’.

**Documentation:** Drents Museum, Assen, 133 Dagboek 1924.

**References:** (a) Museumverslag Assen 1924: p. 16, No. 36; (b) van Giffen, 1925; (c) van Giffen, 1930: pp. 44-45, 79-80; (d) van Giffen, 1944: Afb. 42; (e) van Zeist, 1955; (f) Schlabow, 1974: pp. 193, 207-208, 218, Abb. 19 (d.e.f).

**Description of site:** According to the Museum records, found at a depth of approximately 4 feet, directly under de stobbledaag (wood peat layer), under which there was another meter of peat ("op ±4 voet diepte, volgens mededeling direct onder de stobbledaag, waaronder nog ±1 m veen zat").

**Circumstances of find:** Found October 1924 during peat digging.

**Preservation:** Purchased October 1924 by Drents Museum, Assen, from A. Oortwijn (described as a shopkeeper and caféholder at Stadskanaal) and inventoried under 1924/X.7-12, 15.

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Fig. 9. Find No. 6. Roswinkelerveen (Drenthe), bog hoard(s?). 5. Bronze; 2. Horn; 6. All amber. Scale 1:2. Location plan after Drents Museum inventory.
Description of the objects:

1. Peat turf, in which were two amber beads (Inv. No. 1924/X.8).
2. Fragment of a double-sided horn comb (Inv. No. 1924/X.9).
3. Two fragments of woolen fabric, 30x42 and 21x30 cm resp., in netting technique, dyed red (see Schlabow, 1974: p. 208) (Inv. No. 1924/X.10).
4. Fragment of leather strap, with traces of stitching (Inv. No. 1924/X.11)
5. Fragment of the butt of a bronze palstave (Inv. No. 1924/X.12).
6. Amber necklace, with 44 beads of medium to small size; of translucent amber, dark-reddish to yellowish, well polished (Inv. No. 1924/X.15).

(Nos 1- 3) The largest beads (No. 1: 2.7/2.45 cm; 1.2 cm thick; 2.4/ 2.1 cm; 0.7 cm thick) are markedly 'top-sided'. The largest has a somewhat oval-worn perforator; both are slightly dished around the perforation. The third-largest, No. 3, is of oval section; one face is dish.

The smaller beads are mostly biconical to flattened-biconical or lenticular in section, and vary in diameter from 1.7 down to 0.6 cm, with a peak in their size range from 1.1 to 0.6 cm.

That the remaining objects represent a single closed find depends on the authority of van Giffen (1943: pp. 479, 556 and Afb. 42). "Parallels and connections: the amber beads are, in general similar to those in the Middle Bronze Age graves and hoards here described, if comparatively small in size range. The tubular beads have approximate parallels in the Exloermond hoard (Find No. 1) and the Weerde-Raapschberg grave (Find No. 5); parallels elsewhere are cited under Find No. 1."

The 'spindle-whorl-shaped' bead resembles a bead in the Mander grave in Twente (Find No. 15).

Two crossed perforations in one bead are matched in a (somewhat differently shaped) specimen from Hjerpsted in Jutland, in a Period II grave (Aner & Kersten VI: No. 2916).

The double-edged combs highly unusual in Bronze Age contexts, the single-edged comb being normal in that period, whether in bronze or horn. For combs in the Aegean area, see H.-G. Buchholz (1984-1985). According to Buchholz double-sided combs are absent in the Aegean Bronze Age, but had reached Cyprus in the East at least by the end of the XIVth Century BC (Buchholz, 1984-1985: p. 115).

The horn comb and the textile fragments hint at the wealth of perishable materials which do not normally survive. In the Bronze Age of the Netherlands textile fragments have been recovered along with the bog-body of Emmerersfeidheidenveen, referred to above under Section 1.2.1 (van der Sanden, 1990), and in the Weerdinga-Kampersche grave (Find No. 4).

"Dating: The palstave fragment, such as it is, suggests a Middle Bronze Age dating; its weak cross-section points to a later rather than an earlier palstave. The amber necklace argues for a Middle Bronze B dating."

FIND NO. 7. EMMERCOMPASCUUM, GEMEENTE EMMEN, DRENTHE: BOG HOARD (fig. 10)

Map reference: Sheet 18 (Roswinkel).

Site: Emmerscompascuum, "In de westelijke doornsneedie plaats 10, onder gronslaag in de darg".

Documentation: Museum Assen, 34 Dagboek 1923.

References: Museumverslag Assen 1923, pp. 23-24, No. 88.

When transferred to Drents Museum, Assen, inventorized under 1953/VIII.1-44.

Description of site: Two-phase burial mound c. 14.5X1.7 m; only the NE and SW quadrants were excavated, but a trench 1.8 m wide was excavated along the centre-north baulk in the NW quadrant.

Phase I was a turf-built tumulus without peripheral structure. It is dated by van der Veen and Lanting to Middle Bronze A. Conventional 14C dating (charcoal on old surface, 'in the trench of the NW quadrant'), GrN-I0747: 3290±35 BP; 2-sigma calibration range 1674-1518. Primary, NW-SE coffin inhumation grave in shallow pit. Grave goods as described below, under Excavation find no. 39.

Phase 2 was a tumulus with V-shaped ditch. Central E-W tree-trunk coffin grave, with (No. 31) very long (30 cm) Central European Tumulus Bronze Age pin (mittlere zu jungere Hâgelgräberzeit). In local terms, according to van der Veen and Lanting, "towards the end of the first half of the Middle Bronze Age".

In the SW quadrant were two secondary, tangential burials; whether dug in from Phase 1 or Phase 2 was indeterminate. One of these contained the pottery vessel, bronze pin shaft, and set of 16 amber beads, described below under Excavation find no. 36.

Circumstances of find: Presumably during peat digging; no details are recorded.

Preservation: Purchased June 1923 by Drents Museum Assen, from the finder, one Vos, barge-operator of Emmercompascuum, via A.J. Baas, schoolteacher of Emmer-Erfscheidenveen. Inventorized under 1923/V/1.

The glass bead surviving is light blue, barely translucent; globular with slightly eccentric cylindrical perforation. 7.7x6 mm thick; well preserved, glossy surface.

Parallels and connections: The amber bead types are those occurring in the other Middle Bronze Age hoards here described.

The glass bead is without parallel in the Netherlands. Glass beads occur, however, in numerous Earlier and Middle Bronze Age finds in Denmark, Schleswig-Holstein, and the Luneburg region.

FIND NOS 8-9. HIJKEN, GEMEENTE BEILEN, DRENTHE: GRAVES IN TUMULUS 9 ON LANDGOED (ESTATE) HOOGHALEN (these two grave finds are here grouped together because they come from the same burial mound)

Map reference: Sheet 17 West (Emmen), 230.25/547.83.

Documentation: B.A.I., Groningen.

References: The complete Hijken-Hooghalen barrow cemetery excavation was published in detail (van der Veen & Lanting, 1989) in a recent Paalaeohistoria, in view of its completeness and easy accessibility the description here can be limited to a concise summary, with special reference to the richer graves from Tumulus 9. See also Lohof, 1991 (II): pp. 21-22. No. 044-1/2 ("Tumulus IX, Hijkenveld").

Circumstances of find: Excavated 1952-1953 by A.E. van Giffen for B.A.I. Groningen. Eleven tumuli were excavated, of a group of 16; Tumulus 9 in 1953.

Preservation: B.A.I. Groningen until 1988, when transferred to Drents Museum, Assen, inventorized under 1953/VIII.1-44.

Description of site: Two-phase burial mound c. 14.5X1.7 m; only the NE and SW quadrants were excavated, but a trench 1.8 m wide was excavated along the centre-north baulk in the NW quadrant.

Phase I was a turf-built tumulus without peripheral structure. It is dated by van der Veen and Lanting to Middle Bronze A. Conventional 14C dating (charcoal on old surface, 'in the trench of the NW quadrant'), GrN-I0747: 3290±35 BP; 2-sigma calibration range 1674-1518. Primary, NW-SE coffin inhumation grave in shallow pit. Grave goods as described below, under Excavation find no. 39.

Phase 2 was a tumulus with V-shaped ditch. Central E-W tree-trunk coffin grave, with (No. 31) very long (30 cm) Central European Tumulus Bronze Age pin (mittlere zu jungere Hâgelgräberzeit). In local terms, according to van der Veen and Lanting, "towards the end of the first half of the Middle Bronze Age".

In the SW quadrant were two secondary, tangential burials; whether dug in from Phase 1 or Phase 2 was indeterminate. One of these contained the pottery vessel, bronze pin shaft, and set of 16 amber beads, described below under Excavation find no. 36.
FIND NO. 8. EXCAVATION FIND NO. 39 (fig. 11A)

Description of the objects:
1. Pair of gold coils; of wire c. 1 mm thick; diameter c. 18 mm. Metal analyses (Hartmann, 1982: p. 100, Anal. Nos 3031-3032, Taf. 6): (1) Ag 10, Cu 0.25, Sn 0.01; (2) Ag 11, Cu 0.56, Sn 0.23.

2. Pin of twisted bronze wire. The shaft is bent into a 'sickle' shape. Head rolled; tip missing. Present length 10.5 cm; unrolled length c. 17 cm.

3. Pin with inverted-cone and disc head. The edge of the disc is milled. Length 14 cm; diameter head 0.6 cm; disc diameter 1.2 cm.

4. Set of arrowheads of sheet bronze very slightly ridged in the centre; severely corroded. At least ten examples are present; all tanged, and at least four with barbs. Length 3.5 to 5.5 cm.

5. Flint strike-a-light. Coarse flint blade with bifacial retouch. Length 6.7 cm.

Parallels and connections:
The roll-headed, twisted pin no exact parallel seems to be known.

Roll-headed twisted pins were in use in Central Europe in the later Early Bronze Age and the Middle Bronze Age (cf. Laux, 1976: p. 52, Nos 244-246; No. 286, with further references in Notes 20-23). An example from a Bohemian hoard (Varvažov: Kytlicova, 1964: p. 541, Abb. 163A; Jockenhövel, 1971: p. 67, No. 58, Taf. 57C) is dated to the horizon Plzeň-Jihlava (Reinecke C/D). (The bends in the shaft of this Hijken pin recall the Danubian Sichelnadel of the Koszider horizon but these have quite different types of head.)

The gold coils see under Drouwen (Find No. 11), Sleenerzand (Find No. 16), and Velsenbroek (Find No. 20).

The sheet bronze arrowheads in general very rare, as arrowheads with a strengthening midrib would have been far more practicable. But for the Netherlands cf. Sleenerzand (Find No. 16) and Vries (Tumulus No. 2, a ring-ditch tumulus, secondary grave: van Giffen, 1941: fig. 12), without the barbs in both these cases. Similarly barbed are some examples, also with very slight midribs, in a set of arrowheads from Gräbholz 52 at Schöngesießen, Ldkr. Fürstenfeldbruck in Bavaria.
Fig. 11. A. Find No. 8. Hijken (Drenthe), Tumulus 9: 1, primary grave with Exc. find No. 39. 1. Gold; 2-4. Bronze; 5. Flint. Scale 1:2.
Bronze Age metal and amber in the Netherlands (I)

The cone-and-disc-headed pin. Several related examples are illustrated by Laux (1976: pp. 68-70, Nos 366-370; here fig. 12:3-5). He considers them to be a North German variant (probably made in the Middle Weser area) of the Central European gezackte Nadel.

Interesting is the occurrence in a hoard in Poland (A. Mačkówka, Gd. Zarzecze, Wojew. Przemysł; Essen, 1985: p. 53, No. 284/284A; here fig. 12:13-14) of a pair of pins evidently related to the Hijken pin and its Linnburger Heide parallels, but which have a second cone placed below the milled-edge disc, and incised decoration on the long, bent shaft. The source of these pins is obscure; Essen could cite no parallels. But a related series of pins from Bohemia and South Germany (here fig. 12:8-13) has been illustrated by Herrmann (1970-1971: p. 87, Abb. 10); several examples with heads similar to these by Beck (1980: Taf. 14A5, 14B1, 2, 15B3; Beck assigns these to the Mohnkopfnaudel series. The Polish hoard is difficult to date, as it contains objects ranging from Periods II to IV, but most of its contents are D/HaA1 types.

Dating: The Phase 1 tumulus, without peripheral structures and with a 14C dating of 3290±35 (2-sigma calibration range 1674-1518 BC) was accordingly dated by Lanting & Mook (1977; cf. van der Veen & Lanting, 1989) to Middle Bronze A. If the cone-and-disc-headed pin in this grave is indeed a North German version of the Central European gezackte Nadel, then a dating prior to Reinecke D would be excluded; this would place the grave in question in, at the earliest, an end-phase of Dutch Middle Bronze B (Laux 1976: p. 69) dates the Südöstliche Form of the gezackte Nadel to the turn of Period II and Period III.

J.N. Lanting (pers. comm.) suggests that the Hijken cone-and-disc-headed pin could be regarded as a forerunner rather than a derivative of the gezackte Nadel, and that he would rather date the pin by its context (the tumulus with structureless periphery, the gold coils and the strike-a-light early) than the tumulus grave by the pin. For the moment we must allow opinions to differ.

Stratigraphically later than this grave is the primary grave of Phase 2 of Tumulus 9, with as only grave-goods (Excavation find no. 31): pin with disc head containing shallow depression; under which

4. CATALOGUE OF OTHER RICHER GRAVES AND HOARDS OF THE EARLY AND MIDDLE BRONZE AGE

FIND NO. 10. WAGENINGEN, GEMEENTE WAGENINGEN, GELDERLAND: HOARD (fig. 13)

Map reference: Sheet 39 (Wageningen), 176-177/443.4-444.5. Site: In a heath field ‘half an hour’ (on foot) northeast of Wageningen.


References: (a) Pleyte, 1889: pp. 49, Pl. XI: 5-9; (b) O’Riordain, 1937: p. 239, fig. 37; (c) Butler, 1959: pp. 126-129, fig. 1; (d) de Laet & Glasbergen, 1959: p. 110, Pl. 26; (e) Butler, 1963a: pp. 15 ff., 29, 189 ff., fig. 1; (f) Butler & van der Waals, 1966: esp. pp. 80-82, fig. 21, appendices I: Nos 21-28, III: No. 12 (with spectro-analyses); (g) Butler, 1971: NL 11; (h) Butler, 1969: pp. 87-88, 103-107, fig. 47 (2nd ed., 1979: pp. 94, 112-115, fig. 79); (i) Clarke, Cowie & Foxon, 1985: p. 148, fig. 4.81, p. 318, No. 177; (j) Gerhardt-Witteveen et al., 1989: pp. 12-13, Nos 1-5.

Description of site: On gentle slope at the SE edge of the Veluwe, overlooking the Gelderse Vallei, 2 km north of the Rhine bluffs east of Wageningen.

Circumstances of find: Found in December 1840, the objects ‘all lying close together’, about 60 cm below the surface, while trenching to plant trees. Objects presented by landowner, Alderman J. van Rijn of Wageningen, to R.M.O., Leiden, in June 1841 (see appendix 1).

Description of the objects: All except No. 9, stone, of copper or bronze, with uniform light green patina. Details of metal analyses: see table 2.


3. Dagger: semicircular hilts: projecting shoulders; three rivet-holes, two still containing small rivets of irregularly square cross-section. Flat blade, outlined by two broad, very shallow grooves. Outline of omega-shaped base of hilt preserved in the patina. Edges sharp, slightly worn. Length 15 cm. Of arsenical copper practically identical with halberd, No. 1; one analysed rivet is of low impurity Cu with 1.1% tin. Inv. No. R.W. 3.

4-5. Penannular rings, with ends roughly broken: cross-section variable (nearly square to polygonal or rounded). Diameter 6.5-6.7 cm; max. thickness 3 mm. Bracelets; or possibly two fragments of a spiral ornament (the edges do not join). Inv. Nos R.W. 5a,b. 6-7. Two fragments of thinner rings. Inv. Nos R.W. 6, 7.

8. Ingot bar, of square cross-section, folded into rough spiral. Unrolled length approx. 35 cm; max. diameter 4 mm. Inv. No. R.W. 9b.


10. Punch or awl, of rectangular cross-section: one end ground to a point; the other end thinning toward a chisel-like end, but the tip is broken off. Surface rough except for the ground point. Length 10.3 cm; diameter 3.5 by 3.5 mm. Of Singen-type copper. Inv. No. R.W. 9a.


13. Fragment of rough bar, length 6 cm: of copper similar to Singen type (but low Ag), with 1.4% Sn. Inv. No. R.W. 8.


The flat axe: In form, the flat axe falls generally within the range of the flat axes of Type Migdale (Schmidt & Burgess, 1981), typical for Burgess Stage IV. The ridged sides are found on an axe of Type Dunottor (their No. 45) and on several Type Migdale axes (Nos 57, 60, 98, 137, 151); on Migdale Decorated Variant Nos 197 and 199 (the latter specimen is from the Colleenard Farm hoard). The faint curved, facialed ridge on the face of the Wageningen axe does not seem to have any parallels in the Migdale group; though it is found on two axes from the Wold Farm, Willerby (E. Riding Yorks) hoard; Schmidt & Burgess, 1981: Pl. 134.1, 3, 14, 63 (Nos 326-328), 64 (No. 337), with three axes of Type Falkland and one of Type Scrabo Hill, assigned to Burgess Phase V.

Only the metal analysis of the Wageningen axe does not support the idea of a Migdale origin; Migdale axes are alleged to be all of
Fig. 13. Find No. 10. Wageningen (Gelderland), hoard. All copper alloy except 9 (stone). Scale 1:2.
Table 2. The Wageningen hoard (Find No. 10): Metal analyses. After Butler & van der Waals (1966) in which metallographic data are also given for some of the objects. References to appendices 1 and 2 refer to that publication.

<table>
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<tr>
<th></th>
<th>Anal</th>
<th>Sn</th>
<th>Pb</th>
<th>As</th>
<th>Sb</th>
<th>Ag</th>
<th>Ni</th>
<th>Bi</th>
<th>Fe</th>
<th>Co</th>
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<tr>
<td>Flat axe of Irish thin-butted faceted type. RW 4. Cast, annealed. Traces of cold-working on surface</td>
<td>/</td>
<td>1.16</td>
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<td>0.2</td>
<td>0.13</td>
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<td>n.d.</td>
<td>0.01</td>
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<tr>
<td>Halberd of Irish type 4: 3 rivet-notches. RW 2. Cast, annealed (/f); App. 1:16</td>
<td>BW 2 n.d.</td>
<td>0.03</td>
<td>7.0</td>
<td>0.04</td>
<td>0.03</td>
<td>n.d.</td>
<td>0.006</td>
<td>n.d.</td>
<td>-</td>
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<td>Halberd rivet, unfinished. RW 10</td>
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<td>n.d.</td>
<td>1.5</td>
<td>7.6</td>
<td>2.5</td>
<td>2.5</td>
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<td>n.d.</td>
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<td>n.d.</td>
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<td>8.6</td>
<td>1.3</td>
<td>2.5</td>
<td>0.002</td>
<td>n.d.</td>
<td>0.07</td>
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</tr>
<tr>
<td>Knife, triangular, with 3 rivets, shouldered hilt-plate. RW 3. Cast, annealed (/f); App. 2:9; traces of cold-working on surface</td>
<td>BW 3 n.d.</td>
<td>0.01</td>
<td>6.8</td>
<td>0.02</td>
<td>0.03</td>
<td>n.d.</td>
<td>0.002</td>
<td>0.006</td>
<td>-</td>
<td></td>
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<tr>
<td>Rivet of knife. RW 3</td>
<td>BW 4 1.1</td>
<td>0.07</td>
<td>0.1</td>
<td>n.d.</td>
<td>0.02</td>
<td>0.02</td>
<td>n.d.</td>
<td>n.d.</td>
<td>-</td>
<td></td>
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<tr>
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</tbody>
</table>

bronze, and British alloys do not contain high nickel. Evidently we have to do with an axe made in the Migdale tradition, but of an alloy derived from 'Singen' metal. Only one or two other flat axes found in the Netherlands are also asignable to the Migdale family. Remarkably, nothing in the Wageningen hoard has any relationship whatever to Bell Beaker metal work (Butler & van der Waals, 1966).

The **knife-dagger** in the Wageningen hoard has a hilt-plate of semi-circular form and shoulders, for which it is difficult to cite exact parallels. At least two knife-daggers from the Singen am Hohentwiel cemetery in Southwest Germany (Krause, 1988: Grave 7, Taf. 7C1, Abb. 13:7, Taf. 2D5; metal analysis SAM anal. 1272; 14C date [HD 8972-9116]: 3680±45 BP; Grave 75: Krause, 1988: Taf. 7C1, Abb. 13:75, SAM anal. 346) have, however, an approximately similar hilt form. Other Singen daggers have varied expressions of the shouldered hilt-plate theme.

Although the metal analyses forbid a claim that the Wageningen knife-dagger is a Singen export, we may well consider it to be at least Singen-influenced. The Wageningen halberd and the knife-dagger are possibly from the same workshop, considering the similarity of their metal analyses (note also that both pieces have stepped blade edges). Both pieces have very high As (7.0 and 6.8% respectively), and the percentages of the minor constituents are similar to each other; high As is not a characteristic of Singen metal.

The shouldered hilt-plate is also common, in numerous variations, in the Early Bronze Age of western Europe, especially on halberds, both in the Irish series (Harbison, 1969a) and in France (Gally, 1981).

The **halberd**: Rather similar to the Wageningen halberd is the example from Upsprunge, Kr. Buren, Westfalen (Sprockhoff, 1956: Taf. 32:2). Also similar, but with four rivet-notches, is the halberd from the neighbourhood of Amiens in Picardy (Blanchet, 1984: p. 131, fig. 56:4, p. 133). The Wageningen halberd is less like Irish Type IV/Type Carn halberds (Harbison, 1969a) than once assumed, but the 'international straight-midribbed halberd' type to which Harbison would assign these specimens (1968: pp. 175-178) still requires fuller definition. The finer, larger halberd with 3 rivet-holes from Roermond, Limburg (Glasbergen & Butler, 1961: fig. 1) and the similar example in the Dieskau hoard (often illustrated: e.g. Butler, 1963: PI. lc) are more advanced.

Halberds with notches instead of rivet-holes, but of more developed form, occur in hoards of the classical Unetice phase.

The two unfinished halberd rivets, both of octagonal cross-section, are best paralleled on British-Irish halberds. Thick 'plug' rivets with a shank of polygonal cross-section occur with Irish halberds of several types (e.g. Type Carn (Harbison, 1969a: Nos 145, 151, 155, 170, 171, 177, 183), Type Cotton (Harbison, 1969a: Nos 193, 219, 221, 232, 239, 244, 245, 247, 265, 275, 276), Type Clondard (Harbison, 1969a: Nos 280, 282, 289, 293)). But the Wageningen halberd rivets are of Singen-type metal, with practically identical analyses. Both have very high Sb (7.6 and 8.6% respectively). Sb percentages of this order occur in a number of analysed objects in the Singen cemetery, and also in some flanged axes of Salez type, especially in the hoards of Salez itself (most of the analysed axes) and Hindelwangen (5 ex.) (Bill, 1985; 1987; Krause, 1988). A rivet of the knife has, however, a quite different composition (Sn 1.1%, As 0.1%).

As an awl and an ingot bar are also of metal of Singen (or at least Singen-related) character, we may say that the evidence for Singen-Wageningen contact is considerable. The contact need not necessarily
have been direct; the Adlerberg culture along the Middle Rhine also used Singen-type metal (as, indeed did the Nitra Group in SW Slovakia, and to some extent the Únětice culture). If Krause is correct, ‘Singen metal’ comes ultimately from the Upper Rhine area in the Swiss Alps.

**Dating:** The form of the knife-dagger suggests dating within the Southwest German Early Bronze Age stage of the Singen am Hohenwiel cemetery; thus, according to Krause, within the Reinecke A1 phase. The daggers with comparable hilt form are not confined to a merely closely definable stage of the cemetery, as they are found in various areas thereof.

The halberd’s flat midrib, stepped blade, and large rivet notches suggest, however, some relationship to the halberds of the classical Únětice hoards, so that a dating comparable to the end of Singen and Reinecke A1 seems likely.

The 14C dating of the South German Early Bronze Age has been discussed by Krause (1988: pp. 145-180). The 14C dates for Singen, as evaluated by Krause (1988, pp. 169 ff.) range from 3640 to 3850 BP (conventional), and around 2100-2300 calibrated.

In the Sinagen cemetery, five graves with decorated rudder heads (Ruderndel) and one grave with a Horkheimer Nadel have been 14C-dated. Their calibrated ranges, as calculated with the Groningen conversion programme, are shown in table 1, along with those, for comparison, of the St. Walrick dating and that of the Rich Armoricain Early Bronze Age grave of Saint-Adrien, Côte-du-Nord (the only Armoricain tumulus grave with a low error term). Singen Grave 45 is a high date (but without calendar range) out of line with that of the others which are quite consistent. Five of the date ranges have in common the period c. 2140-2050, so it is perhaps not unreasonable to say that ‘around 2100’ is a fair estimate of the absolute date of this horizon.

Grave 75 occurs in the southern part of the Sinagen cemetery, in Krause’s Gräbergruppe IV; Krause (1988: pp. 125-126) assigns this portion of the cemetery to Ruckdeschel’s Phase A1b (Horkheimer Nadel), with Gräbergruppe I, with Grave 7, is assigned to Phase A1a, characterized by verzierter Scheibenkopfdel.

Whether it was a simple knot-headed pin, or one with a more complicated (T-shaped) head, or even a Horkheimer Nadel, can no longer be established. Pins with such wire winding were in use in the Singen and other Early Bronze Age culture groups (Ruckdeschel, 1978; his Beilagen 1 and 2 provide a convenient overview of the relative chronology of these pin types; cf. Krause, 1988). A similar (also headless) pin occurs with an Armoricain-like dagger and Central European Early Bronze Age burial goods, as the copper gold and spiral bracelet in the Haygenau forest in Alsace, in the well-known grave from Donauberg Tumulus 12 (Gallay, 1981: p. 114, No. 275, Taf. 51A:1-4; with previous references).


The first phase of this St. Walrick tumulus was dated by a primary grave with Veluwe Bell Beaker of van der Waals and Glasbergen Type 21f. It was followed, at not too great an interval according to the pollen analysis, by the grave with the bronze pin and a contracted corpse silhouette, and charcoal which gave a 14C date of 3660±45 BP (GrN-6145). GrN-2996, 3702±80 BP, is from Period II of the same tumulus: Lanting & Mook (1977, pp. 98-99) suggest that “this charcoal has probably been dug up from the grave of period 2”. Both the St. Walrick 14C dates are reasonably close to the conventional 14C date of 3680±45 for Singen Grave 7, which in turn lies comfortably in the middle of the Sinagen 14C range. The St. Walrick 14C date calibrates (2-sigma) in the range 2136–1938. Thus it, and with it the Wageningen hoard, may date in rounded-off absolute terms to the period around 2000 BC. Thus close to the calibrated 14C date to Leubingen, Helmsdorf, and Leki Male, supporting the relative dating of Wageningen to a time close to the transition from Early to Classical Únětice. In terms of the Lanting-Mook chronology for the Netherlands, it falls not far from the boundary between Late Neolithic and Early Bronze Age.

According to Burgess, tin bronze would have been in regular use in the Killaha-Migdale tradition at this time, but along the Rhine, Singen metal (sometimes with tin in the order of 1 to 2%, but regularly with rather high Sb and Ni) was the metal in common use. In the Netherlands Sinagen metal was also in use for axes of the phase comparable to Burgess Stages V and/or VI; including the ‘Emmen axes’ found as local products in the North of the country (see Butler & van der Waals, 1966).

**Interpretation:** The presence in the Wageningen hoard of one axe, one halberd, and one knife-dagger, all apparently in usable condition, tends to suggest a set of masculine personal equipment. The bracelets do not necessarily contradict the masculine character of the assemblage. The presence of unfinished rivets, an awl or punch, and sheet and bar scrap metal would, however, suggest that the possessor was involved with metal-working.

The metal used for some at least of the Wageningen objects, and the flat form of the Wageningen dagger, suggest contact with ‘Singen’ in Southwest Germany, while the form of the flat axe (though not its metal composition) imply contact with the North British Migdale tradition.

The Wageningen hoard may thus be considered to be a ‘contact find’ linking the Southwest German EBA, close to the end of its Phase A1b, with the British EBA in the Stage IV (Killaha-Migdale) of Bebb’s chronology.

In terms of development, the Wageningen assemblage seems to be subsequent to the metal-working tradition of the Veluwe Bell Beaker phase— with which, indeed, it has nothing recognizable in common; and to precede the phase in which British-related decorated low-flanged axes occur, chiefly in the centre of the country, and the undecorated low-flanged Emmen axes chiefly in the North.

The remarkable is that the calibrated 14C dendro dates for this horizon do not necessarily contradict other events in the area. It suggests a visitor to the region, perhaps a travelling smith, or a trader along the Rhine route.

The awl or punch has a Middle Bronze Age parallel in iron, found on the Southern Plank Footpath at Bargerootseveld in Drenthe (Casparie, 1984; 1987). Unfortunately, the types represented in the Wageningen hoard do not occur in the grave and settlement record in the Netherlands or neighbouring areas, so that it cannot be directly related to the regional chronology based on grave mound and pottery types. Presumably it falls within the period when WKD pottery was in use, thus Early Bronze Age in the sense of Lanting and Mook (1977).

**FIND NO. 11. DROUWEN, GEMEENTE BORGER, DRENTHE: GRAVE UNDER MORTUARY HOUSE IN TUMULUS (fig. 14)**

**Reference:** Sheet 12 East (Assen), 249,255/519.5.

**Documentation:** Biologisch-Archaeologisch Instituut, Groningen.

**References:** (a) van Giffen, 1930 (1); pp. 84-93, (II): Abb. 78 (original publication); (b) Sprockhoff, 1941: Taf. 20 (photograph); (c) Glasbergen, 1954: p. 145, fig. 67:7, 68; (d) Butler & Smith, 1956: p. 20, fig. 2; (e) Bachmann, 1957a: pp. 33:7, 88, ff., Kat. Nr. 634, Taf. 39:5-9; (f) de Laet & Glasbergen, 1959: p. 121, fig. 47; (g) Butler, 1963a: pp. 115-117, fig. 33:1; (h) Butler, 1969: p. 107-110, fig. 48-49 (2nd ed. 1979: pp. 115-119, fig. 80-81); (i) Butler, 1971 (= IA NL 11); (j) Jockenhövel, 1980: p. 39, No. 68, see also his Ortsregister ‘Drouwen’ (p. 230); (k) Butler 1986: pp. 149-150, fig. 16a-c; (l) Lobbe, 1991: pp. 28-29, No. 061-0.

**Circumstances of find:** Excavated 1927 by A.E. van Giffen; supplementary excavation by J.N. Lanting 1985; both for R.A.I., Groningen.

**Description of site:** Location 1 km south of Drouwen, within early medieval cemetery. During excavation of the cemetery in 1927 remnants were found of a largely destroyed tumulus, with a core of dirty sand, c. 9 m in diameter, and a capping of clean yellow sand; there were traces of a peripheral stone revetment. The 1985 supplementary excavation disclosed part of a square or rectangular V-
sectioned ditch, with an internal diameter of at least 32.5x16 m which is presumably associated with the original construction.

Under the tumulus lay a four-post mortuary house, c. 1.85x1.40 m. Therein, approximately on the old surface, was the grave, the plan of which (fig. 14, inset) is based upon the 1927 excavation photographs.

**Description of the objects:**
1. **Bronze dirk.** Broad oval blade, thin prominent midrib; rounded heel with five capped rivets arranged in an arc. Incised decoration on blade (four lines outlined by pointillé, with an inner margin of small arcs). Surface corroded and blistered. Traces of grain of wooden hilt preserved in the corrosion. Length 34.5 cm. Inv. No. 1927/VIII.40c.
2. **Bronze flanged axe** with cast 'nicked' flanges. Length 12.7 cm. Inv. No. 1927/VIII.40a.
3. **Bronze tanged razor.** Thin flat blade, badly preserved; thicker narrow tang, thinning to slightly expanded end. (The shape of the upper half of blade as shown is based on excavation drawing and photograph in situ; the exact original outline was indeterminate. The tang and base of blade were well preserved). Inv. No. 1927/VIII.40f.
4-5. Pair of gold coils, of thin springy round-sectioned wire. Length 3 cm; diameter 3.8 cm; thickness of wire 1.3 mm. Gold analyses (Hartmann, 1952: p. 102, Tab. 11): Anal. No. 3035: Ag 20-25, Cu 0.41, Sn 0.04; Anal. No. 3036: Ag 20, Cu 0.48, Sn 0.05; both assigned to Hartmann’s Mat. Group A. Inv. Nos 1927/VIII.b 1-2.
6-14. Nine finely worked hollow-based arrowheads of translucent grey flint, with orange patina. Two have minutely serrated edges. One (11) retains coating of black resinous material, with the hollow originally filled by tip of arrow-shaft. Inv. Nos 1927/VIII.40f 1-9.
15. **Strike-a-light,** of flint similar to (6-14). Length 8.2 cm. Inv. No. 1927/VIII.40d.
16. **Whetstone** of black lydite. Rectangular cross-section: all for faces polished; ends rounded. Length 8.7 cm. Inv. No. 1927/VIII.40e.

**Parallels and connections:** Most of the objects in this grave are typical of the much discussed Sögel group, characteristic in the Early Bronze Age of northwestern Germany and western Jutland. The Sögel group was described most exhaustively by Hachmann (1957a), who also traced the origins of its metal types in the Carpathian basin and southern Germany. Further contributions to its definition have been made by Bergmann (1952; 1970), Piesker (1958), Lomborg (1959), Laux (1971), Bokelmann (1977), Kubach (1973) and others.

1. The **dirk** is typical for the series of daggers and dirks with round hilt-plate, four or five capped rivets (Ringniete), thin midrib, and (often) decorated blade classified as 'Sögel' blades. (Some blades with ‘plug’ rivets are otherwise very similar, but are not usually classified under the 'Sögel' label). No complete distribution map exists; one may compare those of Sprockhoff (1941: Abb. 31), Hachmann (1957a: Karte 1), Stieve (1971: Taf. 5), Hackenberg (1985: Karte 17), etc., with curious discrepancies.

Only a few additional specimens are known in the Netherlands: decorated dagger blades are known from Aegelo near Otterlo, Twente (present location unknown; illustrated Molhuize, 1944: p. 174) and from the Hunnerberg at Nijmegen (Museum Nijmegen, GNAC 39).

A decorated dirk from the river Maas at Borgharen, **gemeente** Maastricht (Butler, 1969: Pl. 5 (2nd ed. 1979: fig. 12); is typically 'Sögel' except that the hilt-plate is rounded-trapeze-shaped.

2. **The gekruikte Randbeil** (no English translation seems to exist) is frequently associated both with Sögel and Wohlde daggers and rapiers, and has a similar distribution.

The Drouwen example is typologically 'early' in that it has no trace of stopridge formation (in contrast to Overloorn, cf. Find No. 12). Very few other examples in the Netherlands: two unpublished 'from Waal or Rhine' without exact provenance, are in the study collection of the B.A.I., Groningen: 1938/IV. 8-9, ex Blijdienstein collection.


4-5. The **gold coils**: Wohle, Kr. Celle, **Hügel** A, Find. 1: Hahe, 1909: pp. 62-63, Taf. XIII.1.7; Laux, 1971: No. 32F, Taf. 3:1-2 (with osthammerovierische palstave Laux Var. A, assigned to Zeitgruppe I according to Laux; but according to Hahe the palstave was a separate find, Find II).

6-14. **Hollow-based arrowheads** of this form and quality are not common in the Netherlands, but cf. Balloërveld, **gemeente** Rolde, Drenthe, Tumulus 4, van Giffen, 1935: p. 13, Abb. 3:5, 9:5; Noordsleen, **gemeente** Drenthe, unpublished cremation grave with rolled-headed pin, amber bead, etc.; Medemblik, North Holland, near recently excavated Bronze Age long house. More common in German Sögel graves.


**Grave structure:** Similar mortuary houses in tumuli in Drenthe cited, with further references, by Glasbergen, 1954: pp. 142 ff.

**Dating:** Sögel-Wohlde phase; now equated with Central European Early Tumulus (= Lochham, etc.). Within that period, it may still be considered to be typologically earlier, however, than finds such as Ehestorf, Wildeshausen, Iismaar, Valsmögge (see below under Overloorn, Find No. 12).

The recently discovered ring-ditch would, if actually contemporary with the mound and the grave, place the Drouwen tumulus within the Lanting & Mook Middle Bronze A.

For Sögel-Wohlde 14C datings, see table 1: these suggest an absolute dating in or around the 17th century.

**Observations:**
- a. Chemical analyses of three of the bronzes quoted by van Giffen, 1930: No. 4, are superseded by spectro-analyses by Jungkin, Sangmeister & Schröder (1960: pp. 110, 128, 168, Nr. 681) (see table 3);
- b. The material of the tumulus contained a barbed and tanged arrowhead, presumably of earlier date. Graves of a Merovingian-Carolingian cemetery were inserted into the tumulus.

**Remarks:** The richest known of the men's graves of Sögel type. This rich Drouwen warrior's grave seems rather isolated in the Netherlands, being on the extreme western periphery of the Sögel group; though it may be grouped geographically with the Hlimmling (Emsland) graves at Sögel itself, some 50 km west of Drouwen, and, farther off, the finds of Wildeshausen (Jacob-Friesen, 1954; 1967) in Oldenburg and Ehestorf near the mouth of the Weser (Laux, 1971: Cat. No. 4, with further references).

At Drouwen we evidently have to do with a person commanding, and buried with, unusual respect. Whether he was an intrusive figure, or a commanding person risen in the local culture but enjoying distant connections, cannot be determined on present evidence.

The occurrence at Drouwen of a series of, for this region, extraordinarily rich Late Bronze Age finds (Butler, 1986) raises the question of whether there was here a long-existing centre of authority. Rich Middle Bronze Age finds are, however, still lacking from this locality; so that continuity may be surmised but not demonstrated.
FIND NO. 12. SMATKER SPURKT, GEMEENTE VENRAY, LIMBURG: THE 'OVERLOON' HOARD (fig. 15)

Map reference: Sheet 52 West (Venlo), 195.7/396.4.

Site: In a field called 'de Klippen', c. 2 km SE of Overloon; close to the eastern border of (but not, as previously assumed, in) the province of Noord-Brabant (information from B. Kruysen and W. Glasbergen).

Documentation: Correspondence in B.A.I. Groningen: burgemeester of Vierlingsbeek to van Giessen, 1 March 1948; H. van Daal to van Giessen, 17 October 1949; van der Griendt to van Giessen, 13 October 1950.


Description of site: A natural hillock overgrown with firs and scrub, on a piece of waste ground bordering on the Pesten.

Circumstances of find: Found by Math. Th. Peeters of Overloon in quarrying sand, at a depth of 30-40 cm, in May 1934.


Description of the objects: All of bronze. All pieces have a fine dark green patina, but with patches of light green corrosion where the objects were in contact (see below under Observations).


2. Rapier (fragment). Blade slightly leaf-shaped, with lozenge cross-section; bevelled edges. Hilt-end lost (the break is modern). Edges quite sharp where preserved, but most of the edges show severe recent abrasion. Length of fragment 39.7 cm. Inv. No. 3870.

3. Flanged axe with 'nicked' east nanges. Low but distinct sloping stop-ridge. Cutting-edge recently abraded. Length 17.7 cm. Inv. No. 8373.


6. Pin, with crude elongated vertical perforation, around which the shaft is swollen. Slightly expanded head. Tip recently broken off. Length 15.9 cm; max. diameter of shaft 4.5 mm (of swelling, 6 mm); diameter of head 5 mm. Inv. No. 8374.

Comparisons:
1, possibly 2: rapiers of Wohlde type (Sprockhoff, 1941: pp. 32-33; Bergmann, 1952: pp. 21 ff., Karte 1; Bergmann, 1970; Holste, 1953: pp. 43-44, Taf. 15:5, Taf. 17., Karte 2; Hachmann, 1957: esp. pp. 32 ff., Karte 2; Piesker, 1937: p. 144; Laux, 1971: pp. 71-72). The Wohlde type includes daggers and dirks as well as full-neged rapier-length specimens. The distribution area includes western Jutland as well as much of North Germany; to which can be added the eastern half of the Netherlands.

The Wohlde rapiers are closely related to perhaps identical with) the rapiers with trapeze-shaped hilt and four capped rivets of Central Europe (Holste, 1953: pp. 43-44, Taf. 15:5, Taf. 17, Karte 2); which have been divided into numerous varieties by Schauer (1971: pp. 24 ff.). (Daggers: see Ritnerhofer, 1983: pp. 208-214). There is no obvious differentiation between Central European and more northerly finds.

This is the second-longest of the 8 Wohlde rapiers known in the Netherlands. It is also longer than most of the South German examples; but specimens of comparable length are found among Schauer's Type
Fig. 15. Find No. 12. Smakker Spurk (Limburg), the 'Overloon' hoard. Scale: 2:5 (1, 2), 1:2 (3-6). Inset: patina discolourations suggest overlapping of the objects in the ground as shown; but the position of the two groups relative to each other is unknown.
Gamprin (Schauer, 1971: p. 38, Nos 90-107; only his later Type Mägerkingen, his Nos 112-116, has longer examples).

Two Wohlde weapons, of dirk length (Mus. RMO Leiden, 1901.1.1 and I 1931.2.15 respectively; but note, one a dealer's provenance, the other from a large collection) are attributed to the River Maas at Venlo, c. 20 km to the SE.

Another geographical grouping, of three specimens (two rapiers, one dirk) is from Twente (eastern Overijssel): see below, under Monnikenbraak, Find No. 13). In Drenthe in the North we know only of a few dagger-length Wohlde weapons.

Two Wohlde rapiers are from tumuli on the Veluwe, in the centre of the country. One is from the Bergsham, Tum. 3, gemeente Garderen (see below under Dating), the other was found in a burial mound some 12 km to the north, near Putten; little is known of the find circumstances (Yepy, 1956; Eltinga, 1957; Hacke-Oudemans, 1963).

3. The geknickte Randbeil, Drouwen, Drenthe (Find No. I I above; q.v. for further refs. concerning the geknickte Randbeil). This Overloon specimen is unusually long, and also atypical in having a slight 'ledge' stopridge.


Both these pins have, unlike the Overloon pin, a round perforation. Pins with elongated punched perforation seem to be rare north of the Alps (though needles with similar perforation, but smaller, and without heads, occur in very diverse chronological contexts; in the Netherlands cf. the Ommerschans hoard, Find No. 17). Ultimately related to E. Mediterranean-Near Eastern 'toggles' (Henschel-Simon, 1936: pp. 169 ff.; Schaeffer, 1948: fig. 44 ff., with numerous varieties), which spread to S.E. and Central Europe. A slit-perforated pin similar to the Overloon specimen has, however, recently come to light in a Tumulus grave in Southwest Germany, at Weikersheim-Millerite (cf. Jacob-Friesen, 1967: Cat. No. 1090; pp. 91 ff., 115. Taf. 10).

7. One dirk is from Twente (eastern Overijssel: see below, under Overijssel: probable grave find in tumulus near HAVEZATE (MANOR HOUSE) HERINCKHAVE (fig. 16A) (brief summary).

Circumstances of find: dug up in a tumulus by an unnamed shepherd; according to ter Kuile the objects were found 'together in one find'. No further details known.

Description of site: none.

Preservation: Objects acquired with the collection ter Kuile in 1952 by Rijksmuseum Twente; preserved under Inv. Nos 791-793, 1010.

Description of the objects:
1. Rapier. Hilt-plate rounded-biconical, with slight V-notch at butt; originally four capped rivets (two notches, two perforations with rivets preserved); narrow omega-shaped hilt mark; parallel-sided blade with ridged cross-section; hollowed blade edges. Tip originally present (photo in ter Kuile 1924) but now broken off and missing. Length originally c. 38/39 cm; width hilt-plate 5.1 cm. Inv. No. 1010.
2. Flanged axe. Straightish butt, narrow parallel-sided body, with wide blade. Group of parallel incised lines as decoration on sides. The edges of the flanges are nicked. Length 16.6 cm; blade width 5.9 cm; max. width of flanges 1.4 cm. Inv. No. 792.
3. Wheetstone, of rectangular cross-section (1.1x1.0 cm), tapering slightly to flattened ends; no perforation. Length 10.5 cm. Inv. No. 793.

4. Small bow, with concave collar, truncated cone body. Height 5 cm; width at rim 6 cm. Inv. No. 791.

Parallels and connections:
1. The rapier is of Wohlde type (parallels discussed above under Find No. 12). The second Wohlde rapier from the Monnikenbraak cemetery is very similar in size and form. It was dug out of a burial mound in 1888 in the Monnikenbraak cemetery by J.W. Mulder, along with a plain, narrow, legged leaf-shaped spearhead (rather like the spearhead from Holset: see Find No. 22 below) possibly but not certainly from the same deposit (fig. 16: B); an Early Iron Age urn was higher up in the mound (Museum Zwolle, Inv. No. 123-4). Only a few kilometers to the north, another Wohlde rapier, evidently a bog find, is from the Wettemanslanden near Vriesvenno (Mus. Enschede, Inv. 11109, formerly 500-270).

2. The flanged axe is without parallels in the Netherlands. It can be considered to be a derivative of the Riquewihr type of Abels (1972: pp. 32-33, Nos 225-237); at least one example of which, his No. 236 from Olszno, has related incised decoration on the sides (related decoration also on other examples). Two Remecke A2 flanged axe types: Abels No. 171, Type Lusanne I, Var. A from Tavel; No. 349, Type Cressier, Var. I from Ollon).

A flanged axe almost identical to the Monnikenbraak specimen.
B. Monnikenbraak (Overijssel). From a tumulus, but uncertain association (see under Find Nos 12 and 13). 1,2. Bronze. Scale 1:2.
but with the groups of parallel lines in the more common horizontal arrangement rather than diagonally, is from a rich Northern Period I grave in Schleswig-Holstein (Haselburg, Kr. Schleswig). The grave find is listed in Grabung 27, Grab G: Aner & Kersten IV, No. 2362: pp. 124-133, esp. pp. 131-133, Abb. 133, Taf. 36:2362(G). The same motif is found on a geknickte Randbeil in a Danish Sögel grave at Lejrskov (Aner & Kersten VII: No. 3806).

The other grave goods include a small spearhead with ridged socket, a twisted Rollenkopfpod, and a slate pendant/whetstone, not unlike the Monnikenbaak whetstone, but with perforation. It is interesting that several groups of incised parallel lines as side decoration on axes are also found on several specimens in Picardy. The axes concerned include narrow-body, ultra-wide blade flanged axes, apparent ceremonial derivates of axes in the Riquewir-Langquaid tradition, from Bury (Oise) and the area of Abbeville, and a shield palstave from Beauvais (Blanchet, 1984: p. 129, fig. 35:1-2, and p. 171, fig. 85:7, showing that this decorative tradition continued into the Tréboul-Acton Park phase at least. In the Netherlands itself, this decorative motif (horizontal bands) also occurs on the flanged axe (damaged; probably of Abels type Mügbringeh of Nehren) in the primary cremation grave of the tumulus with bank of Alphen, North Brabant (Beex, 1966; Butler, 1966). 4.

The small bowls of difficultes. It is atypical both in form and decoration: Verlindel (1987: p. 166, No. 674, Abb. 99:674) believes it to be a Late Bronze Age-Early Iron Age Umfried accessory vessel, thus casting doubt on the homogeneity of the find, Louhof (1991: p. 100) accepts it as an example of Middle Bronze Age Kümmerkeramik. We may note that small pottery vessels with similar hollow neck are not uncommon in Early to Middle Bronze Age contexts in Denmark and Schleswig-Holstein, as a perusal of the volumes of Kersten & Aner makes clear. Though most have a bulbous lower part, a few have straight-sided lower parts like the Monnikenbaak vessel (for example, their No. 417, vol. I, pp. 147-148, from a rich Period II grave at Jaegersborg; 2718G, Morsum, Gem. Syth-Ost, with urn in stone cist, attributed to Period III; 2823B, from Oldersbek, in Southwest Schleswig, from a decayed treetrunk coffin grave, Period II or III). But we hesitate to pass final judgment on this pot.

Dating: Assuming the accuracy of the ter Kuile statement that the objects represent a single find, we can date it in the first instance by the rapiers, which places it in the Stigel- Wohlde phase and the MB A horizon: Briard (1965: pp. 84-86, figs 23-24, 24-1:3, 6-7) and Abace (Habsheim hoard: e.g. Stein, 1979: pp. 84-85, No. 174, with further references, Taf. 63-65). Palstave No. 14 is of a smaller, more graceful variety less typical of Acton Park. A similar palstave is from the Hague (Savornin Lomanplein). Voorhout No. 9 is also perhaps to be included in this category.

The highflanged axe (No. 2): Numerous approximate parallels in the Tréboul phase in Brittany, and in Atlantic France generally (Briard, 1956: PI. 3-XVI; 1955: pp. 35-36; Briard & Verron, 1976a: p. 45: Type 4121 under Types atlantiques). This type seems to be rare in Britain, although an example is illustrated by O’Connor (1980: fig. 15B, No. 37: in the mixed-date hoard from Sidlesham, Sussex).

In the Netherlands, an example from Veenenburg, South Holland, formerly attributed to that hoard (Find No. 21) is a stray find, presumably from the Veenenburg estate.

The flanged stopridge axes (Nos 3-4): Flanged stopridge axes of Type Plaisir (Butler, 1987: esp. pp. 10-13, fig. 3, pp. 31-32, note 3). The lugged chisel: This example is of North Welsh origin, to judge by the metal analysis (see below under Metallurgy). The widespread occurrence of the type in general has been documented by Wesse (1990); the Voorhout example is his Cat.No. 250, p. 210.

Metallurgy: Fourteen of the Voorhout objects were sampled for spectrographic and metallographic analysis by P. Northover (Oxford). The detailed results have not yet been published, but in a brief published comment (Northover, 1980) and in an as yet unpublished typescript he has indicated that thirteen of the fourteen Voorhout objects are of his (tentatively designated) M metal, which is characteristic for the early Middle Bronze Age industry of North Wales. The fourteenth object, the highflanged axe, with a deviant composition, is typologically attributable to a different, if undetermined source (cf. graph of metal analyses, fig. 18).
Fig. 17. A. Find No. 14. Voorhout (South Holland), hoard (with figs 5B-5E). Scale 1:2.
Fig. 17. B. Find No. 14. Voorhout, hoard (with fig. 17A, C-E). Scale 1:2.
Fig. 17. C. Find No. 14. Voorhout, hoard (with fig. 17 A-B, D-E). Scale 1:2.
Fig. 17. D. Find No. 14. Voorhout, hoard (with fig. 17 A-C, E). Scale 1:2.
Fig. 17. E. Find No. 14, Voorhout, hoard (with fig. 17A-D). Scale 1:2. Box: Stray find, Voorhout, Herenstraat 57, 1985. Scale 1:2.
Fig. 18. Find No. 14. Voorhout, hoard: electron micro-probe analyses.

Dating: Palstaves of, or related to, 'Acton Park' in Britain, and flanged stopridge axes of the Plaisir type occur in a series of hoards across northern Europe which the present writer (Butler, 1963: esp. pp. 59-62) termed the 'I1smoor horizon'; cf. Schmidt & Burgess, 1981: pp. 118-119 (summary description). The find has not previously been fully described or illustrated.

Fig. 19. Find No. 15. Mander, Gemeente Tubbergen, Overijssel: Secondary inhumation grave in tumulus 11/1958 (fig. 19)

Map reference: Sheet 28 East (Almelo). 253.86/497.01


Circumstances of find: excavated 1958 by C.C.J.W. Hjøseler, for Rijksmuseum Twente.

Preservation: Rijksmuseum Twente, Inv. No. 1011.

Description of the objects:
1-3. Three amber beads. The largest (3.0x1.8 cm) has a truncated-cone shape and small perforation; another (2.2x0.5 cm) is a disc of uneven section, with a worn oval perforation; the third (1.1x1.4 cm) is spheroid.

4-5. Two small bronze wire coils (diam. 5 to 6 mm).

6. Fragment of bronze wire, irregularly coiled.

7. Sheet-bronze truncated cone-shaped tumbulus (secondarily?) slightly oval, 1.6x1.3 cm; height 0.55 cm). The central perforation is also slightly oval.

The occurrence of 'Acton Park' material in Brittany, South Holland, western Poland and Alsace documents the existence of widespread exchange networks in the period concerned.

FIND NO. 15. MANDER, GEMEENTE TUBBERGEN, OVERIJSSEL: SECONDARY INHUMATION GRAVE IN TUMULUS 11/1958 (fig. 19)

Map reference: Sheet 28 East (Almelo). 253.86/497.01

Documentation: Rijksmuseum Twente, Enschede.


Circumstances of find: excavated 1958 by C.C.J.W. Hjøseler, for Rijksmuseum Twente.

Preservation: Rijksmuseum Twente, Inv. No. 1011.

Description of the objects:
1-3. Three amber beads. The largest (3.0x1.8 cm) has a truncated-cone shape and small perforation; another (2.2x0.5 cm) is a disc of uneven section, with a worn oval perforation; the third (1.1x1.4 cm) is spheroid.

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FIND NO. 15. MANDER, GEMEENTE TUBBERGEN, OVERIJSSEL: SECONDARY INHUMATION GRAVE IN TUMULUS 11/1958 (fig. 19)

Map reference: Sheet 28 East (Almelo). 253.86/497.01

Documentation: Rijksmuseum Twente, Enschede.


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Description of the objects:
1-3. Three amber beads. The largest (3.0x1.8 cm) has a truncated-cone shape and small perforation; another (2.2x0.5 cm) is a disc of uneven section, with a worn oval perforation; the third (1.1x1.4 cm) is spheroid.

4-5. Two small bronze wire coils (diam. 5 to 6 mm).

6. Fragment of bronze wire, irregularly coiled.

7. Sheet-bronze truncated cone-shaped tumbulus (secondarily?) slightly oval, 1.6x1.3 cm; height 0.55 cm). The central perforation is also slightly oval.

The occurrence of 'Acton Park' material in Brittany, South Holland, western Poland and Alsace documents the existence of widespread exchange networks in the period concerned.
Fig. 20. Find No. 16. Sleenerzand (Drenthe), grave. 1,2,6. Bronze; 3-4. Gold; 5. Bronze, partially with traces of pitch and cord. Inset, No. 6, is uncertainly associated. Plan of tumulus re-drawn after van Giffen. Scale 1:2.
**Parallels and connections:** Amber bead 1 may be regarded as an irregular variant of the 'hexagonals', discussed at length in Section 1 above. Amber bead 2 has good parallels in Central European Hügelgräber contexts, i.e. Sulzbach-Langenbuchen, with wheel-headed pins recalled those of Weerdinge (see Find No. 4 above and Hachmann, 1957b: Abb. 8.8, 11, 13) as well as in amber necklaces in Drenthe.

Bronze wire-coil beads frequently accompany amber beads in the Central and North European Middle Bronze Age, though not, apart from this find, in the Netherlands. 

The tutulus differs from the usual Central European Early and Middle Bronze Age sort in that it has a central perforation, but no perforations at the rim. In general it resembles the rivet-caps characteristically employed on Sülgen and Wohmle daggers. A very similar tutulus is in the Bath-Monkwood hoard, Somerset, England (Inventaria Arch. GB 42:16), dating to the Taunton phase.

**Dating:** The amber beads generally resemble those in Drente finds of Middle Bronze B and related finds elsewhere (see Section 1). A Middle Bronze B date, more or less contemporary with Weerdinge-Paaschberg, would therefore be likely. Rather similar beads occur in the Late Bronze Age (Period V) hoard from Holzhazen, Kre. Wildeshausen in Oldenburg (Gandert, 1955), but the inhumation grave form at Mander favours the Middle Bronze Age dating. The Bath-Monkwood tutulus is consistent therewith.

**FIND NO. 16. SLEENERZAND, GEMEENTE SLEENGE-MEENTE, ZEEWOOLO BOUNDARY, DRENTHE: PRIMARY GRAVE OF PHASE 2 IN TUMULUS 'DE GALGENBERG' (fig. 20)**

**Map reference:** Sheet 17 East (Emmen), 248.30/537.24. **Documentary:** Drents Museum, 86 Dagboek 1934. B.A.I. photo album 1934b, Nos 105-113a; 1936, Nos 176-177.

**References:** (a) Museumverlag Assen 1934: pp. 21, Nos 64-67; pp. 121-123, Afb. 32; (b) van Giffen, 1936b: pp. 104-110, Afb. 10-14; (c) van Giffen, 1940: pp. 207-209, Afb. 32; (d) van Giffen, 1944: pp. 478-479, Afb. 40-41; (e) Glasbergen, 1954 (II): p. 22, fig. 47, p. 32, Nos 16-17; (f) Butler, 1969: pp. 110-114, fig. 50 (2nd ed. 1979: pp. 119-121, fig. 82); (g) Lohof, 1991: pp. 67-68, No. 163-1/2/3.

**Circumstances of find:** Excavated May 1934 (two quadrants) and 1935 (other two quadrants) by A.E. van Giffen for B.A.I. Groningen. **Preservation:** Drents Museum, Assen; inventoried under 1934/ V.30.

**Description of site:** A three-period tumulus, c. 23 x 1.85 m: with an unfilled immediately to its south.

Phase 1 was an early Middle Bronze Age sod-built mound with ring-ditch; a central rectangular grave pit contained an unperfected shaft of rectangular section. 

Phase 2, a sod-built capping surrounded by a post circle (Glasbergen Type 3; diameter 15 m); 19 postholes; of which one was cut by a secondary grave with a NNW-SSE central primary grave, containing the grave goods here described, which were not found in situ, however.

Phase 3 was a similar but slightly larger capping, also with a Type 3 post circle. Its central primary grave was destroyed by recent disturbance. There were four tangential secondary coffin graves belonging to Phases 2 and 3: one of these contained an unidentified, corroded fragment of a bronze pin.

Urns burials were found at and near the edge of Phase 3. A concise summary with some further details: Glasbergen, 1954: p. 32.

**Description of the objects:**

1. *Paalste.* Slightly rounded stopridge; rounded septum; on lower part, rounded sides, projecting as sharply moulded low flanges above the flat face. Cutting edge has recent damage. Surface corrosion-pitted, but otherwise well preserved. Length 16 cm; width 5.8 cm; max. thickness 3.2 cm. Traces of wooden shaft adhere to both faces of septum.

2. *Twisted ring of uniform thickness* (slightly over 2 mm) now in numerous fragments. Three curved untwisted wire fragments are probably remains of hooked terminal(s). Diameter 5 cm. Length 5 cm; diameter of coil 1.3 cm.

5. *Series (at least 14 examples, according to van Giffen) of thin sheet bronze arrowheads,* most with flat tang and barbs. All are severely corroded and badly damaged, in consequence of a modern disturbance at the NNE end of the grave where the arrowheads lay. One nearly complete blade has a length of 5 cm; a nearly complete tang is 2.6 cm long.

Traces of wooden shafts and bark fibres were preserved.

**Parallels and connections:** The *placeste* has somewhat atypical proportions, but in all its features could be a product of the local North Netherlands-North-Western German Middle Bronze Age industry (Butler, 1963).

The *twisted ring* was originally illustrated by van Giffen, followed by Glasbergen (1954: fig. 47) as a closed annular ring. Such a form could not have been made by genuine twisting, and there is no reason to suspect a cast imitation. We have therefore considered the reconstruction as here illustrated more probable. Rings of this character occur in bronze, but more commonly in gold, in northern Europe.

A related object, though not a ring, is the twisted 'pin (?) from a grave in Hijzen-Hooghalen, Tumulus 9 (see Find No. 8).

The *gold coils of single wire* resemble those in the Drouwen 'Sülgen grave' (Find No. 11) and in Hijzen-Hooghalen, Tumulus 9, central grave (Find No. 8), but are smaller. Cf. also Velserbroek (Find No. 20), in *chain* with double-wire coils.

The *set of arrowheads* has a counterpart in the Hijzen-Hooghalen, Tumulus 9, grave cited above (Find No. 8). Single example: Vries, Drenthe, Tumulus 2, in secondary treetrunk coffin grave (van Giffen, 1941: pl. 12).

The *tweezers:* Tweezers with similar ribbing, but different in form (i.e. horseshoe-shaped in side view, with widely expanded blade) occur in several finds in burial mounds in the Schwäbische Alb region in southwest Germany (Pirling et al., 1980: Taf. 23K4, 28H3, 29L2, 46N2, 46 O). They are attributed to the Tumulus Bronze Age, but appear not to be more closely datable; the Catalogue entries for these finds do not make it clear whether the objects with which they are illustrated (including *Lochhalmsnadel*, but also a midwinged axe) are in each case from the same grave or merely from the same tumulus.

Though it is certainly not evident that the Sneenerzand fragment is reconstructible in horseshoe shape (the surviving fragments are so small that the original form is by no means clear), it is difficult to imagine that there is no relationship between the Sneenerzand example and those of the Tumulus Bronze Age.

N.B. Doubts have arisen as to the association of the tweezers with the grave find. According to W.A.B. van der Sanden, curator of the Drents Museum, it is not explicitly identifiable in the sources.

**Dating:** The timber circle and the palstave indicate a dating in Middle Bronze B.

**Interpretation:** One of the richest male warriors' graves of the Middle Bronze Age in the north of the country.

**FIND NO. 17. OMMERSCHANS, GEMEENTE OMMEN, OVER-IJSSEL: BOG HOARD (figs 21 and 22)**

**Map reference:** Sheet 22 West (Coevorden), 223.2/5 11.6. **Documentary:** Correspondence: photographs (Museum Nos 2663, 2666) of objects; notes of J.H. Holwerda under 'Ommen' in R.M.O., Leiden. File of notes and correspondence of J. Butler with the family Lips and others: in R.M.O., Leiden. Letter F. Stein to J.A. Bakker, 26 February 1959, with list and description of the objects, then preserved by W. Lips, Holzhazen am Ammersee, Bavaria (I.P.P. archive, Amsterdam).

**References:** (a) Butler, 1950: esp. p. 8; (b) Butler & Bakker, 1961: (c) Briaard, 1965: pp. 91-93, fig. 28; (d) Jockenhövel, 1980: p. 81, No. 232, Taf. 13; (e) Butler & Scharf, 1970-1971: Pl. XI+ loose folding plate.

**Circumstances of find:** Found, c. 1894-1900, by Geert Remmelts just under the surface in a heath field near Ommerschans; precise localization is disputed. According to vague accounts the sword lay on a sort of platform of birchwood stakes, in peat on sand: the other objects lay on the sword. No further details known.

**Preservation:** Kept until c. 1929 at the home of Alexander Seeemann (forester on the estate of E. Lips) at Junne, Overijssel, June-August 1927 temporarily on loan to R.M.O., Leiden, where the
objects were photographed, and a plaster cast was made of the sword (mould still extant under inventory RMO 1927/9.1). In the period 1927-1930 Holwerda tried unsuccessfully to arrange a purchase by the Museum. Since c. 1929 the hoard has been housed with the Lips family in South Germany. Subsequent efforts by the Museum, and privately by the Deventer amateur archaeologist J. Butter, to procure the return of the objects to the Netherlands were without success.

Extensive enquiries concerning the find were made by Butler and by J.A. Bakker (I.P.P., Amsterdam). At the request of Prof. W. Glasbergen, the objects were studied, drawn and described by F. Stein, then assistant to Professor J. Werner (Inst. für Vor- und Frühgeschichte, München), in February 1959. Her detailed typescript report (under Documentation above) served as the basis for the subsequent publication by Butler & Bakker. At that time two small objects from the hoard (the bronze wire spiral No. 12 and stone object No. 15) had been lost, but the other objects were still on a wooden plank onto which they had been nailed in the Junne period.

**Description of the objects:**

1. **Sword,** of exaggerated size (length 68.3; width across hilt-plate 18.6; maximum thickness 0.8 cm). Hillt trapeze-shaped, with gently rounded butt; blade oval. The upperpart of the blade is strengthened by a broad midrib of gently rounded section, on each side of the midrib, and separated from it by a flat space, is a broad, low, flat-topped rib. These ribs form an ogival ornament; from the point or thickness 0.4 cm.

2. **Razor,** double edged, with parallel sides, tapering slightly toward the straight butt end, which has two small rivet-holes. In the rounded opposite end is a small round notch. Cross-section: shallow pointed-oval. Faint traces of what appears to be a hilt-marks vaguely discernible on one side. Length 13.9; width 3.7; thickness 0.4 cm.

3. **Chisel,** with short broad blade, separated by a shoulder from a tang oval in cross-section (broken off). The cutting-edge is oblique, and sharpened from one side only. Present length 5.5; width of cutting edge 3.15; thickness 0.6 cm.

4. **Chisel** of narrow triangular outline, rectangular cross-section; cutting-edge sharpened from both sides. Length 8.6; width 1.55; thickness 0.4 cm.

5. **Razor,** rectangular cross-section; one end thinning as if to a cutting-edge; but no trace of hammering or grinding is detectable. Length 10.6; width 0.2; thickness 0.17 cm.

6. **Pin or needle shaft,** section round, becoming oval toward the upperend, where it is broken off. Present length 8.0; thickness 0.2 cm.

7. **Pin or needle,** rectangular cross-section, slightly flattened and broken off at lowerend; elongated perforation surrounded by a swelling, as if the hole had been punched through, near the otherend. Length 8.66; thickness 0.2 by 0.2, at perforation 0.4 cm.

8. **Rectangular fragment of thin metal,** on one side, five shallow longitudinal grooves, seemingly incised; the other side is nearly flat, but with faint longitudinal grooves, visible only as a variation in the patina, and faintly to be felt with the fingers. One end straight, the other broken off. Length 9.5; width 2.26; thickness 0.2 cm.

9. **fragment of round metal,** of irregular cross-section; all four faces with transverse irregular marks of cutting tool. Cf. No. 11. Length 6.0; width 1.55; thickness 0.54 cm.

10. **Fragment of rough metal.** Length 1.7; width 2.9; thickness 0.26 cm.

11. **Fragment of rough metal,** as No. 9. Length 9.38; width 1.38; thickness 0.5 cm.

12. **Spiral** (irregular) of wire; missing, and not seen by Miss Stein.

13. **Flint dagger,** of rectangular cross-section, polished on all four faces; both ends broken off. Length 5.2; width 0.53; thickness 0.75 cm.

14. **Fragmentary flint implement,** probably a chisel; of irregular D-section; polished on all faces. Length 3.6; width 1.1; thickness 0.53 cm.

15. **Flint or stone implement,** missing and not seen by Miss Stein.

16. **Stone chisel** of black fine-grained stone, of sub-rectangular cross-section, polished on all faces. Length 4.8; width 1.87; thickness 0.55 cm.

17. **Stone tablet,** of granzy quartzite, chert; rectangular cross-section. Three sides have artificial oblique edges; the fourth is unworked. Length 5.7; width 3.45; thickness 0.4 cm.

18. **Whetstone** of sandstone; sub-rectangular section; edges rounded. Length 10.1; width 2.45; thickness 1.5 cm.

**Parallels and connections:**

The sword: identical to, or possibly from the same mould as the 'ceremonial sword' from Plougrescant, Côte-du-Nord, Brittany. A specimen almost identical in size and form, but with slightly different dimensions (length 70.9, width 18.1 cm) has been found recently at Oxborough, Norfolk, East Anglia (we are indebted to Stuart Needham, British Museum London, for information in advance of publication, photograph and 1:1 drawing of this sword). Although certainly not from the same mould, it is likely to be a product of the same workshop as the Plougrescant and Ommerschans swords, the smaller example from Jutphaas, prov. Utrecht (Butler & Sarfati, 1970-1971), and the genuine lower part of the Beaune specimen.

We have been informed by Dr. Needham that spectro-analysis in the British Museum of the sword from Beaune, Côte-d’Or (Greenwell, 1903: pp. 4-5, fig. 3; Butler & Bakker, 1961: pp. 201-204) has shown that it is a composite object, of which the upper part (thus with the hilt-plate) is of modern metal. The other specimens – Plougrescant, Ommerschans, Oxborough and Jutphaas – form a typologically homogeneous group of ceremonial swords.

These ceremonial swords (all finished but left unsharpened, and without rivet-holes for hilt attachment) are apparently derivatives of the functional Armoricain Saint-Brandt type (Briard, 1965: pp. 86-87, 99-103, dist.map fig. 34; Butler & Bakker, 1961: pp. 203-210; Schauer, 1972; Jockenhövel, 1980: p. 81). Burgess & Gerloff (1981: pp. 13-14) have emphasized the relationship of these swords to the three narrower blades making up their type Kimberley – their Nos 58-60, from Kimberley (Norfolk), Finningley (Notts./Yorkls. border), and Erpingham (Norfolk) – which they claim as being from the same mould. Compared with the ceremonial swords of Plougrescant type, the Type Kimberley blades have a similar hilt-plate form and a similar broad-above, thin-below type of midrib. They lack, however, the extra ribs flanking the upper midrib, and all three have sharp blade edges. The Kimberley blade is, like the ceremonial swords, without rivet-holes, but the Finningley specimen has two plug rivets. The Type Kimberley swords are less clearly 'ceremonial' swords; they are not of abnormal size and proportions. The ‘ricasso’ on the Kimberley specimen, to which chronological value has hitherto been attached, is according to Needham merely accidental damage; the Beaune ‘ricasso’ belongs to the non-genuine part of the specimen.

The trapeze-shaped hilt-plates with rounded butt as well as the midrib form provide a link with some at least of the series of long narrow riveted rapiers from Southeast England (which Schauer, 1984: pp. 179-182, Abb. 42, Taf. 1) has cited as being related to the extraordinary specimen decorated with gold and copper inlays supported from the Marais de Nantes, Loire-Atlantique.

Southeast English blades like: Isleham, Cambs. (Schauer, 1984: p. 180, Abb. 43:2); Manea, Cambs. (Schauer, 1984: p. 180, Abb. 43:4); Surbiton, London (Schauer, 1984: p. 180, Abb. 43:3); Wandsworth, London (Schauer, 1984: p. 181, Abb. 44:2); Staines, London (Schauer, 1984: p. 181, Abb. 44:3) can perhaps be seen as a group parallel to, or derived from, the rapiers of ‘Tribeul type’ (Briard, 1965: pp. 86-87, 99-103; dist. map fig. 34) and which have contributed to the development of the ceremonial swords of the Plougrescant series.

The razor: related to ‘Pantalica A’ razors (Butler & Bakker, 1961: pp. 206-208; Jockenhövel, 1980: p. 81). The pair of rivet-holes at the base is, however, atypical for this razor type, and may hark back to earlier Aegean razors (though similar rivet arrangement is found on a number of early Irish knife-razors: cf. Jockenhövel, 1980: Taf. 1, II:42). The only other razor in the Atlantic West assigned to the Pantalica A type, a stray peat find from Lakenheath, Cambs. (Jockenhövel, 1980: Taf. 13:231) has a single rivet-hole.
Fig. 22. Find No. 17, Ommerschans (Overijssel), hoard (see fig. 21). Photograph of the find by R.M.O. in 1926.
Bronze Age metal and amber in the Netherlands (1)

The tanged chisel (No. 3): the marked asymmetry of the blade, suggesting a cutting rather than a chiselling function, is matched on an unshouldered specimen from the Sparkford Hill hoard, Somerset, England (Smith, 1959b: GB 46:3) and another from the Oxford-Burgesses’ Meadow hoard (Smith, 1959b: GB 6:5).

The thin triangular chisel (No. 4) is presumably intended for delicate chisel or punch work. No close parallel in the Netherlands, though not uncommon elsewhere.

**Dating:** The Plougrescant sword was dubiously associated with socketed axes (see above); the Oxborough and Jutphaas swords were stray finds. Schauer (1972) has re-emphasized the derivation of these from the Tréboul/Saint-Brandan ‘Atlantic rapiers’, which would date the ‘Plougrescant variant’ to the Tréboul phase, or at most shortly thereafter. The beginning of the Treboul phase is equated with the ‘Plougrescant variant’ to the Treboul phase, or at most shortly thereafter. The argument derived from the earliest appearance of the ricasso (imitated on the Beaune sword; Butler & Bakker, 1961: pp. 204-206) which supported a dating c. 13th century, falls away in view of the non-authenticity of the upper part of the specimen, but it would still be plausible if, as we suggested in 1981, the Ommerschans razor could be an ‘Aegæan’ specimen somewhat earlier than Pantalica A.

In North European terms, this would place the Ommerschans sword in late Period II or early III; thus in local terms, late in Middle Bronze B.

**Interpretation:** The Ommerschans sword, like its parallels in Jutphaas, Plougrescant and Oxborough, is carefully finished, yet still never sharpened, and never provided with rivet-holes by which it could be firmly attached to a hilt. These facts, together with the extraordinary and impractical size of the three giant swords, emphasize that they were display objects, and not intended for actual use as weapons.

Plougrescant and Ommerschans, extraordinary and well made prestige objects apparently by the same hand (from an Atlantic workshop: in Armorica? or South England?) are separated by over 800 kilometers. Elsewhere (Butler, 1973; 1987) we have pointed to evidence for links between various regions of France and the Netherlands via the Meuse (Maas) valley, extending in time from Tréboul to Kosziderpadlás-Bihúi, at least a few objects involved continued on to the centre and north of the Netherlands. For a Sicilian or Aegæan connection with the Netherlands in this period no obvious explanation suggests itself, but the contemporary, possibly Aegæan sickle/knife from the Helioo hoard (Find No. 19) may cautiously be cited in this connection.

The Ommerschans peat hoard is presumably a votive deposit, and of masculine character. The chisels, the stone polishes, and the scrap metal in the hoard suggest a possible connection with metal-working, though other handicrafts may have been involved.

In terms of ranking, the exotic prestige goods, especially the sword and the Pantalica-related contrast, strongly with the workaday tool components of the hoard.

**FIND NO. 18. EPE, GEMEENTE EPE, GELDERLAND: HOARD** (fig. 23)

**Map reference:** Sheet 27 West (Hattem).

**References:** (a) Butler, 1971; (b) Butler, 1969: p. 93, fig. 41 (2nd ed. 1979: pp. 99-100, fig. 66).

**Preservation:** R.M.O., Leiden; inventoried under WE 5 to WE 7.

**Circumstances of find:** Accidental, by workmen. Objects presented by E.F.J. Weerts of Epe to R.M.O., Leiden, in February 1865.

**Description of site:** “On the slope of a hill about two ells [2 m] below the surface, and beneath a bank or layer of iron-pan and gravel which had to be broken through … (The objects) were wrapped in something which the workmen took to be linen cloth, but which was wholly decayed and could not be brought away with them” (letter of donor accompanying the objects, 8 Feb. 1865; achives R.M.O.). It is not clear whether the ‘hill’ was a burial mound or a natural elevation.

**Description of the objects:** All of bronze, with identical patina (patchily bright green to almost black), in line state of preservation. No trace of the ‘linen cloth’ in the patina.

1. **Stopridge axe** with thick cast flanges, very prominent bar stopridge. Three facets on each side. Blade hammered and then ground, the grinding-plane encroaching on the base of the flanges. The septum above the stopridge is rounded; below the stopridge, flat. Length 13.5 cm. Inv. No. WE 5.


3. **Sickle** with two knobs; three ribs outlining the back edge. Tip greatly curved. Cutting-edge heavily regrind. Length 12.2 cm. Inv. No. WE 7.

**Parallels and connections:**

The flanged stopridge axe: (References: Butler, 1963b: pp. 196-198, fig. 8-9, p. 210, List III; Hulst, 1989: esp. p. 142, Afb. 2, 143; Typical for the present author’s Type Vlagtwedde, a local derivative of western European flanged stopridge axes of Type Plaisir (Butler, 1987). The number of examples has doubled since 1963 (Hulst, 1989). Distribution chiefly in river Issel region. An example from Bronnen-ogen, Gelderland, has a blade with a marked ‘crinoline’ outline, evidently an imitation of western European paltave-like the Epe specimen.

The paltave: Such wide-bladed ‘crinoline’ paltaves are well known in southern England (cf. Rowlands, 1976, examples occurring in a variety of classes). Blanchet (1984) groups such paltaves under the heading Type Normande, but a tentative survey of the South British and Norman material is still lacking.

Schmidt and Burgess have included the Epe example under their Type Oxford (1981: p. 132). O’Connor (1980) suggests that both the paltave and the sickle are of British origin.

Nearly identical: Blackrock (near Brightdon, Sussex) hoard, Piggott, 1949: pp. 114-115, fig. 3 (third from left); further references there cited, Inventaria GB.47, No. 13; O’Connor, 1980: p. 329. The general form is common in South England and Northwest France. Cf. also Barton Bendish, Norfolk (Inventaria GB.7).

The sickle: Ultimately derivable from the Danubian Middle Bronze Age and Central European Tumulus Bronze Age sickles, which have been extensively published and discussed in recent literature (e.g. Rittershofer, 1983: pp. 200-208, Tab. 5-6, 381 Liste 6-8; Primas, 1986; Hriňovský, 1989: pp. 93 ff.). The Central European sickles vary greatly in detail (0 to 3 ribs, knobs single round, single elongated or double, etc.); in general they are shorter and less strongly curved than Late Bronze Age sickles. Some additional examples, present in the Merseyside County Museums, Liverpool, have been illustrated by Nicholson: three from ‘northern Hungary’ (1980: p. 66, Pl. 126, No. 127-129) and two without provenance (p. 112, Pl. 50, No. 291-292).

Though the possibility can be entertained that such sickles were locally produced in the peripheral areas of their distribution like the Netherlands and Somerset, distinctive local characteristics have not been identified. We assume from the strong re-sharpening of the Epe sickle that its S curve is due to secondary re-working and not a typological feature. Apart from this, one of the sickles from Holset (Find No. 22 below) has much in common with the Epe sickle (e.g. three ribs, rounded butt) and they may have a common origin.

**Dating:** The paltave dates the Epe find in British terms to the Taunton phase, which is contemporary with the French Bronze moyen 2 of Blanchet (1984), Northern Period II or at the latest the transition II/III, and in the Netherlands Middle Bronze B. The sickle is in itself not closely datable: the Central European series from which it is derived run from the beginning (horizon Kosziderpadlás-Bihúi) to the end (phase D) of the Tumulus Bronze Age; but in Britain the related sickles are dated to the Taunton phase.

**Comments:** Whether or not found in a tumulus, the Epe assemblage would be quite extraordinary as contents of a grave, and is therefore presumed to represent a hoard deposit (see also Holset, Find No. 22 below). It may, however, be noted that Central European Middle Bronze Age sickles do sometimes occur in graves and other tumulus deposits (Primas, 1986; p. 18, Tab. 7, p. 19, Tab. 8-9). Sickles may...
conceivably had some sort of ritual significance under some circumstances. In the Middle Bronze Age of the Netherlands, we may note that bronze sickles occur not only in the tumulus finds of Holset and Epe, but also in the bog hoards of Heiloo, Find No. 19 following, and Veenenburg, Find No. 21 below.

As a contact find, the Epe hoard has special value in that it combines a Central European Middle Bronze Age object, the sickle, and one of the British-West French Middle Bronze Age (the palstave) with a local product, the stopridge axe otherwise not closely dated.

FIND NO. 19. BOLLENDORP, GEMEENTE HEILOO, NORTH HOLLAND: HOARD (fig. 24)

Map reference: Sheet 19 West (Alkmaar), 108.0/51.4.
Site: The location is given on the map of Brunsting (1962: fig. 1), along the Krommelaan in Bol lendorp, c. 2 km southwest of Heiloo; in a parcel then owned by P. Vooren of Limmen, N.H.


Circumstances of find: Found 1932 (or earlier?) by W. Harms (Bak kem, N.H.), during levelling, presumably of a parcel of dune land, at a depth of c. 3.5 m below the then surface. According to the finder, the objects lay in a row, vertically with points upward, the bronze knife/sickle in the middle.

Preservation: The find was known to the R.M.O. as early as 1932, but was not then acquired. For a time it was displayed with the collection of the Provincial Water Board for North Holland at the House Foghteloo in Bakkum. Purchased from the finder-owner Harms by R.M.O. in 1947; inventoried under g1947/12.10-14.

Description of the objects:

1. Bronze knife/sickle. Curved blade, of triangular section; back convex, slightly rounded; cutting edge concave with sharpening facet c. 3/4 of its length. Butt slightly rounded, with single perforation. Length 16.3 cm; butt 2.5 cm; maximum thickness 4 mm; perforation diameter 6 mm. Inv. No. g 1947/12.14.

2-5. Four flint sickles; all bifacially worked; D-shaped, nearly straight blade edge; 10, 12 and 13 with unretouched butt end: (10) of reddish brown patinated flint; heavy gloss over entire surface, except at buttend. Cutting edge slightly concave. Length 16.3 cm; width 5.5 cm; thickness 1.2 cm; (11) of reddish brown flint; butt is retouched. Heavy sickle gloss overall except at buttend. Cutting edge is somewhat irregular. Length 16.2 cm; width 4.1 cm; thickness 0.9 cm; (12) of grey-black flint, translucent at edges, but with white crust. No gloss. Slightly sinuous cutting edge. Length 14.8 cm; width 4 cm; thickness 1.1 cm; (13) of reddish brown flint, slightly translucent at edges. Concave cutting edge. White crust with glossy patina at both ends. No sickle gloss. Length 14.8 cm; width 3.9 cm; thickness 1.0 cm. Inv. Nos g1947/12.10-13.
The bronze knifefliskle: The perforation in the butt end and the absence of a rib or ribs on one side stand in the way of comparison with the sickles of sike-like knives of the Greek Late Bronze Age, but also with a Saxonian series; giving preference to a Mycenaean origin. O’Connor (1980), in a brief commentary, preferred a relationship with a rather heterogeneous series of British sickles. Presumably Brutning had in mind specimens similar to some of those from the hoards found at Mycenae (more recently: Müller-Karpe, 1980: p. 778, Taf. 232-233). Some of these are very similar to our Heiloo specimen; we may cite in particular the sickle illustrated by Demakopoulous (1988: pp. 246-247, No. 262, with colour photo), found amid the ruins of LiHII houses, and attributed to LiHIIIB, 13th century.

Similar too, but more strongly curved, are the sickles from settlement sites in the north-eastern Graubünden (Primas, 1986: pp. 191-192, esp. Nos 2043, 2047), of equivalent date if Primas is correct in assigning them to Period D. The flint sickles formally resemble the northern Late Neolithic Type A of Kühn (1979: pp. 64-67, Taf. 18:1, 3-5), except that the cutting edges are less markedly concave than those of the specimens illustrated by Kühn.

Similar flint sickles, D-shaped or in varying degree crescentic, are very common in West Friesland (modern North Holland); several examples have occurred in Middle and Late Bronze Age settlement sites. In the modern province of Friesland 21 finds have been listed for the Westergo district alone (van Gijn & Waterbolk, 1984: p. 122). In lesser numbers they occur in Groningen and Drenthe and Northwest Germany; a general survey is still lacking. Van der Waals (1972-73) mentions hoards of flint sickles from De Haar (Nieuw-Trimunt, gemeente Marum, Groningen (2 ex.), Boortange, Groningen (5 sickles, plus five scraper-like flints), and Rolde/Nijlande, Drenthe (7 ex., photo Buijn & Bunte. 1961: fig. 75), and illustrates three examples, probably a hoard, from de Uitwesdeme near Onstwedde, Groningen.

Such flint sickles were made from good-sized pieces of tabular flint, of a quality not normally found in the morainic deposits in the Netherlands, so that importation is presumed (Stapert, 1988). Many of these sickles have heavy gloss, not confined to the cutting edges. Micro-wear study (van Gijn, 1984) has suggested that they were used not for cutting grain but, rather, for turf-cutting or similar work in soil.

Dating: Brutning chose a date for the Heiloo bronze knife/sickle of Late Helladic IIIB (13th century BC), based on the Mycenaean parallels, but without justifying this dating in detail. The British vague parallels cited by O’Connor offer no dating evidence, but the Graubünden cited above are of a later date.

The dating evidence for flint sickles such as those in the Heiloo hoard varies from region to region. In Denmark and Schleswig-Holstein they are considered to be Late Neolithic, with extension into EBI and occasionally as late as Period II (Kühn, 1979). In West Friesland the evidence is for settlement finds for use in the Middle and Late Bronze Age. In the northern coastal area of the Netherlands, where Late Bronze Age occupation is lacking, they have been claimed as characteristic for the first part of the pre-Roman Iron Age (van Giffen, 1944b: pp. 130, 172-177, 188, 231-240, afb. 37-38; Groenman-van Waateringe & van Regteren Altena, 1961; van der Waals, 1972-73; Boersma, 1988; cf. Plaggenburg, Kr. Aurich: Maier, 1974: p. 39, Abb. 23; Sprockhoff, 1956: p. 51; Tackenberg, 1971: pp. 44-45).

A probable hoard consisting of one bronze sickle (knobbed; two backing ribs) and three flint sickles, in form similar to the Heiloo flint sickles, was found in the Baltic coastal area, at Renz, Kr. Rügen (Keiling, 1989: Pl. 34). Bronze sickles of this type are common in Northern Period II, but a later date is not to be excluded.

The burden for the dating of the Heiloo find would therefore fall upon the bronze sickle, which, despite the uncertainties involved, may well fall in the period suggested by Brutning; placing it in a late stage of Lanting and Mook Middle Bronze B.

Evaluation: A find of unusual character, matched only in the Renz, Kr. Rügen hoard already mentioned. The heavy gloss on two of the Heiloo flint sickles shows that they have been intensively used.

References (the data below is based on the following provisional accounts of a recent, not yet fully published excavation): (a) Bosman & SooNius, 1989; (b) Bosman & SooNius, 1990; (c) Therkm & Bosman, 1990: pp. 2-10.

Description of the site: Extended, E-W inhumation burial, set not in a tumulus, but in a natural sand dune. The body for the most part decayed away, but parts were recognizable as stains in the sand. The head was represented by a dark, humous stain in which some fragments of tooth glaze cappings were preserved. The gold wire rings and the palstave lay at the head. Along the right side of the body was a trace of corroded bronze, extending over a length of c. 80 cm; presumed to be the remains of a sword. Removed en bloc and carefully excavated under laboratory conditions, but so little metal survived that it was impossible to recover the object or determine its character. The burial was surrounded by a rectangular ditch, externally measuring 2.80x0.90 m. The inner wall of this ditch was lined with vertically placed wooden planks. The grave pit was covered with sods. This dune burial was situated some 25 m west of a Middle Bronze Age settlement, including at least two plans of 3-aisled post structures - a hou se, 5X18 m, with a period of renewal, and a shorter structure, 5x11 m, tentatively considered to be a barn. The settlement, dated by DKS pottery in the house ditches, is at the NW edge of the Hatzfelder sand ridge, on which agriculture was practiced in the Middle Bronze Age.

Find circumstances: Excavated November-December 1988 by W.J. Bosman for the I.P.P., Amsterdam, as part of a systematic archaeological survey and rescue campaign in anticipation of residential development.

Description of the objects:

1. Palstave: half-part has flanges of convex outline. Stopridge encircles the waist. Blade with side flanges: modest blade expansion. Sides richly decorated, with on upper part alternating bands of incised horizontal and zigzag lines; on lower part alternating bands of transverse incised lines and ladders. Length 21.5 cm; width 4.7 cm; wa ist rib 2.9x2.5 cm.

2. Series of gold wire coi/ed rings: pair of doubled wire, with closed ends. On one of the double wire rings are linked chainwise two single-wire coils. Diameter of double-wire rings: 2.7 cm.

Analysis of one of the rings (electron micro-probe, by R.P.E. Poorter, Dept. of Chemical Geology, University of Utrecht): Au 90.65%, Ag 8.95%, Cu 0.26%, Sn 0.14%.

From the excavation, but not from the grave, are two barbed and tanged ‘short ogival’ flint arrowheads.

Parallels and connections:

The palstave: Several examples with encircling rib separating the shafting part from the blade part are known in the Netherlands; but this is the only richly decorated example in the country.

Similar belted palstaves are common in the North European area (Aner & Kersten, 1973-1986). Kersten (1936) classified them as Type Ci; Laux (1971: pp. 80-81) as Type Ostroninnaver, with four sub-types (A-D) present in the Lüneburger Heide region. Richly decorated examples within his Type B1 are considered to reflect Nordic influence (cf. Kibbert, 1980: pp. 219-221, with further references), and are dated to his Zeitgruppe II.

The Velserbroek palstave is presumably imported from Denmark or Schleswig-Holstein, as are also a side-decorated example from a tumulus at Epe on the Veluwe (Ypey, 1956) and the undecorated long narrow grave example from a tumulus grave with Type 3 post circle at Texel-Den Burg (Woltering, 1973: pp. 5-6, figs 12-13; 1974: Lanting & Mook, 1977: p. 115; IC dating GrN-7456, 2995±75 BP, 2-sigma calibration range 1418-1028). A simpler, undecorated specimen, of Laux Type B1, is from Hijken-Hooghalen. Tumulus 1, phase 3, of Laux Type B1 (found in a tree trunk coffin grave within a timber circle of Glasbergen Type 3; van der Veen & Lanting, 1989: pp. 196-200, Exc. find No. 7, fig. 387; Lohof, 1991: p. 22, No. 046-2/3).

The gold wire rings: A set of four chain-linked double wire gold rings is from Susteren, Limburg (Butler, 1969: Pl. 6 left = 1979: fig. 30). They were found on the site of a Roman cemetery; nothing is known of their actual context.

Similar double wire rings with both ends closed are common both
in Central Europe and the Danish area: Hartmann (1982) illustrates numerous examples. Broholm (1952: p. 54, No. 180) gives some statistics of their occurrence in Denmark. They are common in Period II (35 rings: of which 5 from the Islands as against 30 from Jutland) and III (145 discoveries' of which 13 from the islands and 132 from Jutland). Even more numerous are the undated stray finds (163 examples). Double-wire rings occur frequently in pairs in graves, varying from fingerring to bracelet size. There is a strong concentration in the Limfjord area in Northwest Jutland. Anner and Kersten illustrate dated examples from Period II (VI: 2916, 2962B, 3061A; VIII: 3919B, 3923) and Period III (IV: 2519D). They seem to be unknown in Northwest Germany.

The analysis of one of the Velserbroek rings is comparable to the analysis of one of the single-wire spirals from Hijken (Find No. 9), but has a higher tin value. Cf. generally the Danish material (Hartmann, 1982: Diagram 6, Tab. 22-23; Vankilde, 1990: pp. 127-129).

The grave structure is considered by van der Veen & Lanting (1989) to be a 'beehive grave', comparable to a Middle Bronze Age grave at Gasteren, Drenthe (van Giffen, 1945: Afb. 12) and Late Neolithic examples. The use of a grave chamber constructed with vertically set planks also has Danish parallels, in the 'chamber graves' illustrated by O. Madsen (1988-1989, esp. figs 16, 18, 19).

The palstave is a Northern Period II type; Laux also has them in his Zeitgruppe II. Thus, in the Netherlands, within Lanting and Mook Middle Bronze B.

Comments: The Velserbroek find is one of the very few richer Middle Bronze Age graves known in the western coastal region of the Netherlands (cf. Zwaagdijk, Find No. 24). Certainly the palstave with the other examples cited above, and very probably the gold rings, reflect contacts with the northern cultural area in Northern Period II.

FIND NO. 21. VEENENBURG, GEMEENTEN HILLEGOM AND LISSE, SOUTH HOLLAND: HOARD (fig. 26)

Map reference: Sheet 24 (Hillegom), 992/476.7.

Site: Found in the 'railway sand pit' on the Veenenburg estate, in the gemeente Hillegom. The exact find-spot is described by Leembruggen as lying 10 degrees west of north, at a distance of 170 meters, from the boundary post gemeente Hillegom and Lisse, along the main road from Leiden to Haarlem.

Documentation: Basic documentation for this hoard is a letter from W. Leembruggen (in 1897 owner of the Veenenburg estate in the gemeente Lisse and Hillegom) to Dr. Jesse, of the R.M.O., dated 23 March 1897; enclosing a sheet with 1:1 drawings (his own?) of 11 objects (out of 25 constituting the find) and a second sheet with a description and a sketch map of the find-spot. This communication (appendix 2) was intended for Dr. W. Pleyte, then director of the R.M.O. at Leiden.

Publications dealing with this hoard (see references) have all made only partial, and to some extent inaccurate use of this basic source. Recent re-discovery of the Leembruggen document in the Pleyte archive in the R.M.O. ('Oorst. brieven' 1897/57) are kindly made available by A. Peddemors (to whom our thanks are due) now permit a corrected account of the find circumstances and content of the Veenenburg hoard, superseding all the previous, partially inaccurate accounts (including our own, which, due to the inaccessibility of the original letter, relied on the secondary accounts of Pleyte and Oppenheim). Objects previously attributed to the hoard, but not belonging to it if one follows the Leembruggen inventory, are illustrated in figure 27. Presumably these objects were found on the Veenenburg estate and were acquired by the Museum along with the objects of the hoard.

References: (a) Pleyte, 1902: Pl. VII:1-12; (b) Oppenheim, 1927: figs 13-16, 18, 19; (c) van Giffen, 1928; (d) van Heemskerk-Düker & Felix, 1942: Pl. 106 and 112 (photos); (e) Butler, 1959: esp. pp. 134-136, fig. 4.

Description of site: According to Leembruggen, the objects were lying c. 40 cm below the surface of a hard peaty layer (dari), which was 1 to 1.5 m thick and had an extension of about 1/12 hectare. The altitude of the peat layer is given by Leembruggen as from e. 5 cm to 1.45 m below Amsterdam Datum. 30 to 40 years previously the peaty deposit was covered by sand dunes to a height of about 3 m.

Pleyte's summary account incorrectly places the find rather than in the peat layer.
The 1:25,000 topographical map, Sheet 383, surveyed in 1888, shows, at the spot indicated by Leembruggen, a roughly circular sand pit, about 400 m across, at the time of the survey in use for garden plots. It lies close to the eastern edge of the dune ridge, about 2 km NE of the centre of Lisse.

Subsequently, the whole field, just southwest of the cement-brick factory of van Herwaarden, was levelled downwards for bulb cultivation, so that nothing of the original situation now survives.

Circumstances of find: Found, according to Leembruggen, 12 March 1897. He gives no details as to the circumstances. The find date is quoted correctly by Pleyte. Oppenheim dates a ‘document of 1876’ concerning the hoard which he saw at the Veenenburg house; but this date is apparently a misprint, and the ‘document’ he cites was presumably a draft or retained copy of Leembruggen’s letter of 1897.

Preservation: The hoard was kept at the Veenenburg house, and later at Haarlem, until 1930, when it was presented, together with other finds from the Veenenburg locality, to the R.M.O. by Leembruggen’s widow, the Baroness van Hardenbroek van Ammerstol-Leembruggen. The collection was inventoried under the numbers 1930/VII.1-54.

Description of the objects: All of bronze. The objects have well-preserved surfaces, of bronze colour, with remains of original black patina, with a few spots of green.

As there are at least four differing versions of the composition of

Fig. 26. Find No. 21. Veenenburg (South Holland). bog hoard. Scale 1:2.
Table 4. Veenenburg, Hillegom, ZH: Composition of the hoard according to Leembruggen (1897), Pleyle (1902) and Oppenheim (1927).

<table>
<thead>
<tr>
<th>RMO h 1930.7 drawings number</th>
<th>Type</th>
<th>Leembruggen fig.</th>
<th>Pleyle fig.</th>
<th>Oppenheim sequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>33</td>
<td>Stone axe</td>
<td>–</td>
<td>1</td>
<td>–</td>
</tr>
<tr>
<td>34</td>
<td>Flanged axe</td>
<td>–</td>
<td>–</td>
<td>19</td>
</tr>
<tr>
<td>35</td>
<td>Knobbed sickle</td>
<td>E</td>
<td>5</td>
<td>16</td>
</tr>
<tr>
<td>36</td>
<td>'Razor' fragment</td>
<td>F</td>
<td>7</td>
<td>–</td>
</tr>
<tr>
<td>37</td>
<td>Knobbed sickle fragment</td>
<td>D</td>
<td>6</td>
<td>–</td>
</tr>
<tr>
<td>38</td>
<td>Leather knife/chisel</td>
<td>C</td>
<td>4</td>
<td>'Bijtje'</td>
</tr>
<tr>
<td>39</td>
<td>Pin, bicon. head</td>
<td>A</td>
<td>2</td>
<td>18 right</td>
</tr>
<tr>
<td>40</td>
<td>Pin, bicon. head</td>
<td>B</td>
<td>3</td>
<td>18 left</td>
</tr>
<tr>
<td>41</td>
<td>Pin, stepped head</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>42</td>
<td>Ring, pennan.</td>
<td>G</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>43</td>
<td>Ring, pennan., crossed ends</td>
<td>G</td>
<td>9</td>
<td>–</td>
</tr>
<tr>
<td>44</td>
<td>Ring, pennan.</td>
<td>G</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>45</td>
<td>Ring, pennan.</td>
<td>G</td>
<td>8, 10, 11</td>
<td>–</td>
</tr>
<tr>
<td>46</td>
<td>Ring, pennan.</td>
<td>G</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>47</td>
<td>Ring, pennan., with 13 small rings</td>
<td>–</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>Finger pot</td>
<td>–</td>
<td>–</td>
<td>15</td>
<td></td>
</tr>
</tbody>
</table>

N.B. The objects which do not appear in the Leembruggen description must be considered as not belonging to the hoard of 1897, but are presumably other finds from the Veenenburg estate.

Fig. 27. Subtractions from Find No. 21: Objects from the Veenenburg estate, erroneously attributed to the hoard. 1. Stone. Scale 1:2.

The hoard (Leembruggen in litt., 1897; Pleyle, 1902; Oppenheim, 1927; the R.M.O. accessions register for 1930, cf. table 4; Butler, 1959), it is important to establish the correct inventory. Primary, of course, is the list given by Leembruggen, who received the objects from the finder (whoever that may have been) and sent the list, together with good drawings of many of the objects and with descriptions, within ten days of the find. His letter makes an orderly, precise impression; we therefore rely entirely on his account.

The Leembruggen inventory consists of 25 objects:
1. Knobbed sickle, with single knob. Twodeep grooves outline the thickened edge. The blade tip is broken off, and the break subsequently (in antiquity) ground smooth. Both faces of the sharp cutting edge are hollow-ground. Length 11.6 cm, RMO h.1930/7.35.
2. Knobbed sickle (fragment) similar to (1), but larger and with two prominent ribs. Both faces of cutting edge hollow ground. Length 4.7 cm, RMO h.1930/7.37.
3. Fragment of blade, thin and parallel-sided, razor-sharp on both edges. Length 4.7 cm, RMO h.1930/7.36.
4. Tanged chisel (or Ledermesser) with curved sides, widely expanded blade. Tang rectangular in cross-section, with butt end...
slightly expanded and sharpened; tang separated from blade by a ridged thickening on face. Blade faces slightly convex, with remains of casting seams forming ridges on the sides. Length 10.2 cm, RMO h.1930/7.38.

10. Penannular rings, of bracelet size; all irregularly oval in form, of slender bars slightly oval in cross-section. The Leembruggen account speaks of six rings of this character; of which four are shown in his drawings. Of these, two are open penannular rings; one is a penannular ring with ends meeting, and one with the end overlapping and bent upward slightly.

In the museum, all the rings are now closed penannular: RMO h.1930/7.42 ends slightly expanded and meeting, 7.3x5.7 cm; thickness 4.4 mm; RMO h.1930/7.43: with overlapping ends, 8.6x5.6 cm; thickness 4.5 mm; RMO h.1930/7.44: ends flattened and meeting, 8.5x3.0 cm; thickness 3.5 mm; RMO h.1930/7.45: ends slightly expanded and meeting, 8.6x3.0 cm; RMO h.1930/7.46: 7.2x5.4 cm; thickness 4 mm; RMO h.1930/7.47: 7.7x5.3 cm; thickness 4.5 mm.

11-23. Thirteen small closed annular rings; varying in diameter and thickness. The largest has a diameter of 7.9 cm. Two have richting along their outer side; the others are plain. All show traces of wear.

These are now mounted on, and were inventoried with one of the closed bracelets (RMO h.1930/7.47), as shown in the drawing; that they were originally so mounted is not stated by Leembruggen, nor shown in his drawing; which could lead to the conclusion that this penetration was not made subsequent to the finding of the objects, but before they reached the Museum.

24-25. Pins with flattened biconical head; differing in decoration.

24: Head bears incised ornament consisting of two groups of horizontal lines; there is a ring of punch strokes below. The neck has a long band of horizontal lines and a short band of diagonal hatching. Length 16.5 cm; head diameter 1.2 cm; RMO h.1930/7.40.

Parallels and connections:

The pins: Pins with the head form of the Veenenburg pins (biconical, with flattened top; decorated) do not seem to occur, apart from isolated examples, in the Central European territory of the Higelgraberkultur; but there is a concentration—a dozen examples within a small area—in the region of the Lineburge Heide. Laux classifies them under the heading Nadell mit tonnenförmigem Kopf, chiefly of the variants Holthusen and Kronberg (Laux, 1976: No. 426 ff.; distribution his Taf. 50A). The decoration of the Veenenburg pins can also be matched on Lineburg pins especially in the parallel Deutsche-Everm series, and occasionally on other pin types.

A pin from Leer (Kr. Leer; Ems mouth area) is included by Laux in his Nadell mit tonnenförmigem Kopf series, under Variant-Holthusen, and is thus undoubtedly a Lineburg export: if Laux is right, from the Uelzen area. This pin (plus, perhaps, the pin without its head from Lauren, North Holland: Butler, 1969/1979, which can be matched as to decoration both in the Lineburg area and in Hessen) is a bridge between the Lineburg region and Veenenburg.

The third Veenenburg pin, RMO h.1930/7.41, though not part of the hoard, would seem to be contemporary with it and of the same origin. Its head form links it with Laux’ Type Deutsche-Everm; its decoration can also be matched among Lineburg pins (the Holthusen pin from Bodenstedt, Laux No. 426, offers an almost exact parallel); but its decoration is also matched in the hassel series (e.g. Kuchab, 1977: Nos 686, 704, 949, 952, 964; these are assigned by Kuchab to a variety of types).

The tangled chisel (or Ledermesser) seems to be without exact parallel. Typologically it falls between the simple triangular chisel (such as we have in the Ommerschans hoard in Overijssel; fig. 21-A) and the form with thickened rib running all around the middle, which in recent years has been claimed to represent functionally a leather-workers’ knife rather than a chisel (Roth, 1974; Burgess & Cowen, 1972: pp. 217-218).

The Veenenburg example is not quite like any illustrated example known to the writer, with its continuous-curved sides and a thickening only in the form of a rib on the faces. It belongs, in fact, to none of the four classes distinguished by Roth, though in outline it agrees with many examples of his Type 1; and it may be regarded as its forerunner.

The bracelets: The bracelets in the Veenenburg hoard are made simply of bent wire, without further embelishment. The ends have been modified slightly by hammering: either slightly thinned or slightly thickened. Roughly similar objects occur in Brittany in the Rosnoë phase (Briard, 1965: fig. 526) and in such hoards as Bois­-de-Lessines, Foubertsart (Hainault, Belgium; Mariën, 1956) and Anzin, Dept. Nord, northern France (Mohen, 1972: pp. 451-452, fig. 4; Blanchet, 1984: pp. 228, 231 fig. 122); and Villers-sur-Authe (Somme, Picardie: Blanchet, 1984; pp. 164, 167 fig. 83 esp. Nos 5 and 6). The Villers-sur-Authe hoard, with its Picardy pins and Bignian-like bracelets, is assigned by Blanchet to Bronze median 2; the Anzin hoard, with its midwinged Grigny axe, plain narrow-bladed palstave, etc. is assigned to Bronze final 1. The Foubertsart hoard, with its twisted bracelet and pin with swollen ribbed neck and trumpet head, can also date to Bronze final 1.

Dating: Most clearly datable are the pins. Most of the best parallels for the Veenenburg pins are dated to the earlier phase (Furhrop/Bergen-Bleekmar/Oldendorf) of Laux’ Stufe Deutsche­-Evern; the parallels in Hessen are mostly of Kubach’s Stufe Wollmesheim. In both cases we are in the Späte Higelgraber-Frihe, Ulmengelder, formerly Reinecke D. Some examples may be a stage earlier or later.

The other objects are not closely datable in themselves, but would be not amiss in this chronological context. Thus the Veenenburg hoard would belong to a late stage of Lanting & Mook Middle Bronze B.


Remarks: As a bog find, the Veenenburg hoard is presumably a votive deposit. The predominance of ornaments in the hoard, including the pair of pins, might suggest that it is a female assemblage. Possibly the sickles and the ‘leather knife’ were in this case associated with a female handicraft—perhaps leather-working!—though at Epe (Find No. 18) and Holset (Find No. 22) sickles occurred in more masculine-looking contexts.

FIND NO. 22. HOLSET, GEMEENTE VAALS, LIMBURG: HOARDS IN TUMULUS ‘THE SICKLE GRAVE’ (fig. 28)


Siie: Three bronze objects—two knobbled sickles and a narrow pegged spearhead—were recovered from a burial mound (referred to, since the discovery of these bronzes, as ‘the Sickle Grave’; the mound in question is one of a group of five tumuli in a wooded, sloping terrain in the Herenhauw or Malensbosch woods near Holset, Limburg) during an excavation in 1926 by the Aachen schoolmaster, antiquary and historian, Oberlehrer J. Liese (1886-1939).

Documentation: The excavation was never published, but some documentation, including a plan and a few photographs made during the excavation, with accompanying annotations, were preserved by a friend of Liese, Father J. van Liempd (then of Wittem, Limburg), who had assisted Liese during part of the excavation. The van Liempd album was loaned to the I.P.P., Amsterdam, in 1961, where copies were made of the relevant material, and are there preserved in the I.P.P. Protocol Book ‘Holset’, along with further material assembled by Hooier. This material formed the basis for a short description of the site by Hooier (1959; 1961; the bronzes are here mentioned, but no description of them was then available).

Hooier also conducted, on behalf of the I.P.P., an excavation in one of the mounds, which was also never published, but detailed documentation of it is also present in the I.P.P. ‘Holset’ Protocol Book.

References: (a) Hooier, 1959.

Description of the site: ‘The Sickle Grave’ had a diameter of c. 23 meters. The mound contained a complicated series of drystone constructions, the general plan of which is shown (fig. 28). The significance of all these curiously shaped features is obscure. It would seem unlikely that all of them were laid on at the same time, but the surviving notes do not clarify the sequence of stone constructions. The notes inform us that there was a layer of earth between the original ground surface and the stonework, and this is shown on the photographs.
Above the earth layer is a series of wholly or partially circular, cell-like drystone constructions, of which only one, slightly east of the centre of the mound, is actually a completely circular structure, of the order of 6 metres in external diameter, and with walling around 80 cm thick. It cuts through several 'earlier' similar structures (which could alternatively be interpreted as crescentic annexes to the completely circular chamber). The central circular construction was interpreted by van Liempd and by Hooier as a burial chamber, though van Liempd's notes state explicitly that no traces whatsoever of a burial were found. On the east side of the 'burial chamber' is an opening, interpreted by van Liempd as an entrance, though if the plan is correct it could hardly have been wide enough for a dog to squeeze through. Outside this 'entrance' are two irregular serpentine features forming a sort of funnel for the 'entrance'. The photographs tend to suggest that the stonework of the chambers is the surviving portion of a sort of dome-shaped capping.

In the main chamber there was a stony platform of complicated shape, with a length of c. 3.5 m and c. 1.75 m wide, but there was no actual trace of a burial on it, and there are no known finds from it. Charcoal and traces of bone (whether human or animal, burnt or unburnt is unknown) occurred in a small side chamber.

According to a marginal note on the plan, two bronze objects – the smaller of the two sickles and the spearhead – were found close together, under the stones of the circular walling at the east side; while the larger sickle came from loose earth outside the wall structure, but close by.

The bronze objects thus do not seem to have been placed in the grave, but outside it, and stratigraphically prior to the building of the chamber walling. The two sickles would, in any case, be most unusual grave goods.

Preservation: The present location of the bronze objects is unknown. Plaster casts are, however, preserved in the Brussels Museum, from which the drawings for this publication were made.

*Description of the objects:*

1. **Spearhead**, with slender leaf-shaped blade, round socket, pegholes. Length 11.8 cm; blade width 1.5 cm; socket-mouth width 2.1 cm.
2. **Sickle**, moderately curved, with three backing ribs; rounded butt, with two hafting knobs. Length 12.1 cm; max. width 2.8 cm near butt.
3. **Sickle**, more strongly curved than (2), with a reverse bend near butt; two backing ribs; plastic motif near butt, which is rounded; two hafting knobs. Length 12.5 cm; max. width near butt 2.8 cm; width in centre 3.5 cm.

The two-knobbled sickles: Both of the Holset sickles are strongly curved, and have three backing ribs and two hafting knobs. The smaller sickle has, in addition, a pattern of three raised chevron-like figures on the blade. The only other example of a two-knobbled sickle in the Netherlands is also from a hoard in a burial mound, at Epe, Gelderland (above, Find No. 18). This sickle also has three backing ribs. Its shape has been rather drastically altered by re-sharpening; this is clearly demonstrated by the way the ribs are cut through. Noteworthy is the rounded heel of the Epe sickle, an unusual feature which it shares with both of the Holset specimens.


Between the South German and Dutch finds few examples are known. There is a find of two specimens (N.B. with three backing ribs!), in a possible hoard at Kreuznach-Kastell (Dehn, 1941: Abb. 19, II 31, No. 9; with a decorated sheet metal fragment). Primas dates the Kreuznach find to Late Tumulus/Early Umfieid (Reinecke D).


The spearhead: The narrow pegged spearhead from the Holset deposit closely resembles the spearheads which Rittershöfer (1983: p. 219 distribution map Abb. 12, p. 220 Tab. 8 for associations; p. 382 Liste 11) has termed 'spearheads of type Bühl', from their occurrence in that hoard. Their distribution, in so far as known to Rittershöfer, is mainly South German, but with a few finds extending to North Germany. Of special interest is the grave find of such a spearhead at Herstelle, Kr. Höxter in Westfalen (Hügelgrab 3); Rittershöfer's Liste 11 No. 7; Hachmann (1957a: pp. 34, 37 ff., Taf. 41:8-11, Kat. 363, p. 203). This grave includes a Wohilde sword, a flint strike-a-light and an iron concretion (Sprockhoff, 1941: Abb. 25:6-9; according to Hachmann Sprockhoff's attribution of this find to 'Etteln' is erroneous).

The rather similar, if slightly wider, spearhead from a tumulus at Monnikenbraak (see above under Find No. 13) is also possibly associated with a Wohilde rapier.

Dating: The British two-knobbled sickles are assignable to the Taunton phase, British MBA 2.

The Epe hoard's palstave, with its close parallel in the Brighton Black Rock hoard, Sussex (O'Connor, 1980: p. 329, Cat. No. 34, with previous references), is consistent with this.

Thus the Holset deposits can be assigned in local terms to Lanting and Mook Middle Bronze B.

Interpretation: As there was no evidence that either of these two deposits were directly associated with a burial in the tumulus, they are best regarded as funerary hoards, comparable to those at Swalmen (Find No. 23) and perhaps Epe (Find No. 18). If, however, there were more than one phase of construction, it is conceivable that the bronzes were in a burial chamber at some stage, and redeposited peripherally at a subsequent stage. But at Swalmen-Swalmen (Find No. 23) there were also two peripheral deposits in a tumulus.

Both the spearhead and the sickles can be regarded as products of Central European Tumulus Bronze Age influence.
Fig. 29. Find No. 23. Swalmen-Hillenraad (Limburg). Tumulus hoards. 1,2. Tumulus 1 (2. Stone); 3,4. Tumulus 2. Scale 1:2. Tumulus plans redrawn from field drawings of Bursch.
basis of their test trench Lanting and van der Waals deny this. No central grave was found. Secondary in the mound were HVS/DKS/Laren pottery and an early Harpstedt urn with accessory bowl.

Toward the edge of the mound, on the NE, a bronze winged axe and a large whetstone were found together. According to Lanting and van der Waals these represent a secondary deposit, and are a terminus ante quem for the mound itself.

Tumulus 2: c. 13x0.8 m; of sand. As with Tumulus 1, the Bursch plan suggests a ring-ditch, but the Lanting and van der Waals cutting disproves this. A central ESE-WNW rectangular grave pit, 2.60x0.85 m, contained surviving fragments of a lightly contracted skeleton on its left side, head to ESE; there were no grave goods.

Toward the NE edge of the mound, two midwinged axes, like the one in Tumulus 1, were found together.


Preservation: The winged axe and whetstone from Tumulus 1 are in the R.M.O. Leiden (Inv. No. 11937/8.47.48). One winged axe from Tumulus 2 is in the Bonnefanten Museum, Maastricht (Inv. No. 247), the other is in private possession (family Wolff Metternich, Castle Hillenraad).

Description of the objects:
Winged axe: (RMO 1 1937/8.47): rounded butt with indentation; sides nearly parallel, only slightly sinuous. Short, almost centrally placed D-shaped wings. Sides of lower part slightly convex, with no blade expansion. Length 20.4 cm; blade width 4.5 cm; max. thickness (wings) 3.2 cm.

Winged axe (Maastricht 247): length 19.75 cm; blade width 4.5 cm; thickness (wings) 3.0 cm.

Winged axe (Pvt.): length 20.45 cm; blade width 4.6 cm; thickness (wings) 3.35 cm.

Whetstone: (RMO 1 1937/8.48): length 15.3 cm; width 4.0 cm; thickness 2.25 cm.

Parallels and connections: Winged axes of Type Grigny (Kibbert, 1984; Butler, 1987: pp. 23-26, fig. 14-16) are even more common in eastern France than in western Germany. And in West Germany they are far more common along the Mosel than along the Rhine. A series of finds of such axes along the Meuse (Maas) in Belgium and the south of the Netherlands suggests an import stream northwards from eastern France. Cf. the midwinged axes in hoards from Maaseik of the Netherlands suggests an import stream northwards from eastern France. Cf. the midwinged axes in hoards from Maaseik of the Netherlands.

Date: The Grigny axe dates are dated by Kibbert to the frieze und ältere Urnenfelderzeit (Reinecke D and HaA1 in older terminology).

Interpretation: Deposits of bronzes in a tumulus, and not directly connected with a grave deposit, include those from Holset in South Limburg (Find No. 22) and possibly Epe (Find No. 18), along the eastern edge of the Veluwe plateau in Gelderland. These may be somewhat earlier than the two Swalmien-Hillenraad tumulus hoards. Noteworthy is the predominance in these hoards of tools, and especially axes and sickles, not broken up for recycling; thus probably votive or funerary deposits rather than scrap metal.

FIND NO. 24. ZWAAGDIJK, GEMEENTE WEVERSHOOF, NORTH HOLLAND: FLAT GRAVE 3 (fig. 30)

Map reference: Sheet 14 East (Alkmaar), 139/7/525.3.


References: (a) Modderman, 1964; (b) Butler, 1964; (c) Huizinga, 1964; (d) Runia, 1986; 1987.


Preservation: Part of the finds Westfries Museum Hoorn; part were transferred from the Institute for Human Biology, University of Utrecht, to the I.P.P., Amsterdam, c. 1986 (Runia, 1987); later to the Westfries Museum, Hoorn. The rapier has the Inv. No. N 1963/ XII.17.

Description of the site: Cemetery of at least five flat graves with skeletons; located c. 500 m south of the Zwaagdijk Middle Bronze Age barrow cemetery partially excavated by van Giffen (1944b); and adjacent to a presumed contemporary Bronze Age settlement with ditched fields or enclosures, partially excavated along with the flat graves (Modderman, 1964). In the settlement animal bones, chiefly of cattle, were recovered (Clason, 1964). Conventional 14C date of charcoal from a settlement ditch (revised figure given by Lanting & Mook, 1977: pp. 112, 127), GtN-3433, conventional 3200±60 BP, 2-sigma calibration range 1628-1479 BC.

Grave 3 was the only grave accompanied by grave goods. The grave had previously been partially disturbed, first by a drain-pipe trench through its centre, then by workmen during levelling operations. The skull, some of the arm bones, and part of the rapier were still in situ. The rapier had lain slantwise across the left elbow and the abdomen. The amber beads were not observed in situ, but must have been transported to the Utrecht Institute along with soil lifted with the bones; there they were found by Runia (1986) in a match-box with a tag indicating that they belonged with the bones of Grave 3.

Description of the objects:
1. Rapier: rounded shield-plate (the sides of which are badly damaged), with six 'plug' rivets graduated in size (the longest central; heads diagonal), five in situ, arrange in a shallow arc. Narrow blade, with ridged and stepped cross-section. Severely corroded. Present length of fragments (lowest part lost) c. 45 cm; original length estimated c. 55-60 cm. Reference: Butler, 1964.

2. Four amber beads; all small, with cylindrical perforation. Three of these were available for examination in the spring of 1992; the fourth is described after Runia (1986): (a) biconical bead, slightly flattened around the perforations; diameter 1.38 cm; thickness 0.64 cm; perforation 0.27 cm; (b) disc-shaped bead, slightly convex sides; diameter 0.72 cm; thickness 0.32 cm; perforation 0.2 cm; (c) barrel-shaped bead, slightly convex sides; diameter 0.66 cm; thickness 0.46 cm; perforation 0.28 cm; (d) ovoid outline; flattened sides; diameter 0.92x0.71 cm; thickness 0.42 cm; perforation 0.27 cm. Reference: Runia, 1986: pp. 137-138, with photo.

3. Skeleton: according to Huizinga (1964) 'a robust, strong and tall adult male individual (estimated stature 181 cm)', probably not of the same population as the other skeletons in this cemetery.

Further finds: according to Runia (1987), the grave also contained a piece of worked flint, a piece of sandstone, and a small, not further identified small animal bone.

Parallels and connections:
The rapier: A small number of six-riveted rapiers classified under the heading Type Saint-Triphon (Schauer, 1971: pp. 33-35, Nos 48-52, Nahestehend No. 53; to which we might add his untyped No. 167) seem to be better parallels for the Zwaagdijk rapier than we could find in 1964. The Saint-Triphon-type rapiers may have capped rivets, plug rivets, or a combination of both rivet types. The only parallel for the unusual stepped blade section of the Zwaagdijk rapier in Schauer’s corpus is, however, the rapier from Unterbirmbach, Kr. Fulda, in East Hessen (Schauer, 1971: No. 110, Taf. 29b); this rapier has four rivets, two capped and two plug; it falls under Schauer’s Typ Panholz. The specimen from Wolfhagen in Hessen, which we cited in 1964 as the best known parallel for Zwaagdijk, has not lost its relevance; it has rivets quite like those of Zwaagdijk, in a similar arc, and if the original illustration of Bergmann (1962: p. 110, Abb. 7) is to be believed, its blade cross-section is exactly like that of Zwaagdijk, though the illustration of Schauer (1971: No. 174) shows a rounded rather than a ridged middle section. Incidentally, the gold coil associated with the Wolfhagen rapier is quite like the small single-wire Netherlands specimens from Hijken, etc. (see Find Nos 8, 16, 20).

Date: As a derivative of the Saint-Triphon and related rapiers, the Zwaagdijk rapier is datable in Central European terms to the Early or Middle Tumulus period (Loccham or Göggenhofen). It would thus come within or soon after the Sogel-Wohlde phase, in Lanting and Lochhammer or Morgartenhof (Lochhammer or Göggenhofen). It would thus come within or soon after the Sogel-Wohlde phase, in Lanting and Lochhammer or Morgartenhof.
of a large man and a pair of irregularly coiled lengths of gold wire. The sword (if such it was) has been lost without trace: no drawing or description is known. It is not even recorded whether it was of bronze or iron.

The gold wire coils were, however, still preserved at the farmhouse of the landowner at the time of the B.A.I. excavations, and were examined and described by van Giffen (1944b: Abb. 17). They measured, unrolled, 42.5x0.007 cm and 44x0.06 cm respectively, thus totalling 86.5 cm of gold wire. According to a touchstone determination they were of pure gold: which if accurate would distinguish them from the silver-containing gold wire ornaments from Bronze Age graves (Find Nos 8, 11, 16, 20).

The photographs do not really suggest that the gold wires had been wrapped round a sword handle, or in any way were finished ornaments or parts thereof; they seem to be simply irregular lengths of wire. Unfortunately these gold wires have also since been lost.

The higher parts of Tumuli I and IV of the Zwaagdijk group yielded mutilated skeletons of unknown date. Van Giffen records a tradition that soldiers of Count William II (1227-1256) were buried in these tumuli. He suggests that followers of Count Floris V (1254-
1296) were more likely candidates, as William II is not known to have fought in the area concerned. Such a tradition need not necessarily be taken seriously. Runia (1987: p. 34) has in the meantime re-examined the skeletal material from Tumuli I and IV. He finds that the presumed ‘late’ skeletons do not differ in condition from those in the certain Bronze Age graves; and thus these ‘late’ graves may be Bronze Age too. Furthermore, he finds that of the eight ‘medieval warrior’ skeletons at least four were probably female and one was a child of less than 10 years. It would seem, then, that the ‘medieval soldiers’ have disappeared from the scene.

Although direct evidence for attributing the alleged sword and the gold wire lengths to the Bronze Age is absent, the possibility cannot be dismissed, especially in view of the presence close by of the Zwaagdijk (Modderman’s No. 3) Middle Bronze Age sword and the four gold rings of Velserbroek (Find No. 20) c. 50 km to the southeast.

In the ring-ditch of another Zwaagdijk tumulus (van Giffen’s No. 1) a single amber bead was found (van Giffen, 1944b: p. 125, Afb. 90). It is a rather irregular discoid, slightly oval in outline (1.8x1.6 cm; thickness .7 cm; perforation .25 cm).

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With few exceptions (i.e. with respect to objects illustrated in the literature but now unfindable) the objects were drawn from the originals by professional draughtsmen, either free-lancers in part-time employment at the cost of the Z.W.O., or staff draughtsmen of the B.A.I. and I.P.P. We wish especially to thank B. Kuitert, B. Kracht, L. Hart, O. de Weerd, H. Roelink, and J.M. Smit for the high standard of their devoted art-work on the artefacts.

A number of persons have given extensive and invaluable administrative support with the collection and ordering of the documentation. These include C.H. Butler-Geerlink, T.C. Appelboom, W. de Vries-Metz, E. Wolthus and J. Steegstra. The computer facilities of the University of Groningen (Rekencentrum) and the computer department of the I.P.P. have been very helpful. Numbers of colleagues at the B.A.I., the I.P.P. and the Rijksdienst voor het Oudheidkundig Bodemonderzoek at Amersfoort, and especially those members of its staff who were also provincial archaeologists, have also made valuable contributions.

6. REFERENCES


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same information was noted in the Leiden museum accessions register when the hoard was acquired by the museum in June 1841. But the museum cataloger failed to take over the phrase "all lying close together", which has occasionally given rise to needless uncertainty on this point. Further confusion has arisen from the coupling on one plate by Pleyte (1889: p. 49, PI. XI:5-9) of the hoard with a beaker-like vessel, which was also found at Wageningen, but not at the same time or as part of the same find. This vessel does not seem to have reached the museum and its fate is unknown; in any case, it has nothing to do with the hoard.

Cadastral records show that Alderman Van Rijn owned a number of parcels of heath and woods northeast of Wageningen at the time; of these, two parcels lies at a distance from the town of c. 2.5 km, and could accordingly have been described as having been 'half an hour' away; the other parcels are at a greater distance. It is likely, therefore, that the actual find-spot lies on one of these two parcels, both of which are shown as wooded on the 1:50,000 topographical map of 1850, surveyed in 1847. The two parcels are some 300 m distant from one another. The actual find-spot can, therefore, be approximately located.

Extract letter G.P. Versteegh to L.J.F. Janssen (original Dutch text):

... Nu overgaande tot de beantwoording van UW waarde schrijven, is dienende, dat in het begin der jongsledene Maand December, de voorwerpen op nevensgaande, ter bezichtiging overgezonden worden, de tekening voorgesteld, gevonden zijn geworden op een stuk heidegrond, op een half uur afstand ten noordoosten van deze stad gelegen, toebehorende aan den Heer J. van Rijin, wethouder alhier, bij gelegenheid van het ter beplanting met eiken takken. eene neder diep, ontgraven of riolen van denzelven grond. en wel, ongeveer op de helft dier diepte, en allen kort nabij elkaander ...

APPENDIX 2: The Veenenburg hoard – Text letter of W. Leembruggen dated 'Veenenburg', Lisse, 23 March 1897, to Rijksmuseum van Oudheden (see also table 4)

Zeer Geachte Heer Jesse,

Het deed mij veel genoegen uit UW geeerde letteren van gisteren de belangstelling te mogen vernemen van Dr. Pleyte in de bronze objects found here, and hope that the sketch with indication of the find spot and description which I hereby enclose meets with the wishes of the Director. If the sketch is not sufficient I am gladly willing on an occasion that I again come to Leiden to let Dr. Pleyte see the things, and hope to be able to find him completely recovered.

Deze voorwerpen zijn allen van bronzen, en gevonden 12 maart 1897 in de z.g. 'Rail Sandpit' (Spoorzandjier) bij Hillegom, van het landgoed Veenenburg, hetwelk gelegen is in de Gemeenten Lisse en Hillegom, op een afstand van 170 M van de grenspaal tussen Hillegom en Lisse, die staat aan den Rijksstraatweg van Haarlem naar Leiden, in een richting van ±10° ten Westen-Noord van genoemde grenspaal. Zij lagen allen bijeen op eene diepte van ±40 cm onder de oppervlakte eenen zeer harde darie (een soort veenachtige) laag, die op zichzelf eene oppervlakte had van ±1/10 Hectare, dik was ±1/5-1/1, M en ge­legen van ±25: +Amst.Peil tot ±1.45—AP. Vóór eenen jaren bevonden zich boven die veenlaag duinen ter hoogte van ±3 Meter. Van A-B-C-D-E en F aanwezig elk één voorwerp = 6 stuks
Van G behalve den 4 getekende nog 2, te zamen = 6 stuks
Van H in 't geheel van dezelfde grootte = 13 stuks
Totaal 25 stuks

Translation by J.J.B.:

Greatly esteemed Mr Jesse,

I was very pleased to learn from your valued letters of yesterday of the interest of Dr. Pleyte in the bronze objects found here, and hope that the sketch with indication of the find spot and description which I hereby enclose meets with the wishes of the Director. If the sketch is not sufficient I am gladly willing on an occasion that I again come to Leiden to let Dr. Pleyte see the things, and hope to be able to find him completely recovered.

(was signed W. Leembruggen)

These objects are all of bronze, and found 12 March 1897 in the so-called 'Rail Sandpit' (Spoorzandjier) at Hillegom, of the Estate Veenenburg, which is situated in the Gemeenten Lisse and Hillegom, at a distance of 170 M. from the boundary post between Hillegom and Lisse, which stands along the national highway from Haarlem to Leiden, in a direction ±10° west of north from the boundary post named. They lay all together at a depth of ±40 cm under the surface of a very hard layer (a sort of peaty) layer, of itself had a surface of ±1/10 Hectare, was ±1/5-1/1 M thick, and situated from ± plus 5 cm Amsterdam datum to ± minus 1.45 Amsterdam datum. 30 or 40 years ago there were above this peat layer dunes to a height of ± 3 meters. Of A-B-C-D-E and F one object each is present = 6 pieces
Of G, besides the 4 drawn, another 2, together = 13 of same size
Of H all told = 25 pieces