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**ABSTRACT:** The partly destroyed *hunebed* D9, near Annen, was investigated in 1952. This paper deals with excavation and finds. The typo-chronological schemes for the development of TRB-pottery by Bakker and Brindley are compared. On basis of the pottery the tomb seems to have been used during a relatively short period.

**KEYWORDS:** Northern Netherlands, Neolithic, megalithic monument, TRB-pottery, typo-chronology.

## 1. INTRODUCTION

The excavation and restoration of *hunebed* D9, near Annen, took place in 1952. This investigation was never mentioned in the literature, let alone fully published. After being cleaned and numbered the finds were left, without being examined, in the depot of the B.A.I. at Groningen, later in the Provinciaal Drents Museum at Assen. It was not until 1987 that the excavation and the finds received further attention, when they became the subject of my graduate thesis in Prehistory. This report is based on the excavation journals and field drawings of 1952. In addition it contains the results of the examination of the finds. The present publication is a somewhat abridged and updated version of my original study.

## 2. OWNERSHIP, SITUATION, FIELD NAME

Since 1870, *hunebed* D9 has been in the hands of the province of Drenthe. On 13 April of that year, the Royal Commissioner of Drenthe notified that Mr. C.E. Kniphorst of Zuidlaren had offered the province two *hunebedden* near Annen and Anlo (later known as D9 and D8), as a gift. On 13 July this donation was accepted by the States, and on 3 July 1871 recorded in a deed by the Provincial Archivist (see van Giffen, 1925/27: vol. I, p. 198 sub V 68 and V 77, and p. 200 sub V 111). At that time *hunebed* D9 still comprised two pairs of side stones, a end stone at the west side, and two capstones, one of which lay inside the chamber. Its orientation was almost east-west, with its longitudinal axis diverging on the westside 87°30' from the north (van Giffen, 1925/27: vol. I, p. 30).

Today, *hunebed* D9 lies at the edge of the built-up area of the village of Annen, just west of the Zuidlaarderweg (figs 2 and 3). Its coordinates on the Ordnance Survey map are 244.04/564.66 (sheet 12 E, Zuidlaren). Since 1972, the parcel containing the *hunebed* is cadastrally known as Anlo, section I, No. 3646. On 22 August 1977, *hunebed* D9 was listed as one of the protected Ancient Monuments of the *gemeente* Anlo.

Van Giffen (1925/27: vol. I, pp. 30-31) referred to D9 as the *hunebed* of Noordlo, which is the hamlet on the northern edge of the open fields of the Noordes of Annen. At that time D9 lay in a lozenge-shaped field, cadastrally known as Anlo, Sectie I No. 2355, which was situated between the Zuidlaarderweg and a nameless track across the Noordes. This track, joining the Zuidlaarderweg just north of D9, was a remnant of the Oude Groningerweg which in the Middle Ages, and probably even earlier, constituted one of the main roads along the Hondsrug ridge (Jager, 1985: fig. 2, which shows D9 on the wrong side of the Zuidlaarderweg,

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### NOTE ON THE FIGURES

The following conventions were adopted for the illustrations of the pottery:

- solid lines indicate certainty of reconstructed profile and decoration;
- broken lines indicate proposed reconstructed profile;
- sections with applied features (handles, lugs, footings) shown by solid lines indicate certainty of location and reconstruction.

The drawings of the pottery are reproduced at the scale 1:3.

The drawings of the flint, stone, amber and jet objects are reproduced at full scale. The numbers refer to the catalogue.

The pottery was drawn by S.W. Jager; the other objects by H.R. Roelink. Maps and plans are the work of J.H. Zwier.

This paper was translated by A.C. Bardet.



Fig. 1. The location of Annen.

however). Apparently, the section of the Zuidlaarderweg between Noordlo and Annen was built to take the traffic around the fields and through the village. The section of the Oude Groningerweg across the Noordes then remained in use only for local traffic to and from the fields. In advance of the excavation of 1952, land was exchanged with owners of adjacent fields so as to obtain a roughly rectangular site, lying at right angles to the Zuidlaarderweg (fig. 3). The local situation has dramatically changed since then. A large part of the Noordes has disappeared beneath a housing estate. However, the course of the Oude Groningerweg has been retained in the form of a cycle-path.

Huiskes (1984; 1985) has pointed out the connection between *hunebedden* and field names containing the element *steen* (stone). In many cases it was found that a *hunebed* occupies or has once occupied a parcel or group of parcels with a name such as Steenakker or Steenberg, or in the vicinity of a marshy pool with a name such as Steenveen or Steenbergerveen. In this context he also mentions D9. This is because near this *hunebed* there is a group of fields that is referred to as Stienacker in the *Grondschattingsregister* (land-tax register) of a-

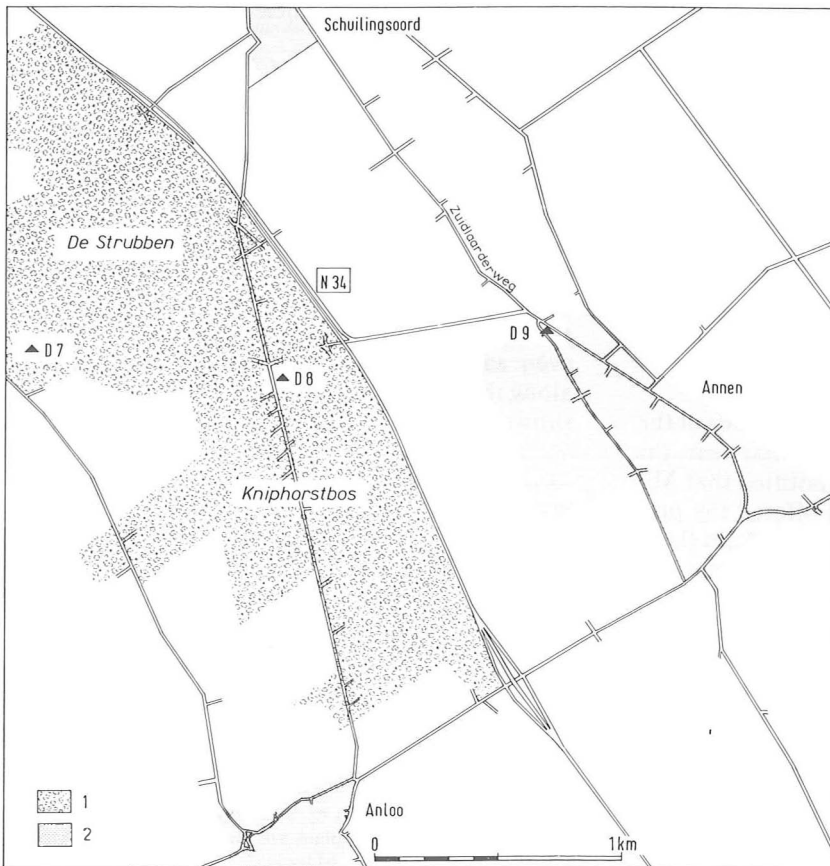


Fig. 2. The location of *hunebed* D9.  
Key: 1. forest and heathland;  
2. built-up area.



Fig. 3. Cadastral position of D9 and its surroundings in 1952. The small black triangles indicate the parts of adjacent plots that were acquired in exchange for the parts shown as white triangles. Shading indicates the fields known as 'Steenakkers'.

round 1650, and as Steenakker in the *Cohieren der Vaste Goederen* (register of real estate) of 1807. In this latter form the name remained in use until quite recently. J. Wieringa (pers. comm.) recorded the name as belonging to a narrow strip of land extending towards the *hunebed* along the east side of the Oude Groningerweg, rather than to the actual *hunebed* site (fig. 3).

It appears that the *hunebed* has always lain outside the open arable fields of the Noordes. Hence the name Steenakker in this case does not refer to a group of fields around the *hunebed*, but instead to a group of parcels in its vicinity.

### 3. EARLY REFERENCES TO D9

The earliest reference to D9 is probably the one by Smids (1711, p. 325) who a.o. mentions a *hunebed* near Annen *aan het einde van den es* (at the far end of the *es*), without giving further details. However, Smids is not always a reliable source. It seems that in many cases he confused tumuli with *hunebedden* (Bakker, 1988).

Much more significant is a drawing made in 1768/69 by Professor Petrus Camper of Groningen (fig. 4). This very accurate representation shows

that in his day the *hunebed* was in much the same state of decay as it was before the restoration of 1952. An etching after Camper's drawing was published anonymously in 1789, possibly by Gallitzin<sup>1</sup> (Bakker, 1989).

In 1809 or earlier, J. Hofstede, brother of P. Hofstede who was then Bailiff of Drenthe, found a fragment of a large flint axe (No. 154) inside the *hunebed*. It is not known to what extent J. Hofstede carried out excavations in D9; other finds were not mentioned, if indeed any more were collected.<sup>2</sup> Hofstede's description of the axe runs as follows: "een zogenaamde donderbeitel of wig, hebbende waarschijnlijk tot eenig gereedschap gediend, gevonden te Annen, 3 uur van Assen, onder een *hunebed* in het veld" (a so-called thunderbolt or wedge, probably having served as a tool of some kind, found at Annen, 3 hours from Assen, beneath a *hunebed* in waste land).

L.J.F. Janssen, curator of the Rijksmuseum van Oudheden in Leiden, in 1840 also gave a description of the axe fragment. He speaks of 'jasper-like flint' (Janssen, 1840: pp. 14-15, No. 18). What made him use this designation is unclear, given the fact that the flint is definitely grey.<sup>3</sup>

Janssen visited Drenthe in 1847. On this occasion he made the sketches of the *hunebedden* that are now

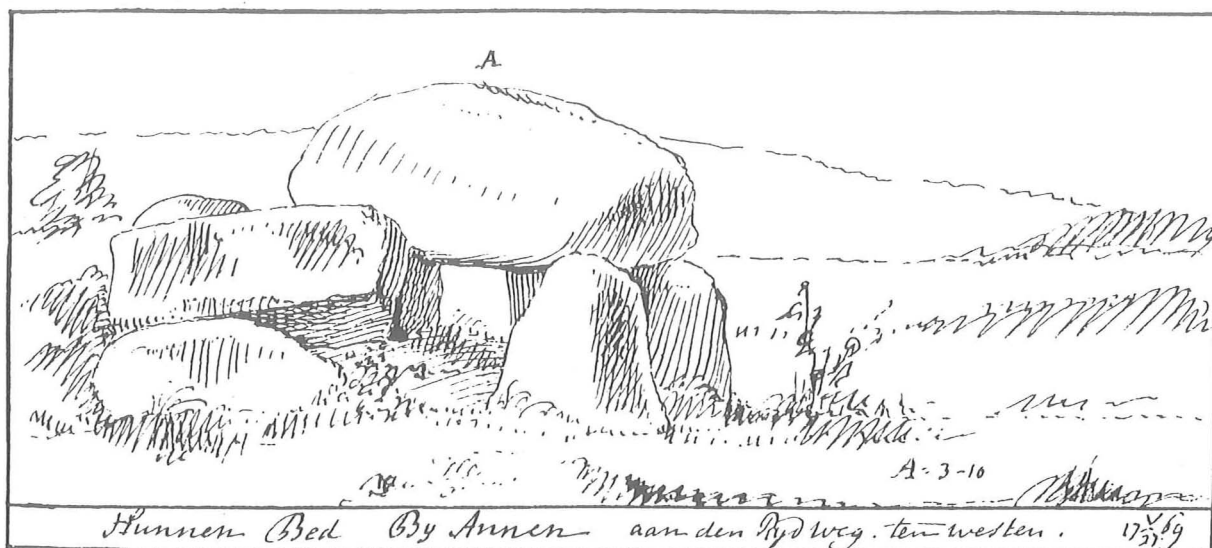


Fig. 4. *Hunebed D9* in 1768/69. Pen drawing in brown ink by Petrus Camper (Library of the University of Amsterdam, MS II G 53; reproduced from *Catalogus van de tentoonstelling ter herdenking van den 150sten sterfdag van Petrus Camper 1722-1789*. Groningen, 1939).

kept at the Provinciaal Drents Museum.<sup>4</sup> The drawing of D9 offers little in the way of fresh information. In his book on the antiquities of Drenthe, Janssen included a rough plan of it, adding in stippled outlines an end stone on the east side (Janssen, 1848: Appendix *Lijst der hunebedden in Drenthe en Groningen*). Evidently he did not believe D9 to have been much longer originally. Further he gave some dimensions, none of them particularly accurate, and an orientation that shows that he used a compass and did not take into account the magnetic declination. Once more he mentioned the axe found here.

The *hunebedden* of Drenthe were visited in 1870 and 1874 by W. Pleyte, Janssen's successor as the curator in Leiden (Bakker, 1979c: p. 153, note 30). In 1874 he had some of them photographed by the photographer J. Goedeljee of Leiden, for making lithos for his book on the antiquities of Drenthe. D9 was also photographed; the photo is preserved with the Pleyte Records in the Rijksmuseum van Oudheden.<sup>5</sup> The corresponding litho was published, together with a rough plan (Pleyte, 1882: Pl. LII, Nos 5 and 6). Pleyte too mentioned the axe fragment found in 1809, calling it "het gedeelte van den beitel, glad bewerkt uit grijzen vuursteen en in het museum te Leiden bewaard" (part of a chisel, of grey flint with a smooth finish, and preserved in the museum at Leiden) (Pleyte, 1882: p. 47, Pl. LII, No.7).

Around 1870 most of the *hunebedden* came into the hands of the provincial or the national government. The great interest generated by these ancient monuments unfortunately meant that several of them were 'restored' by local authorities. Oldenhuis Gratama, adviser to the Royal Commissioner of

Drenthe J.L.G. Gregory, reported on these activities at the Congrès International d'Anthropologie et d'Archéologie Préhistoriques in 1874 at Stockholm (Oldenhuis Gratama, 1886: p. 8). At the 1876 Congress in Budapest, A.W. Franks, president of the Society of Antiquaries of London, expressed his objections to such drastic restorations (Oldenhuis Gratama, 1886:, pp. 16-17). These objections were not without grounds. The so-called restorations not only involved the replacement of orthostats and capstones, but often also the removal of the barrow or its remnant, and in some cases even clearance of the chamber itself (Bakker, 1979b; 1979c).

In order to document the *hunebedden* of Drenthe before even worse damage was done, the Society of Antiquaries in 1878 delegated to the Netherlands Messrs W.C. Lukis and H. Dryden. In a period of merely three weeks, between 1 and 21 July 1878, they documented forty *hunebedden* in the form of plans and cross-sections, descriptions, and in sixteen cases also sketches produced with the aid of a camera lucida. Finds were collected inside and around various *hunebedden*. Of these finds, watercolours were made.<sup>6</sup> *Hunebed D9* also was visited by Lukis and Dryden. Two sections and a plan were drawn. They picked up a sherd at the site, which, together with the other finds from the *hunebedden*, is preserved in the British Museum.<sup>7</sup>

In 1925/27 a detailed description, an accurate plan and a photo of D9 showing the situation of 1918, were published by A.E. van Giffen in his standard work on the Dutch *hunebedden*. He also included the cross-sections made by Lukis and Dryden in 1878 (van Giffen, 1925/27: Atlas Pl. 117). The

description of the hunebed runs as follows (van Giffen, 1925/27: vol. I, pp. 30-31):

“7 Chamber-stones, to which:

- 5 uprights, i.e.:

1 closing-stone, S11, in situ

2 pairs of side-stones Z1, Z2, Z1' and Z2', of which Z2' has receded to the perpendicular line, the others being in situ. Z2' has on the eastside a flat limitation pointing towards the chamber and is probably at the same time a portico-sidestone.

- 2 cap-stones, i.e.: D1 in situ resting on Z1, Z1' and S11; D2 slid over and obviously turned 45°, in such a way that its initial south-north axis now points S.W.-N.E., otherwise just leaning a little on Z2 and moreover sunk into the chamber alongside of Z2'.

Stone of indeterminate character,

marked?, lying in the chamber under D2.

The total number of stones therefore is at least 8. All stones are unhewn, but otherwise they possess more or less naturel flat sides<sup>8</sup> point towards the inside of the chamber and its entrance. The stones are of granite with the exception of D2 and Z2 that are of quartzite.

The hunebed as far as present, shows that formerly it has at least been twice this size, judging by the character of Z2'. Apart from this it is incomplete because only traces of its original cover-or mantle-hill are left over.”

In 1941 D9 was photographed by C. Gombault of Leeuwarden, at the request of F.C. Bursch, curator of the Rijksmuseum van Oudheden in Leiden and director of the Rijksbureau voor het Oudheidkundig Bodemonderzoek (State Agency for Archaeology).<sup>9</sup> This photo, probably deliberately, shows D9 from virtually the same angle as taken by Petrus Camper for his drawing of 1768/69. Both from this picture and from a photo taken immediately before

the excavation of 1952 (fig. 5), it was clear that since 1768/69 little had changed in the condition of the *hunebed*. There is one minor difference, however. In Camper's drawing and in Pleyte's litho of 1874/82 it can be seen, as we read in van Giffen's 1925 description, that capstone D2 rested on orthostat Z2. The photos of 1941 and 1952 show D2 lying on the ground. We know when this small alteration came about. In an inspection report dated 9 January 1950, G.Ch.F. Scheffel, assistant in the State Archaeological Service (R.O.B.), reported being told by one of the villagers that around 1935 the local people had been obliged to lower the capstone because of the danger it presented.

For a more detailed survey of the documentation concerning D9 and the other Dutch *hunebedden*, the reader is referred to the publication by ten Anscher (1988).

#### 4. RESEARCH AND RESTORATION IN 1952

##### 4.1. Preliminary remarks

The excavation and restoration of *hunebed* D9 took place between 25 April and 19 May 1952. It was directed by Professor A.E. van Giffen, director of the Biologisch-Archaeologisch Instituut of the University of Groningen. Work was carried out by field technician J. Lanting and draughtsman R. Woudstra. From 25 April to 3 May the destroyed eastern half of the *hunebed* was investigated; then the project was interrupted for a week because of a



Fig. 5. *Hunebed* D9 in 1952, shortly before the excavation. Photograph B.A.I.

rescue excavation on the Emelange at Wijster, in which all the field technicians of the B.A.I. were employed. On 12 May the excavation of D9 was resumed, now in the hands of J. Lanting and draughtsman H. Praamstra.

This report on the proceedings was compiled from the excavation journals and field drawings of 1952, all kept at the B.A.I., as are the photographs of the excavation.<sup>10</sup>

First it should be noted that Praamstra in his journals made an error of 90° clockwise in his compass bearings, so that for instance he writes 'south' when he means 'east'. In the present report these errors have been corrected. However, the interruption in the excavations and the change of draughtsman gave rise to other errors as well. In the drawings that Praamstra made of the western half of the chamber, the zero point on the baseline through the chamber had shifted 20 cm eastward in relation to Woudstra's baseline. Moreover, the levels in Praamstra's drawings are c. 20 cm too high. In the plans and sections in this publication these measuring errors too have been corrected. In 1952 all levels were measured in relation to the top of the end stone SI1; in July 1989 the level of this point above NAP (Dutch Ordnance Datum) was determined and the levels recorded in the excavation were converted to NAP values.

#### 4.2. The proceedings

Apparently it was not the original intention to carry out a full investigation of D9. The plan was to restore the remains of the chamber, and to trace the position of missing orthostats so that they could be indicated by concrete pedestals.

In accordance with the provincial inspection report of 12 January 1951, an exchange of land with the two adjacent landowners was initiated on 25 April 1952, so that the site came to lie at right angles to the Zuidlaarderweg (fig. 3). In the *hunebed* itself work was started by jacking up the subsided capstone D2 and shoring it with timbers. Subsequently the side stones Z2 and Z2' which had subsided eastwards and outwards respectively, were realigned, so that the capstone could be replaced on them. In order to provide it with greater stability, it was also given a support on Z1. After this, a trench was opened east of the intact part of the chamber, with the aim of tracing the pits of extracted orthostats. From van Giffen's description of 1925/27 it is clear that he assumed the chamber to have been at least twice as long in its original state. In the following days the excavators indeed encountered recent pits, 'extraction pits', which had once held Z3, Z3', Z4, Z4' and SI2. In addition, the extraction pits of two portal stones came to light (figs 6-8).

No heights were indicated on the drawn plan of

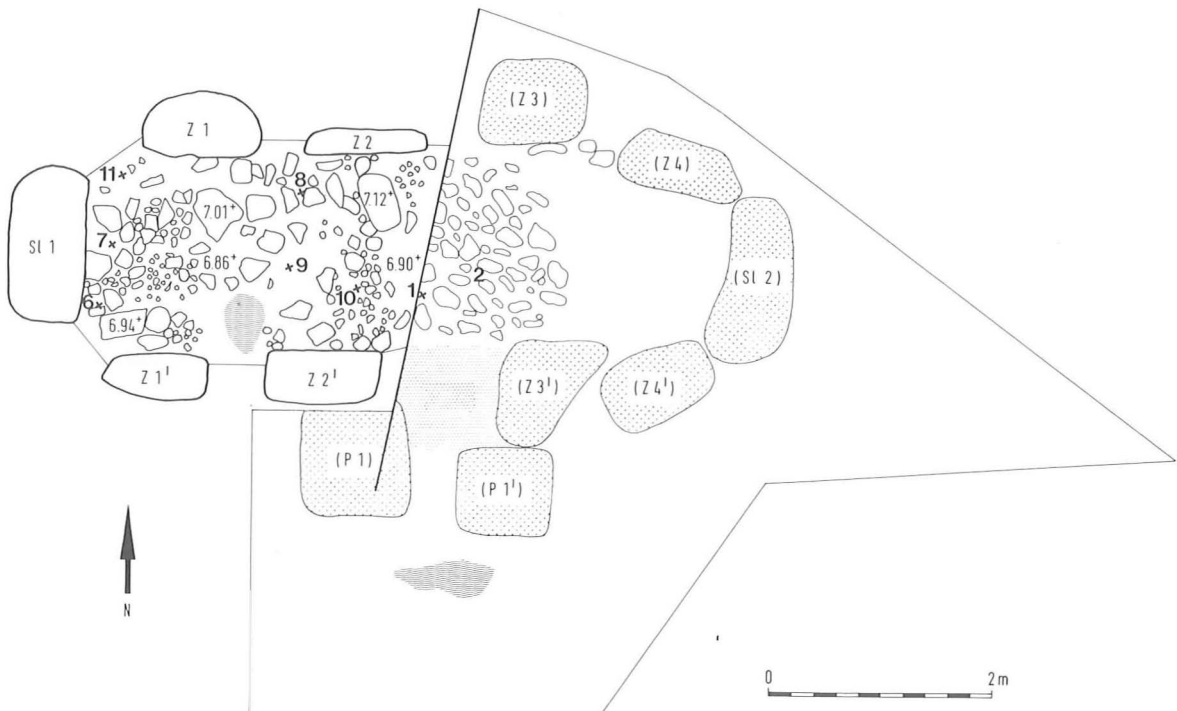


Fig. 6. *Hunebed* D9, excavation 1952. Upper level, showing the supposed 'second floor'. Orthostats numbered according to van Giffen (1925/27): SI end stone; Z side stone; P portal stone. For key to the symbols see figure 7.

this eastern half. From comparison of the drawings and the photos (figs 6-10) of the excavation it is evident that only one plane was cleaned, slightly deeper than the base of the modern ploughsoil. But around the chamber this plane was situated lower because much of the disturbance connected with the destruction of the tomb was dug away. In the drawn plan, as well as in the photos, nothing can be seen, for example, of the chamber's large foundation pit, as observed in other *hunebedden* (Brindley, 1983; 1986a; Bakker, 1982/83; Taayke, 1985). Yet such a pit, or rather the pit filled with stony soil which remains after the removal of the dry-stone walling between the orthostats and the packing stones surrounding the chamber, does appear in the section, on the outside of Z2' (figs 9 and 10). The photo also appears to show this pit in a small section, at right angles to the chamber between Z1 and Z2 (fig. 8: section behind the surveyor's staff on the left). It must be assumed that the fill of this pit seemed so recent to the excavators that they decided to make the plane at the level of the bottom of the pit. This also explains why only the separate extraction pits show up in the excavation plan. The two plans of areas outside the chamber appear to have been drawn at the same level; it was only inside the chamber that two different levels were recorded.

It is not exactly clear why the extraction pit of the

sill stone was indicated as a rather vague stain in the drawn plan, while in the drawn section it is shown as a sharply delineated pit. Nor is it clear why in the plan this extraction pit was seen to be transected by that of portal stone P1, whereas in the section it was not. Apparently the extraction pits were not further excavated. Hence their depths are not known; nor is it known whether they still contained foundation stones. A partial section of the extraction pit of P1 is all that was recorded (fig. 9). This pit was very shallow, as would be expected with a portal stone.

Part of a 'second' or 'upper floor' was found in situ, underlying groups of finds numbered 1 and 2 (fig. 6), which were not described in further detail. Examination of the numbers on the finds has shown that these finds consisted of sherds and flint, including an arrowhead (No. 141).<sup>11</sup>

The chamber floor proper also appeared, largely intact. On it were encountered the finds numbered 3, 4 and 5, all axes (Nos 155, 151 and 150 respectively). The sherds and other finds that must have been present were presumably given the numbers 1 and 2, like the material on top of the 'second floor'. After the eastern, damaged half of the *hunebed* had been investigated, it was decided to examine the western, intact part as well. According to the journals, the aim of this operation was to see whether many of the packing stones etc. had been removed by stone



Fig. 7. *Hunebed* D9, excavation 1952. Lower level, showing chamber floor. Key: 1. extraction pits of orthostats; 2. possible extraction pit of sill stone; 3. remains of dry-stone walling between orthostats; 4. location of finds and find numbers. Heights in metres above Dutch Ordnance Datum (NAP).

robbers. In fact, however, van Giffen must have decided that he wanted to excavate fully another *hunebed*. It was clear enough from the start that many of the packing stones had disappeared. The presence of a second floor, a phenomenon that greatly interested van Giffen, may have been decisive.

In the investigation of the western half, the area outside of the chamber was not included. Small areas were cleaned only in the gaps between the orthostats, in order to see whether any packing stones remained. They were too small to afford insight into the presence and size of foundation pits. Probably these areas were immediately excavated down to the undisturbed subsoil or to any remaining packing stones.

According to Praamstrå, in the chamber the removal of a little sand was sufficient to uncover small stones that lay on dirty soil. A little deeper the uneven 'upper' floor came to light. This is where find group No. 6 was encountered, consisting of sherds and an axe (No. 153). A patch of loose soil was present between the easterly sidestones; on it lay find groups Nos 7, 8, 9, 10 and 11 (fig. 6). No. 7 comprise sherds and a flint flake, No. 8 sherds and

two flint flakes, No. 9 sherds only, No. 10 sherds and an unworked piece of flint, and No. 11 sherds, a flake and a small block of flint. If we look at figure 6, we see that these numbers are quite dispersed, however. After removal of the upper floor, the underlying sand produced many small stones, some larger ones and a great number of sherds. The remaining sand was removed to expose the chamber floor proper; this sand yielded among other things the find group No. 12, consisting of sherds, an arrowhead (No. 137) and two flint flakes. The flint group No. 13 also lay above the chamber floor, consisting of sherds, seven arrowheads (Nos 134, 136, 139, 140, 142, 143 and 144), an axe fragment (No. 152), two *bikkels*<sup>12</sup> (Nos 145 and 146), a sickle blade (No. 147), a burin (No. 148), an axe production flake (No. 149), a retouched blade, a core-preparation blade, an unworked blade, eighteen flakes and fifteen pieces of unworked flint, one of them with traces of burning.

The five beads (Nos 156-160) also come from this part of the *hunebed*. The chamber floor was drawn without much precision, because the northeast side stone and the endstone were beginning to subside, the whole structure threatening to collapse east-



Fig. 8. *Hunebed* D9, excavation 1952. Extraction pits of orthostats and remains of the chamber floor in the destroyed eastern half of the tomb. Photograph B.A.I.



wards. When van Giffen was warned about this situation, he ordered immediate precautions to be taken against the subsidence. For this reason the excavation was prematurely concluded. Nevertheless, all the data were collected, although less accurately than usual. This probably also is the reason why find number 13 contains a great deal of material and was not recorded on the field drawings.

The question as to whether stone robbers had removed packing stones and the like, did receive an answer. Packing stones were found only between Z1 and Z2, and between S11 and Z1' (fig. 7). No traces were found of a stone packing around the chamber, which is a feature of most *hunebedden*. After the excavation the orthostats and the end stone were embedded in a mixture of stones and cement, so as to prevent further subsidence. On 19 May the identified extraction holes of Z3, Z3', Z4, Z4', S12 and the two portal stones were marked by low pedestals of cement mixed with crushed stone. These rise just 1 cm above the ground level.

#### 4.3. Comments concerning the investigation

In the journals and the field drawings it is suggested that the *hunebed* contained two floors. Yet the drawings of plans and sections make clear that the

supposed second floor was very uneven. The stones it was thought to consist of were very different in size and lay at varying levels. In this respect, the drawn section (fig. 9) must be considered an idealisation. The photo (fig. 10) shows nothing to suggest such a regular and evenly laid layer of stones. So far, no other *hunebed* with a convincing second floor has been recorded. But van Giffen did believe in the existence of second floors in *hunebedden*. He interpreted irregular distributions of stones found in chambers as such. So too in the case of *hunebed* D9. In reality, *hunebed* D9 probably contained just one floor and the other stones should be regarded as collapsed dry-stone walling and packing stones.

The finds were not systematically collected in grid squares, so that it is not possible to draw distribution plans of the finds. What can be said is that disturbance must have occurred, because potsherds postdating the TRB period were found at the lowest level. This is an additional reason for doubting the presence of two floors.

Presumably quite a number of finds were overlooked, as in the days of this excavation it was not yet customary to sieve the excavated soil. It is all the more remarkable that in spite of this five beads and a great deal of flint material were recovered. On the other hand, a villager is known to have found an axe

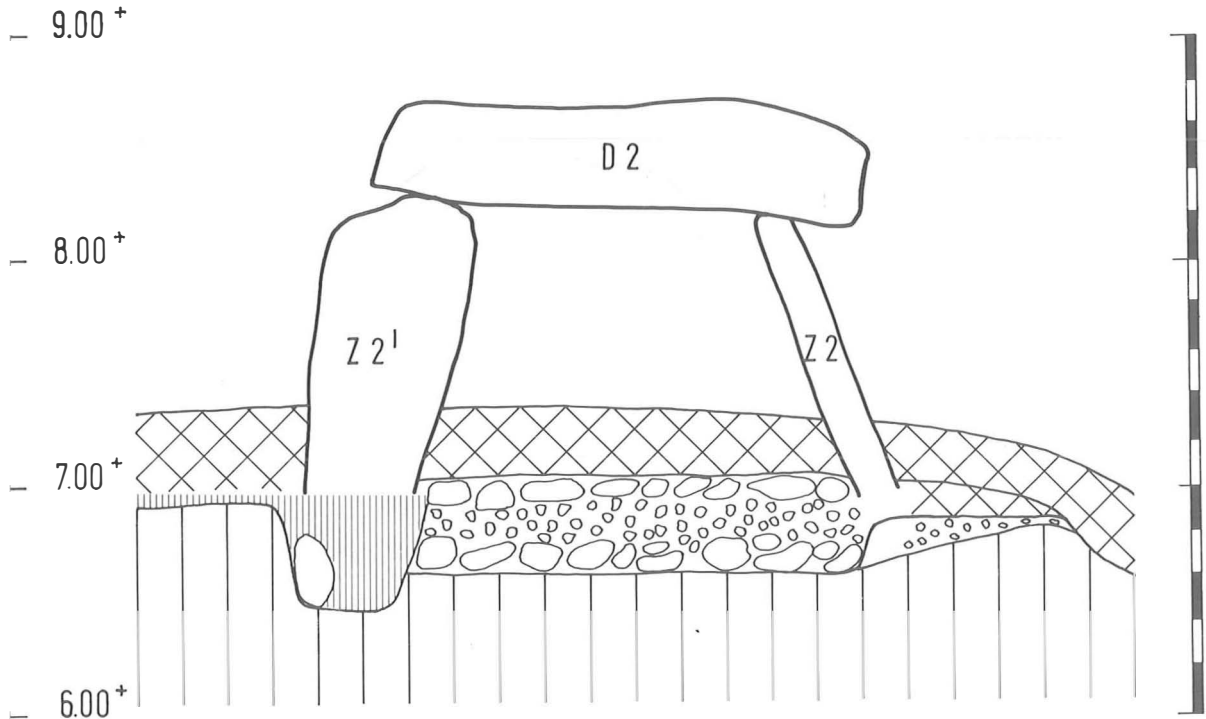


Fig. 9. *Hunebed* D9, excavation 1952. Section through chamber. In the section, in contrast to the plane, no difference in fill appears to have been noticed between the shallow extraction pit of P1 and the deep extraction pit of the sill stone. Heights in metres above Dutch Ordnance Datum (NAP).



Fig. 10. *Hunebed* D9, excavation 1952. Section through the chamber. The supposed 'second floor' is considerably less clear than the drawing (fig. 9) suggests. Photograph B.A.I.



Fig. 11. *Hunebed* D9 with replaced capstone D2 and low pedestals indicating missing orthostats and portal stones. Situation 1952. Photograph B.A.I.

on the spoilheap.<sup>13</sup> This shows that at times attention was paid to the minutest detail, while at others large objects, even the size of an axe, might be overlooked. In spite of this method of investigation, the finds that were retrieved are likely to constitute a representative sample of what the hunebed contained in the way of pottery and other artefacts, because the whole of the chamber was investigated.

There is one feature that is not mentioned in the journals, although it figures in the drawings, namely a grey stain in front of the *hunebed* entrance (fig. 6). This is not described in any detail; presumably a faint smudge was observed in the trench, which the excavators were unable to interpret. It is not clear whether the stain is in any way related to the *hunebed*.

No traces were found of the barrow. This is hardly surprising, as even in 1925 van Giffen had recorded that little or nothing remained of the covering mound (van Giffen, 1925/27: vol. 1, p. 31).

What became of the 'doubtful stone' that van Giffen mentioned is obscure. There is no indication in the journals or field drawings that it was present at the beginning of the excavation and was removed in the course of it. Maybe the stone was moved between 1925 and the time of the excavation in 1952, possibly around 1935, when the capstone D2, beneath which the 'doubtful stone' lay, was lowered to the ground.

## 5. THE FINDS

### 5.1. A survey of the finds<sup>14</sup>

Altogether, some 870 potsherds were found, of which about 810 belong to TRB pottery and some 60 to pottery of later periods.

Of the 810 TRB sherds, 452 can be assigned to at least 101 vessels. Further there are 21 bases and 3 loose handles, which I have not included with the minimum number of vessels, because of their possible belonging with one of the incompletely reconstructible bodies or rim fragments, even if at first sight this would not seem to be the case.

These 101 vessels can be subdivided as follows:

- 41 funnel beakers (Nos 1-41)
- 23 bowls (Nos 42-64)
- 10 tureens (Nos 65-74)
- 6 amphorae (Nos 75-80)
- 1 pail (No. 81)
- 5 collared flasks (Nos 82-86)
- 15 miscellaneous (Nos 87-101a/b)

A minimum of eight vessels can be postulated among the 60 remaining sherds dating to later periods. Four of them go back to the Single Grave Culture (Nos 126-129), one certainly to the Bell

Beaker period (No. 130), and possibly one other also (No. 131). Two pots with barbed-wire decoration (Nos 132a/c-133) date to the Early Bronze Age. The numbers given here refer to the catalogue and the illustrations (figs 12-17). The following detailed description of the TRB pottery uses the typologies of Brindley (1986b) and Bakker (1979a).

In all, 75 pieces of flint were found, of which 55 had been more or less worked. There was one axe of a different stone, as well as four jet beads and one of amber.

### 5.2. The TRB pottery

#### 5.2.1. Funnel beakers (Nos 1-41)

The profiles of the funnel beakers are quite variable, ranging from fairly angular (Nos 3 and 6) to very rounded (Nos 2, 10 and 13). The neck of No. 11 is very widely flared by comparison with the other beakers. Of the 41 funnel beakers only 4 can be typochronologically classified according to Brindley's system. Nos 1, 2 and 5 may fit into Horizon 4, while No. 4 may belong in Horizon 5. It should be remembered that funnel beakers are notoriously hard to classify.

On the basis of the Form Groups distinguished by Bakker (1979a: pp. 54-55), 11 of the funnel beakers can be assigned to Group I, i.e. that they are well-made and carefully modelled funnel beakers with a distinctly angular neck-body transition. Five of these have a rounded belly without a carination, and a greatest width at around  $\frac{3}{4}$  of the height of the belly; this means that they can be further classified within Group I and assigned to Group I 2 (Nos 1, 9, 12, 14 and 16). The other six beakers, too, can be further classified under Group I 4, because of their extremely narrow, angular or rounded shoulders (Nos 3, 5, 6, 8, 11 and 17). Then there are five more funnel beakers that can be classified under II 2 (Nos 2, 7, 10, 13 and 15) because they are well-made and have a flowing transition between neck and belly, not an angular one like the beakers in Group I. Apart from this, their bodies are similar to the beakers in Group I 2 (see above). Eighteen of the funnel beakers are decorated (Nos 1-16, 18 and 19); the other funnel beakers are represented by a neck-shoulder fragment (No. 17), 22 neck-rim fragments (Nos 19-28 and 30-41), or a neck fragment without a rim (No. 29).

Of the decorated funnel beakers, 7 are decorated both on the shoulder/belly and on the neck (Nos 1, 5, 6, 7, 10, 11 and 15). Three beakers are known to have had a decorated neck (Nos 2, 4 and 19) while it is not certain that their bellies were decorated as well, because the lower parts of these vessels are missing. Six funnel beakers are decorated on shoulder and belly only (Nos 8, 9, 12, 13, 14 and 16), while

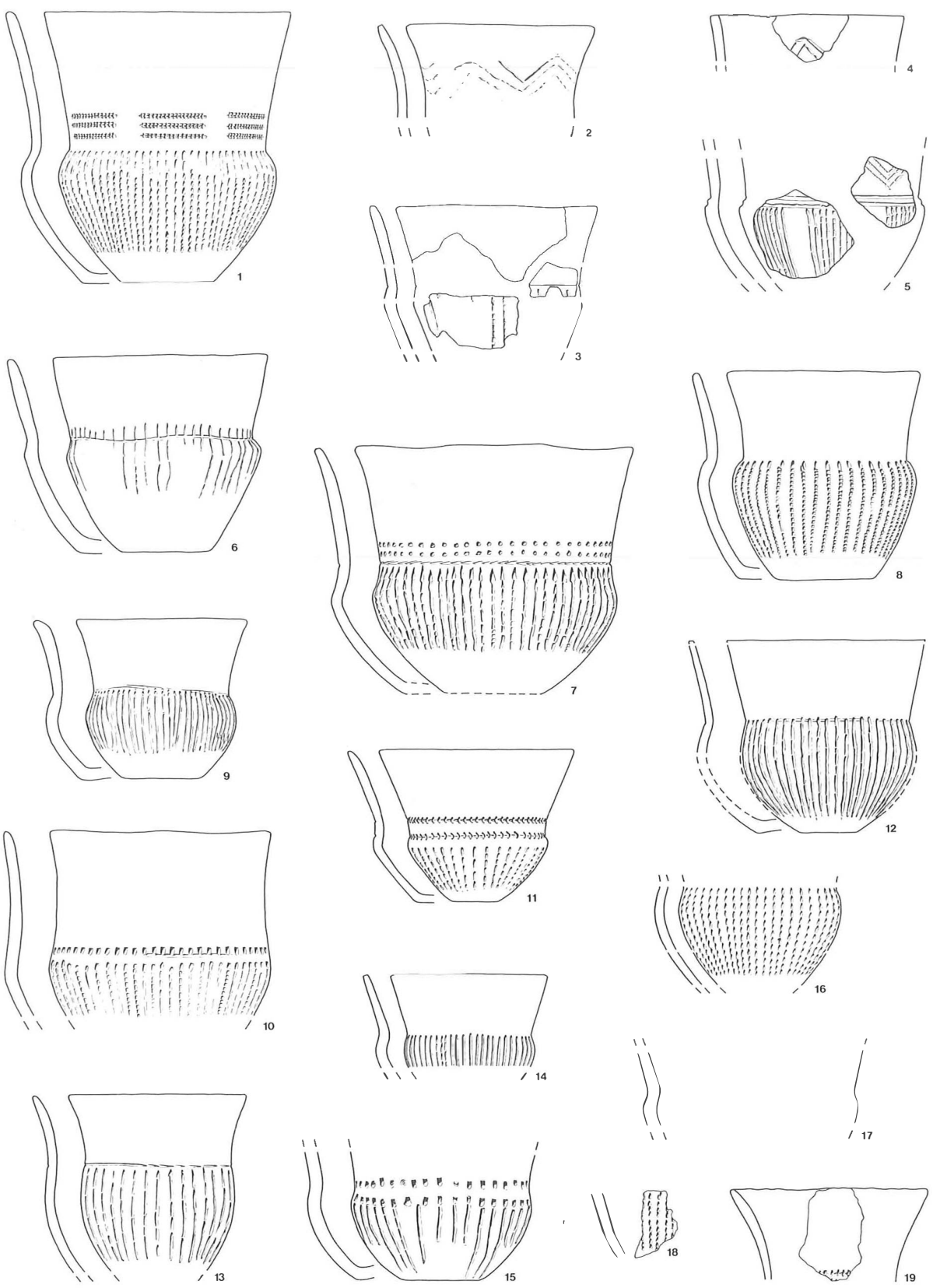


Fig. 12. *Hunebed D9*, TRB pottery.

of No. 18 only a belly fragment survives, so we can say no more than that its belly was decorated.

The designs on the necks include blocks of horizontal *tvaerstik* lines (No. 1), horizontal, encircling *tvaerstik* lines (Nos 11 and 19), horizontal, grooved zigzag lines (Nos 2, 4 and 5), horizontal rows of spatula and point impressions (Nos 7, 10 and 15), or, as in one case (No. 6), vertical grooves that partly extend onto the shoulder and belly.

The decoration on the shoulder consists of two parallel horizontal grooves in the case of No. 5; No. 15 displays a row of spatula impressions. With both of these, the decoration on the belly consists of grooves. On the other funnel beakers with shoulder/belly decoration the vertical design consists of *Tiefstich* lines around the vessel (Nos 1, 7, 8, 11, 13, 16 and 18), blocks of *Tiefstich* lines (No. 3), blocks of grooved lines (Nos 5, 6 and 15) or a continuous zone of vertical grooves (Nos 9, 10, 12 and 14).

Finally, it can be noted that there are seven funnel beakers that are decorated on the neck-shoulder transition. With Nos 3, 6, 9 and 13 this is a more or less continuous grooved line; with Nos 7 and 11 it is a *Tiefstich* line, and No. 10 features a row of point impressions, accompanied along a short stretch by a grooved line.

### 5.2.2. Bowls (Nos 42-64)

Before discussing the bowls it should be remarked that Nos 42a and 42b are shown as two separate bowls, but it is far from impossible that they are parts of the same vessel. They both are rim fragments and both have broken off above a lug. There is some difference in their decoration, but this lies within the variability of the decoration on one fragment – therefore it should not be ruled out that the two fragments were on opposite sides of a single vessel. Below, these fragments will be regarded as parts of one bowl and referred to as No. 42a/b.

There are two bowls with lugs (Nos 43 and 46); from what has been said above it can be concluded that No. 42a/b probably also had two lugs, although it is not clear whether these were solid or perforated.

Among the 23 bowls there are nine with decoration. These nine can be typochronologically classified by means of Brindley's system; some of these find no place in Bakker's system.

The earliest in the typochronological seriation is No. 42a/b, its decoration made up of a zigzag line parallel to the rim and vertical lines beneath it. This type is classified by Brindley under Horizon 3. As it is not clear whether the bottom of the zone of vertical lines is bordered by a zigzag line, by a groove or by a *Tiefstich* line, the bowl cannot be classified more closely in Bakker's system than under Phase B/C.

There are seven bowls that belong in Horizon 4 (Nos 43-49). Bakker's system does not allow them all to be classified. However, No. 44 can be classed as Phase D2, Nos 45 and 46 as Phase D2/E1 and No. 49 as Phase E1. The reason why Nos 43, 47 and 48 cannot be classified in Bakker's system is that they have no *tvaerstik* lines, which Bakker considers an essential feature of Phases D2 and E1.

No. 43 is a bowl with lugs and a decoration of point impressions that may have been made with a comb. The design is arranged more or less in panels, consisting of short and long vertical rows of impressions. This anticipates the block pattern, which attains full development in Horizon 4.

Bowl 44 also displays traces of a block pattern; unfortunately, the vessel is represented only by a single sherd, so that it cannot be seen whether the three lines below the rim are continuous or interrupted. It is clear, however, that the decoration below them is a block design. The lines are executed in *tvaerstik*. Nos 45 and 46 show a little more of a block pattern. No. 45 has two continuous lines below the rim and beneath them a continuous zone of short vertical lines; further down are blocks of short, double, horizontal lines. On No. 46 the blocks are immediately beneath the rim; these too are in the form of short, double, horizontal lines. Beneath these the vessel has an encircling zone of short vertical lines. On both of these bowls the horizontal lines are in *tvaerstik* and the vertical lines in *Tiefstich* technique.

The block motif is clearly present on Nos 47, 48 and 49. Below the rim, these three vessels bear four, three and two continuous lines respectively. Then the block pattern begins. The blocks on No. 48 consist of short horizontal lines above pairs of smaller blocks of two very short horizontal lines; further down is a zone in which blocks of three horizontal lines alternate with blocks of three or four vertical lines. On Nos 47 and 49, blocks consisting of pairs of short horizontal lines lie beneath the interrupted lines. No. 47 has one row of blocks; No. 49 has two rows. Further down on both vessels, there are blocks of vertical lines; three lines in the case of No. 47, while it is not clear whether on No. 49 these lines are three and/or four. On Nos 47 and 48, all lines are in *Tiefstich* technique as are the vertical lines on No. 49; the horizontal lines on No. 49 are in *tvaerstik*.

Finally, bowl No. 50 may belong to Horizon 5. It has a decoration consisting of two lines of point impressions below the rim, and two wide zigzags beneath them. This is strongly reminiscent of the Heek-Emmeln style, with the wide zigzag that Brindley distinguishes (1986b: p. 99). Nevertheless, this object is definitely atypical, so that its classification remains to some degree uncertain. Bakker's system allows no classification of this vessel.



Fig. 13. Hunebed D9, TRB pottery.

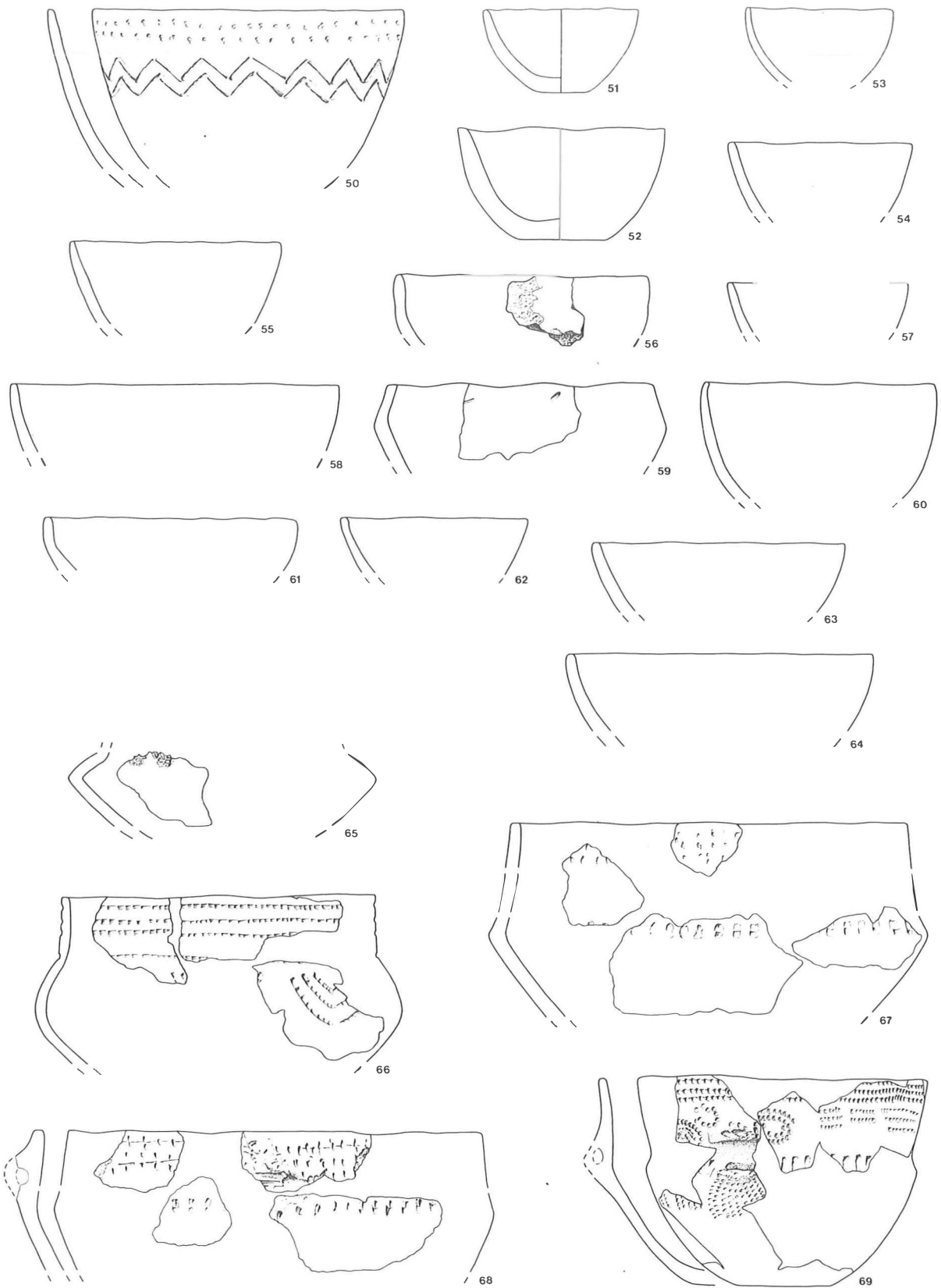


Fig. 14. Hunebed D9, TRB pottery.

### 5.2.3. *Tureens* (Nos 65-74)

In all, eight tureens were identified, all of which fit into Brindley's and Bakker's classifications. The only exception is No. 66, which, because it lacks *tvaerstik* lines, cannot be classified in Bakker's system. The decoration on this tureen is carefully executed in *Tiefstich* lines, in a pattern of four horizontal lines on the neck and triple inverted pointed arcs on the shoulder. Apart from these tureens, there is a tureen-like vessel (No. 73) and a neck-rim fragment which possibly is part of a tureen (No. 74).

Two of the tureens are known to have had one or more horizontally pierced lugs (Nos 68 and 69). The tureen-like vessel No. 73, too, had at least one horizontally pierced lug. The lug (or lugs) on No. 68 starts just beneath the rim and extends to the shoulder carination. No. 69 has the lug at the neck-shoulder transition, and the lug of No. 73 is on the shoulder. Given its angular profile and its decoration of pendant filled triangles, the earliest tureen (No. 65) belongs in Horizon 3 and Phase C. The next two tureens fit in with Phase D1. According to Brindley's system they belong to Horizon 4 (Nos 67 and 68), because of their decoration and the lack of a proper shoulder. The design on these two is rather poorly executed. No. 68 has two haphazard *tvaerstik* lines below the rim; in places this merely becomes a series of impressions. On No. 67 there are three sloppy lines of point impressions along the rim. Both of these vessels have shoulder stamp decorations on the shoulder. The shoulder stamp is a phenomenon that begins in Horizon 3 and continues into Horizon 4 (Brindley, 1986b: p. 96).

Tureen No. 68 possibly had two lugs. A top edge and a bottom edge of a lug have survived which do not directly fit together. It is hard to make out whether they belong on the same side of the vessel; it is not unlikely that they were on opposite sides, which would mean that the tureen had two lugs.

Four of the tureens belong in Horizon 4 and Phase D2 (Nos 69-72). Nos 69, 70 and 71 are decorated with shoulder stamps, No. 71 combines them with a line of incised lozenges on the neck. The lozenge line especially is a typical feature of Horizon 4. All three have horizontal *tvaerstik* lines below the rim. Moreover, No. 71 also has vertical *tvaerstik* lines on the neck. The other vertical and horizontal lines on all three are executed in *Tiefstich* technique. No. 69 also has vertical rows of point impressions below the lug and No. 71 displays a horizontal row of impressions where neck and shoulder meet. Although only part of the neck survives, No. 72 because of its block design can also be assigned to Horizon 4. Both the continuous lines along the rim and the horizontal lines of the block pattern beneath it are executed in *tvaerstik*. A

remarkable feature of one of the sherds of this vessel is a small repair hole; the tureen therefore had probably served as a household utensil that had broken and been mended before it ended up among the grave goods. Alternatively, people may have attempted to repair a fissure that had occurred when the pot was fired.

### 5.2.4. *Amphorae* (Nos 75-80)

All of the six amphorae that were identified belong to Horizon 4. In Bakker's system they are less easy to classify. Here too we come up against the problem that in Bakker's system Phases D2/E1 are characterized by the predominant *tvaerstik* technique in which the horizontal lines of the decoration are executed. With several amphorae, as with some of the bowls, this condition is not met, so that the vessels cannot formally be classified in Bakker's system.

On Nos 75-78 all lines are made in *Tiefstich*. The decoration on No. 75 consists of a horizontal row of impressions and below it a horizontal line; further there are vertical lines on the shoulder. No. 76 has vertical *Tiefstich* lines on the belly. This also applies to No. 77, which has horizontal lines at the neck-shoulder transition. Unfortunately no more than a single fragment survives of No. 78, showing only horizontal lines. No. 80 has a decoration of horizontal lines in *tvaerstik*, while the decoration on No. 79 is one of horizontal *tvaerstik* lines on the neck with vertical *Tiefstich* lines on shoulder and belly, and grooved lines around the lugs. Both belong in Phase E1.

It is hard to tell how many lugs the amphorae had. No. 79 at any rate possess a complete lug as well as the lower edge of one, so it must have had at least two. On No. 77 only the lower edge of a lug survives, and on No. 80 there is an almost complete one. In all three cases the lugs are positioned where neck and shoulder meet, and are perforated horizontally. It is not clear whether Nos 75, 76 and 78 possessed any lugs.

### 5.2.5. *Pails* (No. 81)

Among this material only one pail could be identified, No. 81. This can be classified under Horizon 4 and Phase D2. The vertical blocks made up of chevrons, which form the lower zone of decoration, extend into the upper zone. Along the rim there are two continuous horizontal lines. All horizontal lines are executed in *tvaerstik* except the short, slightly curved lines above the lugs, which are in the *Tiefstich* technique. The vertical lines are executed either in *tvaerstik* or in *Tiefstich*.



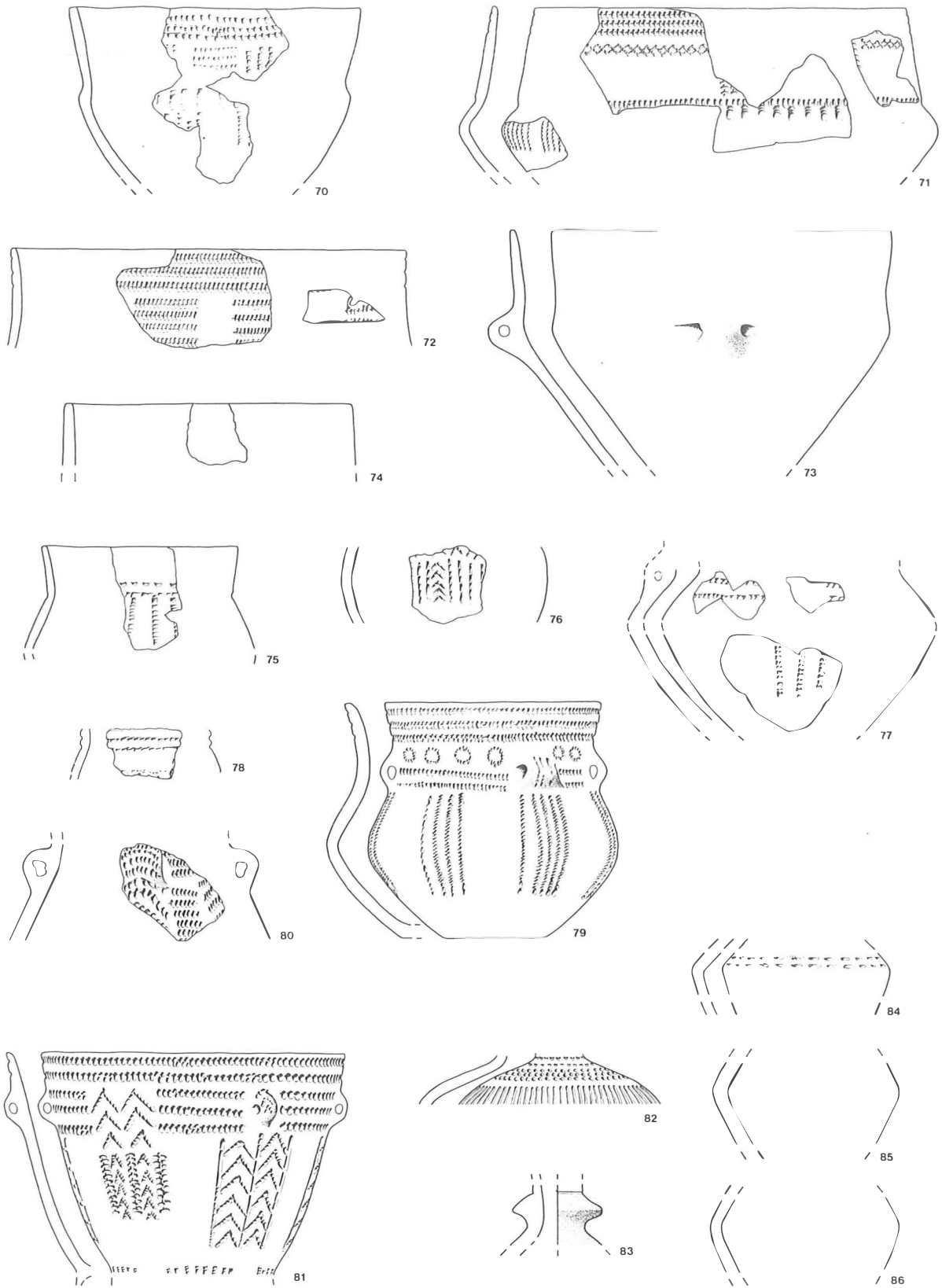


Fig. 15. Hunebed D9, TRB pottery.

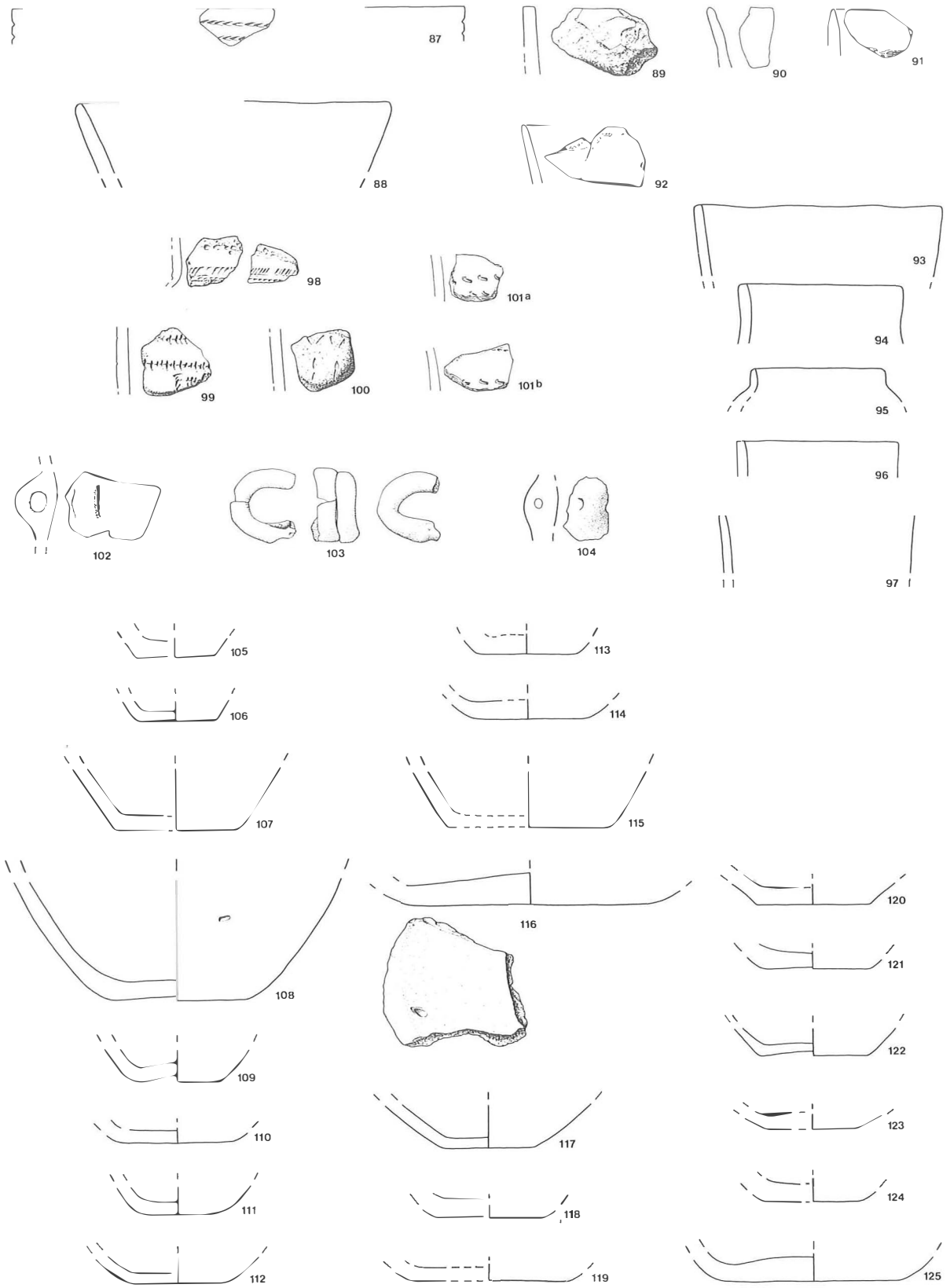


Fig. 16. *Hunebed* D9, TRB pottery.

### 5.2.6. Collared flasks (Nos 82-86)

There are at least three, and possibly five collared flasks, none of which fit into Brindley's or Bakker's classification.

No. 82 features a decoration of point impressions at the neck-shoulder transition and on the shoulder, together with grooved lines on the lower shoulder and the belly. No. 84 too is decorated with point impressions on the shoulder. Unfortunately, all that remains of the flask is a fragment of the shoulder and belly, so that any further decorations cannot be observed. Of No. 83 only the undecorated collar survives. The collars of the other flasks all are missing, but the retrieved collar does not appear to belong to any of them. Nos 85 and 86 both are undecorated shoulder-belly fragments, which because of their profile are thought likely to be of collared flasks.

### 5.2.7. Miscellaneous (Nos 87-101a/b)

After the pottery has as much as possible been sorted according to type, a number of vessels remain unclassifiable because of their fragmentary condition. No. 87 could be the rim fragment of a tureen, but it might equally be the rim of a bowl. After all, there are bowls with a profile that is vertical before curving inwards towards the base (Brindley, 1986a: No. 155).

Nos 88-93 all are rim fragments that are difficult to attribute to any particular type of vessel, as are the neck-rim fragments Nos 94-97.

No. 95 is rather curious. When it was examined, the idea arose that it might be a foot ring, but there was no definite attachment to a base. Where such an attachment would be expected, there was no trace of the sherd having broken. For this reason I have classified it as a neck-rim fragment. In the literature, however, I have not come across any vessel with a similar short, cylindrical neck and high shoulder. Hence it is hard to say what kind of pot it may have been.

No. 98 is represented by two sherds that together form part of a neck and a neck-shoulder transition. The decoration consists of impressions and a *Tiefstich* line. Unfortunately, these remains also are too fragmentary to enable their typological classification.

Then there are two wall fragments that cannot be assigned to a particular type. The first (No. 99) is decorated with horizontal *waerstik* lines and a vertical *Tiefstich* line. The decoration of the second (No. 100) has been much affected by abrasion or weathering. The design shows a horizontal zigzag line and vertical *Tiefstich* lines. Nos 101a and b both are undecorated wall fragments. They are so similar in technique and fabric that they probably derive from the same vessel.

### 5.2.8. Lugs and bases (Nos 102-125)

Nos 102-104 are lugs and handles that do not seem to belong to any of the vessels referred to above. No. 102 may be part of an amphora; of Nos 103 and 104 it is hard to tell to what type of pot they may have belonged. An interesting feature of No. 103 is that the handle consists of two parts that fit together; there are no traces of their having been smoothed to form a single handle. It is not clear whether the potter did this intentionally or whether the vessel was simply left unfinished.

Finally there are the bases or base fragments that seem not to belong to any of the above-mentioned vessels. Most of them have a more or less flat bottom and are virtually flat inside (Nos 105, 107, 110, 111, 112, 115, 117, 118, 119, 120 and 124). The inner and outer surfaces of Nos 106, 108, 109, 121 and 122 curve inwards, producing a more or less concave base. Further there are a few bases of which the outer surface is flat and the inner surface bulges inward (Nos 113, 114, 116, 123 and 125).

### 5.2.9. The pottery fabrics

The temper of the pottery varies from fairly coarse to very fine crushed granite and in some cases is barely visible. Most of the vessels are tempered with fine crushed granite. There are four sherds with impressions of organic material. In funnel beaker No. 35 this may be a bit of straw, as in bowl No. 59, which also has an impression of a cereal grain. The belly-base fragment No. 108 contains the impression of a cereal grain or a piece of straw, and base fragment No. 116 has a burnt-out cereal grain. The grain impressions are not clear enough to allow identification of the cereal.

The hardness of the wares varies strongly, from two rather soft bowls (Nos 52 and 61) to several hard-fired vessels.

Any correlation between size of temper particles and fabric hardness could not be established. Nor does either of these parameters seem to correlate with the type of vessel.

Several vessels have a smoothed surface; others however are rough to the touch, while several are 'rather rough' or 'fairly smooth'. Bowl No. 52 is poorly finished, in spite of its smooth surface. Some vessels have a coarse appearance, e.g. Nos 45 and 50, as well as having a rough surface. No. 45 is tempered with crushed granite of medium coarseness and No. 50 with fairly coarse crushed granite. Both pots are medium hard.

In many cases traces of a white inlay are found in the decoration of TRB pottery. Analysis of this white inlay has shown it to consist of hydroxyapatite (Brindley, 1986a: p. 50). Among the pottery from *hunebed* D9 too there are a few pieces with traces of such a white inlay. These are three vessels:

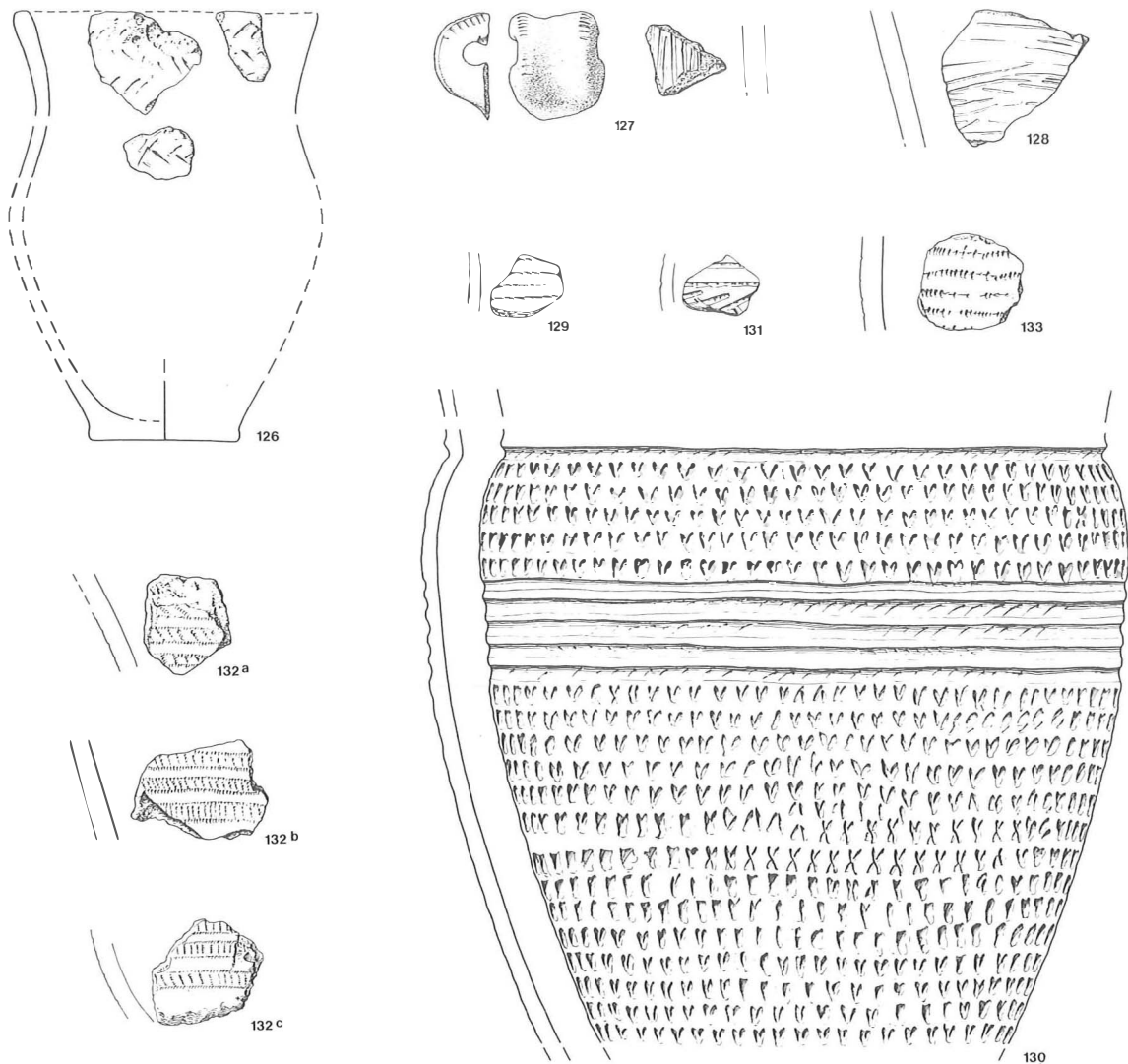


Fig. 17. Hunebed D9, Beaker pottery.

a funnel beaker (No. 6), a bowl (No. 45) and a tureen (No. 72).

### 5.3. Beaker pottery

#### 5.3.1. Pottery of the Single Grave Culture

At least four Single Grave vessels can be distinguished. The first (No. 126), due to its largely reconstructible profile and its poorly-executed herringbone design, can be identified as a Single Grave beaker, type 1d (van der Waals & Glasbergen, 1955). The second is an amphora (No. 127) of which at least a handle and a decorated wall sherd survive. The design consists of short, horizontal lines on the lug, and of roughly vertical, grooved lines on the wall sherd. They possibly belong to a so-called

*Strichbündelamphore* (cf. van der Waals, 1964). Besides these two certain amphora fragments, there are five undecorated wall sherds, varying in size from c. 2.5x3.0 cm to c. 6.5x6.5 cm, which, in view of their fabric, also may belong to the amphora. Possibly the fragment in the British Museum is part of the same vessel.

Apart from these, two other wall sherds derive from Single Grave pottery. The first (No. 128) is decorated with brush strokes, and could be part of a so-called *golfsbandpot* (storage vessel with short-wave moulding) (c.f. van Giffen et al., 1971: fig. 15). The second sherd (No. 129) is decorated with cord impressions and most probably belongs to a Single Grave beaker of type 1a, or else to an AOO beaker, type 2 II b (van der Waals & Glasbergen, 1955).

### 5.3.2. Pottery of the Bell Beaker Culture

One vessel can certainly be assigned to the Bell Beaker Culture, viz. the neck pot beaker No. 130 (for definitions and dating, see Lehmann, 1965 and Lanting, 1973). The pot is decorated with V-shaped paired fingertip impressions, and grooved lines with superimposed fingernail or spatula impressions.

It is not sure that sherd No. 131 is part of a bell beaker. Its decoration, consisting of wide, horizontal grooves, and a partial(?) herringbone motif also in wide grooves, would be quite appropriate on a so-called epi-maritime bell beaker (Lanting & van der Waals, 1976). However, this design also occurs on Single Grave beakers (type 1b or 1e), be it usually in finer grooved lines.

### 5.3.3. Barbed-wire pottery

In the Early Bronze Age at least two vessels entered the *hunebed*. The decoration on Nos 132a-c is so similar, that they must be part of the same pot. This was carried out with a very fine barbed-wire stamp (Modderman, 1955; Lanting, 1973). The design is still reminiscent of bell beaker motifs. Possibly this is an early barbed-wire beaker. Sherd No. 133 is decorated with a more robust barbed-wire stamp; the thickness of the sherd is suggestive of a beaker rather than a large pot.

## 5.4. The flint artefacts

In the following, only the most interesting pieces among the 75 flint objects will be discussed. The numbers refer to the catalogue section and the drawings of the flint tools (figs 21-24).

### 5.4.1. Transverse arrowheads (Nos 134-144)

Among the 55 pieces of worked flint there are 11 transverse arrowheads of varying sizes. Greatest length varies from 18 to 30 mm, greatest width from 13 to 20 mm, and greatest thickness from 2 to 6 mm.

One of the arrowheads (No. 136) is made from an axe fragment; traces of grinding are still visible. The other arrowheads are made from flakes.

### 5.4.2. Other flint tools (Nos 145-150)

The other flint tools were found to include a chisel with a rectangular section (No. 150). The cutting edge has use retouch. Apart from this chipped cutting edge, there are retouches all around it, which also may result from use. The damaged butt shows that the chisel was re-used as a *bikkel*.

Apart from this tool, there are two worked flints that may be immediately identified as *bikkels* (Nos 145 and 146).

The next flint artefact is a sickle blade (No. 147). Its cutting edge shows use retouch and sickle gloss on both sides.

No. 148 may have served as a burin. One of its short sides has a flake negative with adjacent fine retouches extending along one of its long sides; these may in part be due to use.

No. 149 is a flake produced in the making of a Neolithic axe (Beuker, 1986: p. 121). The remnant of the striking platform is slightly faceted.

Besides the above tools there are several pieces of worked flint which will be summed up in the following list:

- a retouched blade;
- a core preparation blade;
- two plain blades;
- two small blocks;
- a natural piece of flint with a small flake negative;
- 27 flakes, two of which fit together.

Among the unworked pieces of flint there is one with traces of burning. This does not occur among the worked flints.

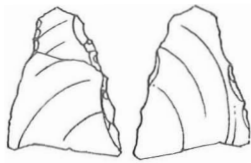
### 5.4.3. Axes (Nos 151-154)

The *hunebed* yielded three flint axes; their dimensions are 65x37x12 mm (No. 151), 100x55x 21 mm (No. 153), and 85x64x32 mm (No. 154). It was No. 151, No. 153 or No. 155 which was found on the spoilheap (see note 12). Nos 151, 153 and 154 all three are ground and the cutting edge of each of them has been resharpened and polished. Two of the axes are rectangular in cross-section (Nos 151 and 153); both are of the type *Flint-Flachbeil* var. 2b according to Brandt's classification (Brandt, 1967: pp. 102-108). The third is oval in section (No. 154). Bakker typologically classifies this specimen as a large point-buttet axe of oval cross-section (Bakker, 1979a: pp. 84-85). This characterization is not wholly justified, as the butt of the axe is missing. This is the axe that was found in 1809 or earlier.<sup>13</sup>

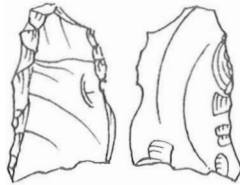
Besides these three axes there is an axe fragment that was refashioned into a plane (No. 152). It probably was on purpose that the fragment was broken off; at 1 cm from the cutting edge there is a bulb of percussion. The reason why the fragment was chipped off can only be guessed at; possibly the axe had already broken, so that it could no longer be used as such.

### 5.4.4. Provenance of the flint

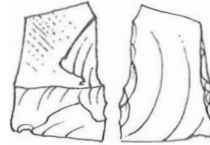
The colour of the flint varies from dark grey to grey-white and brownish. All of the flint probably has a northern provenance, but this is not to say that the tools were imported. The smaller tools especially may well have been made from local flint that was



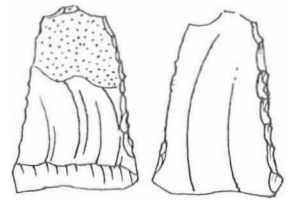
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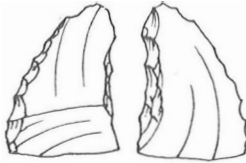
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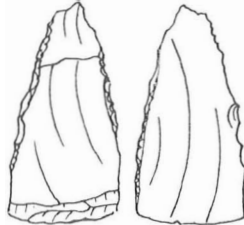
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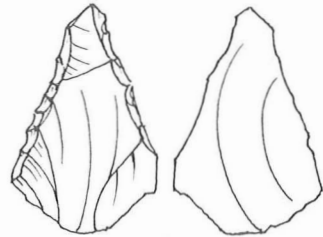
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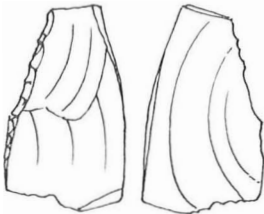
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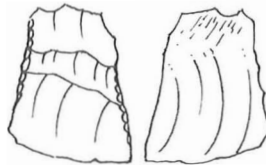
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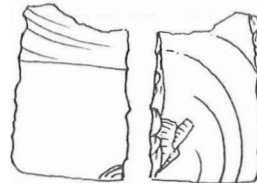
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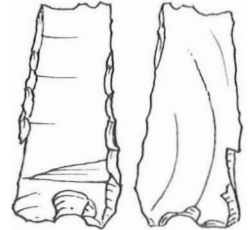
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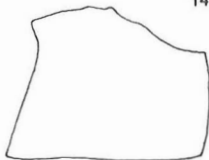
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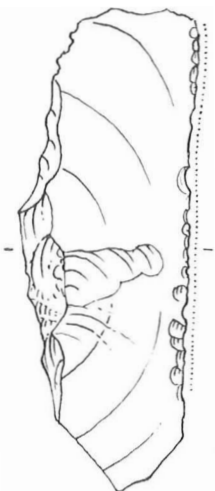
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Fig. 18. *Hunebed* D9, flint artefacts, transverse arrowheads and *bikkels*.

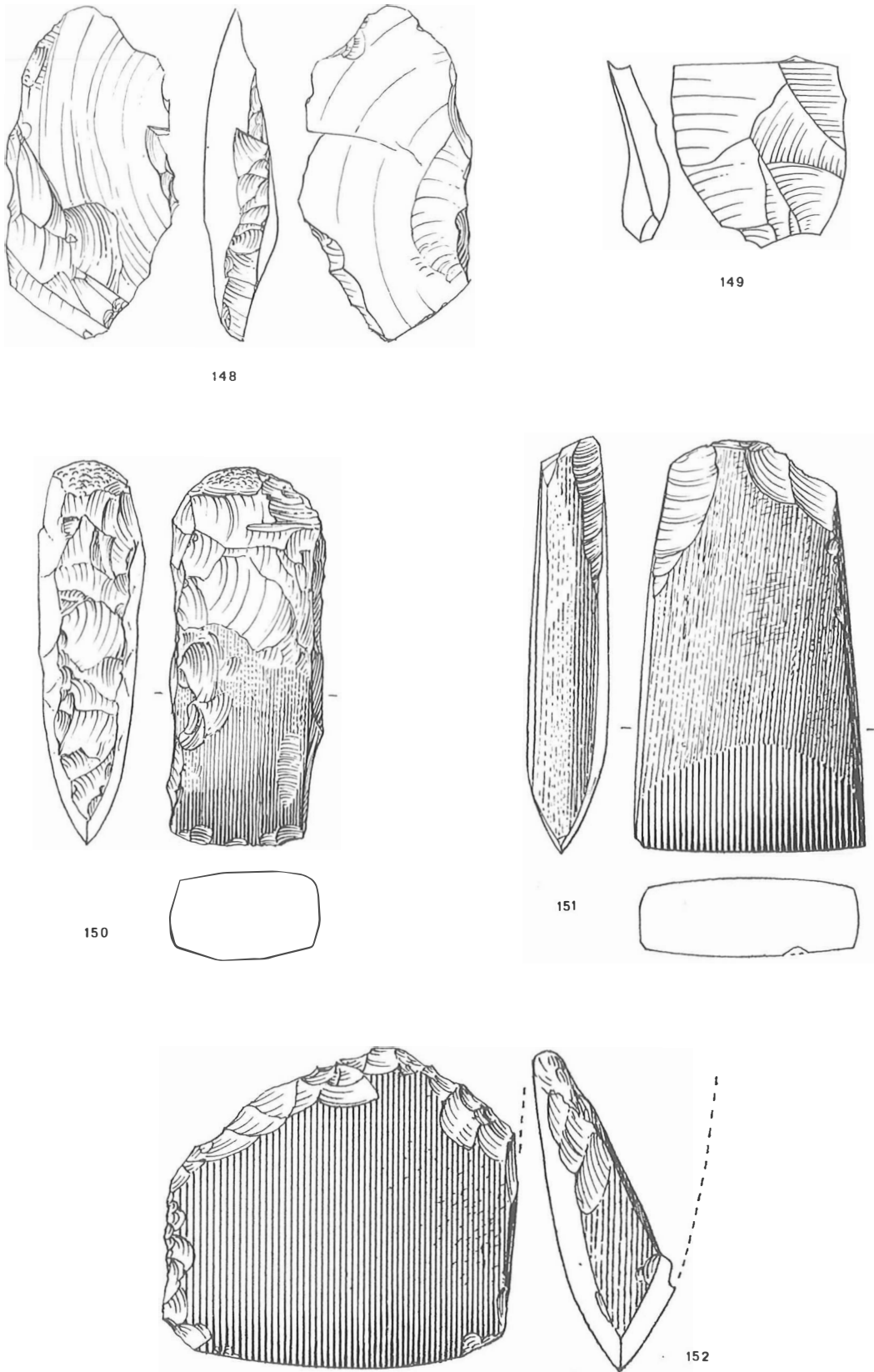


Fig. 19. *Hunebed D9*, flint artefacts, burin (No. 148), flake of Helgoland flint (No. 149), chisel (No. 150) and axes.

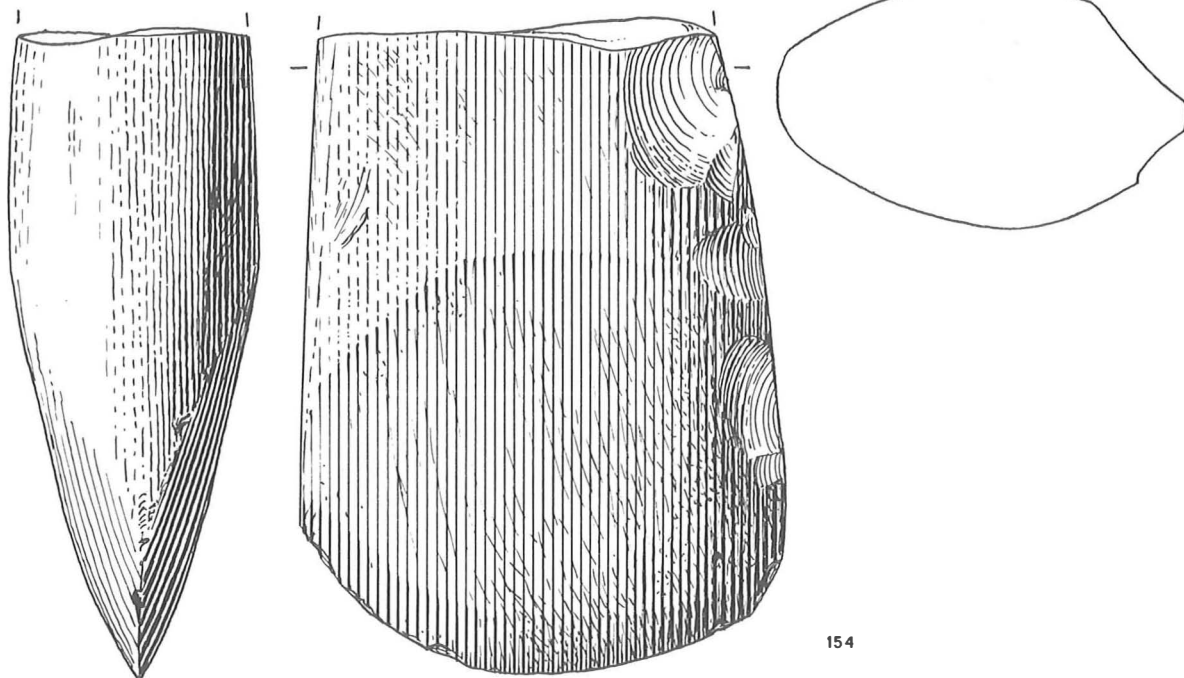
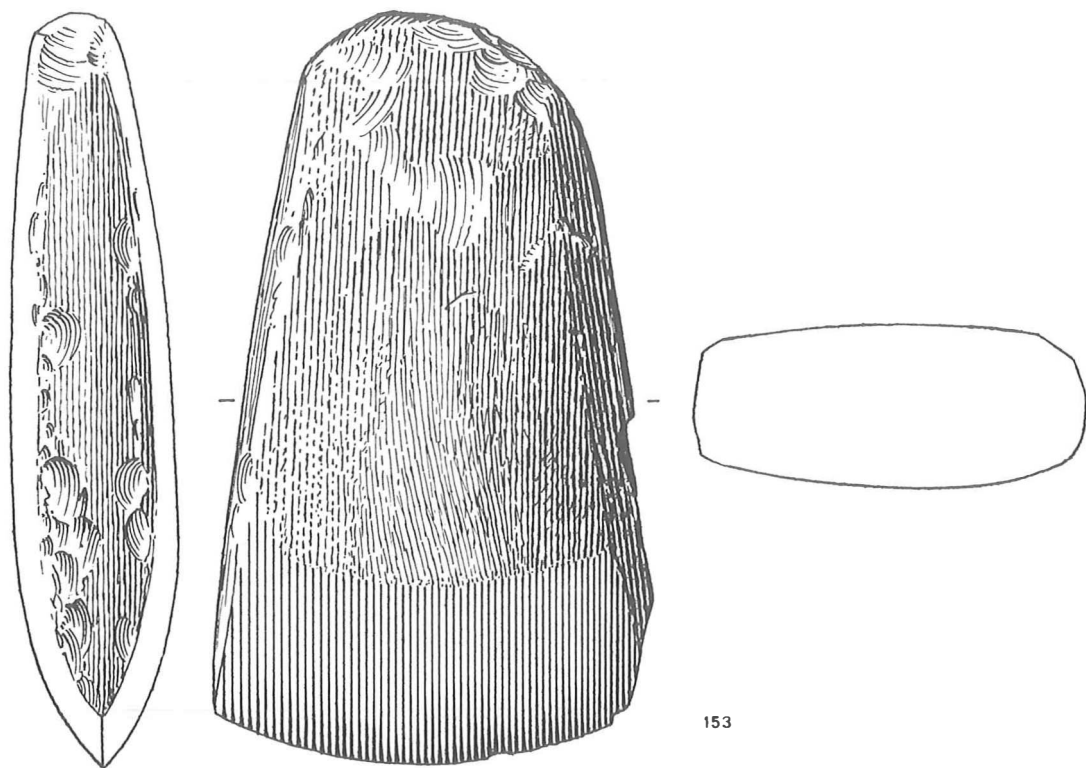


Fig. 20. *Hunebed D9*, flint axes.



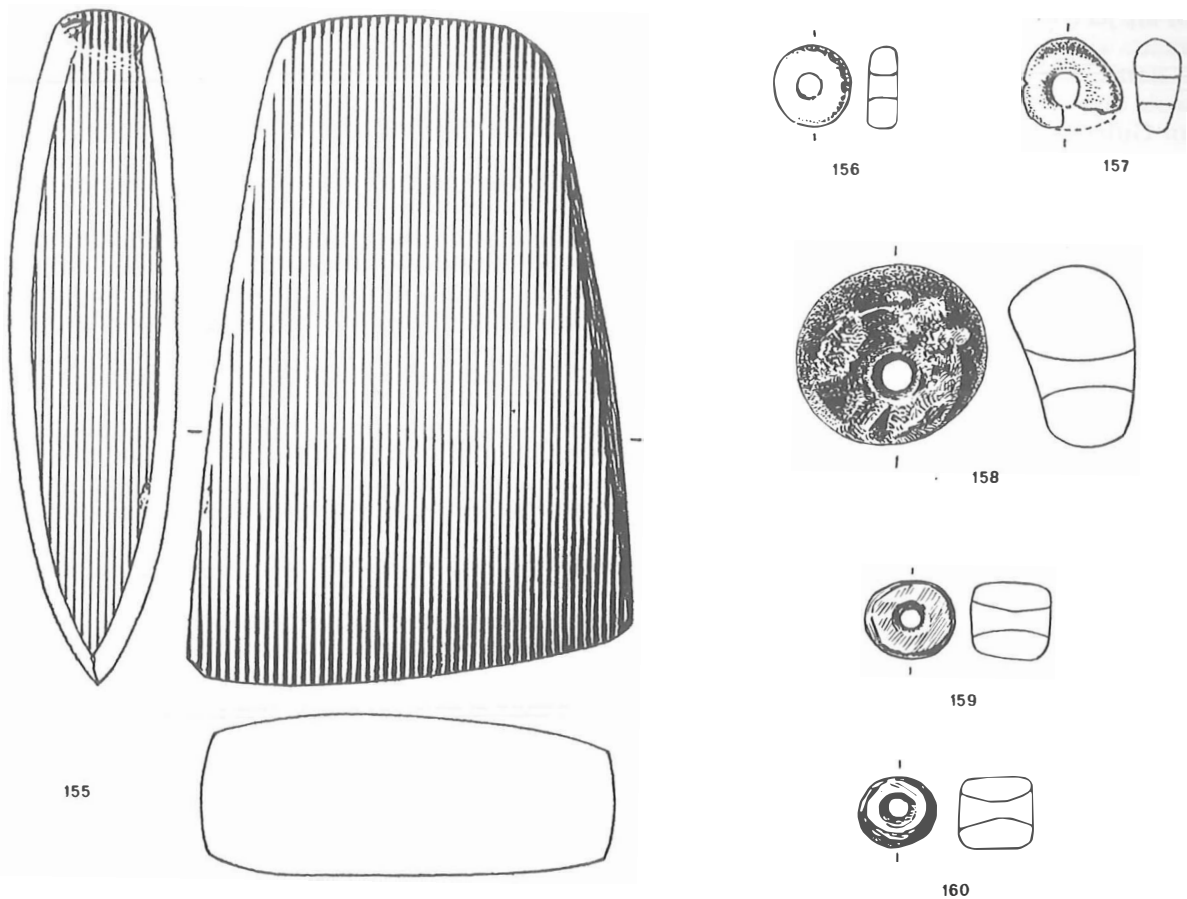


Fig. 21. *Hunebed D9*, axe of siltstone(?), beads of amber (No. 156) and jet.

brought to these parts in the Ice Age. A few of the larger tools, notably the *bikkels* (Nos 145 and 146), probably also were made from local flint, as they have wind gloss on ancient surfaces. The chisel, the sickle blade and the burin (Nos 150, 147 and 148) may be of local flint as well.

Regarding the larger tools, such as the axes, we should consider the possibility of their being imported as ready-made objects, semi-manufactures or maybe even rough pieces of flint. Nonetheless, it cannot be ruled out that local flint was used even for these. It will be hard to prove contacts with distant regions, at any rate on the basis of these artefacts.

There is one piece of flint, however, that almost definitely indicates long-range contacts. This is the flake derived from the production of a Neolithic axe (No. 149). It has a pale, purplish-red hue, a colour that is found only in Helgoland and which in the Netherlands has (so far) not been encountered in the till deposits. Actually, this specific kind of flint is not likely to be present in the till, because if it were it would surely be found in Palaeolithic and Mesolithic contexts, and this is not the case (Beuker, 1986).

### 5.5. Other stone material

Apart from the flint artefacts, there also is an axe that is made from a different kind of stone (No. 155). The exact composition of the stone has not been determined so far; possibly this will be done one day by petrographic analysis of a thin section. The stone is like siltstone in texture and resembles the material used for a number of tools from other findspots and kept in the museum in Assen that appear to be from the Osnabrück region. Its colour poses a problem, though, which means that this axe cannot simply be classed with these tools: the axe is cream-coloured whereas the tools are black to grey.<sup>16</sup> The shape of the axe is quite typical of the TRB Culture.

### 5.6. Personal ornaments

Unfortunately the soil was not sieved during the excavation, so that beads and any other ornaments may have been lost. In spite of this, five beads were recovered.

One of the beads is amber (No. 156), the other

four are jet (Nos 157-160). Both materials point to contacts with distant regions. The amber came from the north, and the jet probably came from the Liassic deposits at Whitby in Northeast England (van Giffen, 1943). The bore of bead No. 157 is virtually cylindrical, whereas in the other beads it is hourglass-shaped.

As for the shapes of the beads, three are disc-shaped with a diameter of 10 to 25 mm and a thickness of 4 to 16 mm (Nos 156-158). There are two cylindrical beads which both have a diameter and thickness of around 10 mm (Nos 159 and 160).

### 5.7. Bone and cremation remains

In the excavation no bone or cremation remains were encountered. This may in part be due to the method used, in which no soil was sieved, but the soil conditions must have been of greater importance, especially for the conservation of bone remains. The composition of the soil is such that bone stands little chance of being preserved. Hence nothing can be said about the number of inhumations and cremations in this *hunebed*.

## 6. TYPOCHRONOLOGICAL CLASSIFICATION AND DATING

### 6.1. Typochronological classification of the TRB pottery

Part of the 101 TRB vessels can be typochronologically classified with some accuracy. If we first consider Brindley's Horizon system (Brindley, 1986b), we see that about 28% of the pieces, a total of 28 vessels, can be assigned to a Horizon (table 1).

Bakker's Phase system (Bakker, 1979b) permits the typochronological classification of only 15% of the pieces, i.e. 15 vessels (table 2).

It is not surprising that only part of the pottery can be typologically assigned to the Horizon or Phase level. Most of the funnel beakers, with an undecorated neck and a 'fringe' on the belly, cannot be dated more closely than to Horizons 1-4 or Phases A-D. Undecorated pottery can only rarely be closely dated. From the tables it will be clear that Brindley's Horizon system not only accounts for a greater part of the pottery, but also produces a more consistent picture. One could almost speak of a normal distribution with 2 vessels in Horizon 3, 24 in Horizon 4, and 2 in Horizon 5.

According to Bakker's classification, the pottery assemblage covers five or six Phases, with a slight emphasis on Phase D2. In this context it should be noted that Brindley was quite critical of the criteria that Bakker employed for his definitions of Phases B to E1.

### 6.2. The dating of the TRB pottery

According to Brindley (1986b: pp. 104-106), Horizon 3 can be dated to c. 3300-3200 BC, Horizon 4 to c. 3200-3050 BC and Horizon 5 to c. 3050-2950 BC (calibrated radiocarbon dates).

Given the fact that most of the vessels correspond to Horizon 4, and only two in Horizon 3 and possibly two in Horizon 5, the use of *hunebed* D9 by TRB people is likely to have started shortly before 3200 BC. Most of the activity took place between c. 3200 and 3050 BC, and soon after 3050 BC the TRB people ceased using it. This means that the *hunebed* was used over a period of about 200 years. This could mean that once every other year a body was interred, together with a single piece of pottery. This is purely hypothetical, however, as it is by no means certain that each body was accompanied by merely one vessel. In the investigation of the destroyed *hunebed* G2, situated on the Glimmer Es, it turned out that in the course of c. 350 years around 400 pots had been used as grave goods; an average of just over one pot a year. It also became clear that several vessels, making up 'service sets', might be buried simultaneously (Brindley, 1986a: p. 58).<sup>17</sup>

On the basis of Bakker's typo-chronology it is less easy to reach conclusions about the period during which D9 was used. The greatest problem is the fact that Bakker fails to give the duration of his various Phases, and becomes vague if not confusing about the extent to which the Phases D1 and D2, E1 and E2, and D2 and E1 occur side by side. On the grounds of the sparse radiocarbon dates available at the time, Bakker arrived at a duration of the TRB Culture from c. 4700 to 4100 BC, as Brindley does, but so far he has not published his estimate in calendar years. In my opinion we therefore do best to stick to Brindley's pottery chronology for dating the material from *hunebed* D9.

*Hunebed* D9 is remarkable for its comparatively short period of use, which is virtually limited to Brindley's Horizon 4. This seems opposed to the traditional view of a *hunebed* as the burial vault of a TRB community, continuing to be used over many centuries. Indeed some *hunebedden* are known that

Table 1. Classification of pottery from D9 according to Brindley.

Horizon	3	4	5	
Funnel beakers	-	3	1	
Bowls	1	7	1	
Tureens	1	7	-	
Amphórae	-	6	-	
Pails	-	1	-	
Collared flasks	-	-	-	
Total	2	24	2	28

Table 2. Classification of pottery from D9 according to Bakker.

Phase	B/C	C	C/D	D1	D1/D2	D2	D2/E1	E1	
Funnel beakers	-	-	-	-	-	-	-	-	-
Bowls	1	-	-	-	-	1	2	1	
Tureens	-	1	-	2	-	4	-	-	
Amphorae	-	-	-	-	-	-	-	2	
Pails	-	-	-	-	-	1	-	-	
Collared flasks	-	-	-	-	-	-	-	-	
Total	1	1	-	2	-	6	2	3	15

were used for a long time, such as G1 near Noordlaren (Bakker, 1982-1983) and G2 on the Glimmer Es near Haren (Brindley, 1986a). Other *hunebedden*, however, were used for fairly short periods. *hunebed* D40 in the Valtherbos near Emmen only yielded material of Horizon 3, and hence was used for 100 years at most (Brindley, in prep.). We can only guess at the reason for the 'brief' use (although still 200 years!) of *hunebed* D9.

### 6.3. Some remarks concerning the Beaker pottery

The finds of Beaker pottery in D9 are not exceptional; almost any investigated *hunebed* is found to contain pottery of the Beaker cultures. Curiously enough, the pottery encountered in *hunebedden* often is of a kind that is only rarely found in Beaker graves. This applies for instance to the pots with short-wave moulding and amphorae of the Single Grave Culture, and to neck pot beakers of the Bell Beaker Culture. Probably more amphorae are known by now from *hunebedden* than from graves and settlements of the Single Grave Culture (see also Brindley, 1983: pp. 222 and 234). Fragments of pots with short-wave moulding, often in the form of the typical body sherds with brush-stroke finishing, also crop up regularly in *hunebedden* (see e.g. Bakker, 1982-1983: fig. 25), while these pots are not known from graves of the Single Grave Culture. Nor are neck pot beakers known from graves of the Bell Beaker Culture. Yet the vessel from D9 has two good parallels from D21 at Bronneger (van Giffen, 1925/27: Pl. 154: 87 and 89; Lehmann, 1965: Nos 6 and 7). Hence it can be doubted whether Beaker pottery in *hunebedden* is indeed related to burials. The possibility of (food) offerings should be given serious consideration.

The four pots of the Single Grave Culture point to activities between c. 3000/2900 and 2450 BC. During the Bell Beaker period at least one vessel was buried in the *hunebed*. This must have occurred between c. 2550 and 2050 BC.

The two vessels with barbed-wire decoration indicate activity in the Early Bronze Age, between c. 2050 and 1850 BC.

## 7. SOME FINAL REMARKS

The material found in *hunebed* D9 (see section 5) corresponds with that found in other *hunebedden*.

Some of the finds show that contact must have existed between the TRB people who used this *hunebed* and inhabitants of other regions. These contacts might extend across considerable distances, as witnessed by the piece of Helgoland flint, and the amber and jet beads.

The finds also make it clear that bodies may have been interred in the *hunebed* up to the Early Bronze Age; at any rate pottery was put into it. This means that people used the *hunebed* for a period of maybe as many as 1450 years (c. 3300-1850 BC).

Later too, the *hunebed* has seen many visitors, yet with quite different intentions, such as stone robbing, research, restoration, or simply regarding it as a tourist attraction conveniently situated beside the road. It may be a good idea to mark the site with a sign explaining to passers-by what such a monument meant to people in ancient times.

In my investigation I have also attempted to find out whether in the vicinity traces have been found of a settlement that could be linked with the TRB material in the *hunebed*. Disappointingly, this was not the case. The only settlement nearby yielded younger TRB material (J.E. Musch, pers. comm.). Also I have wondered whether the missing periods of the TRB Culture might instead be represented in other *hunebedden* of the area. Unfortunately this question also remains unanswered, because neither of the *hunebedden* D7 and D8 has been investigated.

## 8. NOTES

1. On 1 May 1768 Camper visited the *hunebedden* D3/D4 at Midlaren, D9 at Annen, D13 and D14 at Eext, D8 between Anlo and Zuidlaren, and G1 near Noordlaren. Of all these megalithic tombs drawings were made. On 27 May 1769 Camper revisited these *hunebedden*, to check, and if necessary to correct, his drawings. The original drawings and a description of his trips along the *hunebedden* form part of a manuscript, entitled 'Hunnen Bedden in Drenthe. Getekend door P. Camper', kept in the library of the University

of Amsterdam (library Maatschappij ter Bevordering der Geneeskunst, ms. II G53). Photocopies of this manuscript are present in the I.P.P. Amsterdam, B.A.I. Groningen and the above-mentioned University library. The drawing of D9 in this manuscript is dated 27.V.1769.

An incomplete set of copies of the drawings, including the one of D9, is kept in the Schwartzberg Records (varia No. 3901) in the Rijksarchief at Leeuwarden. These copies do not show the corrections made in 1769 and must have been made after the drawings of 1768.

A second set of copies, but after the drawings of 1769, may have been given to the anonymous author of the book *Lettres sur quelques objets de minéralogie à Mr. le Professeur Petrus Camper*, published in 1789. This book contains etchings made after Camper's drawings. Nowadays the author is supposed to have been Dimitrij Petrović, Prince of Golicyn, better known in western Europe as Prince Gallitzin or Galitzin, Russian ambassador in The Hague. Why van Giffen (1925/27: vol. I, pp. 214-215) ascribed this book to a Prince de Radzivil is not clear.

2. The axe fragment is mentioned in a hand-written *Lijst der urna's en andere oudheden in het departement Drenthe gevonden door den ondergetekenden afgezonden voor het Koninklijk Museum den Yden van Grasmaand 1809* (List of urns and other antiquities collected in the department of Drenthe by the undersigned and sent to the Koninklijk Museum on the ides of April 1809). The list covers 30 items; 31 are described, but No. 2 was never sent. The axe from Annen was entered as No. 4. The list is kept in the Reuvens records in the Rijksmuseum van Oudheden at Leiden; Portfolio C II 22-31.

There are some problems surrounding the identification of these antiquities sent by Hofstede, arising from the museum's move from Amsterdam to Leiden. The objects themselves were shipped to Leiden in 1825; the pertaining documentation did not arrive until 1833. Reuvens himself added a note at that time saying that the objects listed by Hofstede were also referred to in a printed *Catalogus der Schilderijen, Oudheden, enz. op 't Rijksmuseum te Amsterdam*, under numbers 488 to 517. However, on arrival at Leiden the objects were found to bear labels numbered 498 to 527. Reuvens also remarked that most of the objects still bore the numbers that Hofstede had given them.

Matters are further complicated by the presence in the Reuvens records of the pages 102 to 105 from a printed catalogue of the Koninklijk Museum in Amsterdam, 1810, relating to *Oudheden gevonden in het Departement Drenthe in de zogenaamde hunebedden door de Heere J. Hofstede, landdros van genoemd Departement, aan het Koninklijk Museum aangeboden en door de Koning aangenomen*. In this list the objects are numbered 503 to 532!

In the Leiden inventory of 1825 they are numbered AM1 to AM30, the axe fragment got number AM2. Later, the numbers from the printed catalogue compiled by Janssen in 1840, *De Germaanse en Noordsche Monumenten van het Museum te Leiden*, were added to the inventory in red ink. The copy of this catalogue kept at the Leiden museum also contains such a concordance, in the form of added AM numbers. However, the two concordances differ. Possibly the one in the printed catalogue is the more reliable. Indeed a note on the fly leaf explicitly says: "The markings within the red lines are correct".

A check is possible: one object from Hofstede's list can be identified with certainty, viz. the small TRB-vessel from the Eext burial vault, entered as No. 28. And this is indeed numbered correctly in the printed catalogue.

Apart from the problems related to the identification of the axe fragment as such, there is also a problem regarding the *hunebed* in which this fragment was found. While Janssen and Pleyte identified this *hunebed* as D9, van Giffen was of the opinion that the axe fragment was found in D8,

the *hunebed* between Anlo and Zuidlaren (van Giffen, 1925/27: vol. II, p. 37 footnote). This he based especially on the clause in Hofstede's list 'in het veld' (in waste land).

It is difficult to accept van Giffen's interpretation, however. First of all, D8 is not situated in the *marke* (commons) of Annen like D9, but in the *marke* of Anlo. It is not likely, that Hofstede would have ignored this difference. Secondly, D8 is not closer to Annen than either Anlo or Schipborg. Lukis and Dryden even referred to D8 as 'Schipborg-Bosch'. Other authors refer to D8 as the *hunebed* between Anlo and Zuidlaren, but never as the *hunebed* of Annen.

And, last but not least, it should not be forgotten that D9 was situated in waste land, just north of the Noordes of Annen.

3. 'Jasper-like flint' suggests a red-flamed flint. Possibly Janssen referred to the texture of the stone rather than to its colour. Given the uncertainties surrounding the objects in the Hofstede collection (see note 2), another explanation could be that they became mixed up. Yet Janssen does call it an axe fragment, and its length of 8.5 cm also tallies.
4. Depot of the Art-Historical Department, inventory Nos P 1862-2 to -7, P 1863-7, P 1875-3 to -5, and P 1903-62. Copies of these drawings are kept at Assen and in the University Library of Leiden (Janssen records, ms B.P.L. 944 III; see ten Anscher, 1988: p. 10).
5. The photo is to be found in the volume of illustrations to 'Drente', on page II. Photo No. R.M.O. D 232 (ten Anscher, 1988: p. 12).
6. The original descriptions, plans, sections, etc. are preserved by the Society of Antiquaries, Burlington House, London (Bakker, 1979b). However, copies are kept at the Provinciaal Drents Museum at Assen; inv.no. P 1880-5, two portfolios. The watercolours of the finds were not copied for the Assen museum.
7. This concerns a sherd that possibly is of an amphora of the Single Grave Culture. If this is correct, the sherd may belong to No. 127 in my catalogue. I myself have not seen the sherd; the data were taken from notes by J.A. Bakker.
8. The 'naturally flat surfaces' on the orthostats and capstones that van Giffen referred to, do not necessarily have a natural origin. Splitting up large boulders appears to be comparatively easy, for example with wedges inserted into bored holes, or by local heating (Erhardt, 1921/22).
9. This photo is preserved at the Institute of Prae- and Protohistory (I.P.P.) in Amsterdam. How the photo ended up there is related in ten Anscher, 1988: p. 23, sub 16.
10. The documentation of the excavation, consisting of field drawings, excavation journal, photos and a list of finds, is kept at the B.A.I.
11. There is some discrepancy between the descriptions of numbered finds in the journal and field drawings, and the numbers on the objects. Some numbers have been mixed up, and some finds bear numbers unrelated to those in the journal or field drawings. To avoid further confusion I have considered only the numbers that the objects are actually marked with.
12. The term *bikkel* (pick) was coined by van Giffen in his investigations at Rijckholt. In the ensuing publication he applied it to a guide form among the Limburg flint artefacts, namely the core axe with a more or less pointed to oval cutting edge (van Giffen, 1925: p. 485). Since then the term has also been used for the tools described here, which may have been used as strike-a-lights. For instance Bakker in 1973 used the term *bikkelachtige vuurslag* (Bakker, 1973: Chapter V, p. 3), translated as 'picklike strike-a-lights' (Bakker, 1979a: p. 76).
13. At the time of the excavation, the site was visited by an excursion party from Amsterdam. The visitors were W.A. van Es, J.D. van der Waals and an unknown female student. J.D. van der Waals later told me that while they

were being shown round, they were approached by a farmer living next to the site, who brought along a stone axe he had found on the spoilheap beside the dig. Unfortunately it is not clear which of the axes this is, but it is certain to be one of the axes described here (Nos 151, 153 or 155). Possibly it is the largest (No. 153), because the axe is said to have been a large one.

14. All but two of the finds are in the Provinciaal Drents Museum at Assen; inv.nos. 1952/IV 1-13. The axe fragment excavated by J. Hofstede (No. 146) is in the Rijksmuseum van Oudheden in Leiden (inv.no. AM2). As is clear from note 7, the British Museum preserves one sherd from *hunebed* D9, which may be part of the amphora No. 127.
15. As was said in note 2, it is not absolutely certain that this is the piece that J. Hofstede took from the *hunebed* in or before 1809.
16. These comparable tools are in the Provinciaal Drents Museum at Assen. Their inventory Nos are 1855/I.47; 1870/VI.6; 1899/III.2; 1939/V.7 and 1967/II.26.
17. A 'service set' is a group of two or more vessels that either are of the same type or have the same fabric and decoration. In each case they appear to have been made by the same potter for a single occasion and to have been fired in the same batch (Brindley, 1986a: p. 35).

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## CATALOGUE

### POTTERY

#### Funnel beakers

1. Incomplete, but reconstructible. Decoration: blocks consisting of three horizontal lines on the lower part of the neck; vertical lines on the shoulder and belly, extending to below the middle of the belly. Technique: the beaker was formed from clay coils; decoration consists of *tvaerstik* lines and *Tiefsch* lines.

Fabric: smooth surface; tempered with barely distinguishable crushed granite; hard. Typochronology: Brindley Horizon 4; Bakker Phase?; Form Group I 2.

2. Incomplete, reconstructible from the rim to the top of the belly. Decoration: three wide zigzag lines around the neck. Technique: the beaker was formed from clay coils; the design of grooved lines is very uneven and poorly executed. Fabric: slightly rough surface; tempered with fine crushed granite; medium hard. Typochronology: Brindley Horizon 4; Bakker Phase?; Form Group II 2.

3. Incomplete, largely reconstructible. Decoration: one horizontal line where neck and shoulder meet; alternating short and long vertical lines on shoulder and belly. Technique: the method of forming cannot be determined; decoration of grooved and *Tiefstich* lines. Fabric: slightly rough surface; tempered with crushed granite; fairly hard. Typochronology: Brindley Horizon?; Bakker Phase?; Form Group I 4.

4. Neck-rim fragment, one sherd (c. 3.7 x 2.5 cm), diameter can be determined. Decoration: two wide zigzag lines (?) around the neck. Technique: the vessel was formed from clay coils; decoration of grooved lines. Fabric: smooth but uneven surface; tempered with barely distinguishable crushed granite; hard. Typochronology: Brindley Horizon 5?; Bakker Phase?

5. Incomplete; only part of the neck, shoulder and belly can be reconstructed. Decoration: three or more wide zigzag lines around the neck; two horizontal lines on the shoulder; blocks of vertical lines on the belly. Technique: the method of forming cannot be determined; decoration of grooved lines. Fabric: slightly rough surface; tempered with very fine crushed granite; fairly hard. Typochronology: Brindley Horizon 4?; Bakker Phase?; Form Group I 4.

6. Funnel beaker, restored and supplemented to form a complete vessel. Decoration: horizontal lines where neck and shoulder meet; alternating long and short blocks of a variable number of lines, running from the base of the neck down to the belly and the shoulder respectively. Technique: the method of forming cannot be determined; decoration of grooved lines; traces of white inlay in the lines. Fabric: fairly smooth surface; tempered with fine crushed granite; medium hard. Typochronology: Brindley Horizon?; Bakker Phase?; Form Group I 4.

7. Incomplete, but largely reconstructible. Decoration: two horizontal lines of dots on the base of the neck; a horizontal line where neck and shoulder meet; vertical lines on shoulder and belly. Technique: the vessel was formed from clay coils; decoration of point impressions and *Tiefstich* lines. Fabric: the neck is fairly smooth, the body somewhat rougher; tempered with fine crushed granite; medium hard. Typochronology: Brindley Horizon? Bakker Phase?; Form Group II 2.

8. Incomplete, but largely reconstructible. Decoration: vertical lines on shoulder and belly, running down almost to the base. Technique: the method of forming cannot be determined; decoration of *Tiefstich* lines. Fabric: smooth surface; tempered with very fine crushed granite; fairly hard. Typochronology: Brindley Horizon? Bakker Phase?; Form Group I 4.

9. Incomplete, but largely reconstructible. Decoration: a horizontal line where neck and shoulder meet; vertical lines on shoulder and belly, to half way down the belly. Technique: the beaker was formed from coils; decoration of grooved lines. Fabric: smooth surface; tempering of fine crushed granite; hard. Typochronology: Brindley Horizon? Bakker Phase?; Form Group I 2.

10. Incomplete, but largely reconstructible. Decoration: a horizontal line of dots where neck and shoulder meet, a small part of it accompanied by a horizontal line; vertical lines on shoulder and belly. Technique: the beaker was formed from clay coils; decoration of point impressions, *Tiefstich* lines and grooves (some of them poorly executed *Tiefstich* lines). Fabric: slightly rough surface; tempered with fine crushed granite; medium hard. Typochronology: Brindley Horizon?; Bakker Phase?; Form Group II 2.

11. Incomplete, but largely reconstructible. Decoration: a

horizontal line on the lower neck; a horizontal line where neck and shoulder meet; vertical lines on the belly, running down almost to the base. Technique: the beaker was formed from clay coils; decoration of *vaerstik* and *Tiefstich* lines. Fabric: smooth surface; tempering almost indistinguishable; fairly hard to hard. Typochronology: Brindley Horizon?; Bakker Phase?; Form Group I 4.

12. Incomplete, but largely reconstructible. Decoration: vertical lines on shoulder and belly, possibly running down almost to the base. Technique: the beaker was formed from clay coils; decoration of grooved lines. Fabric: fairly smooth surface; tempered with fine crushed granite; fairly hard. Typochronology: Brindley Horizon?; Bakker Phase?; Form Group I 2.

13. Incomplete, but largely reconstructible. Decoration: a horizontal line where neck and shoulder meet; vertical lines on shoulder and belly. Technique: the beaker was formed from clay coils; decoration of *Tiefstich* lines, in places poorly executed and resembling grooved lines. Fabric: fairly smooth surface; tempered with fine crushed granite; medium hard. Typochronology: Brindley Horizon?; Bakker Phase?; Form Group II 2.

14. Incomplete, but largely reconstructible. Decoration: vertical lines on the shoulder, possibly continuing onto the belly. Technique: the beaker was formed from clay coils; decoration of grooved lines. Fabric: smooth surface; tempered with very fine crushed granite; hard. Typochronology: Brindley Horizon?; Bakker Phase?; Form Group I 2.

15. Incomplete; only the shoulder, belly and part of the neck can be reconstructed. Decoration: a horizontal row of spatula impressions at the base of the neck; a horizontal row of spatula impressions on the shoulder; alternating blocks of long and short vertical lines on the belly, running almost to the base and halfway down the belly respectively. Technique: the method of forming cannot be determined; decoration of spatula impressions and grooved lines. Fabric: smooth to rough surface; tempered with crushed granite; medium hard. Typochronology: Brindley Horizon?; Bakker Phase?; Form Group II 2.

16. Shoulder and belly, partly reconstructible. Decoration: vertical lines on the belly. Technique: the method of forming cannot be determined; decoration of *Tiefstich* lines. Fabric: smooth surface; tempered with almost indistinguishable crushed granite; hard. Typochronology: Brindley Horizon?; Bakker Phase?; Form Group I 2.

17. Neck-shoulder fragment. Decoration: none. Technique: the method of forming cannot be determined. Fabric: rough surface; tempered with crushed granite; medium hard. Typochronology: Brindley Horizon?; Bakker Phase?; Form Group I 4.

18. Wall fragment, one sherd (c. 3.5 x 2.0 cm). Decoration: interrupted vertical lines. Technique: the method of forming cannot be determined; decoration of *Tiefstich* lines. Fabric: smooth surface; tempered with very fine crushed granite; hard. Typochronology: undeterminable.

19. Neck-rim fragment, one sherd (c. 4.7 x 3.0 cm); the diameter can be determined. Decoration: the lower edge of the sherd displays two horizontal lines. Technique: the method of forming cannot be determined; decoration of *vaerstik* lines. Fabric: smooth surface; tempered with almost indistinguishable crushed granite; hard. Typochronology: undeterminable.

20. Neck and rim, incomplete, but the diameter can be determined. Decoration: none. Technique: the vessel was formed from clay coils. Fabric: smooth to rough surface; tempered with fine crushed granite; hard. Typochronology: undeterminable.

21. Neck and rim, incomplete, but the diameter can be determined. Decoration: none. Technique: the vessel was formed from clay coils. Fabric: smooth surface; tempered with fine crushed granite; hard. Typochronology: undeterminable.

22. Neck-rim fragment, one sherd (c. 3.0 x 1.5 cm); the diameter can be determined. Decoration: none. Technique: the vessel was formed from clay coils. Fabric: slightly rough surface; tempered with fine crushed granite; medium hard. Typochronology: undeterminable.

23. Neck-rim fragment, two small sherds (c. 2.0x2.0 cm and 2.5x1.5 cm); the diameter can be determined. Decoration: none. Technique: the method of forming cannot be determined. Fabric: smooth to slightly rough surface; tempered with fine crushed granite; hard. Typochronology: undeterminable.

24. Neck-rim fragment, one sherd (c. 3.5x1.5 cm); the diameter can be determined. Decoration: none. Technique: the vessel was formed from clay coils. Fabric: rough surface; temper almost indistinguishable; hard. Typochronology: undeterminable.

25. Neck-rim fragment, one sherd (c. 4.0x4.0 cm); the diameter can be determined. Decoration: none. Technique: the method of forming cannot be determined. Fabric: slightly rough surface; tempered with fairly rough crushed granite; medium hard. Typochronology: undeterminable.

26. Neck-rim fragment, one sherd (c. 5.0x5.0 cm); the diameter can be determined. Decoration: none. Technique: the method of forming cannot be determined. Fabric: smooth to rough surface; tempered with fine crushed granite; medium hard. Typochronology: undeterminable.

27. Neck-rim fragment, one sherd (c. 3.2x2.2 cm); the diameter can be determined. Decoration: none. Technique: the method of forming cannot be determined. Fabric: smooth surface; tempered with fine crushed granite; hard. Typochronology: undeterminable.

28. Neck-rim fragment, one sherd (c. 5.7x4.0 cm); the diameter can be determined. Decoration: none. Technique: the vessel was formed from clay coils; Fabric: fairly smooth surface; tempered with fine crushed granite; hard. Typochronology: undeterminable.

29. Neck fragment without rim, one sherd (c. 4.0x3.5 cm); the diameter can be determined. Decoration: none. Technique: the method of forming cannot be determined. Fabric: smooth surface; tempered with very fine crushed granite; hard. Typochronology: undeterminable.

30. Neck-rim fragment, one sherd (c. 3.5x3.5 cm); the diameter can be determined. Decoration: none. Technique: the method of forming cannot be determined. Fabric: smooth surface; tempered with very fine crushed granite; hard. Typochronology: undeterminable.

31. Neck-rim fragment, one sherd (c. 4.5x4.5 cm); the diameter can be determined. Decoration: none. Technique: the method of forming cannot be determined. Fabric: smooth to rough, rather uneven surface; tempered with crushed granite; medium hard. Typochronology: undeterminable.

32. Neck-rim fragment, one sherd (c. 2.5x2.0 cm); the diameter can be determined. Decoration: none. Technique: the vessel was formed from clay coils. Fabric: smooth surface; temper is hard to distinguish; hard. Typochronology: undeterminable.

33. Neck-rim fragment, one sherd (c. 3.0x2.5 cm); the diameter can be determined. Decoration: none. Technique: the method of forming cannot be determined. Fabric: smooth surface; tempered with crushed granite; hard. Typochronology: undeterminable.

34. Neck-rim fragment, one sherd (c. 4.5x3.0 cm); the diameter can be determined. Decoration: none. Technique: the method of forming cannot be determined. Fabric: fairly smooth surface; tempered with very fine crushed granite; medium hard. Typochronology: undeterminable.

35. Neck-rim fragment, one sherd (c. 3.3x2.0 cm); the diameter can be determined. Decoration: none. Technique: the vessel was formed from clay coils. Fabric: fairly rough surface; tempered with very fine crushed granite; there is an impression of a piece of straw or the like; medium hard. Typochronology: undeterminable.

36. Neck-rim fragment, one sherd (c. 4.0x2.0 cm); the diameter can be determined. Decoration: none. Technique: the vessel was formed from clay coils. Fabric: smooth surface; tempered with very fine crushed granite; hard. Typochronology: undeterminable.

37. Neck-rim fragment, one sherd (c. 2.5x2.2 cm); the diameter

can be determined. Decoration: none. Technique: the method of forming cannot be determined. Fabric: smooth surface; tempered with very fine crushed granite; hard. Typochronology: undeterminable.

38. Neck-rim fragment, one sherd (c. 2.5x1.7 cm); the diameter can be determined. Decoration: none. Technique: the method of forming cannot be determined. Fabric: smooth surface; tempered with very fine crushed granite; hard. Typochronology: undeterminable.

39. Neck-rim fragment, one sherd (c. 3.8x3.0 cm); the diameter can be determined. Decoration: none. Technique: the method of forming cannot be determined. Fabric: smooth surface; tempered with very fine crushed granite; hard. Typochronology: undeterminable.

40. Neck-rim fragment, one sherd (c. 3.0x2.0 cm); the diameter can be determined. Decoration: none. Technique: the method of forming cannot be determined. Fabric: smooth surface; tempered with very fine crushed granite; hard. Typochronology: undeterminable.

41. Neck-rim fragment, one sherd (c. 2.2x2.0 cm); the diameter can be determined. Decoration: none. Technique: the method of forming cannot be determined. Fabric: smooth surface; tempered with fine crushed granite; hard. Typochronology: undeterminable.

#### Bowls

42a. Rim fragment, two sherds (together c. 2.5x2.0 cm); the fragment appears to have broken off just above a handle. Decoration: a horizontal zigzag line; vertical lines beneath it. Technique: the bowl was formed from clay coils; decoration of *Tiefstich* lines and impressions of a straight-edged spatula. Fabric: smooth surface; tempered with barely distinguishable crushed granite; fairly hard. Typochronology: Brindley Horizon 3; Bakker Phase B/C.

42b. Rim fragment, one sherd (c. 3.0x2.0 cm); the fragment appears to have broken off just above a handle. Decoration: a horizontal zigzag line; vertical lines beneath it. Technique: the bowl was formed from clay coils; decoration of *Tiefstich* lines and impressions of a straight-edged spatula. Fabric: smooth surface; tempered with barely distinguishable crushed granite; fairly hard. Typochronology: Brindley Horizon 3; Bakker Phase B/C.

43. Incomplete, but largely reconstructible. Lug handles. Decoration: four horizontal lines of dots beneath the rim; the lugs interrupt the bottom two lines; blocks alternately consisting of three horizontal rows of impressions and three vertical rows of impressions; the latter extend further down. Technique: the bowl was formed from clay coils; decoration of point impressions, possibly produced with a comb-like tool. Fabric: rough surface; tempered with fine crushed granite; medium hard. Typochronology: Brindley Horizon 4; Bakker Phase?

44. Wall-rim fragment, one sherd (c. 4.3x3.7 cm), but largely reconstructible. Decoration: three continuous, horizontal lines below the rim; two interrupted lines beneath them, probably part of a block design. Technique: the bowl was formed from clay coils; decoration of *ivaerstik* lines. Fabric: smooth surface; tempered with fine crushed granite; hard. Typochronology: Brindley Horizon 4; Bakker Phase D2.

45. Incomplete, but largely reconstructible. Decoration: two horizontal lines below the rim; beneath them, vertical lines around the vessel; beneath these, blocks of double horizontal lines. Technique: the method of forming cannot be determined; decoration of *Tiefstich* and *ivaerstik* lines; traces of a white fill in the lines. Fabric: fairly rough surface; rather coarse appearance; tempered with crushed granite; medium hard. Typochronology: Brindley Horizon 4; Bakker Phase D2/E1.

46. Incomplete, but largely reconstructible; the bowl probably had two small lugs. Decoration: blocks of two horizontal lines below the rim; beneath them, vertical lines; Technique: the bowl was formed from clay coils; decoration of *ivaerstik* and *Tiefstich*

lines. Fabric: smooth to rough surface; tempered with fine crushed granite; hard. Typochronology: Brindley Horizon 4; Bakker Phase D2/E1.

47. Incomplete, but largely reconstructible. Decoration: four sloppy horizontal lines along the top; blocks in the form of pairs of horizontal lines; and beneath these blocks three vertical lines. Technique: the bowl was formed from clay coils; decoration of *Tiefstich* lines. Fabric: fairly rough surface; tempered with fine crushed granite; medium hard. Typochronology: Brindley Horizon 4; Bakker Phase?

48. Incomplete, but largely reconstructible. Decoration: three horizontal lines along the top; an interrupted line and beneath it small blocks of pairs of horizontal lines separating the two zones of decoration; on the lower part, alternating blocks of three horizontal lines and three or four vertical lines. Technique: the bowl was formed from clay coils; decoration of *Tiefstich* lines. Fabric: smooth to rough surface; tempered with fine crushed granite; medium hard. Typochronology: Brindley Horizon 4; Bakker Phase?

49. Incomplete, but largely reconstructible. Decoration: two horizontal lines below the rim; beneath it, two rows of blocks consisting of double horizontal lines; in the bottom zone, blocks of vertical lines. Technique: the bowl was formed from clay coils; decoration of *tvaerstik* and *Tiefstich* lines. Fabric: smooth surface; tempered with fine crushed granite; hard. Typochronology: Brindley Horizon 4; Bakker Phase E1.

50. Incomplete, but largely reconstructible. Decoration: two horizontal lines of dots below the rim; beneath it, two horizontal zigzag lines. Technique: the bowl was formed from clay coils; decoration of point impressions and grooved lines. Fabric: rough surface, rather coarse appearance; tempered with fairly coarse crushed granite; medium hard. Typochronology: Brindley Horizon 5, Heek-Emmeln style; Bakker Phase?

51. Supplemented and completed through restoration. Small. Decoration: none. Technique: the method of forming cannot be determined. Fabric: fairly smooth surface; tempered with fine crushed granite; fairly hard. Typochronology: undeterminable.

52. Incomplete, but reconstructible. Small. Decoration: none. Technique: the method of forming cannot be determined. Fabric: smooth but uneven surface, careless finish; tempered with fairly coarse crushed granite; not very hard. Typochronology: undeterminable.

53. Incomplete, but largely reconstructible. Small. Decoration: none. Technique: the method of forming cannot be determined. Fabric: fairly rough surface; tempered with fine crushed granite; fairly soft. Typochronology: undeterminable.

54. Incomplete, one sherd (c. 4.0x3.0 cm), largely reconstructible. Small. Decoration: none. Technique: the bowl was formed from clay coils. Fabric: smooth surface; tempered with fine crushed granite; hard. Typochronology: undeterminable.

55. Incomplete, one sherd (c. 4.0x3.7 cm), largely reconstructible. Small. Decoration: none. Technique: the method of forming cannot be determined. Fabric: fairly rough surface; tempered with fine crushed granite; medium hard. Typochronology: undeterminable.

56. Wall-rim fragment, one sherd (c. 4.0x3.5 cm), largely reconstructible. Decoration: none. Technique: the method of forming cannot be determined. Fabric: rough surface; tempered with fairly coarse crushed granite; medium hard. Typochronology: undeterminable.

57. Incomplete, one sherd (c. 3.5x2.3 cm), partly reconstructible. Small. Decoration: none. Technique: the method of forming cannot be determined. Fabric: slightly rough surface; tempered with fine crushed granite; hard. Typochronology: undeterminable.

58. Rim fragment, one sherd (c. 4.5x3.7 cm), partly reconstructible. Decoration: none. Technique: the bowl was formed from clay coils. Fabric: smooth surface; tempered with crushed granite; medium hard. Typochronology: undeterminable.

59. Rim fragment of carinated vessel, one sherd (c. 6.0x4.0

cm), partly reconstructible; the diameter can be determined. Decoration: none. Technique: the vessel was formed from clay coils. Fabric: fairly rough surface; tempered with fine crushed granite; also there are imprints of a cereal grain (unidentifiable) and a piece of straw or the like; hard. Typochronology: undeterminable.

60. One sherd (c. 7.0x6.0 cm), largely reconstructible. Decoration: none. Technique: the vessel was formed from clay coils. Fabric: smooth, but uneven surface; tempered with fine crushed granite; fairly hard. Typochronology: undeterminable.

61. Wall-rim fragment, one sherd (c. 5.0x3.0 cm), largely reconstructible. Decoration: none. Technique: the bowl was formed from clay coils. Fabric: rough, uneven surface; tempered with crushed granite; fairly soft. Typochronology: undeterminable.

62. Wall-rim fragment, one sherd (c. 3.5x3.0 cm), largely reconstructible. Small. Decoration: none. Technique: the bowl was formed from clay coils. Fabric: rather rough and uneven surface; tempered with crushed granite; medium hard. Typochronology: undeterminable.

63. Wall-rim fragment, two sherds (together c. 8.0x3.5 cm), largely reconstructible. Decoration: none. Technique: the vessel was formed from clay coils. Fabric: smooth surface; tempered with fine crushed granite; hard. Typochronology: undeterminable.

64. Wall-rim fragment, three sherds (two joining sherds c. 7.0x4.0 cm; one sherd c. 4.0x3.0 cm), largely reconstructible. Decoration: none. Technique: the vessel was formed from clay coils. Fabric: fairly rough surface; tempered with very fine crushed granite; hard. Typochronology: undeterminable.

#### *Tureens*

65. One sherd, as illustrated; the shape and diameter of the shoulder can be determined. Decoration: filled triangles where neck and shoulder meet. Technique: the vessel was formed from clay coils; decoration of filled triangles. Fabric: smooth to slightly rough surface; tempered with fine crushed granite; fairly hard. Typochronology: Brindley Horizon 3; Bakker Phase C.

66. Incomplete, but reconstructible from the rim almost to the base. Decoration: four horizontal lines around the neck; on the shoulder, a design of triple inverted pointed arcs. Technique: the method of forming cannot be determined; decoration of *Tiefstich* lines. Fabric: smooth surface; tempered with very fine crushed granite; hard. Typochronology: Brindley Horizon 4; Bakker Phase?

67. Incomplete, but its shape is reconstructible from rim to belly. Decoration: three lines of dots along the rim; shoulder stamp design on the shoulder. Technique: the vessel was formed from clay coils; decoration of point impressions and shoulder stamps. Fabric: rough surface; tempered with crushed granite; medium hard. Typochronology: Brindley Horizon 4; Bakker Phase D1.

68. Incomplete; its shape can be reconstructed from rim to belly; the tureen may have had two small handles. Decoration: two horizontal lines along the rim; degenerating here and there into a series of impressions, due to sloppy execution of *tvaerstik*; shoulder stamp on the shoulder; Technique: the tureen was formed from clay coils; decoration of shoulder stamp and poorly executed *tvaerstik*. Fabric: fairly smooth surface; tempered with crushed granite; medium hard. Typochronology: Brindley Horizon 4; Bakker Phase D1.

69. Incomplete; its shape is largely reconstructible; the tureen probably had two small handles; the base of one of these still can be seen. Decoration: three horizontal lines below the rim; blocks of two and three horizontal lines on the neck; in some places these blocks are replaced by roughly circular designs on either side of a lug; below the lugs are slightly curved, vertical lines of dots; shoulder stamp on the shoulder; short vertical lines running from the shoulder stamp down on to the belly. Technique: the tureen was formed from clay coils; decoration of *tvaerstik* and *Tiefstich* lines, shoulder stamp, point impressions and a hollow



stamp. Fabric: rough surface; tempered with fine crushed granite; medium hard. Typochronology: Brindley Horizon 4; Bakker Phase D2.

70. Incomplete; its shape is largely reconstructible; it is not clear whether this tureen had lugs. Decoration: three horizontal lines below the rim; on the neck, alternating blocks of horizontal and vertical lines; shoulder stamp on the shoulder; vertical lines running from the shoulder stamp to half way down the belly. Technique: the tureen was formed from clay coils; decoration of *tvaerstik* and *Tiefstich* lines and shoulder stamp. Fabric: rough surface; tempered with fine crushed granite; medium hard. Typochronology: Brindley Horizon 4; Bakker Phase D2.

71. Incomplete, reconstructible from the rim to just below the shoulder. Decoration: three horizontal lines below the rim; beneath them, an incised-lozenge line, interrupted by vertical lines; a horizontal row of impressions where neck and shoulder meet, with shoulder stamp attached to it; in places, the shoulder stamp makes way for blocks of vertical lines running across the shoulder and the top of the belly. Technique: the method of forming cannot be determined; decoration of point impressions, *tvaerstik* and *Tiefstich* lines, and shoulder stamp. Fabric: smooth surface; the temper is barely distinguishable; hard. Typochronology: Brindley early Horizon 4; Bakker Phase D2.

72. Neck fragment, incomplete; the diameter can be determined. Decoration: three horizontal lines below the rim; beneath it, on the neck, blocks of at least four horizontal lines. Technique: the tureen was formed from clay coils; decoration of *tvaerstik* lines; slight traces of a white filling in the lines. Fabric: smooth to rough surface; tempered with fine crushed granite; medium hard. Typochronology: Brindley Horizon 4; Bakker Phase D2.

73. Tureen-like vessel. Incomplete, but largely reconstructible. It had at least one horizontally pierced lug. Decoration: none. Technique: the method of forming cannot be determined. Fabric: fairly smooth, but somewhat uneven surface; tempered with crushed granite; medium hard. Typochronology: undeterminable.

74. Possibly a tureen. Neck-rim fragment, one sherd (c. 3.0x2.5 cm); the diameter can be determined. Decoration: none. Technique: the method of forming cannot be determined. Fabric: smooth surface; tempered with fine crushed granite; medium hard. Typochronology: undeterminable.

#### Amphorae

75. Incomplete, reconstructible from rim to shoulder carination. Type I, according to Brindley (1986b: p. 109). Decoration: a horizontal line of impressions on the base of the neck; a horizontal line where neck and shoulder meet; vertical lines on the shoulder. Technique: the vessel was formed from clay coils; decoration of point impressions and *Tiefstich* lines. Fabric: fairly smooth surface; tempered with fine crushed granite; hard. Typochronology: Brindley Horizon 4; Bakker Phase?

76. Belly fragment, one sherd (c. 4.0x3.7 cm). Type 2 (or possibly shouldered vessel). Decoration: probably a horizontal row of small pointed arcs on the shoulder; a vertical chevron with vertical lines on either side, on the belly, possibly below a lug. Technique: the method of forming cannot be determined; decoration of *Tiefstich* lines. Fabric: fairly smooth surface; tempered with crushed granite; hard. Typochronology: Brindley Horizon 4; Bakker Phase?

77. Incomplete, but the shape of shoulder and belly are largely reconstructible; the amphora probably had two small lugs (one remaining). Type I. Decoration: two horizontal lines where neck and shoulder meet; these are interrupted by the lugs; at least three vertical lines on the belly, possibly below a lug. Technique: the vessel was formed from clay coils; decoration of *Tiefstich* lines. Fabric: fairly smooth surface; tempered with fine crushed granite; hard. Typochronology: Brindley Horizon 4; Bakker Phase?

78. Neck-shoulder fragment, two sherds (c. 3.7x2.5 and 2.5x2.0 cm). Type ? Decoration: three horizontal lines where neck and shoulder meet; a horizontal line on the shoulder.

Technique: the vessel was formed from clay coils; decoration of *Tiefstich* lines. Fabric: rough surface; tempered with crushed granite; medium hard. Typochronology: Brindley Horizon 4; Bakker Phase?

79. Incomplete, but largely reconstructible; the amphora had two pairs of handles. Type I. Decoration: three horizontal lines on the neck below the rim; beneath them, small circular motifs; two horizontal lines where neck and shoulder meet; these are interrupted by the handles; six groups of vertical lines on shoulder and belly, four of which below the handles, extending half way down the belly; three vertical lines on the handles. Technique: the amphora was formed from clay coils; decoration of *tvaerstik* and *Tiefstich* lines and point impressions. Fabric: fairly rough surface; tempered with fine crushed granite; fairly hard. Typochronology: Brindley Horizon 4; Bakker Phase E1.

80. One sherd, representing part of the neck/shoulder transition and bearing a perforated handle; the vessel probably had two handles. Type I. Decoration: groups of horizontal lines; across and beneath the handle, some curved lines; beside the handle, traces of horizontal lines. Technique: the method of forming cannot be determined; decoration of *tvaerstik* lines. Fabric: smooth surface; tempered with fine crushed granite; hard. Typochronology: Brindley Horizon 4; Bakker Phase E1.

#### Pails

81. Incomplete, but largely reconstructible; the pail probably had two pairs of lugs. Decoration: two horizontal lines below the rim; in the upper zone, blocks consisting of three horizontal lines; these blocks alternate with the lugs and with blocks of triple chevron; beneath these zigzags in the upper zone two vertical strips of small chevrons occur, bordered by an extra line on each side; beneath each lug two strips of larger vertical chevrons; two small chevrons on each lug and a small line above it; at the base, groups of vertical lines. Technique: the pail was formed from clay coils; decoration of *tvaerstik* and *Tiefstich* lines. Fabric: slightly rough surface; tempered with fine crushed granite; medium hard. Typochronology: Brindley Horizon 4; Bakker Phase D2.

#### Collared flasks

82. Shoulder fragment with transitions to neck and belly. Decoration: two horizontal lines of dots where neck and shoulder meet; three horizontal lines of dots close together on the upper part of the shoulder; vertical lines around the lower part of the shoulder, extending onto the belly. Technique: the method of forming cannot be determined; decoration of grooved lines and point impressions possibly produced with a comb. Fabric: smooth surface; tempered with fine crushed granite; hard. Typochronology: undeterminable.

83. Collar fragment. Decoration: none. Technique: the method of forming cannot be determined. Fabric: smooth surface; tempered with crushed granite; medium hard. Typochronology: undeterminable.

84. Shoulder-belly fragment. Decoration: two horizontal rows of dots on the shoulder. Technique: the method of forming cannot be determined; decoration of point impressions. Fabric: fairly smooth surface; tempered with crushed granite; medium hard. Typochronology: undeterminable.

85. Shoulder-belly fragment, incomplete; the diameter can be determined. Possibly a collared flask. Decoration: none. Technique: the method of forming cannot be determined. Fabric: smooth surface; tempered with fine crushed granite; medium hard. Typochronology: undeterminable.

86. Shoulder-belly fragment, incomplete; the diameter can be determined. Possibly a collared flask. Decoration: none. Technique: the vessel was formed from clay coils. Fabric: fairly smooth, but somewhat uneven surface; tempered with fine crushed granite; medium hard. Typochronology: undeterminable.

#### Miscellaneous

87. Rim fragment of a tureen or bowl. One sherd (c. 3.7x1.7

cm); the diameter can be determined. Decoration: two horizontal lines below the rim. Technique: the method of forming cannot be determined; decoration of *Tiefstich* lines. Fabric: slightly rough surface; tempered with fine crushed granite; hard. Typochronology: undeterminable.

88. Rim fragment. The diameter can be determined. Decoration: none. Technique: the method of forming cannot be determined. Fabric: smooth surface; tempered with crushed granite; medium hard. Typochronology: undeterminable.

89. Rim fragment. One sherd (c. 5.5x4.3 cm). Decoration: none. Technique: the method of forming cannot be determined. Fabric: smooth surface; tempered with barely visible crushed granite; hard. Typochronology: undeterminable.

90. Rim fragment. One sherd (c. 3.0x1.5 cm). Decoration: none. Technique: the method of forming cannot be determined. Fabric: smooth surface; tempered with fine crushed granite; hard. Typochronology: undeterminable.

91. Rim fragment. One sherd (c. 3.5x2.5 cm). Decoration: none. Technique: the method of forming cannot be determined. Fabric: fairly smooth surface; tempered with fine crushed granite; medium hard. Typochronology: undeterminable.

92. Rim fragment. Two sherds (together c. 5.1x3.1 cm). Decoration: none. Technique: the method of forming cannot be determined. Fabric: fairly smooth surface; tempered with fine crushed granite; medium hard. Typochronology: undeterminable.

93. Rim fragment. Two sherds (together c. 6.5x3.5 cm); the diameter can be determined. Decoration: none. Technique: the method of forming cannot be determined. Fabric: smooth surface; tempered with crushed granite; medium hard. Typochronology: undeterminable.

94. Neck-rim fragment. One sherd (c. 4.0x2.8 cm); the diameter can be determined; the shoulder transition is present, and shows that the neck was short and cylindrical. Decoration: none. Technique: the method of forming cannot be determined. Fabric: smooth surface; tempered with crushed granite; medium hard. Typochronology: undeterminable.

95. Neck-rim fragment. Transition to shoulder is present; one sherd (c. 3.7x1.8 cm); the diameter can be determined; the neck is very short. Decoration: none. Technique: the vessel was formed from clay coils. Fabric: fairly smooth surface; tempered with fine crushed granite; medium hard. Typochronology: undeterminable.

96. Neck-rim fragment. One sherd (c. 2.0x1.5 cm); the diameter can be determined; the neck is cylindrical. Decoration: none. Technique: the method of forming cannot be determined. Fabric: slightly rough surface; tempered with fine crushed granite; hard. Typochronology: undeterminable.

97. Neck-rim fragment. One sherd (c. 4.0x3.0 cm); the diameter can be determined; the neck is almost cylindrical. Decoration: none. Technique: the method of forming cannot be determined. Fabric: smooth surface; tempered with fine crushed granite; hard. Typochronology: undeterminable.

98. Neck fragment. The transition to the shoulder is present. Decoration: a horizontal row of impressions on the neck; just above the shoulder transition, some short, oblique spatula impressions; a horizontal line where neck and shoulder meet. Technique: the method of forming cannot be determined; decoration of impressions and a *Tiefstich* line. Fabric: smooth to rough surface; tempered with crushed granite; hard. Typochronology: undeterminable.

99. Wall fragment. One sherd (c. 3.5x3.3 cm). Decoration: two horizontal lines; a vertical line with the remnant of a horizontal one beside it. Technique: the method of forming cannot be determined; decoration of *ivaerstik* and *Tiefstich* lines. Fabric: slightly rough surface; tempered with fine crushed granite; hard. Typochronology: undeterminable.

100. Wall fragment. One sherd (c. 3.0x3.0 cm). Decoration: faint zigzag; faint vertical lines below it. Technique: the method of forming cannot be determined; decoration of *Tiefstich* lines and impressions made with a straight-edged spatula; affected by

abrasion and/or weathering. Fabric: rough surface; tempered with fine crushed granite; hard. Typochronology: undeterminable.

101a. Wall fragment. One sherd (c. 2.8x2.5 cm). Decoration: two horizontal lines of impressions. Technique: the method of forming cannot be determined; decoration of point impressions. Fabric: fairly smooth surface; tempered with crushed granite; medium hard. Typochronology: undeterminable.

101b. Wall fragment. One sherd (c. 3.6x2.6 cm). Decoration: along the top, a horizontal line; a line of impressions. Technique: the method of forming cannot be determined; decoration of point impressions and a grooved line. Fabric: fairly smooth surface; tempered with crushed granite; medium hard. Typochronology: undeterminable.

102. Fragment of neck-shoulder transition with a pierced lug. Possibly from an amphora; one sherd (c. 4.5x3.5 cm). Decoration: none. Technique: the method of forming cannot be determined. Fabric: rough surface; tempered with fine crushed granite; medium hard. Typochronology: undeterminable.

103. Double handle. Now broken into two closely fitting halves; no evidence of the two halves having been smoothed together. Fabric: fairly smooth surface; tempered with fine crushed granite; medium hard. Typochronology: undeterminable.

104. Perforated lug, complete. Fabric: fairly smooth surface; tempered with crushed granite; medium hard. Typochronology: undeterminable.

105. Small base fragment. Fabric: smooth surface; tempered with crushed granite; hard. Typochronology: undeterminable.

106. Small base fragment. Fabric: fairly smooth surface; tempered with fine crushed granite; hard. Typochronology: undeterminable.

107. Belly-base fragment. Technique: the vessel was formed from clay coils. Fabric: smooth surface; tempered with fairly coarse crushed granite; hard. Typochronology: undeterminable.

108. Belly-base fragment. Technique: the method of forming cannot be determined. Fabric: smooth surface; tempered with very fine crushed granite; there is an impression of a cereal grain or piece of straw (unidentifiable); hard. Typochronology: undeterminable.

109. Base fragment. Fabric: rough surface; tempered with crushed granite; medium hard. Typochronology: undeterminable.

110. Base fragment. Fabric: smooth to rough surface; tempered with crushed granite; medium hard. Typochronology: undeterminable.

111. Base. virtually complete. Fabric: smooth to rough surface; tempered with crushed granite; medium hard. Typochronology: undeterminable.

112. Small base fragment. Fabric: fairly smooth surface; tempered with crushed granite; medium hard. Typochronology: undeterminable.

113. Base fragment. Fabric: smooth surface; tempered with crushed granite; medium hard. Typochronology: undeterminable.

114. Small base fragment. Fabric: fairly rough surface; tempered with crushed granite; medium hard. Typochronology: undeterminable.

115. Belly fragment. with transition to base. Fabric: smooth to fairly rough surface; tempered with crushed granite; medium hard. Typochronology: undeterminable.

116. Base fragment. Fabric: smooth surface; tempered with crushed granite; there is an impression of a cereal grain (unidentifiable); hard. Typochronology: undeterminable.

117. Belly-base fragment. Fabric: smooth to rough surface; tempered with crushed granite; medium hard. Typochronology: undeterminable.

118. Base fragment. Fabric: fairly smooth surface; tempered with very fine crushed granite; hard. Typochronology: undeterminable.

119. Base fragment. Fabric: smooth surface; tempered with

very fine crushed granite; hard. Typochronology: undeterminable.

120. Base fragment. Fabric: smooth surface; tempered with fine crushed granite; fairly hard. Typochronology: undeterminable.

121. Base fragment. Fabric: smooth surface; tempered with fairly coarse crushed granite; medium hard. Typochronology: undeterminable.

122. Base fragment. Fabric: smooth surface; tempered with very fine crushed granite; hard. Typochronology: undeterminable.

123. Base fragment. Fabric: smooth surface; tempered with fine crushed granite; medium hard. Typochronology: undeterminable.

124. Base fragment. Fabric: slightly rough surface; tempered with crushed granite; fairly hard. Typochronology: undeterminable.

125. Base fragment. Fabric: slightly rough surface; tempered with crushed granite; fairly hard. Typochronology: undeterminable.

#### *Pottery of the Single Grave Culture*

126. Two rim fragments, one wall fragment and part of base of protruding foot beaker. More or less reconstructible. Decoration: herringbone design, rather poorly executed. Technique: the method of forming cannot be determined; decoration of spatula impressions. Fabric: fairly smooth surface; tempered with fine sand; fairly hard. Typochronology: beaker type 1d, according to van der Waals and Glasbergen (1955).

127. Wall fragment and handle, presumably of a *Strichbündelamphore*. Decoration: short, horizontal lines on the slightly thickened edges of the strap handle; more or less vertical lines on the wall fragment. Technique: the method of forming cannot be determined. Fabric: smooth surface; temper is barely distinguishable; hard. Remark: there are several undecorated sherds that may also belong to this vessel; their approximate dimensions are: 4.0x4.5 cm, 4.0x4.5 cm, 3.0x2.5 cm, 6.5x6.5 cm and 5.5x5.0 cm.

128. Wall fragment of thick-walled pot. Decoration: brush strokes. Technique: the method of forming cannot be determined. Fabric: smooth surface with brush strokes; tempered with fine crushed granite; medium hard. Typochronology: almost certainly part of large storage vessel with short-wave moulding (*golffbandpot*).

129. Wall fragment of beaker. Decoration: four horizontal lines of cord impressions. Technique: the method of forming cannot be determined. Fabric: fairly smooth surface; temper is barely distinguishable; hard. Typochronology: beaker type 1a of Single Grave Culture, or beaker of type 211b of AOO group (van der Waals & Glasbergen, 1955).

#### *Pottery of the Bell Beaker Culture*

130. Neck pot beaker. Incomplete; the base of the neck is present and the belly can be reconstructed almost down to the base. Decoration: at the neck-shoulder transition, a horizontal groove with spatula impressions in it; on the shoulder-belly transition, five horizontal grooves with spatula impressions in them; fingertip impressions forming rough V-shaped figures all over the shoulder and belly. Technique: the method of forming cannot be determined. Fabric: smooth surface; tempered with crushed granite; medium hard.

131. Wall fragment. Decoration: two vertical lines with oblique lines below them. Technique: the method of forming cannot be determined. Fabric: slightly rough surface; tempered with fine sand; fairly hard.

#### *Early Bronze Age pottery*

132a. Wall fragment. Decoration: three horizontal bands of oblique lines, enclosed by horizontal lines, executed with a fine barbed-wire stamp. Technique: the method of forming cannot be determined. Fabric: rough surface; tempered with sand; medium hard.

132b. Wall fragment. Decoration: three horizontal bands of roughly vertical lines enclosed by horizontal lines, executed with a fine barbed-wire stamp. Technique: the method of forming cannot be determined. Fabric: fairly smooth surface; tempered with sand; medium hard.

132c. Wall fragment. Decoration: three horizontal bands of roughly vertical lines enclosed by horizontal lines, executed with a fine barbed-wire stamp. Technique: the method of forming cannot be determined. Fabric: fairly smooth surface; tempered with sand; medium hard.

133. Wall fragment. Decoration: five rather irregular horizontal lines of barbed-wire impressions. Technique: the method of forming cannot be determined. Fabric: smooth to rough surface; tempered with sand; medium hard.

#### STONE MATERIAL

##### *Transverse arrowheads*

134. Dark grey flint with lighter patches. Dimensions: greatest length 20 mm; greatest width 15 mm; greatest thickness 3 mm. Remark: the arrowhead was made from a comparatively large flake.

135. Dark grey flint. Dimensions: greatest length 22 mm; greatest width 15 mm; greatest thickness 6 mm. Remark: the arrowhead was made from a comparatively large flake.

136. Pale grey flint. Dimensions: greatest length 18 mm; greatest width 13 mm; greatest thickness 3 mm. Remark: the arrowhead was made from an axe fragment; traces of grinding are still visible.

137. Pale grey flint. Dimensions: greatest length 24 mm; greatest width 17 mm; greatest thickness 2 mm. Remark: the arrowhead was made from a comparatively large flake, some cortex still present.

138. Grey-brown flint. Dimensions: greatest length 20 mm; greatest width 15 mm; greatest thickness 4 mm. Remark: the arrowhead was made from a comparatively large flake.

139. Dark grey flint with lighter patches. Dimensions: greatest length 29 mm; greatest width 14 mm; greatest thickness 2 mm. Remark: the arrowhead was made from a comparatively large flake.

140. Dark grey flint. Dimensions: greatest length 30 mm; greatest width 20 mm; greatest thickness 4 mm. Remark: the arrowhead was made from a comparatively large flake.

141. Middle grey flint. Dimensions: greatest length 27 mm; greatest width 16 mm; greatest thickness 2 mm. Remark: the arrowhead was made from a comparatively large flake.

142. Pale grey flint. Dimensions: greatest length 20 mm; greatest width 15 mm; greatest thickness 2 mm. Remark: the arrowhead was made from a comparatively large flake.

143. Pale grey flint. Dimensions: greatest length 23 mm; greatest width 15 mm; greatest thickness 3 mm. Remark: the arrowhead was made from a comparatively large flake.

144. Pale grey flint with darker patches. Dimensions: greatest length 29 mm; greatest width 13 mm; greatest thickness 3 mm. Remark: the arrowhead was made from a comparatively large flake.

##### *Other flint tools*

145. *Bikkel*. Material: fairly dark grey flint with yellowish and off-white to grey patches. Dimensions: greatest length 66 mm; greatest width 27 mm; greatest thickness 20 mm. Remarks: the ends are chipped through use; a small area of cortex has remained; some ancient surfaces display wind gloss.

146. *Bikkel*. Material: pale grey flint with a darker patch. Dimensions: greatest length 72 mm; greatest width 22 mm; greatest thickness 12 mm. Remarks: the ends are chipped through use; some ancient surfaces display wind gloss.

147. Sickle blade. Material: pale grey flint with lighter patches. Dimensions: greatest length 63 mm; greatest width 23 mm; greatest thickness 12 mm. Remarks: the object was made from a

flake; a small area of cortex remains. The cutting edge is slightly chipped through use; sickle gloss on both sides.

148. Burin(?). Material: grey mottled flint. Dimensions: greatest length 52 mm; greatest width 27 mm; greatest thickness 12 mm. Remarks: one of the ends has a flake, negative, while one of the long sides, adjacent to it, has small retouches, which in part may have resulted from use; some ancient surfaces display wind gloss.

149. Waste flake of Neolithic axe production (Beuker, 1986: p. 121). Material: pale purply-red Helgoland flint with small white and orange inclusions. Dimensions: greatest length 29 mm; greatest width 27 mm; greatest thickness 6 mm. Remarks: the remnant of the striking platform is slightly faceted.

150. Chisel. Rectangular in cross-section. Material: middle grey flint. Dimensions: greatest length 60 mm; greatest width 25 mm; greatest thickness 17 mm. Remarks: retouches all around, possibly through use; cutting edge chipped through use; re-used as a *bikkel*, this is evident from the damage done to it.

#### *Flint and stone axes*

151. Asymmetrical. Rectangular in cross-section. Material: pale grey flint with dark and off-white patches. Dimensions: greatest length 65 mm; greatest width 37 mm; greatest thickness 12 mm. Remarks: the axe is ground; traces of grinding remain; the cutting edge was resharpened and polished; there are damaged areas, both ancient and modern. Type: *Flint-Flachbeil* var. 2b (Brandt, 1967: pp. 102-108).

152. Axe fragment. Retouched to produce a plane. Material: pale grey flint. Dimensions: greatest length 55 mm; greatest width 51 mm; greatest thickness 15 mm. Remarks: traces of grinding remain: hence the tool must have been made from a ground axe; a bulb of percussion can be seen at about 1 cm from the working edge. Probably this part was removed intentionally, possibly because the axe was broken anyway, so that it could be made into a plane.

153. Asymmetrical. Rectangular in cross-section. Material:

pale grey flint with almost black patches. Dimensions: greatest length 100 mm; greatest width 55 mm; greatest thickness 21 mm. Remarks: the axe is ground; traces of grinding can still be seen; the cutting edge was resharpened and polished; there are damaged areas, both ancient and modern; the cutting edge is virtually intact. Type: *Flint-Flachbeil* var. 2b (Brandt, 1967: pp. 102-108).

154. Asymmetrical. Oval in cross-section. Material: grey flint. Dimensions: greatest length 85 mm; greatest width 64 mm; greatest thickness 32 mm. Remarks: the axe is ground; traces of grinding remain visible; the cutting edge was resharpened and polished. Type: undeterminable, as the butt is missing.

155. Asymmetrical. Rectangular in cross-section. Material: resembling siltstone in texture, attempts at closer identification unsuccessful (J.R. Beuker, pers. comm.). Dimensions: greatest length 90 mm; greatest width 58 mm; greatest thickness 21 mm. Remarks: the axe is ground; damaged areas, both ancient and recent.

#### *Personal ornaments*

156. Bead. Complete; hourglass-shaped bore. Material: amber. Dimensions: section c. 10 mm; thickness c. 4 mm. Type: disc-shaped.

157. Bead. Virtually complete; almost cylindrical bore. Material: jet. Dimensions: section c. 13 mm; thickness c. 6 mm. Type: disc-shaped.

158. Bead. Complete; hourglass-shaped bore. Material: jet. Dimensions: section c. 25 mm; thickness varying from 11 to 16 mm. Type: more or less disc-shaped.

159. Bead. Complete; hourglass-shaped bore. Material: jet. Dimensions: section c. 10 mm; thickness c. 10 mm. Type: cylindrical.

160. Bead. Complete; hourglass-shaped bore. Material: jet. Dimensions: section c. 10 mm; thickness c. 10 mm. Type: cylindrical.