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The Excavation of a Passage Grave Site at Himmelev, Central Zealand

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In the autumn of 1968 the author excavated, for the National Museum of Copenhagen, a passage grave site near the village of Himmelev, a few kilometres north-east of Roskilde. Before excavation the site was noticeable merely as a low mound in a cultivated field consisting of a heavy clay top-soil resting on moraine clay. For excavation the mound was divided into four quadrants separated by baulks 0.5 m wide which together formed a slightly oblique cross. A cross section extending NE-SW through the mound (section A) was recorded, but first a number of c. one-metre-wide test pits were dug along the mound section (fig. 1) in order to clarify the original extent and structure of the mound. The larger excavation trenches were dug as an extension of these test pits. They had to be confined to the area in and around the chamber, passage, and passage opening since this was a rescue excavation with limited resources. In 16 days a total of 128 m² was uncovered.

THE MOUND

By means of the test pits we succeeded in finding a sufficient quantity of *in situ* stone packing for the approximate diameter of the mound to be determined. From north to south it measured c. 19 m, from east to west c. 18 m (fig. 1). The test pits clarified another matter: the layer of moraine clay turned out to rise slightly from the outer edges to the middle of the mound. Thus the mound was built on top of a small natural elevation in the terrain.

The excavated portions of the mound together with the recording of section A soon made it possible to reconstruct the structure of the lower parts of the mound – in spite of a sizable, recent disturbance penetrating from north to south right through the eastern half of the mound, which had completely eliminated any traces of the passage way (fig. 1). The following seems certain: on a small elevation was placed an almost circular packing of boulders 0.1–0.5 m large, measuring c. 19 m from north to south and 18 m from east to west. Towards its perimeter the packing consisted of simple paving of, apparently, fairly scattered stones. Towards the chamber, which was situated away from the centre in the northerly quadrant of the mound, the thickness increased considerably, the stones here being preserved in up to four layers in very dense and – especially at the back, the western side of the mound – very wide stretches of packing. In several places in the south and northerly ends of the mound there was a fill between the stones, consisting of very firm sand – with a slight admixture of clay – of a yellowish grey or yellowish brown colour. This fill must have come from elsewhere as the subsoil around the mound consists of moraine clay (cf. Strömberg 1971:67). A few undecorated potsherds, some flint waste and bone fragments mixed with the grave fill may stem from a culture layer (discussed below) that was identified underneath the floor of the chamber. The purpose of the massive stone packing, which was supplemented nearest the chamber by a packing of crushed flint, must undoubtedly have been to provide a solid and rigid backing for the megalithic uprights of the chamber and thereby prevent these from being displaced by the earth of the mound (cf. Strömberg 1971: 233 f.).

It was impossible to determine whether the mound had been surrounded by kerb stones, but as none of the trenches at the base of the mound revealed definite traces of their sockets, they are unlikely to have existed.

None of the many stones in the packing gave any indication that they had been used as hammer stones, grind-stones or whetstones.

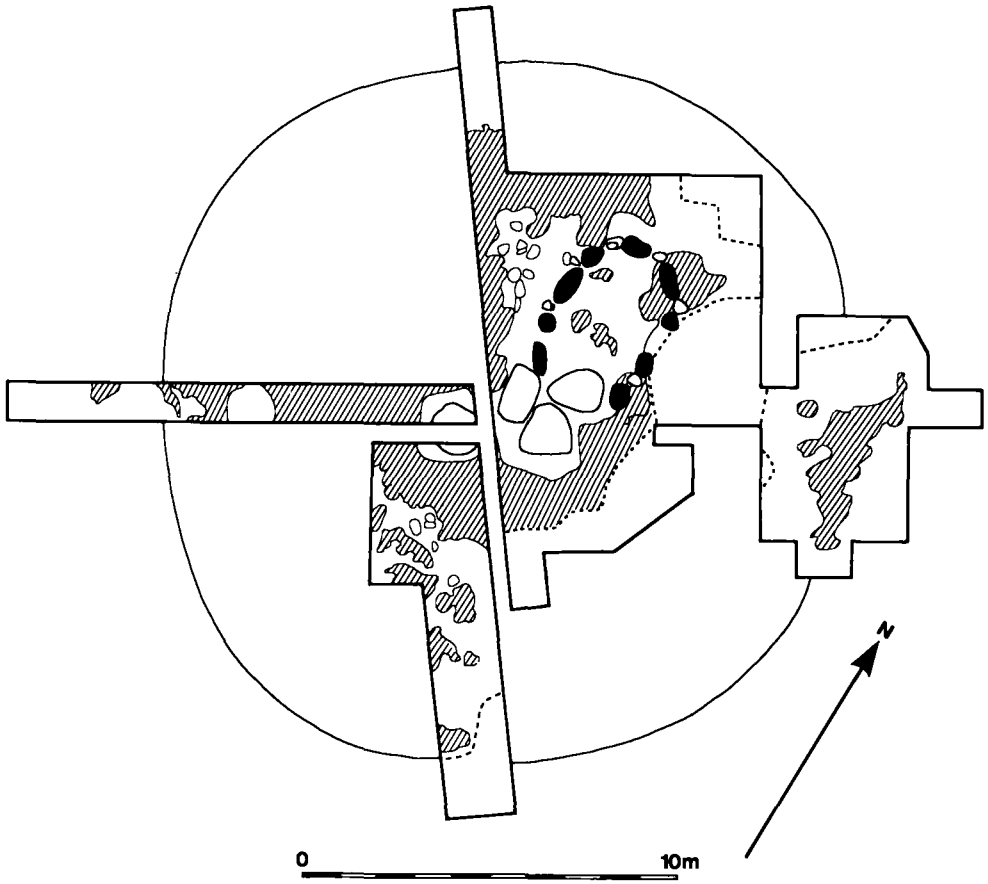

Fig. 1. Plan of the passage grave site at Himmelev (National Museum parish register No. 53). The full line indicates the probable periphery of the mound. 1:200.

THE CHAMBER AND THE PASSAGE

The chamber of the passage grave was located fairly quickly in the northern excavation quadrant, trench I. This was gradually extended to cover c. 50 m², i.e. the whole chamber as well as the adjacent northern and north-eastern parts of the mound and almost the whole area through which the passage must have run. The disturbance, mentioned above, in the east side of the mound turned out to include the whole area up to the outside face of the chamber and the north corner of the trench. Between these two areas there was a course, c. 1.3 by 1.5 m, of the external support packing of the chamber, consisting of boulders between 0.1 and 0.25 m placed in layers of one to three deep with an admixture of crushed flint. Both boulders and flint were laid in yellowish grey sand lightly mixed with clay. The flint level continued in a packing 5–10 cm thick northwards past the chamber.

Nearly all the megaliths from the chamber and passage had been removed when the grave was demolished. However, four heavy stones – three of granite and one of gneiss – remained, presumably because it proved impossible to remove them. Instead the stones, which were up to 1.5 m tall, had been rolled down into two pits – one large pit that disturbed the south end of the chamber, and a smaller one close to the middle of the mound, where it was necessary to take up the heavy stone packing before the unmanageable megalith could be removed (figs. 1 and 2). Apart from the disturbance in the south end the floor of the chamber was hardly affected by the destruction of the chamber. The floor was covered by a layer of top soil 15–20 cm thick and (below it) a layer of clay 5 cm thick, which

had probably come from the pits for the megaliths. The clay level was situated immediately above the packing of crushed flint, which in the middle of the chamber was 15–20 cm thick. In the northern part of the chamber the thickness of the flint layer diminished to only 5 cm.

On top of the flint packing two small areas of paving appeared in the middle of the chamber and across its longitudinal axis. Another small area of paving was discovered near the north-west corner of the chamber. The entire north-east corner was paved with stone. It was impossible to decide whether the scattered paving stones originally formed a continuous pavement over the flint packing. Underneath the paving and on and within the flint packing were the grave goods, comprising a large quantity of broken pottery and several artefacts of flint, stone and amber. Only a few, very fragmented bones remained of the people buried.

One find deserves special mention as it appears to date the flint packing in the chamber. It is a fairly large potsherd, which consists of the rim and shoulder of a shouldered pot with two lugs on opposite sides (fig. 4.8). This sherd was found immediately beneath the flint packing. Its shape and decoration make it the oldest potsherd in the chamber. If its location beneath the flint packing indicates the original position of the – later broken – pot (and in the north-west end of the chamber the packing was compact and firm), the flint packing must be later than the building and first use of the chamber (cf. Strömberg 1971:210).

After the removal of the upper paving and the flint packing in the chamber, its ground plan became apparent (fig. 2a). Traces of no less than six sections of dry wall with up to four courses of cloven or naturally split flagstones of granite and sandstone remained in the northern half of the chamber, and along the edge of the floor there were traces of nine sockets for the side stones of the chamber. Several of the sockets were edged with stones or had a mixture of flint and gravel at the bottom. The south end of the chamber was fairly damaged by the embedded megaliths, but the presence of a small preserved sections of the stone packing behind the south wall nevertheless made it possible to determine fairly accurately the southward extension of the chamber. It was orientated north-south and had an oval ground plan. The interior length north-south was c. 4.5 m. East-west the width in the middle was 2.55 m. The north end was 2.3 m wide, the south end 2.05 m wide. The entrance to the chamber was situated in the middle of the long side facing east. The distance between the two entrance sockets was 80 cm.

As already mentioned the traces of side stones in the passage had been eliminated by recent digging activities, but the length of the passage can be estimated at c. 4.2 m on the basis of the distance between the passage opening and a preserved paving area with broken votive pottery in trench V east of the entrance. The interior width of the passage opening was 80 cm, as mentioned above.

HABITATION LEVEL

In connection with the uncovering of the sockets a black layer of top soil mixed with clay was excavated between the underside of the flint packing and the moraine clay. This layer contained a number of charcoal particles, a little flint waste and a few potsherds. Sherd No. 9 (fig. 4.8), mentioned above, was found on the very top of the layer. The thickness of the layer was 3–10 cm. In the western and north-western parts of the chamber it continued down into three small, flat-bottomed pits, which contained a fill of top soil mixed with charcoal and one flake waste. Because of its composition the layer was interpreted as a habitation level, which – judging by a few simply decorated rim sherds from funnel beakers – must predate the erection of the passage grave.

ARD MARKS

Below the assumed habitation level the moraine clay of the subsoil appeared. As mentioned in the introduction, it rose to form a small natural elevation under the mound. This elevation revealed furrows looking like ard scratches, which must precede the building of the mound. In the moraine clay below the chamber floor there were ard scratches in the direction east-west and NNW-SSE. The greater part of the scratches, and the most visible ones, extended from east to west (fig. 2b). To the west, where the situation was clearest, these scratches were broken by side stone holes, which must consequently have been dug later. The distance between the U-shaped ard scratches extending east-west,

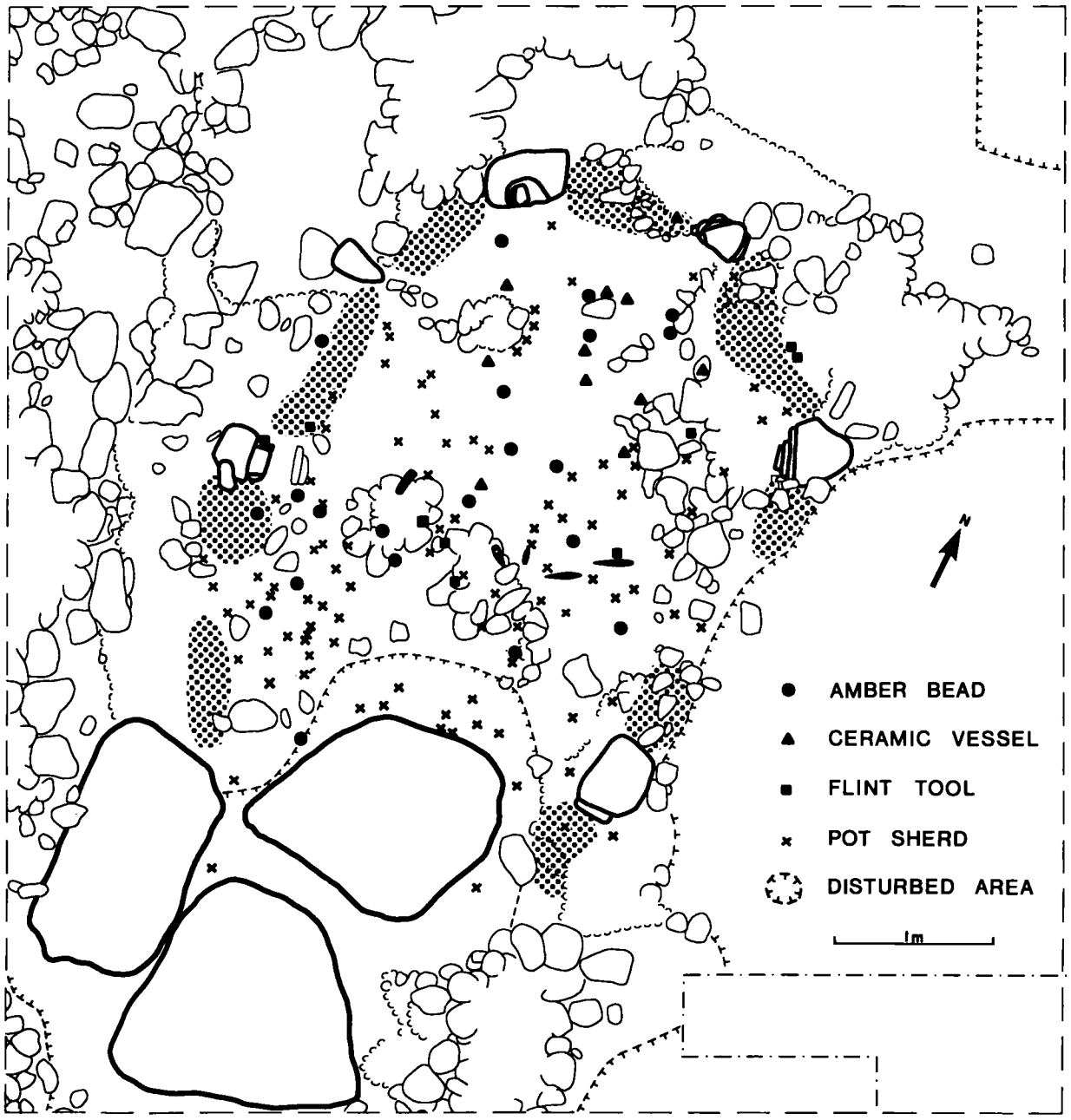

Fig. 2a. Detailed plan showing the distribution of finds in the grave chamber and parts of the votive deposit. 1:40.

which measured 3–6 cm in width and c. 1.5–2 cm in depth, was 15–20 cm.

The intersecting scratches extending NNW-SSE were fewer in number and less conspicuous in the clay. The distance between these scratches, which were 2–3 cm wide, fluctuated between 10 and 30 cm.

As it was not economically feasible to remove the solid stone packing west of the chamber to follow the ard scratches there, we attempted instead to scrape the surface of the 1.5-metre-wide area with undisturbed subsoil located in the east side of trench I in order to demonstrate possible ard marks east of the chamber.

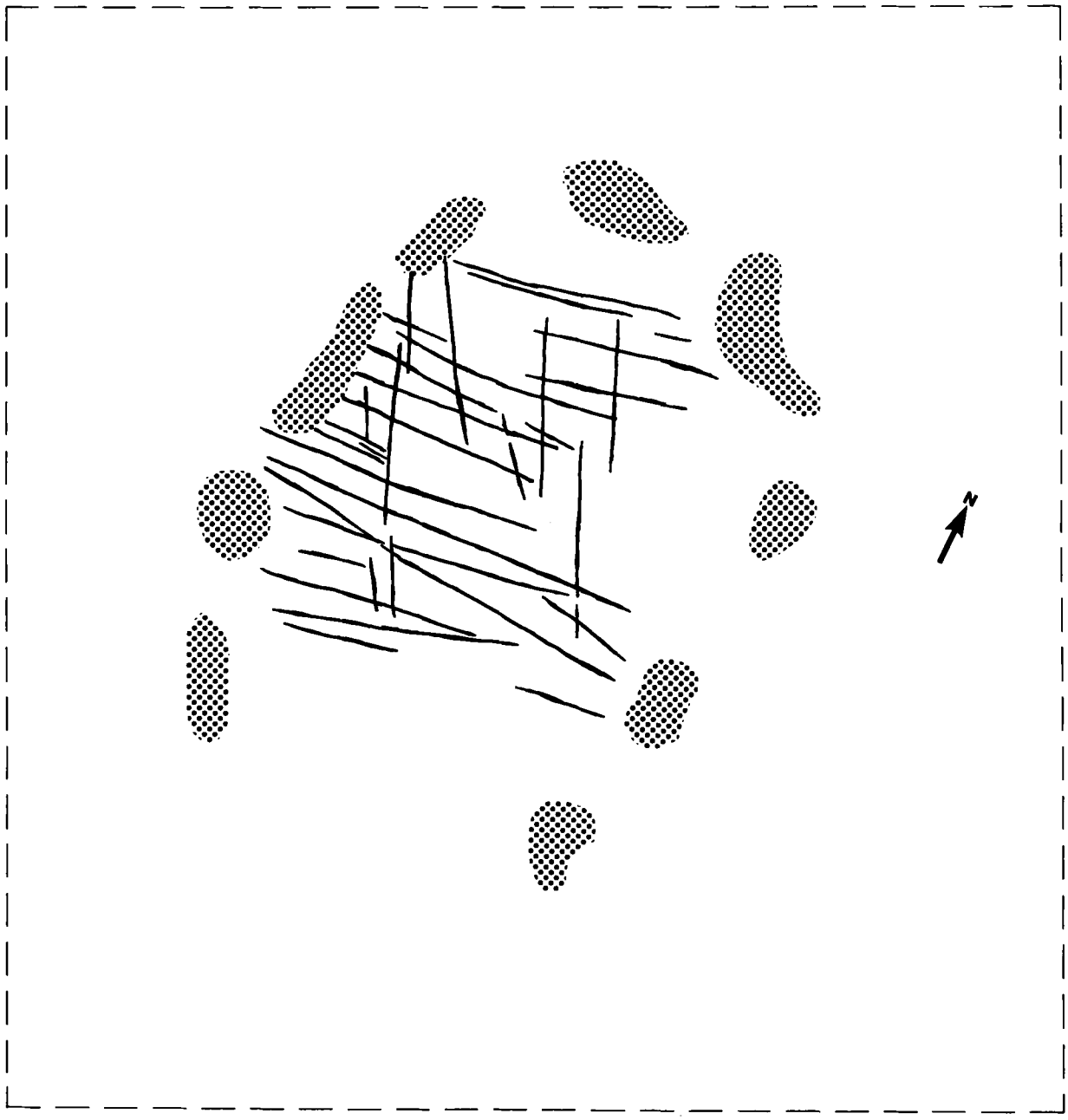

Fig. 2b. Ard scratches under the chamber floor. 1:40.

This attempt was unsuccessful, however, because in this particular place the subsoil was penetrated by a gravel bar that prevented closer observations. It was impossible to decide whether the ard marks stemmed from ploughing during an earlier occupation or whether they were connected with rituals when the mound was built (Ørsnes 1956:231).

THE STONE PACKING AT THE PASSAGE OPENING

In front of and around the place where the passage is assumed to have opened into the east side of the mound, an area of c. 26 m² was uncovered, which was designated trench V (fig. 1). This contained an irregular, oblong piece of paving 5.3 m long from north to

south and up to 1.4 m wide from east to west. The paving consisted of one or two layers of stones measuring 15–30 cm, which rested on a layer of whole and broken stones measuring 10–50 cm. The extension of the paving was established everywhere except to the north, where a single row of stones continued underneath the edge of the trench. The paving appears to have been placed just outside the opening of the passage as the mound fill with clay admixture was not found further to the east than the western limit of the paving. Just east of the paving the clay subsoil sloped down, and the top soil was heavy with ploughed-in mound fill.

A number of potsherds from e.g. pedestal bowls and funnel beakers as well as a single flint tool, a flake knife, were recovered from between the two upper layers of the paving and its close vicinity. The paving with its potsherds must be regarded as a votive offering at the passage opening, as we know from a number of excavated passage graves (cf. Strömberg 1968: 173 f.).

FIND MATERIAL

Pottery

The excavation of the passage grave site yielded a considerable quantity of pottery, namely 2.067 sherds. (To which may be added nearly a score of mainly glazed potsherds from the 17th or 18th century. These sherds, found with fragments of clay pipes in the heavily disturbed southernmost part of the chamber, probably indicate the time when the grave was destroyed). Of the 2.067 potsherds, 427 were very small and predominantly undecorated. In all 718 sherds or 34.7% of the total material were decorated.

The majority, i.e. 1.453 of the potsherds, were found in or on the flint packing of the chamber floor. One sherd was found immediately below the packing. Fourteen sherds come from the thin habitation level under the chamber floor. Twenty sherds from the mound fill probably also originate mainly from this level. Finally, 579 potsherds were recovered from the irregular paving in trench V, which was interpreted as a votive offering in front of the passage opening. All the prehistoric pottery is TRB. In fig. 2a, x indicates the location of small collections of potsherds, while greater concentrations are marked with a triangle.

The number of vessels from the burial layers in the chamber amounts to at least 28, the majority of which are greatly fragmented, probably because of repeated interments. The predominant pottery shape is shouldered pots with a single lug, which measure 9–17 cm in height and 13–18 cm in diameter at the mouth. Ornamentation usually consists of a combination of horizontal lines of chevron and groups of vertical strokes executed as stab-and-drag or incised decoration. Characteristic examples can be seen in figs. 3.2-7 and 4.1.

One very large shouldered vessel, to which the above-mentioned potsherd No. 9 (fig. 4.8) belongs, had two opposing lugs and a decorative pattern that differs markedly from that of the other shouldered vessels. Below the rim there is a wide cross-hatched band, while the broad sharp-angled shoulder has large deeply excised triangles, which – like the lugs – are decorated with dentate spatula impressions. The body is undecorated. Inside the vessel, just below the rim, there is a horizontal row of chevrons (fig. 4.8).

Biconical and shouldered vessels are represented by two pots, one of which is undecorated while the neck and body of the other, which was originally about 15 cm high, are decorated with a metope pattern consisting of horizontal bands of grooved and imitation cord impressions, alternating with undecorated zones (figs. 4.13 and 10). Finally, we have a potsherd, which seems to come from the bottom of a pedestal bowl, decorated with horizontal rows of curved stabs (fig. 4.5).

The few potsherds from the habitation level below the chamber represent at least two funnel beakers with one and three rows of incised decoration, respectively, below the rim. A flat base may have belonged to one of them (fig. 4.11-12).

Most of the potsherds from the mound fill are undecorated and small. Two side sherds with vertical grooved and vertical impressed decoration, respectively, from the paving just west of the chamber may have been removed from it by ploughing.

The considerable quantity of potsherds from the deposit in front of the passage represents at least 12 clay vessels. Two or three of these are pedestal bowls of which only a few sherds (fig. 4.9) and a couple of pottery chips have survived. The pedestal bowls are decorated with large rhomboid figures (fig. 5.14) and vertical herring-bone decoration bordered with double bean-shaped indentations.

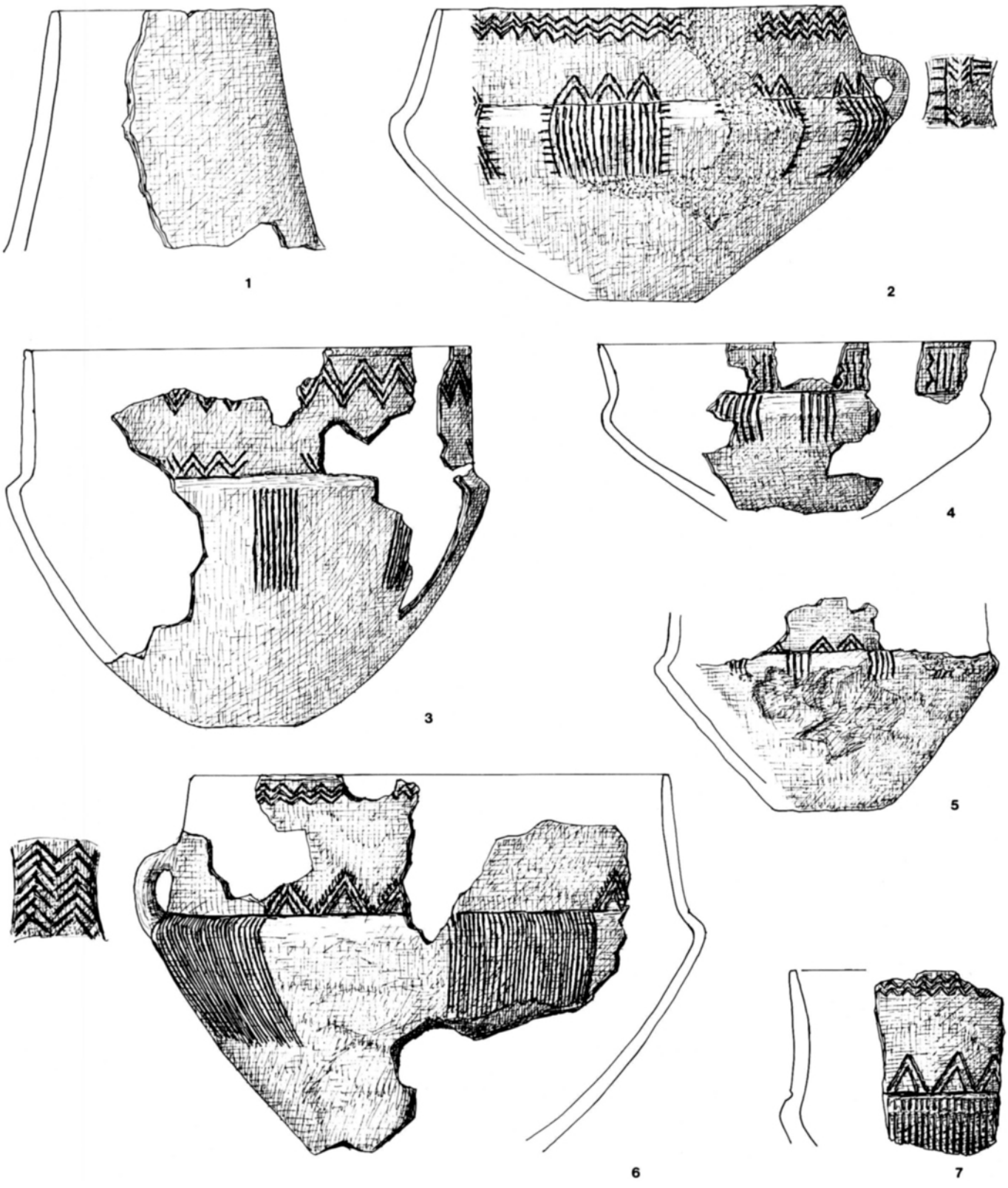

Fig. 3. Clay vessels from the votive deposit (1) and chamber (H. Ørsnes *del.*). 2:5.

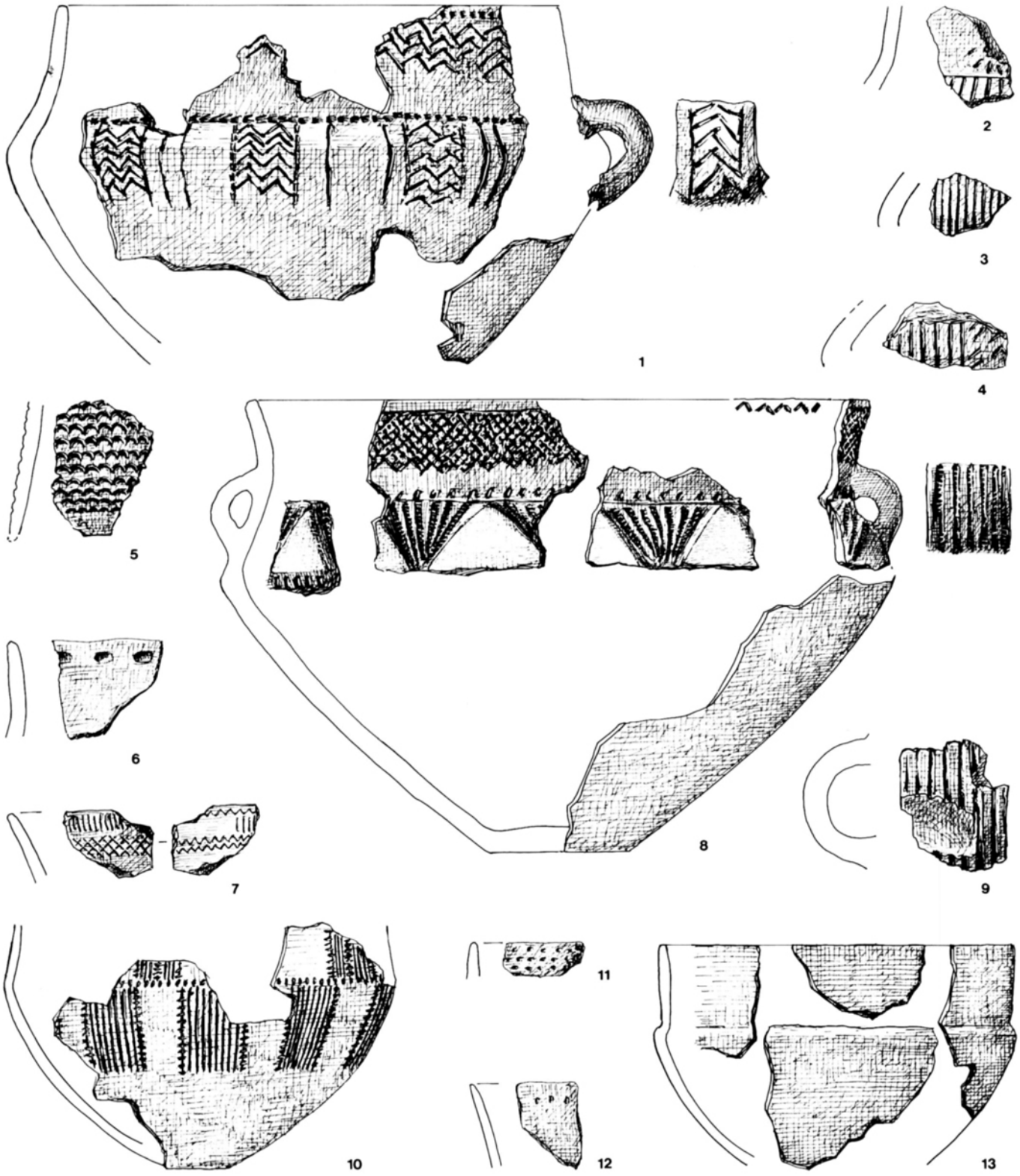

Fig. 4. Potsherds from the chamber (1,5,8,10 and 13) and votive deposit (2-4,6,7 and 9) and from the habitation level underneath the passage grave (11-12) (H. Ørsnes *del.*). 2:5.

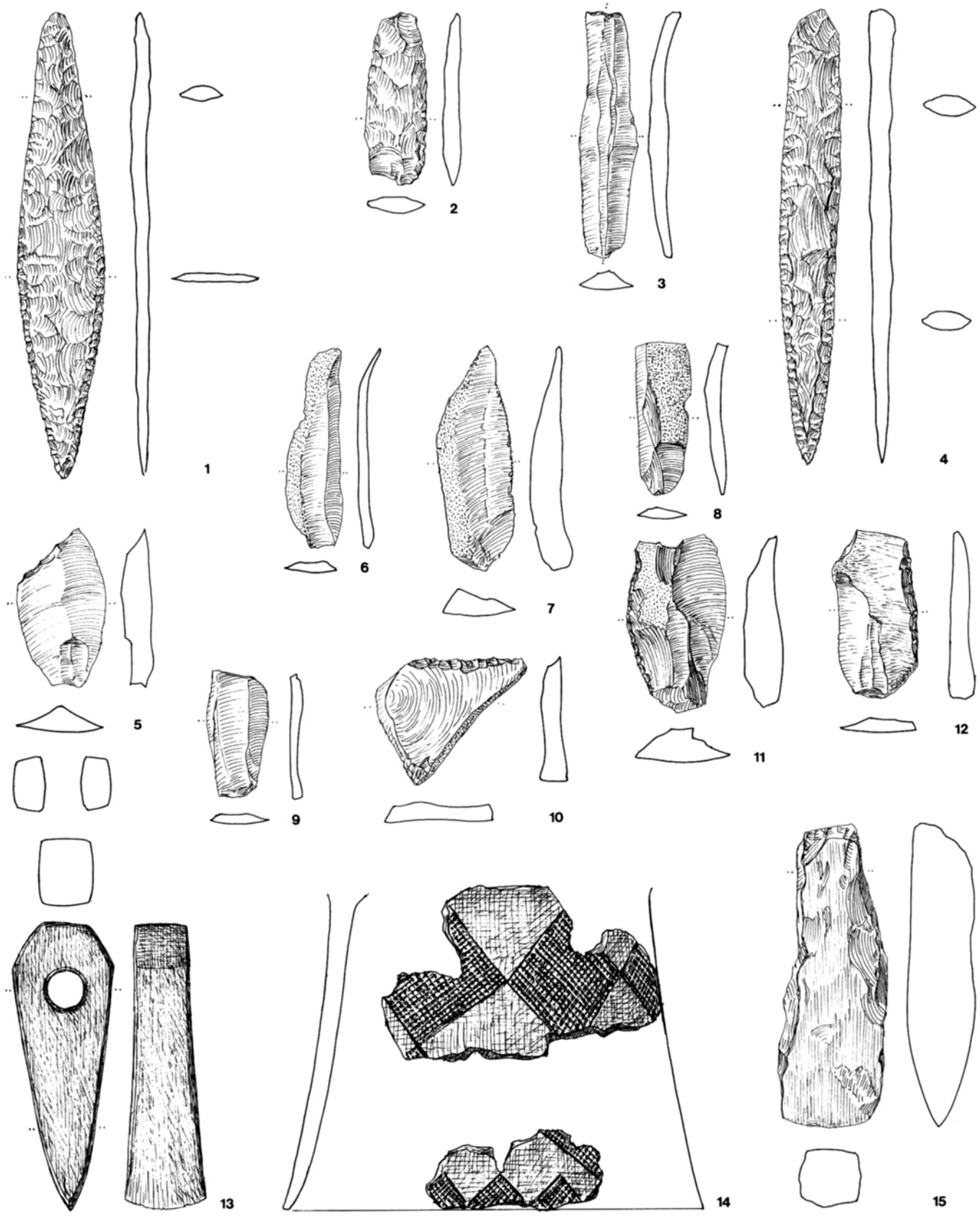

Fig. 5. Flint and stone tools from the chamber and a flake knife (12) and a pedestal bowl (14) from the votive deposit in front of the passage opening (H. Ørsnes *del.*). 2:5.

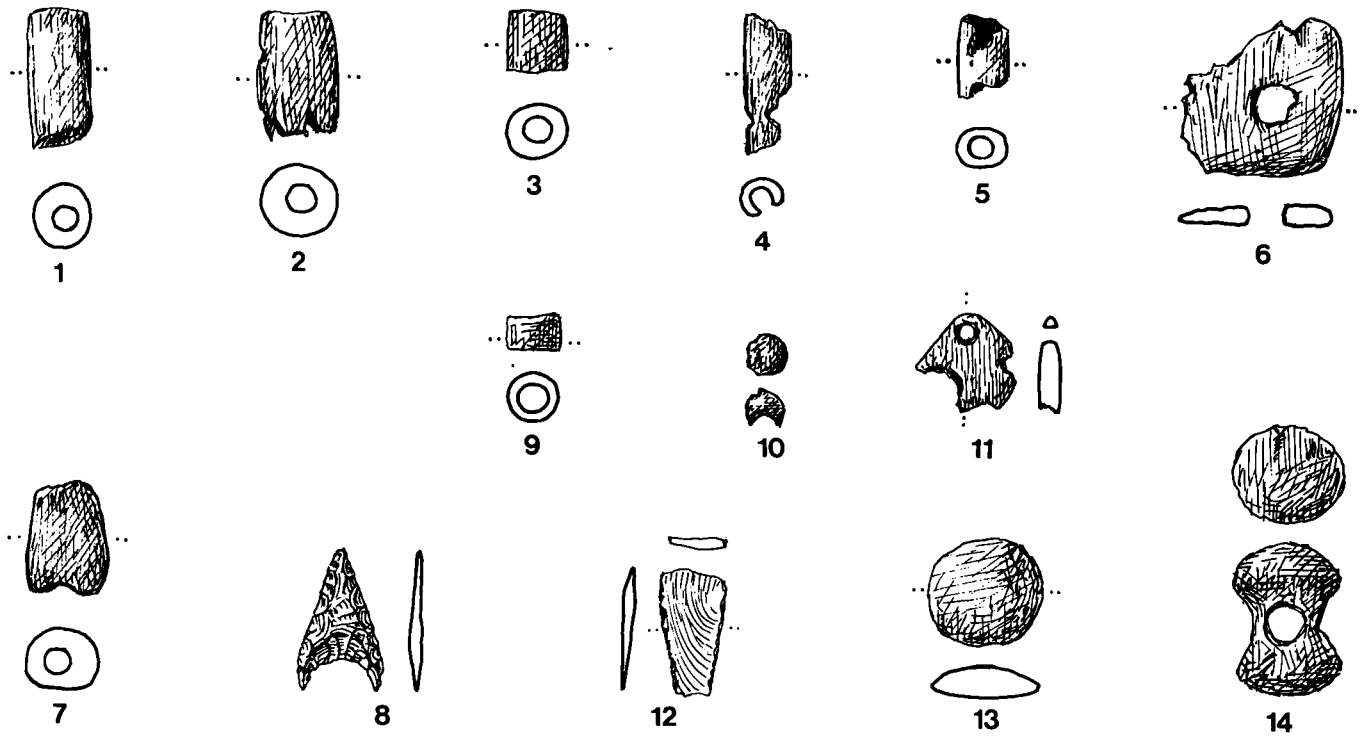

Fig. 6. Amber beads and flint arrow-heads from the chamber (H. Ørsnes *del.*). 2:3.

The rest of the pottery from the votive deposit consists of the remains of two badly preserved, undecorated biconical pots (fig. 3.1); three or four shouldered vessels with chevron and linear ornamentation, impressed, incised or in stab- and -drag (fig. 4.2-4); and as many funnel beakers with pits below the rim (fig. 4.6) or more complex rim patterns (fig. 4.7) and vertically striped body.

Flint and stone

In comparison with the rich material of potsherds the finds of flint and stone were few. A total of 16 finished and unfinished tools were retrieved, 15 of flint and one of greenstone. The tools were found in or on top of the flint packing in the chamber, with one exception: a knife 7.6 cm long, produced from a sturdy flake, was discovered in the eastern end of the votive deposit (fig. 5.12). Their location is indicated in fig. 2a. Two flint daggers, one lanceolate 20.7 cm long and one very pointed type VI dagger (cf. Forssander 1936:121 f.), 21.2 cm long, were placed with facing points in front of the passage opening (figs. 5.1 and 4). A little further west and fairly deep down in the flint packing was found a flat-trimmed unidentifiable flint tool 7.8 cm long (fig. 5.2). Below the oblong paving in the middle of the chamber there were uncovered a 13.0 cm long axe of greenstone with a tubular shaft-hole measuring 2.0 cm in diameter (fig. 5.13), and a 13.6 cm long thick-butted flint axe with a crudely flaked rectangular butt and polished cutting edges (fig. 5.15). A heart-shaped, flat-trimmed arrow-head 2.8 cm long (fig. 6.8) was found in what appeared to be a secondary deposit above the remains of a socket in the west side of the chamber. Finally, six blade and flake tools were found scattered in the chamber: scrapers and knives as well as two unshaped blades and a 2.6 cm long transverse arrow-head made from a tiny flake (fig. 5.3 and 5.11, fig. 6.12). In the chamber the packing of broken flint contained 128 homogeneous waste flakes, a core and a hammer stone. The habitation level contained only six small flakes. Scattered among the mound fill there were a total of 84 flakes, 2 blades – one with a retouched edge – and two

cores. Seventeen flakes, apart from the knife mentioned above, were found in trench V. Some of the flint from the mound fill and trench V may come from the habitation level. No concentrations of worked flint were observed (Strömberg 1968:197 f. and 1971: 310 f.).

Amber

No less than 21 amber beads, many of which were in a poor state of preservation and could be removed only as fragments, were found scattered over the whole chamber floor and in a few instances in secondary deposits above traces of sockets. The location of the amber beads appears from fig. 2a. Tubular amber beads with a length varying between 0.8 and 2.6 cm and a diameter of approx. 1 cm are the most common type among the identifiable beads. Other preserved pieces include a single club-shaped bead, a discus-shaped bead without perforation, a flat rectangular bead with a central hole, and a rounded disc with a hole near the edge (fig. 6.1-7, 9-11 and 13-14).

Bone

The excavation recovered no artefacts of bone. Four hundred and thirty-two bone fragments together with a poorly preserved lower jaw and two molars – jaw and molars both definitely human – were found in the chamber. This material presumably represents the sparse remains of those interred. No physical anthropological study, however, has been carried out. Of the bone fragments 226 showed traces of fire, though none had become brittle as a result of it. The interpretation of this fairly common phenomenon in passage graves is uncertain (Strömberg 1971:241).

DATING

The relatively numerous artefacts from the passage grave provide an excellent basis for dating its construction and period(s) of use; they are also important in dating the habitation level and ard marks under the grave. The oldest pottery in the chamber was the big double-lugged shouldered vessel and the pedestal bowl with curved incisions. These pots can be dated to MN I b. The rhombus-decorated pedestal bowls and possibly also the funnel beakers from the votive deposit in front of the entrance are of the same date (Berg 1951: 16 f.). This pottery must belong to the first period of use just after the passage grave was built. However, the majority of the potsherd material derives from MN II, when the grave chamber must have been rather intensively used. Virtually all shouldered vessels from the chamber and the sacrificial layer are decorated and shaped in the East Danish style of MN II (Winther 1943: 16 f.). In the same category belongs a greatly fragmented (probable) pedestal bowl with crude vertical herring-bone decoration from the votive deposit (Winther 1943: fig. 38). The undecorated biconical pottery from the votive deposit and the chamber first appears in MN II, but may be later.

The TRB people's use of the passage grave appears to have ceased during MN III. Continued burial in the chamber during this period is attested only by a biconical vessel with metope-decoration (fig. 4.10) and possibly also the undecorated biconical pottery mentioned above, and a shouldered vessel, all found in the chamber. The thick-butted axe with rectangular cross section could perhaps be taken as evidence of a continued TRB-use of the grave chamber into MN IV (Becker 1957:29), but the axe is too crudely chipped for it to be confidently dated and culturally classified. The amber beads all represent shapes that are common in the Middle Neolithic TRB culture. They cannot be accurately dated. The same is true of the core and flake tools. By contrast, the four flat-trimmed implements and the axe with a shaft-hole from the chamber indicate that the passage grave was used as a burial place on at least two later occasions; the first time during an early phase of the Late Neolithic when the lanceolate dagger was deposited together with a dead body that has now disappeared; the second and presumably last time during the Early Bronze Age when the sharpened dagger with a fully shaped hilt and the shaft-hole axe constituted the grave goods in connection with one or more burials. The flat-trimmed tool and the heart-shaped arrow-head can be dated only to the Late Neolithic or the Bronze Age and may either be associated with the other artefacts from this period or they may represent independent burials. The last phase in the history of the passage grave is its destruction, which seems to have occurred

during the 17th or 18th century, as already mentioned.

The supposed traces of ard-ploughing below the passage grave must, as appears from the above, be earlier than or contemporary with MN I b. Their presence below the thin culture layer, which – owing to the funnel beakers – must be assigned to the Early Neolithic or the beginning of the Middle Neolithic, does not necessarily imply that they precede the culture layer. An ard or a similar ploughing implement may be assumed to be able to cut through the culture layer. Consequently it is impossible to determine whether the occupation or the ploughing is the earlier, but in any case the furrows under the Himmelev passage grave are one of the earliest examples of ploughing in Denmark.

Translated by Ole Bay-Petersen

NOTE

[1] The site is located in the south-eastern corner of Title No. 6a in the Land Register, Himmelev town and parish, Sømme district. Prior to excavation it had not been recorded in the parish register of the National Museum, Dept. I (NMI). Report and maps are filed in the archives of NMI (File No. A 50383).

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