

## **Part II**

# **The Early Medieval burials**

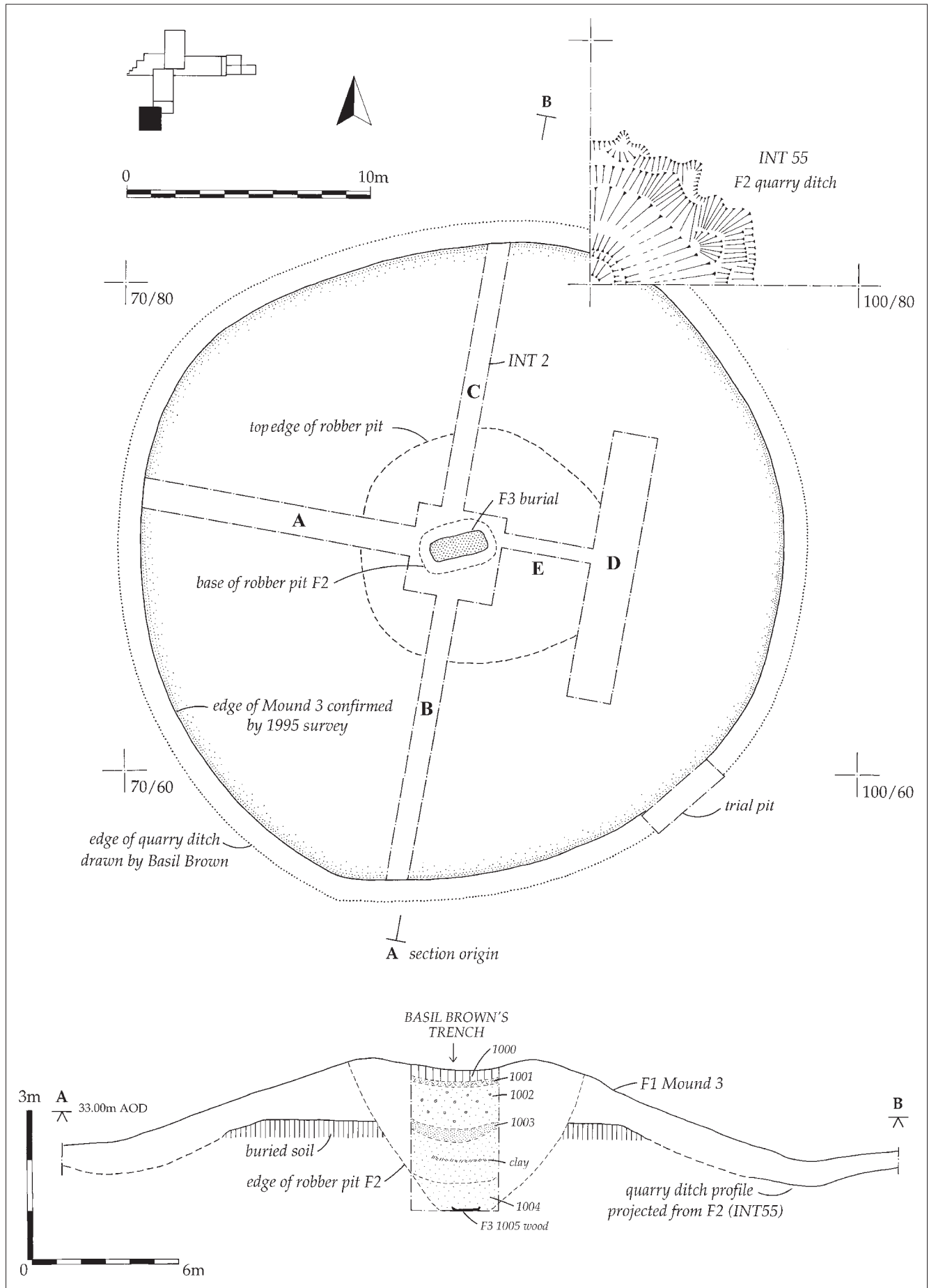


Figure 25 Plan and north-south profile through Mound 3 (adapted from SHSB I, original records by Brown and 1995 survey; with context and feature numbers added by Martin Carver).

## Chapter 4

# Cremation burials

## Mounds 3, 4, 5, 6, 7 and 18, and Burials 13 and 14

Martin Carver

### **Mound 3: cremation on a tree-trunk trough, coffin or boat**

A reinterpretation by Martin Carver, based on SHSB I: 103–4 and 108–10, and supplemented by Basil Brown's Notebooks (BBN) and Diary (BBD), and excavations in 1991 (Int. 55).

### **Description of the investigations**

#### *Excavations in 1938*

Work began at Mound 3 on 21 June 1938. No previous excavation was noted and the mound was described as 'circular and no material seems to have been removed. Top of mound showed little disturbance' (BBD: 143). A trial pit was dug on the south-east side (BBN/1: fig. 3), and the mound was then cleared of bracken and a trench 4 ft wide laid out west–east with a compass (Figure 25: Trench A). Brown (BBD: 144) credited his excavation procedure to the Norfolk Research Committee (citing Clarke and Apling 1935). The trial pit was used to find the depth of the sand subsoil, and then a trench was driven through the mound at this depth: a discontinuity observed on the floor of the trench would indicate the location of the burial pit. Brown's helpers were Bert Fuller and Tom Sawyer.

On 23 June, 'towards the centre of the mound and 2 feet below the surface soil with its many bracken roots' (Contexts 1000 and 1001), 'a distinct difference in the strata was noted and from this the existence of a pit was deduced' (BBD: 144; Context 1002, F2). Cross trenches were then extended across the mound (Trenches B and C) to determine the limit and nature of the pit (Figure 25). The area at the junction of the trenches, where the grave pit was being defined, was 12 ft square. On 25 June, Brown had defined the grave pit, 'at least to my satisfaction'. On 27 June, he had 'trouble with landslides'. On 28 June he described the burial pit as containing 'black earth layers which I believe to be the residue of a fire' (Context 1003). Under the black layers, they were 'digging into yellow sand' (Context 1004). By 29 June they had reached a depth of 8 ft below the top of the mound, and on 30 June bone and wood fragments were spotted. On 1

July the bottom of the pit was reached at 9 ft deep. The section is reconstructed in Figure 25.

At this point a layer of wood was reported, variously described as a box, part of a boat, a dugout or a tray (Plate 20; BBD: 145). The feature is recorded and labelled 'boat' in BBN/1: 3; Figure 26 (F3, Context 1005). Maynard (FR 2/3.2) called it 'a wooden object which may have been (a) the bottom of a dugout chest or (b) a domestic trough of some kind which was used as a symbolic boat. It was about 6 ft long, rather narrow and not likely I think to have been a shield. It is important to realize that all that remained was a mere film of rotted wood fibres.' The wood 'to west is soft wood, remainder [survives] as black sand' (BBN/1: 5). Charles Green wrote that 'its overall length was 5½ feet and its breadth some 2 feet 4 inches [BBN/1 has 22 inches]. All round ran a raised rim, some 3 inches broad, and the whole shape showed that this tray was a great slab of timber with its upper surface hollowed. It was in effect, a very shallow dugout coffin without a lid.' (Green 1963: 26). In the photograph (SHSB I: fig. 58; another photograph from 1938 is reproduced as Plate 20), the tray looks like the truncated base of a coffin or a tree-trunk burial.



**Plate 20** The tray or dugout in Mound 3. Photograph taken in 1938.

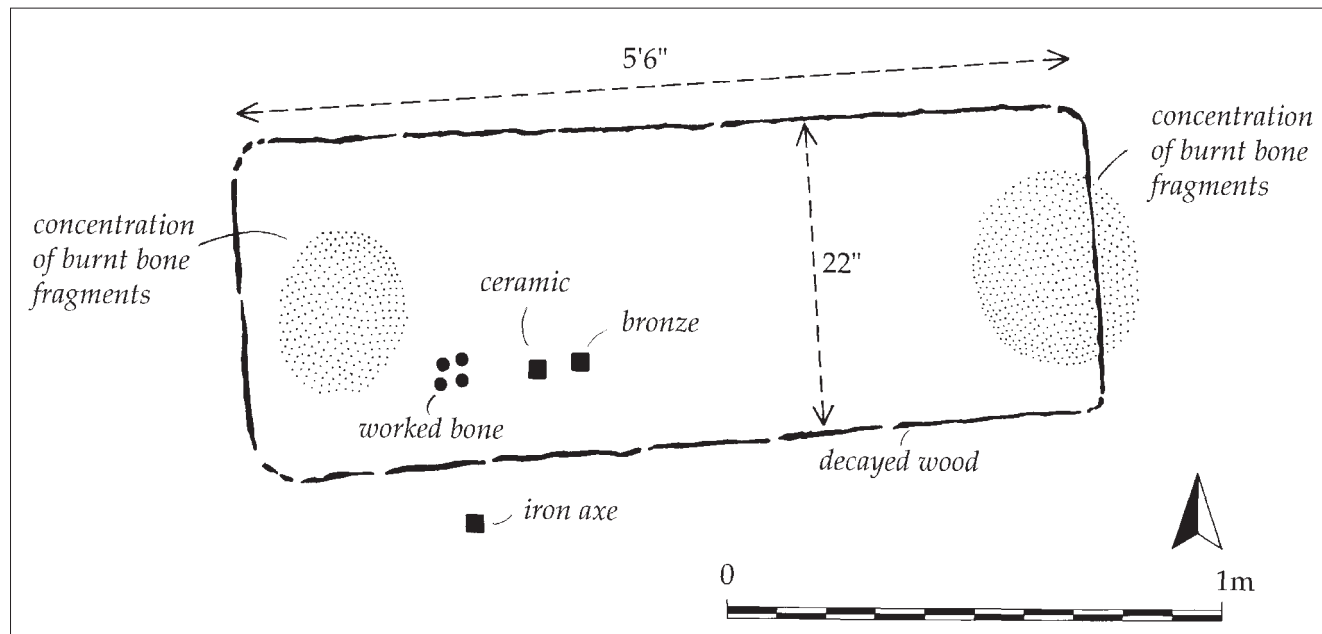


Figure 26 Plan of the 'tray' carrying the cremation under Mound 3 (adapted from SHSB I and original records by Brown).

Finds on the 'wooden tray' were recovered on 2 July. They included fragments of bone inlay, a bronze object, calcined bone, a sherd of Anglo-Saxon burial urn, a fragment of thin bronze and a corroded iron axe-head (for a revised list see Table 14). The bone appears to have been found in two small heaps, one at each end of the tray (Figure 26).

Some of the official visitors to it were puzzled by Brown's excavation, and felt he had yet to locate the real burial. Vincent Redstone thought the pit found by Brown was a dew-pond (it had a layer of clay in it). On 26 June, Reid Moir urged Brown to dig through 6 ft of natural sand (which he presumably did to one side, in Trench D, Figure 25). On 4 July, the pit itself was cut back further 'to prove to Mr [Reid] Moir the limits of the grave'. The dugout tray was covered with hessian on 5 July and by 6 July Brown had begun to excavate his trench into Mound 2. But on 19 July he was obliged to return and cut a trench (Trench E, Figure 25) 'from the end of the tray or dugout in Tumulus A [Mound 3] to the east joining the large central excavation with Trench D to suit Mr Reid Moir, but there was nothing at all or sign of any objects. This, however, proved the eastern limit of the grave to everyone's satisfaction I believe.' An attempt was made to lift the tray, in the course of which it broke up (BBD: 150-4).

*Analysis by Bruce-Mitford*

The records and the material from Mound 3 in the British Museum were studied by Bruce-Mitford and are discussed by him in SHSB I: 112-15. The objects were found to have included the stopper of an East Mediterranean bronze ewer; a limestone plaque with an angel in relief, also East Mediterranean; a box with bone facings, originally carrying a chi-rho monogram (Grainger and Hennig 1983); a Frankish iron throwing-axe; a comb, and textiles. The plaque and the bone facings had definitely been exposed to heat, but it was not certain if the other finds had. The survival of the assemblage is obviously partial, and is remarkable for the number of imports from Christian Europe. The calcined bone was found to derive from a human adult (probably male, SHSB I: 136) and a horse. The reported fragment of thin bronze sheet (above) was not confirmed (BBD: 145; SHSB I: 103). For a list of the finds from Mound 3 see Table 14.

*Excavations in 1991*

A small segment of the depression adjacent to Mound 3 (Int. 55/F2) was excavated in October 1991 (Figure 25). It had a shallow, irregular cut, with meandering edges, reminiscent of

Table 14

**Mound 3: summary of finds (SHSB I: 112-15)**

1	Limestone plaque, 37 × 26 × 3 mm. Possibly from Alexandria, but now lost (SHSB I: 101 and 112).
2	Bronze lid of ewer, diameter 45 mm, height 57 mm. Possibly from Nubia (SHSB I: 101 and 113).
3	Iron axe-head with wooden haft, 188 mm long, width of cutting edge 170 mm.
4	Pottery sherd, length 90 mm, with incised decoration. Thought to be early medieval in date. For reconstruction see Bruce-Mitford 1964. Said to be very similar in fabric, and possibly the same shape, as the pot found holding a cremation in Area A (Burial 14).
5	Pottery sherd, undecorated.
6	Textile fragment and replaced textiles on iron concretion (9).
7	Six fragments of thin bone-sheating (from casket, see Grainger and Henig 1983).
8	Fragment of decorated facing of a bone comb.
9	Unidentified iron concretion carrying textile.
10	Fragments of cremated bone from an adult male human and a horse (SHSB I: 135-6).

individual 'bites' taken into the sides of the natural subsoil. It was at least 5 m across and was about 60 cm deep, from definition at Horizon 1 at 32.20 m AOD to its base at 31.58 m. The breadth suggested that the feature was part of a quarry ditch encircling the mound, but this was not proved, and it instead may have been one of a number of quarry pits, such as surrounded Mound 5 (see below). The sequence of infilling began with an initial deposit (1099) of soily sand, followed by a turf 'shoulder' (1095) and a characteristic clean, pinkish deposit (1011) in the top. A number of later deposits followed: 1096, a ploughsoil dished into the top of 1011; Context 1094 (a dump of turf) probably representing a recent spoil-heap (perhaps due to Brown); and finally Context 1010, a sandy deposit also likely to derive from the 1938 excavations of Mound 3.

### Interpretation

#### *The burial rite*

The calcined bone of an adult and a horse suggest that the original burial was a cremation, but the nature of any container and its relation to the wooden 'tray' are uncertain. The fragment of thin bronze mentioned by Brown should indicate the presence of a bronze bowl (as in other mounds), but it was not reported by the British Museum team. It was suggested that Brown had mistaken bone veneer for bronze (SHSB I: 103), but Brown also noted bone inlay (BBD: 145). The little heaps in which the bone was found might suggest that one or more containers had been emptied, as in Mound 7 (p. 99). One container, of which two possible sherds survived, may have been a cooking-pot of some kind. The two heaps of bone could have originally represented the human at one end, and the horse at the other (but the fragments were bagged together).

The hypothetical containers were apparently placed on a dugout trough, which may either have represented the remains of a tree-trunk coffin or a piece of a dugout boat. Both are acceptable in the context of the Sutton Hoo cemetery, but they are by no means easy to tell apart where the evidence has been reduced to wood stains, and rivets are absent. Local sites have featured both boats and tree-trunk coffins. At Snape (Filmer-Sankey and Pestell 2001), two seventh-century boats used for burial were c.3 m in length and pointed at both ends. The tree-trunk coffins used for inhumation burials at Burrow Hill, Butley, often had one or more tapering ends (Fenwick 1984). The problem of distinguishing the type of body-bearer has been addressed at the completely excavated Iron Age cemetery at Slusegård on Bornholm, where forty-three expanded log boats were identified and distinguished from seventy-three tree-trunk coffins (see Chapter 8, p. 301).

These examples of burial in dugout boats or tree-trunk coffins relate to inhumations. Boats were also used in cremations in Early Medieval Scandinavia, but they were generally burnt on the pyre and identified from the presence of clench nails (Müller-Wille 1995; Carver 1995b: table 1). The cremations in Mound 3 – one, at least, perhaps in a pot – seem to have been placed on an unburnt trough, bier or section of dugout boat.

#### *Construction of the mound*

The segment of quarry ditch examined suggested a quarry ditch 5 m wide and 0.6 m deep, surrounding a mound about 13 m in diameter. The reconstructed section (Figure 25) assumes an old

ground surface at a similar height to that beneath Mound 7 (32.85 m AOD).

#### *Back-filling of the quarry ditch*

The quarry ditch had been rapidly back-filled with soil (1099), which may represent unwanted material from the quarry; this had turfed over (1095). In a later incident, the ditch was completely filled in and the mound spread out, presumably by a ploughing episode which broke up a pale (podzolic) sand (1011). Deposits from earlier excavations (1096, 1094 and 1010) overlay the flattened mound.

#### *Robbing*

The original burial had been ransacked, as Brown (BBD: 145) realized: 'It is probable that grave-robbers disturbed the burial very soon after it took place.' Bruce-Mitford, in contrast, thought that 'the burial does not appear to have been robbed' (SHSB I: 104, 108). The argument for an intact burial appears to depend on the idea that if the tray was intact, then the burial cannot have been robbed. But the photograph and descriptions make the wooden bearer seem sufficiently robust to have survived a ransacking operation, and its form may even be the result, in part, of being trodden down by grave robbers. The 'black earth layers' encountered by Brown are reminiscent of the fire in the Mound 1 robber pit (see p. 198). Redstone's 'dew-pond' (above) could refer to a robber pit that was not completely back-filled, and in which water, silt, clay and burnt wood had collected. The sequence noted in section is consistent with a robber pit having been left open, with clay forming before the hole was back-filled with turfs and spoil. It subsequently grassed over. The robber pit was most probably due to the campaigns of the sixteenth to seventeenth centuries encountered in virtually every mound so far excavated (Chapter 12, pp. 468–9).

### Conclusion

In the burial rite practised at Mound 3, a man and a horse were cremated and the ashes placed at the ends of a wooden bier, trough, tree-trunk coffin or section of a dugout boat. Some of the ashes may have been contained in a decorated pot. Some grave goods, including decorated bone, and probably including a comb and a casket, were burnt on the pyre; while others, including a limestone plaque, a bronze ewer and an axe with an iron head, were placed in the pit on or beside the bier. A mound c.13 m across was erected over the burial pit. The mound was excavated by means of a central shaft in around 1600, at which time important grave goods made of precious materials were very probably removed. This 'robber shaft' was re-excavated by Basil Brown in 1938.

### Mound 4: cremation in a bronze bowl

A reinterpretation by Martin Carver, based on SHSB I: 107–8 and 111–12, and supplemented by Basil Brown's Notebooks (BBN) and Diary (BBD), and excavations in 1991 (Int. 55).

#### *Description of the investigations*

##### *Excavations in 1938*

Maynard (FR 2/3.2) described Mound 4 as 'riddled with rabbit burrows' and the quarry ditch was not well defined. On 30 July, Mound 4 (Brown's Tumulus E) was cleared of bracken, and a trial trench was dug on the south-east side that located yellow

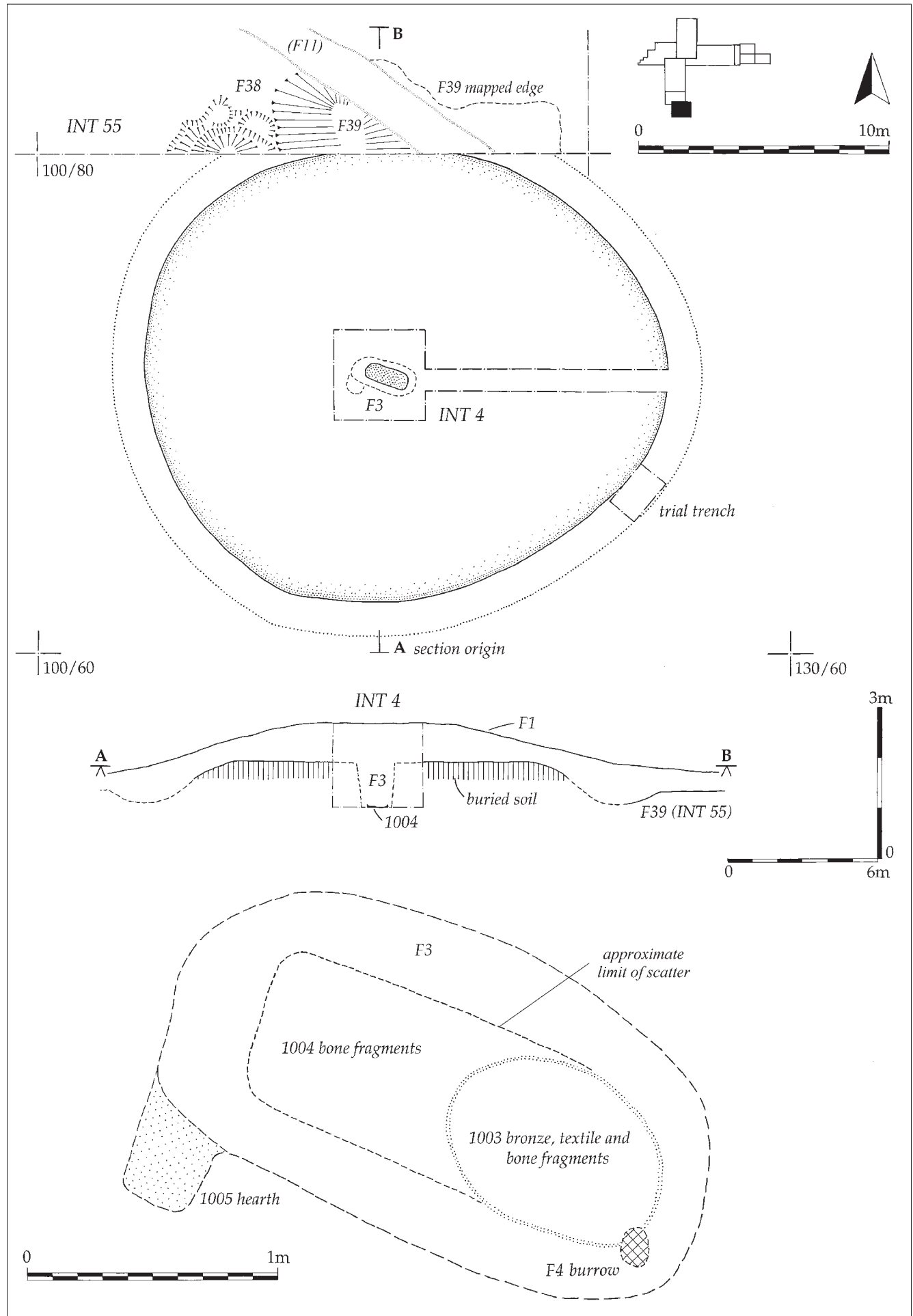


Figure 27 Plan of Mound 4, showing (above) the area excavated and (below) the excavated pit (adapted from SHSB I, original records by Brown and 1991 intervention; with context and feature numbers added by Martin Carver).

sand at a depth of 2 ft 6 in (BBN; Figure 27). This shows that there was a quarry ditch or quarry pit at this point. A trench 4 ft wide was laid out east–west. Brown followed the old ground surface at the bottom of his trench and reported that, unlike Mounds 2 and 3, the soil contained no fragments of Bronze Age pottery (BBD: 153). On 4 August, he ‘located the black earth pit’ (F2, 1001), and a square area around it was widened to 12 ft (ibid.; Figure 27).

On 5 August the grave pit was being cleared below the old ground surface. It was:

...found to be very shallow and the indications are that this burial is not of great importance. [The pit is] only 3 feet below the old ground surface on plain level. The grave was then cleared down to the hard level sand [1002]. At the east end a rabbit had caused much disturbance [F4], but whether the condition of the burial is due to this or other causes is difficult to say. The burial pit contained many fragments of thin bronze evidently belonging to a vessel of thin bronze which had been smashed. It had most likely contained the bones from a cremation burial. These may have been wrapped in a linen cloth or textile of some kind, for we found pieces of textile were adhering to the fragments of the bronze vessel. The calcined bones appeared to be those of a young man. No ornaments were found although all the sand content of the grave was sifted. (BBD: 153)

The assemblage was re-examined by Bruce-Mitford (SHSB I: 124–5; here Table 15) and found to include the bones of a man, a young woman and a horse (SHSB I: 136).

The plans also show a pile of cremated bone (1003; cf. Mound 7), a spread of cremated bone (1004) and a hearth of blackened sand (1005), probably Prehistoric, at the equivalent of Horizon 5 (within the buried soil, see p. 370).

#### *Excavations in 1991*

Int. 55, dug in 1991, contained parts of what appear to be two quarry pits associated with Mound 4 (F38 and F39); although given the shape of F39, this might represent the junction of two arms of quarry ditches. These were excavated after ditch F11, which clipped F39, had been removed. They were shallow, irregular cuts, c. 4.5 m and 5.5 m in diameter, respectively, and c. 40–55 cm deep (from definition at Horizon 2 at 32.32 m AOD, to bases at 31.92 m and 31.75 m AOD). F38 was found to contain a fill of grey-brown sand, interpreted as turf with some wind blown sand (1062), whereas F39 had at its base a stiff clayey deposit (1097) sealed by the mixed fill 1063.

#### **Interpretation**

##### *The burial rite*

The cremation, which seems to have included at least two human individuals (male and female) and a horse, was wrapped in cloth and placed in a bronze container, probably a bowl with an estimated diameter of 329 mm (according to SHSB I: 124). This was placed in a shallow pit 2.3 × 1 × 1 m below the old ground surface.

##### *The character of the mound*

Judging from the profile of F39, Mound 4 appears to have been about 13 m in diameter. It remains uncertain whether the make-up was quarried from pits or a ditch.

#### **Aftermath**

##### *Ploughing*

The backfill of the quarry ditch or pits was more mixed than that in other quarries (see below). The quarry pits were, however,

**Table 15**

#### **Mound 4: summary of finds (SHSB I: 124)**

1	Sheet bronze from a bowl
1a	Textiles
2	Bone or ivory gaming counter
3	Scrap of iron slag
4	Cremated bone from a man, a woman and a horse (SHSB I: 135–6)

completely back-filled, and the mound reduced in height, presumably under the plough. The ditch, F11, may indicate that there was a route or boundary at this point.

##### *Robbing*

The burial had been scattered a metre or so to the north-west, by an unrecorded excavation. The early excavators may have dug a pit, or possibly an east–west trench, which Brown fortuitously followed. He comments that the soil he removed, unlike that of Mounds 2 and 3, contained no Bronze Age pottery, suggesting that the buried soil was missing. Mound 4 could therefore have been visited by an east–west trench from the east, the form of trench implying that this occurred during the mid nineteenth-century campaign; but this would not preclude an earlier visit in the campaign of c. 1600 (Chapter 12, p. 462).

##### *Conclusion*

The cremated remains of a man, a woman and some animals, including a horse, were placed in a bronze bowl associated with a cloth (wrapping the bone or covering the bowl). The grave goods had included gaming-pieces. The mound was reduced, and the quarries back-filled, by ploughing. The burial was ransacked by excavators either coming down a shaft at the centre of the mound (the sixteenth- to seventeenth-century campaign) or along a trench from the east (the nineteenth-century campaign), or perhaps both.

#### **Mound 5: cremation in a bronze bowl (FR 4/7.2)**

Written by Martin Carver, based on excavation, recording and analysis of the burial pit and robber trench by I. Kinnes, I. Longworth and A. C. Evans, and of quarry pits by A. J. Copp and M. R. Hummler, with analysis by A. J. Copp.

##### **Summary**

Mound 5 was the burial of a young individual who had suffered head wounds from a blade. His body was cremated with grave goods – including bone gaming-pieces, shears and a silver-mounted cup – and some animals. The ashes were wrapped in cloth and put in a copper-alloy bowl, which was placed in a burial pit. A mound with a diameter of about 14 m was raised over the burial pit, using soil and subsoil excavated from three groups of quarry pits (Figure 28). The remains of animals, and possibly of a human, were deposited in quarry pits during or after the construction of the mound.

The mound was used as an execution site for a period that lay between its construction – probably in the seventh century – and the twelfth century. The bodies of execution victims were buried in graves located around the mound, some of which were cut into the grassed-over quarry pits.

During the later Middle Ages the mound was ploughed and reduced in height, and the quarry pits filled with light-coloured sand. The mound was investigated, probably with a vertical

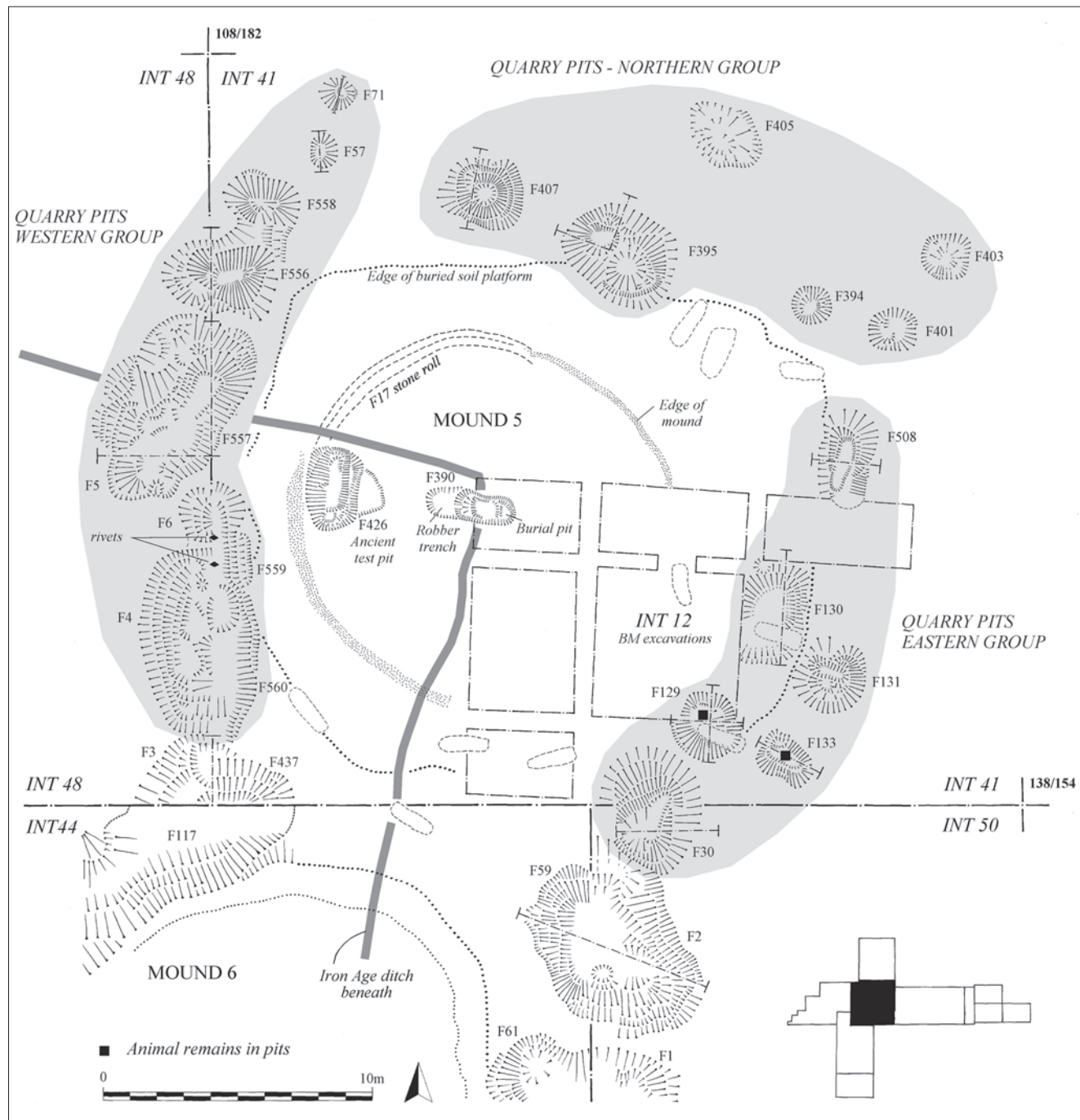


Figure 28 Plan of Mound 5, showing the position of its burial pit, robber trench and quarry pits.

shaft, and robbed, probably in the sixteenth to seventeenth centuries. It was excavated again, probably in the campaign of 1860, using a test pit and trench (Figure 28). The mound was ploughed and lowered again, this time to the level of the buried soil, before 1881. Mound 5 was explored during the British Museum campaign of 1965–71 (Int. 12) and completely excavated in 1984–91 (Figure 28).

Mound 5 is not well dated, but the artefacts could belong to the period of the late sixth to early seventh centuries, say around 600. The stratigraphy offers evidence that Mound 5 was earlier than both Mound 2 to its north and Mound 6 to its south. For this reason, it may have been one of the first mounds to be erected at the Sutton Hoo cemetery (Chapter 8, p. 310).

**Description of the investigations**

*Excavations in 1970 (Int. 12)*

The position of Mound 5 had been inferred from the topography by Basil Brown, and was confirmed by Bruce-Mitford using evidence from aerial photographs (SHSB I: 5, fig. 5). Bruce-Mitford had set out to confirm its existence during the 1964–71 campaign (published in Longworth and Kinnes 1980). The British Museum excavation took the form of a number of ‘boxes’ separated by balks (i.e. adjacent square cuttings, as promoted by Wheeler 1954; here Colour Plate 5). The burial pit for Mound 5 was located in their cutting 5/1, in the north-west part of the excavation, and was recognized as probably having been robbed:





**Plate 21** Mound 5: re-excitation of Area C5/1, originally opened in 1970, showing the central pit of Mound 5 from the east.

In cutting 5/1... in an east–west alignment was an irregular trench whose recorded upper fill consisted of a series of layers suggesting a combination, perhaps, of natural silting and backfill. This might plausibly be seen as a robber trench, aimed at a putative central grave. (Longworth and Kinnes 1980: 26)

The excavation also encountered three unfurnished inhumations, which proved to belong to the Group 2 execution cemetery (Burials 45, 50 and 51, see Chapter 9).

#### *Excavations in 1984–91*

The re-investigation of Mound 5 during the 1983–92 campaign began with an attempt to remove the turf by smothering it with black polythene (Int. 25, 1984), so as to lose no part of the relict mound. This was unsuccessful. The turf was barely affected, and in 1987–8 it was removed by hand. In the event, it was found that the topsoil over Mound 5 had already been disturbed by ploughing – to a depth of 150 mm or more. The linear feature crossing Mound 5, and expected to contain a water pipe (SHSB I: 11), was only in the turf, and probably represented the line of a vanished fence (FR 4/3533). The 1970 cuttings were re-excavated and cleaned, and this gave a ‘free section’ through the deposits. The graves located in 1970 were re-opened and excavated. The robbed burial pit (located in 1970) was excavated in 1988 (Plate 21), the remains of the buried soil platform in 1989, and the quarry pits around the mound between 1989 and 1991. Some of the quarry pits relating to Mound 5 extended into Ints 44, 48 and 50; they were recorded in the appropriate intervention, but are also included in this study (Figure 28). A pit, F426, was defined and excavated one metre to the west of the robber trench F390. Both were thought to be connected to a nineteenth century excavation.

Mound 5 was surrounded by a group of inhumations, some of which were located inside the Mound 5 quarry pits. The map of these graves shows that they were related to Mound 5, and they have been referred to in interim reports as ‘satellite burials’. They are here called the ‘Group 2’ inhumations, and reports on all of them are to be found in Chapter 9. Their relation to the quarry pits and the construction of Mound 5 is considered below.

#### THE EXCAVATION OF THE ROBBER TRENCH AND BURIAL PIT

The central feature of Mound 5 (F390) was excavated in nine stages as follows (see Figure 29):

At Stage 1, beginning 1 August 1988, the feature was defined at two levels: the western part, which first showed at Horizon 2; and the eastern part, which had already been lowered within the 1970 excavation.

At Stages 2–4, the upper (western) part was excavated as F390 (Contexts 1770 and 1806). It was defined as a ‘scoop-like depression’ (FR 4/7.215), and had been disturbed by rabbits.

At Stages 5–6, the lower (eastern) half was excavated as F417 (Contexts 1772, 1833). On its lower surface was a squarish, silt-filled hollow (F425, Context 1840), resembling a dried puddle, and beneath this lay scraps of artefacts and cremated bone in disturbed, dirty sand and silt (Contexts 1811, 1834, 1925, 1935 and 1936).

At Stage 7, a shallow depression (F417A) was defined against the subsoil at the base of F417.

At Stage 8, a layer of silt was removed. This had been deposited on 12 October, when the excavation suffered from a downpour that defeated the covers.

At Stage 9, the final thin deposits were removed from the depression F417A. They contained fragments of artefacts and bone, and lay on an irregular shapeless interface with the subsoil.

All these features have subsequently been interpreted as belonging to one or more robbing operations that left virtually nothing of the original burial.

#### *Topographic observations on the form of the mound*

The existence of Mound 5 was confirmed by the British Museum team, which set out to investigate its size and nature in 1965–70 (Longworth and Kinnes 1980). In 1983 the mound was still visible as a faint elevation. Once the topsoil had been removed, i.e. at Horizon 2/4, a perimeter to the mound was sighted from the air (Colour Plate 5). On the ground, this perimeter was confirmed in at least one area by the ‘stone roll’, a concentration of pebbles indicating the point at which the edge of the freshly built mound met the buried soil (F17; see p. 46, Chapter 3). The diameter and position of this mound is shown in Figure 28. The former existence of a mound is also implied by the ring of ragged-edged, refilled pits (which are identified as quarries by the position of the Group 2 graves), by the satellite burials (which were clearly focused on something visible) and by the fact that the cremation had been robbed (it would have been hard to find unless it was centrally placed under a mound).

#### *Stratigraphic observations*

The excavators were aware that whereas the upper layers of soil covering Mound 5 (c. 200 mm thick) were loose and mixed, probably from recent ploughing (see Chapter 10, p. 371), the lower parts (c. 400 mm thick) had the firmer character of buried

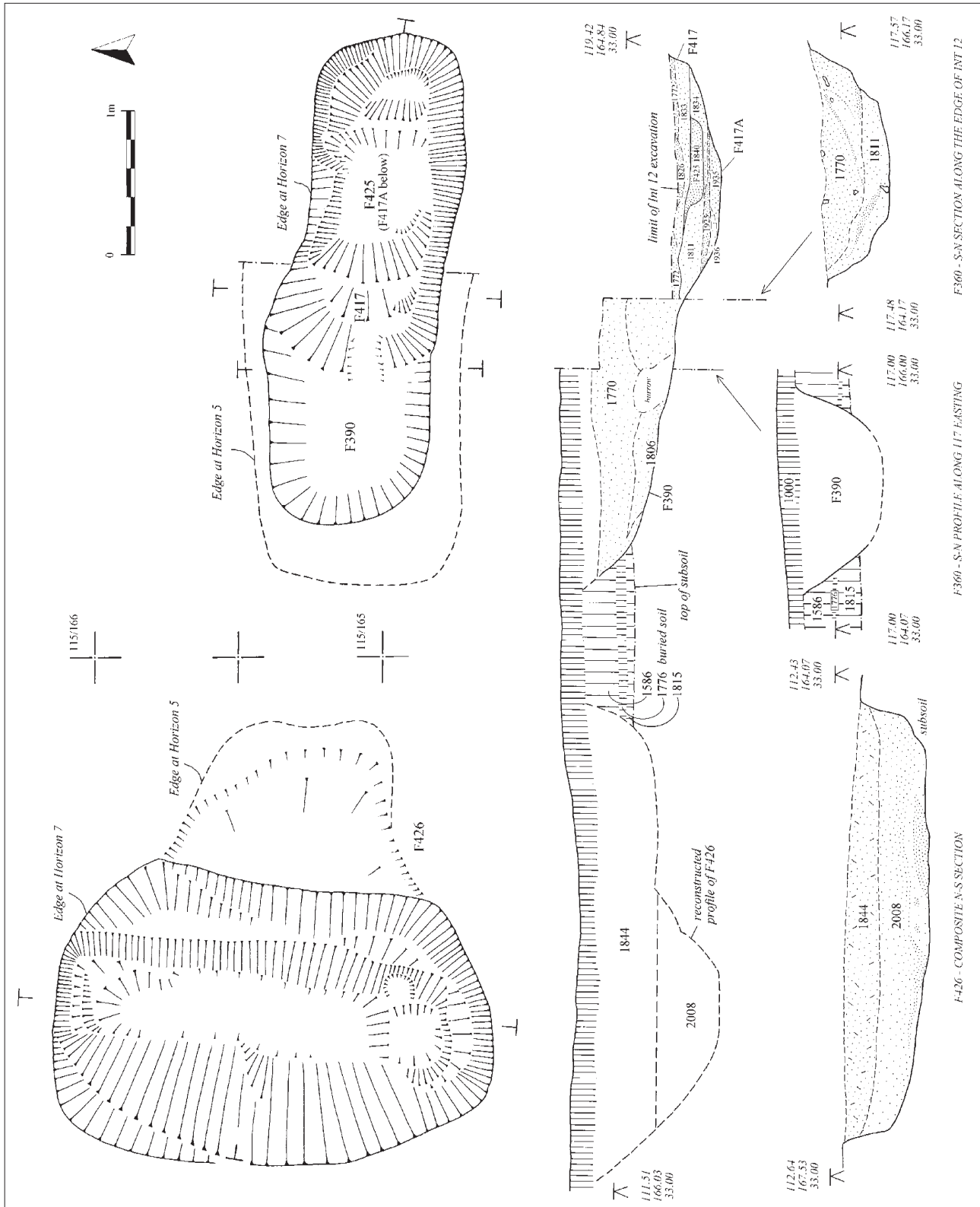


Figure 29 Plan and sections of the central pits of Mound 5, F429 and F390, F417 and F425.

soils, and these two systems could be just about distinguished from each other (Chapter 3, p. 43). No contexts were assigned to intact mound make-up, although given that the depth of buried soil captured by Mound 2 and Mound 5 was the same (c. 400 mm), the 200 mm of ploughed topsoil that capped the Mound 5 platform was probably mound make-up in origin. Some intact make-up may have been located in Burials 50 and 51. The identification of the make-up was endorsed by the thickness of deposit beneath Horizon 2 at this point, which was deeper than 400 mm (see also Chapter 10, p. 370 for other studies on the history of the buried soil). It is argued that for Mounds 1, 2 and 6 the mound-building began by stripping and stacking the turf from the mound platform and the surrounding area. Such turf was thought to have constituted a major component of the mound, but in the lower parts that survived it was only found occasionally. It is thus suggested that the turf was stacked and used to build up the upper parts of the mound that have since been dispersed by ploughing. The 'missing turf' may have accounted for another half metre or so of height (Chapter 10, p. 376).

#### *The quarry pits (FR 4/2.72439)*

The quarry pits were generally defined and excavated from the subsoil, that is at Horizon 2/7, but it can be assumed that they were originally cut from the Early Medieval ground level. The rims of the pits at buried-soil level would thus have risen higher and spread wider than the dimensions by which they were defined and recorded against the subsoil, those on the west side, at least, probably joining into a continuous quarry ditch. The capacity of each pit was calculated from its measured dimensions extrapolated to the height of the old ground surface, computed for this purpose as being 33.40 m AOD.

#### **A history of Mound 5, argued from the investigations**

##### *Before the burial pit was dug*

The surviving platform of soil, which represented Mound 5, consisted of a buried soil, about 400 mm deep and ploughed in antiquity, covered by about 200 mm of a more recent ploughsoil. There is no doubt that the buried soil had been anciently ploughed. The marks of cultivation, which showed at Horizon 5, were of two kinds (Chapter 10, p. 371):

- narrow, scratched criss-cross furrows with a principal axis WNW–ESE
- root spots in orderly rows, as though left by cabbages or carrots

This suggests that at the time that Mound 5 was constructed the land had been recently cultivated. On analogy with the cultivation marks under Mound 2, the Mound 5 plough-marks should have been covered by about 200 mm of buried soil, but there was here no intact mound make-up to indicate the position of the old ground surface. The mound platform was found to consist of buried soil (1776, 1815, 1586), the upper part of which had already been disturbed by ploughing, both before and after robbing, blurring the distinctions between buried soil, mound make-up and later ploughsoils. No turf line was seen. By dint of slight differences in the stone content (see Chapter 3, p. 43), Horizon 4 (the pre-mound surface) was in fact defined at about 200 mm above Horizon 5. This, in turn, suggests that the old

ground surface under Mound 5 had been at, or slightly below, the height of the old ground surface under Mound 2 (33.40 m as opposed to 33.45 m AOD).

The plough-marks beneath Mound 5 respect the line of the Iron Age enclosure ditch, S22, leaving a 2 m wide space on either side of it (Figure 28). No earthwork survived, but the bank and ditch could still have been visible to the builders of Mound 5, who may have begun by levelling the site (Chapter 11, p. 457). The position of Mound 5 (and those of Mounds 6 and 17) with respect to this enclosure certainly suggests that the mound builders could still see it (Figure 17).

##### *Digging the burial pit*

Very little can be known for certain about the Mound 5 burial pit, except that it must have been contained within F417, the surviving cut being due to later robbing (see below). The burial was a cremation, of which the centrepiece was a consignment of cremated bone wrapped in cloth and placed in a bronze bowl. A. C. Evans defined a feature at the base of the robber pit (F417A) as a small flat-bottomed square depression, about 500 × 400 mm, with almost vertical sides. It could, therefore, have originally contained a box. However, it could also have derived from digging with a spade, and thus belong to the robbing incident.

##### **The assemblage**

The assemblage had three main components: cremated bone, fragments of thin sheet bronze (which were sometimes curved) and fragments of other artefacts. Figure 30 shows the distribution of the cremated bone and Early Medieval artefact fragments.

##### *Artefacts*

The artefacts recovered from the Mound 5 excavation are discussed and described in detail by Angela Evans in Chapter 7 below (p. 202 and Figure 94 and Figure 95). The sheet bronze derived from a bowl of unknown diameter (2), probably used to contain the cremated bone. Replaced textile (6) was found adhering to the face of fragments of bronze, but which face – inner or outer – was uncertain. The textile may have been used to wrap the cremated bone, which had then been placed in a bronze bowl, or, alternatively, it may have served as a cover for the bowl containing the cremation (Chapter 8, p. 285). Finds indicative of high status included silver vessel-mounts (3) from small wooden cups or containers, bone gaming-pieces (7), the ivory lid of a box (10) and a milled silver collar (11). Other finds were a knife (5), shears (4) and two bone combs (8a and b). Only the gaming-pieces showed signs of having been in a fire. The surviving assemblage suggests the burial of a man in the early seventh century.

##### *Human remains in the cremation deposit*

Frances Lee discusses the cremated human bone in Chapter 7. The remains imply a single individual, young in age and of unknown sex. Fragments from most parts of the body suggest that the cremated remains had been gathered up at the time of burial, and were subsequently disturbed. The cremation process does not appear to have been particularly efficient, and left large fragments (over 15 mm across). The most interesting features are the blade injuries to the skull, of which there at least nine

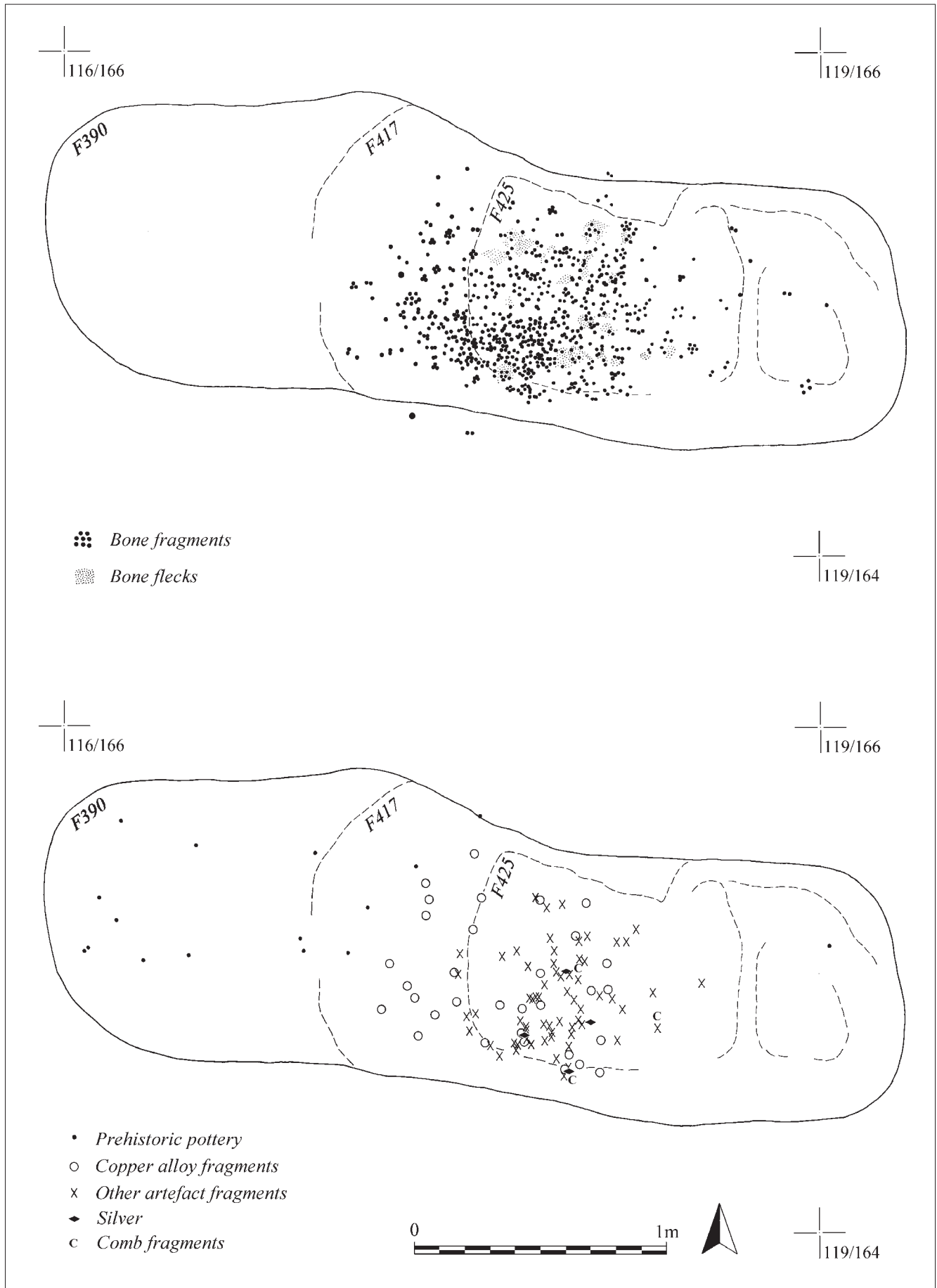


Figure 30 The Mound 5 robber/burial pit, with distribution plans of cremated bone (above) and artefacts (below).

incidences. It is uncertain whether they were the cause of death or occurred after death, but Lee argues that in at least one instance, 40445, the assault occurred after death.

#### *Animal remains in the cremation deposit*

A detailed account of the cremated animal bone is given by Julie Bond in Chapter 7. She reports that none of the cremated bone from this mound could be positively identified to animal species, and very little could be attributed to the two size categories. The existence of bone fragments from the 'large ungulate' category did suggest, however, that a large animal was represented in the cremated bone. The bone from large mammals includes a small piece that could be part of the shaft of a horse metapodium, but the identification is not definite. The other bone in the 'large ungulate' category are two other shaft fragments, an area of articular surface (possibly from a distal femur) and part of a vertebra. The three fragments in the sheep/goat size-category are all from ribs.

#### **Digging the quarry pits and constructing the mound (FR 4/7.24)**

The quarry pits fall into three groups: western, northern and eastern (Figure 28). The southern side was generally not quarried; the pits seen at the bottom of Figure 28 are quarries for Mound 6. The most vigorous quarrying took place on the western side, where the pits were large, deep, oval and linked, and provided 60 per cent of the excavated spoil (Figure 31). The eastern group, which provided 22 per cent of the spoil, consisted of separate round pits (Figure 32). In the northern group, which provided 18 per cent of the spoil, pits were generally small and round (Figure 33). The exception, F395, has a double base, and thus could be viewed as two small round pits placed close together. Assuming these differences in size and distribution are not fortuitous, there would seem to have been three different kinds of labour at work: an energetic workforce was employed to the west, while more genteel groups quarried soil in the northern and eastern parts of the perimeter.

The profiles of the pits do not show any particular system for extracting earth. The deeper, broader pits may be stepped (e.g. F30, F395 and F557), but in general the impression is of a rapid quarrying operation in which the earth could be, for the most part, thrown from the pit onto the mound (the distance is c.5 m). Assuming this was the case, then it may be concluded that the base of the mound would be composed of displaced buried soil, and the upper part would have been mainly yellow sand and gravel. The turf cut from the area before quarrying started would have been loaded onto the mound by hand at the end.

#### *The capacity of the quarry pits and the size of the mound*

The size of the mound was computed from the observed diameter of 14 m and the capacity of the quarry pits (Chapter 10, p. 375; Table 94). The volume of soil extracted from the original quarry pits was calculated as 111.11 m<sup>3</sup> (west), 23.34 m<sup>3</sup> (north) and 32.70 m<sup>3</sup> (east), a total of 167.15 m<sup>3</sup>. If allowances are made for the soil assumed to have been returned as surplus to construction (below), the volumes are 61.10 m<sup>3</sup> (west), 14.77 m<sup>3</sup> (north) and 13.25 m<sup>3</sup> (east), a total of 89.12 m<sup>3</sup>. This gives a height of between 1.25 m (min.) and 2.11 m (max.), excluding turf. If the supposed turf cap is added (see above), Mound 5 would have had a minimum height of around 1.75 m. At the rate of one cubic metre per man-day, Mound 5 would have taken

c.160 men-days to build, in the ratio 100 (west) to 25 (north) to 35 (east). Given the ease of access of persons to small pits, it might be supposed that the mound could have taken five days to build, with twenty persons working on the west side, five on the north side and seven on the east. This model of ritualized mound-building, with its 'class distinction', is also suggested by the fact that the quarry pits appeared to have provided more soil than was needed (see below).

#### *The back-filling of the pits and its significance (FR 4/7.2434)*

The evidence for the use and disuse of the quarry pits after they had been dug is available from three sources:

- the pattern of the fills
- the losses to the tops of the pits
- their relation to the burials and other deposits made in them

The fills of the quarry pits are summarized in Table 16 and in the examples given in Figures 31–33. Only one quarry pit fill sequence was examined by micromorphology, that of a Mound 6 quarry pit. No episodic demarcation was found, but the fill as a whole was determined as a redeposited, podzolized brown forest soil (FR 9/5.2). This could have derived from either the buried soil or the mound (Chapter 10, p. 385).

The layers that refilled the quarry pits and quarry ditches were examined during the excavation of Mounds 2, 5, 6 and 7. Table 16 summarizes the fills of the Mound 5 quarry pits and Table 17 summarizes selected areas of the Mounds 6 and 7 quarries (for Mound 2 see Chapter 6, p. 171 and Colour Plate 10). These studies led to the observation of a general sequence, which was often repeated. This was, from the bottom up:

- the primary filling was a light brown mixed gravelly, sandy soil, up to half a metre thick (the 'mixed soil')
- the secondary filling was a band of dark brown, stone free soil about 100 mm thick (the 'turf line')
- the ultimate filling was a pale grey or brown, sometimes pinkish or cream-coloured, fine sand (the 'pale sand')

The nicknames (e.g. 'pale sand') have been given for ease of reference. These layers were not always present and if they were, were not always in that order. But the sequence occurred with sufficient regularity to suggest a general chain of events that merits explanation. The 'sandwich' of three layers was repeated clearly in six out of the seventeen Mound 5 quarry pits (F129, F130, F556, F5/557, F4/559/560 and F30). In the remainder, the central layer is missing in six cases and the top two layers in five. The pits without the top layers are also the shallowest, implying that the layers in question may have been lost during the truncation that subsequently occurred due to ploughing.

An interpretation of the formation process can be offered from the context records. The lowest layer ('mixed soil') consists of a mixture of buried soil and subsoil (e.g. Context 2037 in F556), and in a number of pits (F57, F130, F133, F395, F557 and F558) was recorded as very stony (FR 4/7243). Remembering that the pits were originally broader, and might have reached to the edge of the mound, this material may, in some cases, have tumbled down from the mound in the course of its building.

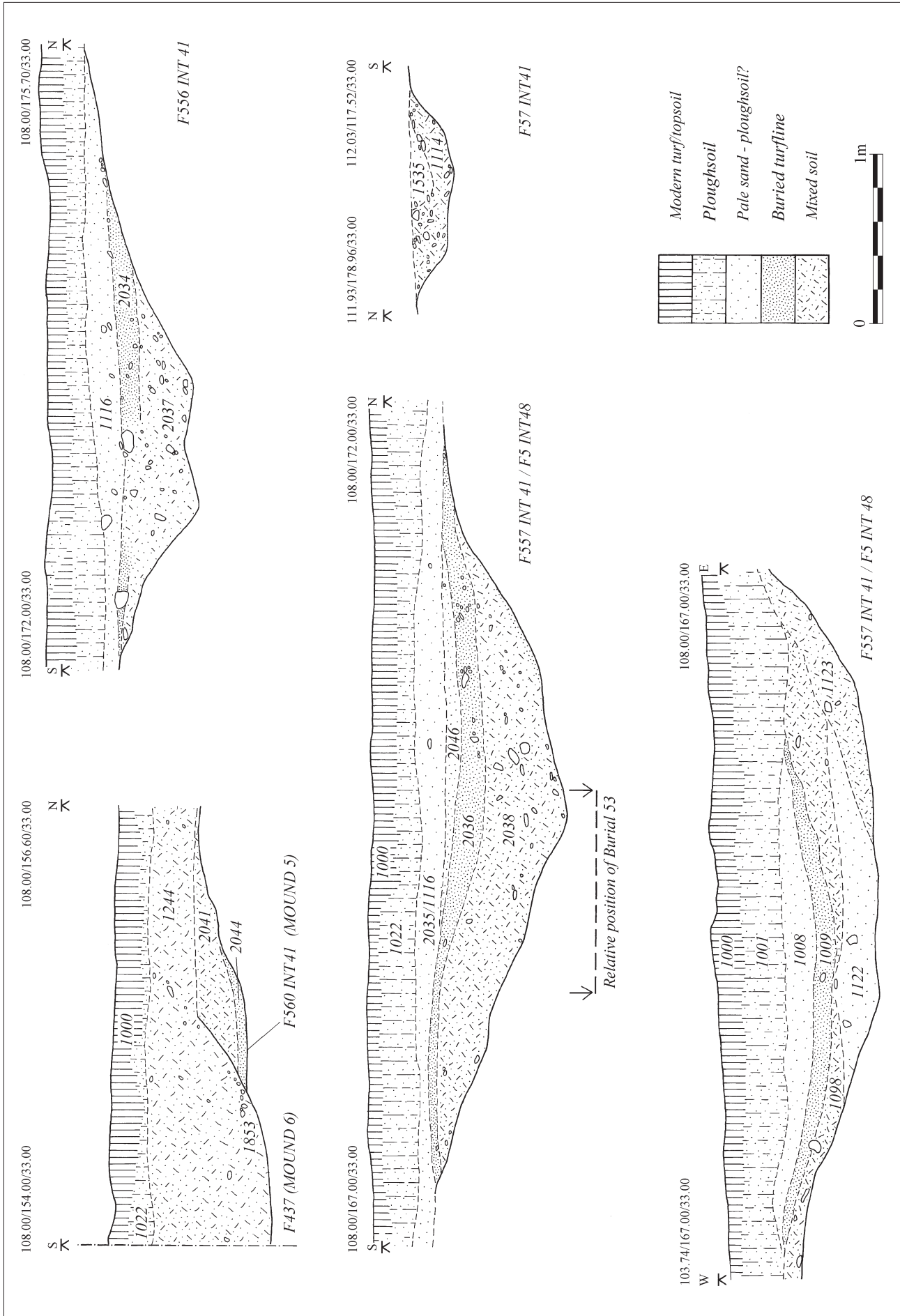


Figure 31 Mound 5: sections across quarry pits of the western group: F437, F556, F557 and F57 in Int. 41.

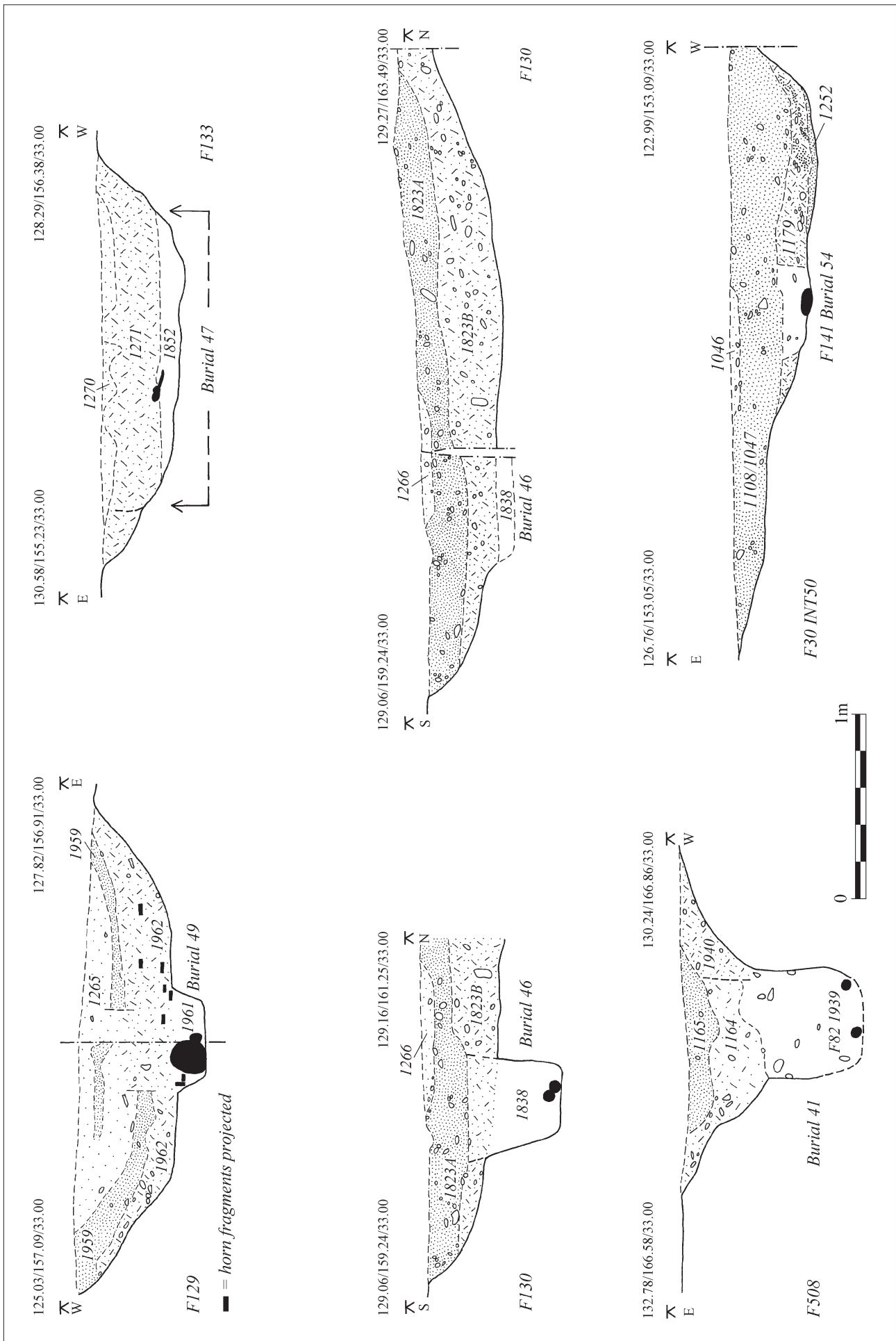


Figure 32 Mound 5: sections across quarry pits of the eastern group: F129, F133, F130 and F508 in Int. 41, and F30 in Int. 50.

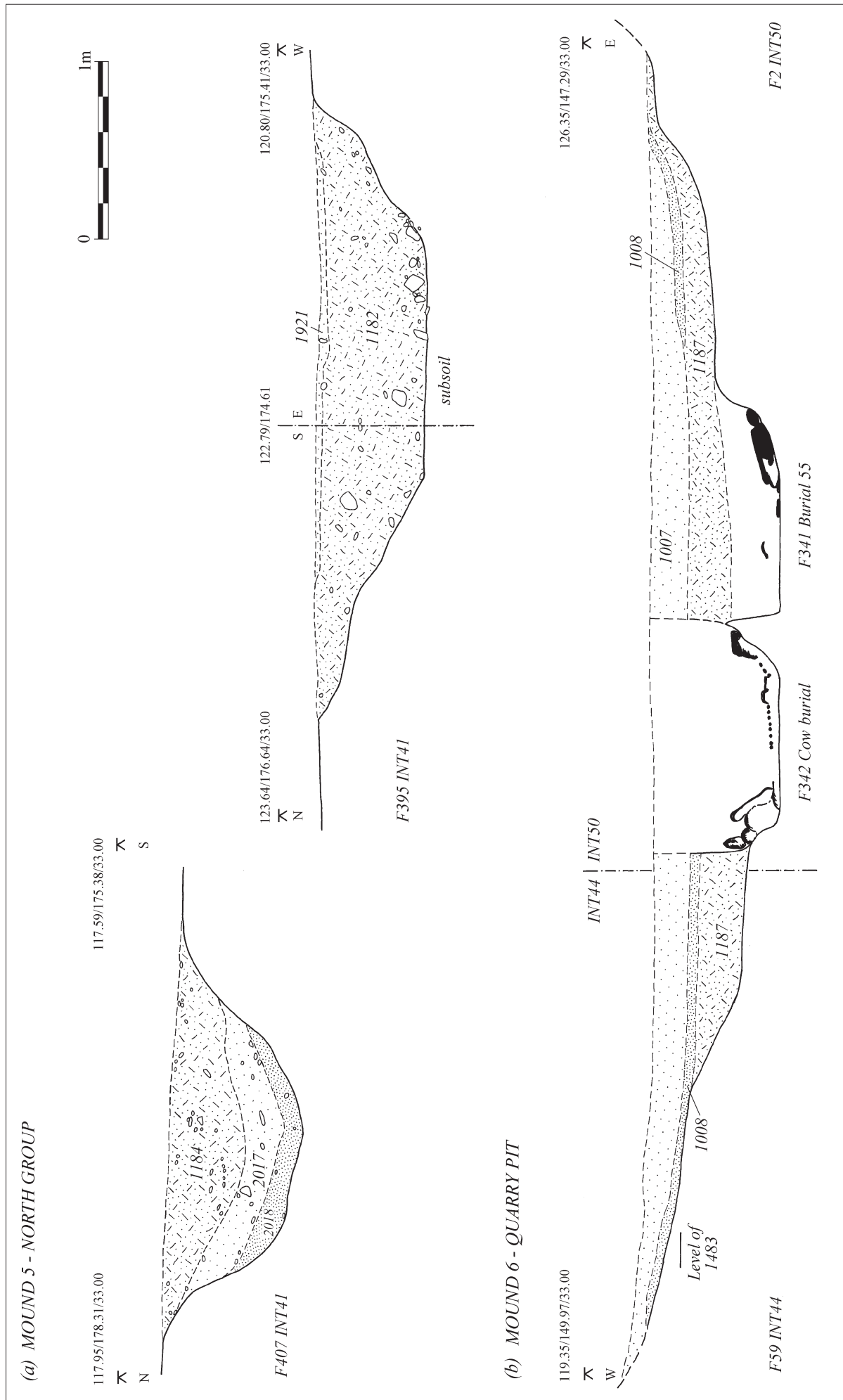


Figure 33 (a) Mound 5: sections across quarry pits of the northern group; F395 and F407 in Int. 41; (b) Mound 6: section across eastern quarry pit, F2 in Int. 50.



Table 16

Summary data from quarry pits relating to Mound 5 (listed clockwise, as on Figure 28)

Feature	Context	Colour (Munsell)	Stoniness (% stones)	Lowest point (m AOD)	Thickness in mm	Description	Comment
<i>Western group</i>							
Int. 41/60	1244	-	-	32.23	300	pale sand	also in F437, a Mound 6 quarry
	2041	5YR 4/3	2	32.02	250	mixed soil	cut by F437, a Mound 6 quarry
	2044	5YR 3/2	-	31.94	60	turf?	
Int. 48/F4	1006	7.5YR 5/4	2	32.25	250	pale sand	western half of Int. 41/F560
	1180	10YR 4/4	2	31.90	100	turf-line	
	1262	7.5YR 5/6	-	31.87	300	mixed soil	
Int. 41/ F559	1116	-	-	-	150	pale sand	Int. 48/F6/1011 is a western extension of this pit
	1244						
	2040	5YR 4/3	11	31.91	500	mixed soil	
	2043	5YR 3/3	-	31.84	100	turf?	
Int. 41/ F557	1116/ 2035	-	-	32.61	200	pale sand	
	2046	5YR 5/6	-	32.52	100	sand	
	2036	5YR 3/3	2	32.38	150	turf-line	
	2038	5YR 4/3	2	31.91	500	mixed soil	
	1008	5YR 5/6	-	32.42	500	pale sand	western half of F557
Int. 48/F5	1009	5YR 3/2	2	32.30	100	turf-line	
	1098	5YR 3/3	5	32.24	100	mixed soil	
	1122	7.5YR 4/4	6	32.04	200	yellow sand	
	1123	5YR 3/3	2	32.11	150	mixed soil	Burial 53: body-matter with traces of wood or other organic debris found with a group of cobbles on base of the pit; no traces of a cut for a grave in plan or section
	Int. 41/ F556	1116	-	-	32.70	200	
Int. 41/ F556	2034	5YR 4/3	15	32.55	150	turf-line	
	2037	7.5YR 5/4	2	32.20	300	mixed soil	
	Int. 41/ F558	2039	5YR 3/4	22	32.48	300	mixed soil
Int. 41/ F57	1535	5YR 3/4	4	32.69	130	pale sand	shallow pit
	1114	5YR 3/2	10	32.58	100	mixed soil	
<i>North group</i>							
F407	1184	5YR 3/4	5	32.29	400	mixed soil	deep circular pit
	2017	7.5YR 5/6	-	32.22	100	sand	
	2018	5YR 3/3	-	31.97	150	turf?	
Int. 41/ F395	1921	5YR 4/4	5	32.75	100	pale sand	pit with two depressions on the base
	1182	-	-	c.32.20	c.600	mixed soil	
Int. 41/ F405	1122	5YR 4/4	2	32.55	120	mixed soil	shallow scoop
Int. 41/ F394	1175	7.5YR 4/4	2	32.69	250	mixed soil	shallow scoop
Int. 41/ F401	1254	5YR 3/2	1	32.57	200	mixed soil	shallow scoop
Int. 41/ F403	1255	7.5YR 5/6	2	32.69	250	mixed soil	shallow scoop
<i>Eastern group</i>							
Int. 41/ F508	1165	5YR 3/3	1	32.71	200	sand and soil	Burial 41 cut from c.32.50 m or higher; disturbed by a secondary cut from c.32.75 m.
	1940	5YR 4/4	2	c. 32.55	400	mixed soil	
Int. 41/ F130	1266	5YR 4/3	1	32.84	90	pale sand	
	1823A	5YR 3/4	17	32.70	200	turf-line	cut for Burial 46 not seen
	1823B	5YR 3/4	17	32.42	480	mixed soil	
Int. 41/ F131	1267A	7.5YR 4/4	9	32.70	150	pale sand	
	1267B	-	-	32.43	200	mixed soil	grave-like cut (F131A) seen cutting from under turf at c. 32.70 m
Int. 41/ F129	1265	7.5YR 5/4	1	32.63	300	pale sand	cut by Int 12.
	1959	5YR 3/4	3	32.53	100	turf-line	Burial 49 cut from c.32.75 m; cutting Context 1962 and possibly Context 1959 fragments of animal jaw in this layer
	1962	7.5YR 4/4	-	32.38	350	mixed soil	
Int. 41/ F133	1270	7.5YR 5/4	-	32.68	120	pale sand	
	1271	7.5YR 4/4	-	32.45	200	mixed soil	piece of bone ('Burial 47') cut into Context 1271 at c.32.65 or lower
Int. 50/ F30	1046	10YR 4/4	1	32.53	110	pale sand	Int. 41/F530/1997 is shallow northwards extension
	1108 1047	5YR 3/4	8	32.30	350	turf-line	
	1179	5YR 4/4	10	32.23	300	mixed soil	cut for Burial 54 seen below turf-line at c.32.35 m
	1252	5YR 4/4	10	32.19	350	turf?	

Note: a blank entry means that the variable was not observed

**Table 17**  
**Summary data from selected quarries relating to Mounds 6 and 7 (Figure 34)**

Feature	Context	Colour	Stoniness (% stones)	Lowest point (mAOD)	Thickness in mm	Description	Comment
<i>North-west quarry, Mound 6</i>							
Int. 48/F3	1005	7.5YR 5/4	2	32.28	140	pale sand	equates to F437/1244 in Int. 41
	1059	7.5YR 4/4	8	32.25	130	pale sand	
	1088	7.5YR 4/2	4	32.17	140	turf-line	
	1090	7.5YR 4/4	1	32.02	200	mixed soil	
<i>North-east quarry, Mound 6</i>							
Int. 44/F59 (Int. 50/F2)	1007	10YR 4/3	2	32.42	250	pale sand	probably cut by seventeenth-century cow burial F342
	1008	7.5YR 4/2	-	32.38	260	turf line	twelfth-century pottery (Context 1483) lies on turf at 32.70 m.
	1111						
	1187	7.5YR 4/4	2	32.28	300	mixed soil	Burial 55 detected at base
<i>South-east quarry, Mound 6</i>							
Int. 44/F61	1002/5	-	-	32.90	150	recent ploughsoil	
	-	-	-	32.70	200	pale sand	
	-	-	-	32.60	100	turf line	
	1071	5YR 4/4	6	32.16	400	mixed soil	
<i>East quarry, Mound 7</i>							
Int. 44/F67	1209	5YR 3/3	4	32.50	30	turf line	
	1245	5YR 5/3	2	32.35	130	pale sand	
	1244	5YR 3/3	6	32.25	250	turf line	
	1093	5YR 3/3	5	31.94	460	mixed soil	
	1250	7.5YR 5/6	2	31.91	40	mixed soil	
<i>South quarry, Mound 7</i>							
F231	1150	5YR 3/4	-	32.05	150	pale sand	
	1247	5YR 3/3	-	31.95	180	turf-line	
F98/106	1165	-	-	-	-	mixed soil	slump from mound?
	1159	-	-	32.40	150	turf-line	
	1150	-	-	32.10	300	pale sand	
	1247	-	-	32.00	100	turf	

Note: a blank entry means that the variable was not observed.

Another possible source might be the edges of the pits themselves, which would collapse as people climbed in and out of them. In some cases (such as 2018 in F407 and 2044 in F560), this might result in a turf or clean humus layer at the base of a pit. An additional source could be the process of quarrying itself, which in this terrain is not a crisp operation. When a pit is dug, a large proportion of the quarried soil and sand that is dug out falls to the base, and is trodden in, even when using modern shovels; in archaeological excavation, some care with trowel and bucket is needed to create a clean subsoil surface in the pit. It is reasonable to suppose that the imprecise operation implied by the ragged edges of the Mound 5 quarry pits would leave a sizeable tread layer as surplus to requirement, one perhaps added to by later tidying up. These deposits are particularly deep in the deeper pits (e.g. the western group). The experiment with the Mound 2 quarry ditch (Chapter 3, p. 47) suggests that a mound, once built, does not slowly erode into its quarry, so erosion is unlikely to account for the deeper primary deposits. Such erosion would be less likely still if the mound had been capped with turf. For this reason, the lower layers are supposed to belong to the mound-building phase, which is an interpretation consistent with that of the two layers routinely found above them, and considered next.

The dark central layer ('turf line') of the sandwich occurs in a thin regular band that generally follows the dishing of the partially back-filled pit (e.g. 2034 in F556, 1823A in F130 and 1959 in F129). Where a pit was truncated and defined at Horizon 2 this layer showed as a dark ribbon around the edge of the pit. Occasionally the layer occurred in thicker lumps at the edge of a pit. Its shape, colour and texture suggest that this was a layer of turf that grew *in situ*.

The ultimate layer ('pale sand') consists of a pale, homogenous sand (e.g. 1116 in F556, 1265 in F129 and 1266 in F130). The sand often appears to be fine enough to have been blown in by the wind, but it is rarely free of stones or gravel. Wind and water erosion may have played a part, but few lenses, as from erosion episodes, were seen. The thorough mixing is most easily explained by some evenly applied mechanical transportation, such as ploughing. The transported soil is notably bleached in appearance, and should represent the most recent podzol to develop on the site – although in its transported, truncated state it could not be distinguished from earlier relict podzols. It might derive mainly from mounds that had acquired sandy mantles under heath through prolonged use as warrens (see Chapter 6, pp. 171–4 and Chapter 12, p. 461).

There is no independent dating for this sequence from the Mound 5 quarry pits. In the quarry system for Mounds 6 and 14, where analogous sequences were recorded, Medieval pottery (late twelfth century) was found lying on the 'turf' layer (see Chapter 12, p. 461). The principal earth-moving operation after the Middle Ages was the robbing and ploughing that can be assigned to the seventeenth century or earlier (see Chapter 10, p. 371).

In broad outline, the probable events were:

- seventh century: digging of the pits, construction of the mound and return of mixed surplus spoil to the pits with some collapse of pit edges
- seventh to twelfth century: turf grows over the earthworks
- twelfth to seventeenth century: cultivation pushes the ploughsoil into the quarry pits

#### ***Rituals and burials associated with the Mound 5 quarry pits (FR 4/2.725)***

On excavation, several of the Mound 5 quarry pits were found to contain human and animal remains. The animal remains (in pits F129 and F130) were included in primary back-filling, and so should be contemporary with the construction of Mound 5. The human burials (in pits F557, F508, F130, F129 and F30) were more difficult to date. One example appeared to be contemporary with mound-building (Burial 53 in F557), but the remainder were cut into quarry pits in which turf had already formed. These burials thus came after the construction and grassing over of Mound 5 and its quarries, and this sequence is likely to have been the norm.

#### *The animal remains*

Twelve fragments originating from the jaws of large herbivores (cattle and horse) were found in quarry pit F129 (see Chapter 9, p. 340). The pit showed the usual triad of layers (Figure 32). The animal fragments were recorded within or on the mixed primary fill (1962). This layer and the turf above it (1959) were then cut by a grave (Burial 49), which had apparently scattered some of the animal bone from its original position.

The animal bone derived from the heads of horses and cattle. It is unlikely that any other parts of the carcasses were present, as a sand fossil would have been observed (the body in Burial 49 left a readable sand fossil). The heads had largely dematerialized, so the most recognizable parts were fragments of teeth. The heads could have been placed in the bottom of the empty pit, rotted leaving only the teeth, and then been dispersed by the action of digging the grave. This accounts less satisfactorily for the presence of teeth in the lowest layer, remote from the grave-cut. More credibly, the heads or teeth were first deposited outside the pit within a light-brown mixed soil, which was then transported into the quarry pit to form its first backfill layer. This layer became covered with turf and, at a later date, was cut by the grave, which disturbed some of the teeth, which were then deposited (for a third time) within its fill.

The teeth, if not the heads that originally contained them, retained enough texture to stand re-deposition at the time of Burial 49. As elsewhere, the primary layer rests on the clean surface of the base of the quarry pit. Thus it is probable that the primary layer entered the pit, the teeth then entered the layer and the grave then cut the layer, disturbing the teeth, all within a century or so.

Another sand-formed bone ('Burial 47'), which more probably derived from an animal than a human, lay in the primary deposit of the immediately adjacent quarry pit F133.

#### *Human burials*

Sixteen burials focused on Mound 5 were identified as the graves of execution victims and are discussed in Chapter 9 (Group 2). Four of these burials were found within quarry pits to the east of Mound 5, one was found in a western quarry pit, and one lay within a Mound 6 quarry pit (see Chapter 9, Figure 149).

Pit F557 (F5 in Int. 48) contained Burial 53. This was the only burial which might have lain on the clean subsoil surface of a freshly dug quarry pit. The sand-form, humified human remains, if they were human, were ill defined and associated with timber decay products, and the whole was originally interpreted as a burial in a coffin (FR 6/742). The form of the body leaves something to the imagination, although the excavator was convinced of its human attributes – particularly the rounded skull. On these grounds, a human burial is thought more likely than that of the carcass (whole or part) of a large animal (horse or cattle). In Chapter 9 (p. 341) the case is argued that the clean quarry pit first received a stone-roll of pebbles, after which a human body was laid on the quarry pit base and covered by a number of organic layers, including wood. The usual triad of mixed soil (1098, 1123), turf (1009) and pale sand (1008) formed over this (Figure 31: 2038, 2036, 2046). No cut for a grave was observed in plan during a long and careful excavation. However, looking at the plan, the body and its timber pieces do seem to lie in a 'cut' at the base of the quarry pit (F349), and the possibility of an unrecognized cut can never be excluded in Sutton Hoo's deposits. Burial 53 is a candidate for a human burial that was contemporary with, or followed very closely, the erection of Mound 5, but the case is finely balanced. The possibility should be allowed that it represents an animal carcass contemporary with Mound 5, or that it was a human burial interred, like the other examples in Group 2, after the Mound 5 quarry pits had grassed over (see Chapter 9, p. 344).

All the other pits containing certain or possible human graves were situated on the east side. Pit F508 contained Burial 41 (Figure 32). Originally, this pit was probably quite deep, but only a small part of its primary fill survived (1940). Into this had been cut a grave containing a body (Burial 41). However, this had probably been revisited at a later date, by which time the body had humified – say more than ten years later. Pieces of the right thigh and head had been cut out of the humified body and re-deposited immediately above, in the later fill of the quarry pit. Judging by its extant depth, the grave had been cut through the equivalent of the primary mixed soil. No turf line was visible, and the grave may have been cut through that too.

Pit F130 contained Burial 46 (Figure 32). The pit fill featured the usual sequence of layers – mixed soil (1823B), turf (1823A) and pale sand (1266) – although the turf was only seen in photographs. The grave apparently cut the mixed-soil layer and was sealed by the turf. This might suggest that burial occurred before the turf had formed, and could therefore theoretically belong to a period quite close to the mound construction. However, given that turf would regenerate after a hole had been cut through it, the burial may equally belong to a period after Mound 5 and its quarry pits had grassed over.

Pit F129 contained Burial 49. The pit fill sequence began with a mixed soil (1962) containing fragments of animal teeth (see above), followed by turf (1959) and finally pale sand (1265). This grave had cut both the mixed soil and the turf, and therefore belongs to a period after the turf had formed, but before the teeth had completely humified. This would put it fairly soon after the construction of Mound 5.

Pit F30 (Int. 50) contained Burial 54. The pit fill featured mixed soil (1179), turf or humic soil (1047) and pale sand (1046). The burial was seen to have been cut through the primary fill (1179), and may also have been cut through the humic layer above it (1047), although no cut was visible in section. The floor of the pit had a slight step, which could imply a grave-cut. One concludes, therefore, that the body was either laid in a grave cut through the primary fill or laid directly on the pit floor.

Pit F133 contained a piece of body, not necessarily human (Burial 47), within a primary mixed soil fill (1271). There did appear to be a cut for a short grave (1.50 m long) in the base of the pit, but no body lay within it. The quarry pit probably contained a piece of meat (as did adjacent F129) and not a human burial.

Pit F131 was a small, round quarry pit with two layers of fill, determined (retrospectively) as mixed soil beneath pale sand. The base of the pit descended as a grave-like slot about 1.50 m long. The shape was certainly suggestive, but could have equally originated from spading out subsoil for quarrying. This is not considered to have been a human burial.

The last burials to be considered are those in F2 (Int. 50), which was actually a quarry pit for Mound 6. However, from the plan, it would seem that the burials could only be associated with Mound 5, which all the other burials surround. The pit featured primary mixed soil deposit (1187), turf layer (1008) and pale sand (1007; Figure 33:b). There were two burials: the first human, the second that of a bull. The human burial, Burial 55, was cut into the base of the pit, and had probably cut the primary (mixed soil) layer (1187). It may also have cut the turf (1008), which was not present in the area over the burial. The pit for the bull (F342) had certainly cut Burial 55, had probably cut the turf (FR 7/7.3), and may also have cut through the pale sand (1007).

### *Dating*

The remains of the ox-heads are stratigraphically contemporary with the construction of the mound. With the possible exception of Burial 53, the human burials post-date the construction of the mound and the grassing over of its quarry pits. Radiocarbon dating was successful for four burials (see Chapter 3, Table 9): Burial 40 (centred on the late tenth to eleventh century); Burial 42/43 (centred on the eighth to ninth century); Burial 45 (centred on the late tenth to eleventh century) and the bull from pit F131 (centred on c. 1650). The dated human burials are therefore Early Medieval, within the range eighth to eleventh century. None of the human burials post-date the episode of ploughing that filled the quarry pits and rendered them invisible. The bull, on the other hand, dates from the sixteenth or seventeenth century, by which time the quarry pit may have been largely filled in by ploughing, even if it was still visible as a depression in the ground.

### *The aftermath*

How long did the mound stand? At some stage the mound was reduced in height by ploughing, resulting in the formation of the homogenous pink-grey sand that formed the upper layer of the quarry-pit fills. At another stage, the mound had been robbed. The robbers were able to pinpoint and excavate the central burial pit with some precision. The destination was a small subterranean feature, but there were no criss-crossing trenches and there was no scatter of Early Medieval finds discovered outside the immediate nucleus of the robber pit, on or above the surface of the ancient soil. For these reasons we can surmise that when the robbing operations took place the mound must have been standing to a height which allowed robbers to guess successfully where its centre lay.

### *The robbing operations*

In a very disturbed deposit, excavator A. C. Evans succeeded in identifying the likely original site of a burial and at least two phases of robbing (FR 4/7.2132). The first robbing operation, signalled by F417, seems to have reached the subsoil. None of the contexts at first hopefully designated as the fill of a burial pit (1834, 1925) survived the test of being entirely free of fragmented objects or cremated bone. But F417A was a rectilinear depression that cut into the subsoil, and may have represented the locus of the original burial pit, or even a container within it. The burial deposit had presumably been scooped out, and a bronze bowl containing the cremated bone and some of the grave goods dumped unceremoniously towards the west end of the hole. Pieces of bronze and bone were trampled into the bottom of the grave, which seems then to have been filled in, as none of the contexts in this phase show signs of weathering.

In a putative second phase of robbing, an east–west trench was cut into the central area (F390). It seemed to respect the west end of F417, suggesting that the trench-diggers, once they had recognised F417, followed it down in a series of shallow shelves. This operation did not disturb the contexts in the bottom of the wrecked grave, suggesting that the second group of grave robbers appreciated that the burial had been comprehensively robbed once they encountered the dumped bone on their way in (Context 1811, Figure 29). They then abandoned their efforts and back-filled their trench (1770).

A third possible intrusion is represented by F425, which survived as a shallow rectangular pit that cut away the east edge of 1811. At this level those responsible stopped work, and the exposed surface of F417 (i.e. 1840 and the truncated surfaces of 1811 and 1834) subsequently acquired a layer of silt from weathering. F425 and the layers above it probably represent the back-filled limit of the British Museum excavations of 1970.

An additional feature, F426, was encountered during the excavation of Mound 5. This was an irregular pit, bell-shaped in plan, with the narrow end aligned with the centre of Mound 5. It was 3.5 m east–west, 2 m north–south and descended to 32.20 m AOD. At the bottom of the pit, on its west side, was a slot running north–south, dug through the subsoil and apparently back-filled straightaway with the same material (2008). The upper fill of pit F426 contained brown soil and yellow sand (1844), and seemed to represent a mixture of buried soil and subsoil. The similarity of the fills points to a possible connection between F426 and F390. F426 might represent a trial pit designed to find

the subsoil, as used by Basil Brown (above, p. 67) and as seen in Mound 6, which had a possible trial pit in an analogous position.

Fragments of two ship-rivets were found on the surface of western quarry pits (F4; Figure 28). Fragments of cremated human bone were found in the same area, suggesting that robbing had occurred after the quarry pit had refilled and at the same time as the robbing of Mound 2, the only likely source of ship-rivets.

The features and contexts encountered in the Mound 5 platform can therefore be resolved into three principal episodes:

- 1 a central burial pit was dug, perhaps half a metre square (F417A)
- 2 there was a robbing operation, probably via vertical shaft cut through the upstanding mound (F417)
- 3 there was a second robbing by means of a test pit (F426) and an east–west trench (F390) with steps cut on the west side (into F417)

#### *Post-mound ploughing (FR 4/7.263)*

A set of plough-marks was observed at Horizon 1, between Mound 2 and Mound 5. The marks ran east–west and overran all the defined strata in this area. A light orange-brown deposit (1022) lay over the area between Mounds 2 and 5. This could have derived from the ploughing of a thin soil lying on subsoil denuded by quarrying. Context 1022 overran the fill of quarry ditch for Mound 2, F42. An area of ploughing east and west of Mound 5 is also implied by a digitally-enhanced contour map prepared by IBM (*Bull.* 5: 24). There seems little doubt that the area of Mound 5 was ploughed from east to west, and that this is likely to have been responsible for reducing the height of the mounds. It is less clear whether this ploughing took place before or after robbing, or both.

#### **Sequence and dating**

It is argued in Chapter 7, p. 204 that diagnostic artefacts surviving from the Mound 5 burial belong to the early seventh century. The stratigraphy offers evidence that Mound 5 was earlier than Mound 6, to its south, which is itself earlier than Mound 7. Mound 5 was thus the most northerly of the axial group of cremation burials seen as the ‘founder group’, and has a claim to be the earliest mound at Sutton Hoo (see Chapter 8, p. 307). This needs to be reconciled with its role as the focus for executions.

Radiocarbon dating puts three of the executions into a period between the eighth century and the eleventh. The majority of the burials were cut into the quarry pits after they had grassed over. There is a *prima facie* reason for believing that the executions at the Mound 5 site followed its construction by about a century, when the mounds were earthworks and the use of the princely burial ground had discontinued. Burial 53 is anomalous in that it lay on the west side, and at the base of a quarry pit covered by primary fill, and should therefore be contemporary with the construction of the mound and the deposition of animal remains in F129 and F133 on the east side. However, the discussion (above) allows that the body may actually have been the carcass of an animal, or that it was a human burial and execution victim that, like the others, had been buried in a grave undetectably cut into the grassed-over quarry pit.

Executions may have focused on Mound 5 because it was a relatively low mound, close (although not the closest) to the line of a track to the east or west (see Chapter 12). Alternatively, it may have been remembered as the burial place of a dynastic figure that had a symbolic relevance to the later practice of execution (Chapter 9, p. 349). Execution had ceased by the time the quarry pits were filled in with a pale sand by ploughing. This ploughing occurred before 1601, when Track 1 crossed the back-filled pits of Mounds 7 and 14. It is argued to be late Medieval, dating to between the twelfth and sixteenth centuries (see Chapter 12, p. 459).

Mound 5 had been robbed at a time sufficiently remote from the burial for the bronze bowl to become brittle and fragmentary. Fragments of ship-rivets were found on the surface of the quarry pit (Int. 48/F4; 169/1000/108164 and 262/1001/108163), implying that Mound 5 had been robbed by the same people and at the same time as Mound 2, and that this happened after ploughing had filled the quarry pits. The first robbing is thought to belong to a campaign of the late sixteenth or early seventeenth century, and the second robbing to a campaign of the mid nineteenth century (see Chapter 12, p. 462). Mound 5 was further reduced by ploughing, and had been levelled by the time of the first edition of the Ordnance Survey in 1881. This levelling may have been a local event involving Mounds 5, 17 and 18, which were all severely flattened (see Chapter 10).

#### **Model**

Mound 5 may have been the first burial on a new site founded in the early seventh century on the scarp overlooking the Deben, a few hundred metres south of a pre-existing folk cemetery near Tranmer House (see Chapter 13, p. 483). It was the burial of a young individual, possibly male, who had suffered head wounds with a blade – some of which were administered after death. His body was cremated with some grave goods (including gaming-pieces) and some animals. The latter were not positively identified but, by analogy with other mounds, may have included horse and sheep.

The ashes from the pyre were put in a bronze bowl, which was placed in a pit. A cloth was used to wrap the cremation, or as a cover for the bowl. Other grave goods – which had included shears, a silver-mounted cup, a comb, a knife in a leather sheath and a large playing piece – had been placed in the burial pit.

Three parties raised a mound over the burial pit. A large and vigorous gang worked on the western side, excavating a chain of quarries. To the east (the aristocracy?) the pits were individual, and to the north (family?) they were smaller. Horses and cattle were killed and probably eaten, the remains of their heads being left on the ground on the south-east side of the mound. At this time the body of an animal – or possibly a human – was placed in the largest, deepest quarry pit on the west side of the Mound, beneath planks or other pieces of wood. Alternatively, this burial took place at a later date, after the pit had grassed over.

A general tidy up then took place, with surplus soil being returned to the pits as a sandy mixture. Quarry pits on the south-east side (F129, F133) received the heads of sacrificed horses and cattle.

In the following centuries, while the mound and the partially back-filled quarry pits were grassing over, men and women were hanged or decapitated and buried around

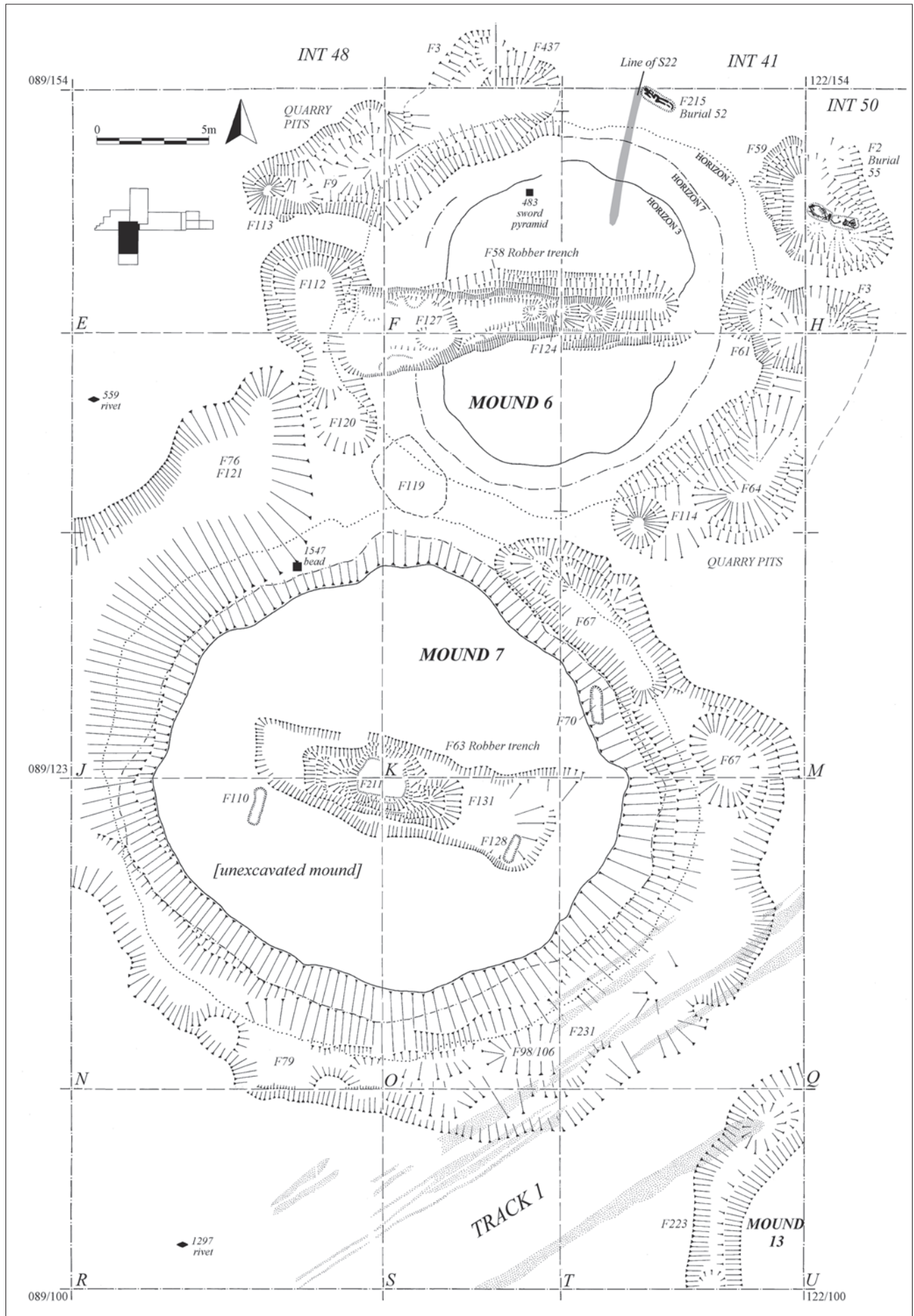


Figure 34 Mounds 6 and 7, their quarry pits, other Early Medieval features and stray finds. The robber trenches and the remains of the burial pits are in the centre of each mound.

Mound 5, some within quarry pits. At least one Mound 6 quarry pit was also the burial site for an execution victim. Execution took place in a period from the eighth to the twelfth century.

Between the twelfth and the sixteenth century the Sutton Hoo site was reduced by ploughing, filling the quarry pits with a podzolic soil, and around 1600 it also became the subject of a major excavation campaign. A vertical shaft was dug through Mound 5, which reached the burial. In the mid nineteenth century Mound 5 was visited by a second band of excavators. A trial pit was dug, perhaps to find the level of the buried soil, then the excavators cut a trench towards the centre of the mound, finding the earlier robber pit. The burial pit was rifled by these operations; the few remaining grave goods were trampled into spoil in the entrance trench. The mound was then levelled, so that by 1881 it was no longer visible to surveyors making maps.

#### **Mound 6: cremation in a copper-alloy bowl (FR 5i/7.1)**

Written by Martin Carver; excavation supervised and recorded by A. J. Copp.

#### **Summary**

The Mound 6 burial was of a cremation, covered in cloth and buried in a copper-alloy bowl. The mound was raised above the burial deposit, using soil extracted from quarry pits to the east and west. The constructors of Mound 6 were aware of both Mound 5 and Mound 7. The mound was reduced, and the quarry pits back-filled, by ploughing, probably in the Middle Ages. The burial had been explored and ransacked in an excavation

campaign, leaving few finds apart from cremated human and animal bone, fragments of textile and the copper-alloy bowl, and one sword pyramid dropped on the surface of the mound. The early excavators used a pilot pit and an west–east trench (the ‘robber trench’), constructing a splayed barrow run and steps for the antiquary to the east.

#### **Description of the investigations (FR 5/7.11)**

*Excavation in Int. 44*

The surfaces of Mounds 6 and 7, their quarry ditches and their robber trenches were defined together at Horizon 2 in July 1988, and at Horizon 3 in September 1988 (Plate 12).

#### **EXCAVATION OF THE ROBBER TRENCH AND MOUND**

The excavation of Mound 6 and its associated features began from Horizon 3 in July 1989, with the removal of fill from the robber trench and the quarry ditches of the mound. Once the robber trench had been defined, the mound and the trench were excavated in tandem. When the robber trench fill had been lowered to a point a little below the top of the buried soil, work stopped, while the mound itself and the buried soil beneath it were examined. The rest of the robber trench was then excavated to subsoil, with the recovery of every displaced fragment from the Early Medieval burial accompanied by three-dimensional recording. The Prehistoric features cut into the subsoil (Horizon 7) were then excavated. Mound 6 was subsequently restored, *in situ*, to its 1983 profile.

The mound was excavated against running section lines, leading quadrants (G and K) first (Figure 34). Since the mound



**Plate 22** Mound 6: the robber trench cutting through the buried-soil platform, which is under excavation.

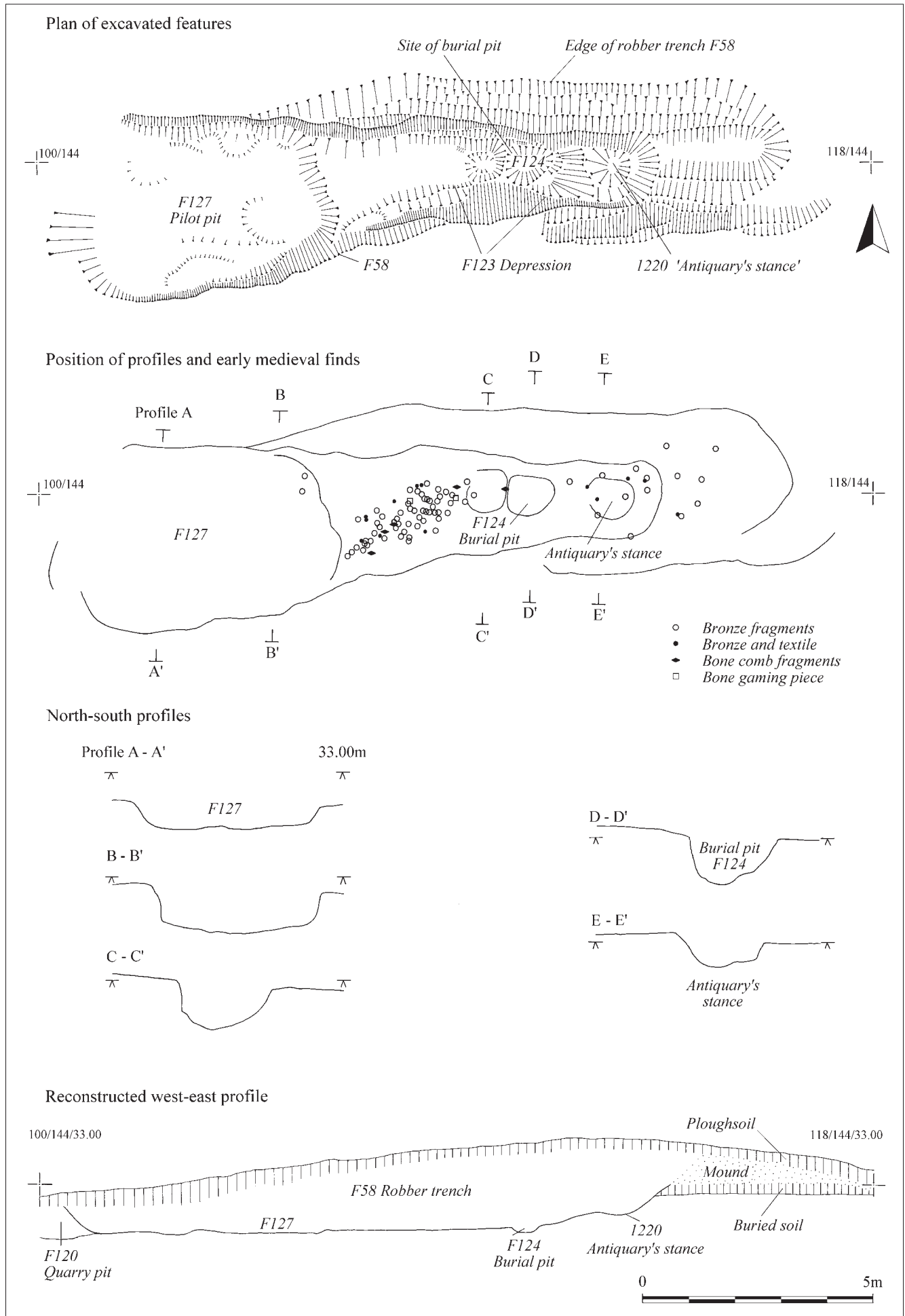


Figure 35 Mound 6: the robber trench and the remains of the burial pit, showing the distribution of finds and the 'antiquary's stance'.



was relatively low, the balks were left standing from turf to buried soil, and a single section series was drawn (Figure 37). The mound remnants were completely removed before section lines were restored and the buried soil was excavated. Before the section through the buried soil was drawn, the site had to pass through one season and two winters, and the surface of the balks suffered from erosion and excessive cleansing. For this reason there is an unrecorded vertical gap between the section through the mound and that through the buried soil (see Chapter 3, p. 47).

The robber trench F58 (Plate 22; Figure 35) was excavated in twelve stages (FR 5/7.113), the last nine being as follows:

Stage 4: The fill of the feature, F58, was approximately level with the top of the buried soil platform.

Stage 5: The mound make-up was excavated in quadrants down to the level of the buried-soil platform. The balks, still capped with turf and carrying the sections along the north–south and east–west axes were left standing and drawn.

Stage 6: That part of each balk that was contiguous with the robber trench, F58, was excavated to the level of the buried-soil platform. A plan was made of the full outline of the robber trench F58 thus obtained.

Stage 7: The removal of the balks was completed. The buried-soil platform and the robber trench that cut through it were now fully exposed. The robber trench was seen to run west into the now excavated quarry pit F112 (Figure 36).

Stage 8: The data acquisition strategy changed to Level E (single context planning).

Stage 9: A new feature number, F123, was assigned to a depression in the centre of the trench F58 (Context 1228). A semicircular ledge was defined at the east end of the robber trench, and was identified as the ‘antiquary’s stance’ (1220). At this point, the 1989 excavation season finished, and the robber trench was wrapped with wire netting, polythene and sandbags for the winter.

Stage 10: Begun in 1990. A new feature number, F124, was assigned to a subrectangular patch located in the centre of F123. It is Context 1230, and was identified as the ‘original burial pit’ by the excavator.

Stage 11: The robber trench had been cleared down to the subsoil in the centre, and a plan was made. The point at which the robber trench met the west quarry pit was still unclear at this point.

Stage 12: The south edge was found to be false; 1248–9 were removed and the edge was redefined and re-planned. North–south profiles were recorded at intervals along the east–west length of the trench.

#### FINDS RECOVERY (FR 5/7.13)

Seventy per cent of the finds came from 1216 (Stage 8) and 1228 (in F123, Stage 9). There were no finds from 1230, the putative relict fill of the burial pit.

Groups of bronze-bowl fragments and adhering textiles were lifted in blocks where the concentration of fragments justified it, with the assistance of Simon Dove of the Conservation Section of the British Museum. Major fragments were drawn *in situ* at 1:1, using a miniature planning frame.

All the Early Medieval finds came from the robber trench sequence, except for the pyramidal strap mount 483. This was recovered during a routine metal-detector survey of the surface

of Mound 6 in Quadrant F at 109554/149331/33.497, about 50 mm below the surface of 1005. Also recovered there was ‘an army cap badge with a sphinx and “Egypt” and “SWB” [South Wales Borderers]’, a relic of Sutton Hoo’s wartime role as an infantry training area (see Chapter 12, p. 470).

#### EXCAVATION OF THE QUARRIES IN INT. 44

The quarries in Int. 44 survived in the form of pits and ditches that achieved their first clear definition at Horizon 2. At this point, with some rare exceptions such as part of Quadrant P, the junction between the make-up of the mounds and the quarry pits was still masked by a cone of eroded ‘slump’. Recorders referred to this ‘slump’ or ‘slumping’ by various sartorial metaphors, e.g. ‘skirt of dirty brown material’ or ‘the slipped trouser effect’. The layer (e.g. 1084) described as a ‘dark-brown silt-sand’ was very thin on top of the mounds, but thickened to over a metre deep at the junction of mounds and quarries.

When this slump had been removed, the mounds were declared to be at ‘Horizon 3’. At this point, the filled-in quarries, the make-up of Mound 6, the sandwich of buried soil beneath it and the robber trench across it were all visible together. In theory, the surface of the original mound could have been exposed at the same time as the face of the buried soil (where it had been cut by the quarry ditch), but the fill of the quarry ditch and the robber trench were clearly later. Horizon 3 as a whole was, therefore, an anachronistic slice that most nearly equates to the surfaces of different dates which had been truncated, scoured and exposed by a ploughing episode (causing the ‘slump’) which lie above them. The ploughed soil system had scrambled the upper mound make-up and the ultimate quarry ditch fill, and had scuffed or truncated the subsoil that separated them. All quadrants told the same story, though in most cases the edges were also obscured and scrambled by tunnelling rabbits, which were especially fond of the primary mound make-up.

The quarry pit fills showed a three-part ‘sandwich’ similar to that already encountered in the pits around Mound 5. The upper fill was a smooth, relatively stone-free, pale pinky-grey sand (e.g. 1001 in F3 and 1087 in F64; Figure 36). This was dished onto a stratigraphically earlier layer of dark-brown soil that showed as a thin band in section (e.g. 1005 in F3 and 1006 in F1). This layer also showed edge-on around the perimeters of the quarries where they had been truncated.

The primary fills of the quarry pits included concreted subsoil (1188 in F64), crag (1087 in F64 and 1203 in F114) and clean, washed sand (1213 in F114 and 1211 in F59), as well as mixed brown or mixed sandy soil (Table 17).

#### *The stratigraphic order of the building of Mounds 6 and 7*

Careful study and tentative and conflicting observations resulted in no conclusive stratigraphic distinction between the quarries of Mound 6 and those of Mound 7 (see FR 5/7.114321) and their plan suggests that the builders of Mounds 6 and 7 were aware of each other, if not actually contemporary. The geography of the quarries suggested that Mound 7 followed Mound 6.

There was, however, more direct stratigraphic evidence that Mound 6 quarries were cut through the primary fills of Mound 5 quarries. On the west side (Figure 28), a Mound 6 quarry (Ints 41/F437, 44/F411 and 48/F3) had cut a Mound 5 quarry (Ints 41/F560 and 48/F4; see FR 4/3.944). On the east side a quarry pit attributed to Mound 6 (Int. 50/F2) had probably cut a quarry

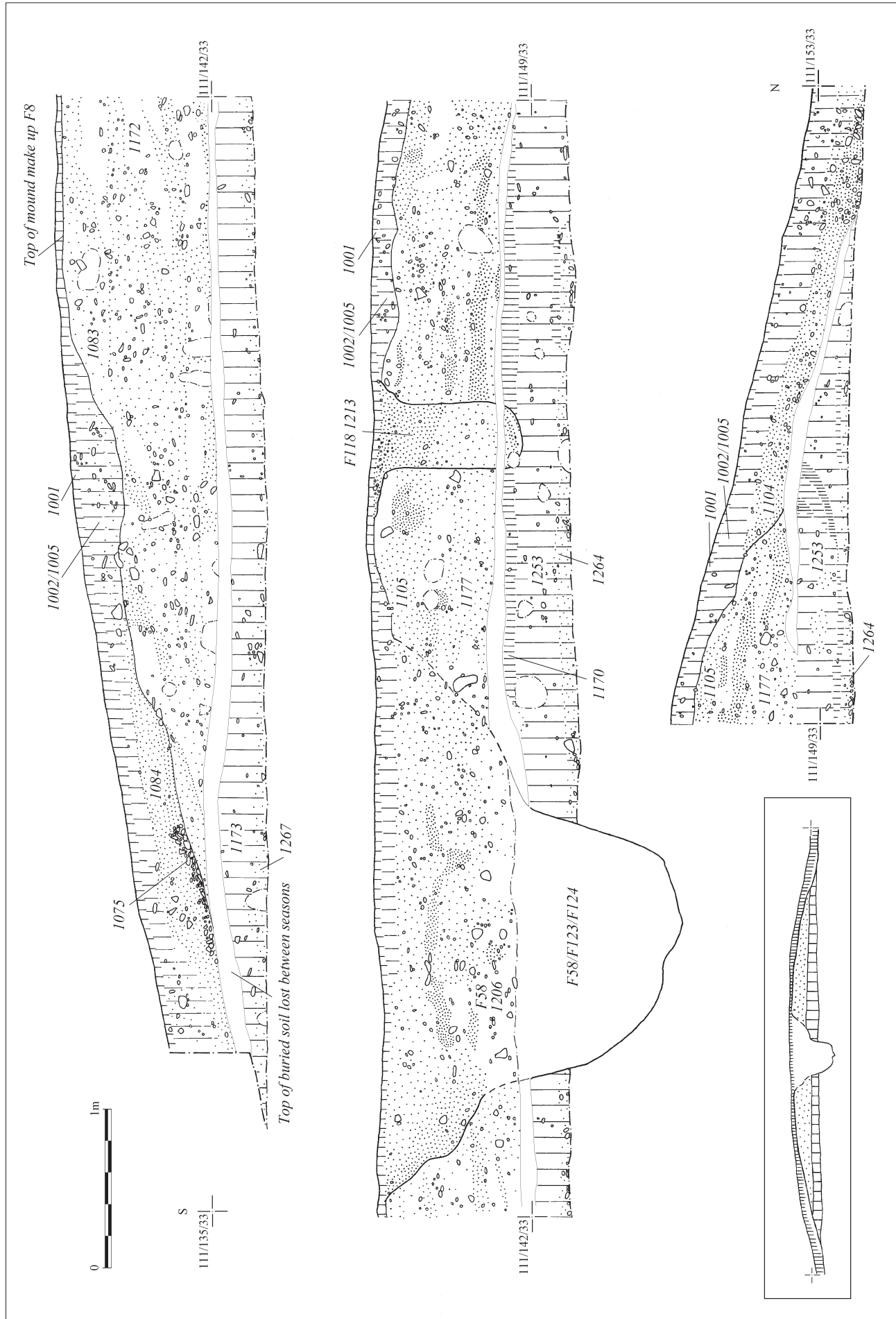


Figure 36 Section north-south through Mound 6 and the buried soil beneath it, and summary of the stratification (inset).

pit attributed to Mound 5 (Int. 50/F30), but the observation was not explicit (FR 7/7.5)

On this basis, the suggested order of construction is Mound 5, 6 and then 7 (see Chapter 8, p. 307).

### **A history of Mound 6, argued from the investigations**

#### *Before Mound 6*

The surface of the buried soil encountered under Mound 6 was not flat, but slightly undulating. There were patches of yellow subsoil, which were scored across by animal burrows. Animal activity into and under the mound had disturbed about 80 per cent of the buried soil, and the expected splash of subsoil upcast from the burial pit was nowhere defined. The total depth of buried soil under Mound 6 varied between 300 and 400 mm. There were no plough-marks seen, at any horizon. Horizon 5 (which was clear beneath Mounds 2 and 5) was not defined beneath Mound 6. It seems that the buried soil beneath Mound 6 had not been cultivated, or at least not sufficiently recently to have preserved visible plough-marks. On the other hand, the upper level of the buried soil sequence was, in places, capped with a possible turf-line: the best recorded examples being at GR III 149 at 33.10 m AOD and GR III 1455 at 33.30 m AOD. There was also a turfy deposit sighted on the north side of the mound, beyond 143N, where it was given the context number 1170 (see below).

Like Mounds 5 and 17, Mound 6 lay over the line of an Iron Age enclosure, S22. It is argued in Chapter 11 (p. 457) that this would have been visible as a low earthwork in the seventh century, but that the mound builders began by levelling it. There was no evidence in the disturbed surface of the buried soil or in the mound make-up that such an earthwork still existed.

#### *The burial pit*

The supposed remains of the original burial pit (F124) were defined at Stage 10 as a small subrectangular stain (Figure 35). Within it, 1231 was identified as *in situ* subsoil separating two shallow scoops containing fills 1229 (west) and 1230 (east). The eastern hollow was deeper and more convincing as the original cremation pit. There was no evidence for any surviving fill from the cremation – no organic or metallic stains, no variation in the texture or nature of the backfill, and no diagnostic finds. The finds from the robber trench, which consisted largely of fragments of copper-alloy container, textile and cremated bone, suggested that the original form of the burial had been a cremation placed in a copper-alloy bowl, with cloth used to wrap the ashes or to cover the bowl.

### **The assemblage**

#### *Artefacts*

A. C. Evans reports on the artefacts in detail in Chapter 7 (pp. 205 and 207–8) and Figure 96. A mass of copper-alloy fragments found represents a bowl (2), most probably that in which the cremated bone was originally placed. Apart from remains of textile (4) surviving in association with the bowl, and the tip of a copper-alloy pin (1), all the finds are of burnt or unburnt bone, including gaming-pieces (6a), part of a gaming counter (6b), part of at least two combs (5) and some decorated bone facings, probably from a casket (5d) and a bone rod (?) or wand (7). The single copper-alloy, garnet and glass pyramidal strap mount (3), from a sword suspension system, found in

metal detecting the surface of Mound 6 (see above), if accepted as probably originally from the same assemblage, suggests that this cremation was of equal status to its companion cremation burials under mounds. Evans concludes that the artefacts suggest a male burial of early seventh century date.

#### *Human bone*

F. Lee reports on the human cremated bone in Chapter 7 (pp. 271–3). She comments that a single adult of unknown sex was buried in Mound 6 with a significant amount of cremated animal bone. The body was by no means complete. Indeed, only a very small proportion of human body could be positively identified. However, given the disturbance and robbing of the burial and mound, this is not surprising.

#### *Animal bone*

The bone identified from Mound 6 included large ungulate, sheep, pig, and modern (uncremated) rabbit. For a detailed report by J. Bond, see Chapter 7 (pp. 275–80).

### **The construction of the mound (FR 5/714)**

In section, the buried soil appears to rise towards the edges of the mound platform to form a bank or ‘collar’ (1170). This might represent the first turfs stripped from the quarries (or from the putative earthwork of the Iron Age enclosure, S22), stacked in a ring to form a marking-out bank; or it may be that the mound platform was stripped of turf, except at the edges where it was left high. A sharp interface, noted between 1170 and the buried soil below it (1253), suggests that here at least the turf was face down, and had been stacked, supporting the notion of a turf marking-out bank.

#### *Evidence from the context descriptions for the construction of the mound*

Against the buried-soil platform, the make-up was dark-brown, silty sand, which was difficult to distinguish from buried soil. Upcast from a burial pit was not discerned among the splashes of sand upcast by rabbits. The mound make-up was in general a very even mix of buried soil and subsoil, without definable variation either horizontally or vertically. The mound was everywhere capped with 200 mm of dark earth, carrying the present turf. The key to distinguishing the real surface of the make-up from the scrambled soils that lay above it was the ‘stone-roll’ (1075, Figure 37 and Plate 15), which marks the foot of a freshly constructed mound.

The mound builders encountered some earlier cultural material in their excavations of the buried soil in the area of the quarries, and included it in the mound make-up. A Roman fibula (3219) was recovered from mound make-up layer 1177 (Quadrant F). The same context contained a dense concentration of burnt flint. This deposit was within a metre of the robber trench, where a concentration of burnt flint was also recovered.

#### *Evidence from the sections*

The sections across Mound 6 show a remarkably random composition, without any obvious correlation with the subsoil of the adjacent quarry pits; they were not suggestive of an ordered loading. In the north–south section through the mound (Figure 37), the make-up consisted of interleaved re-deposited

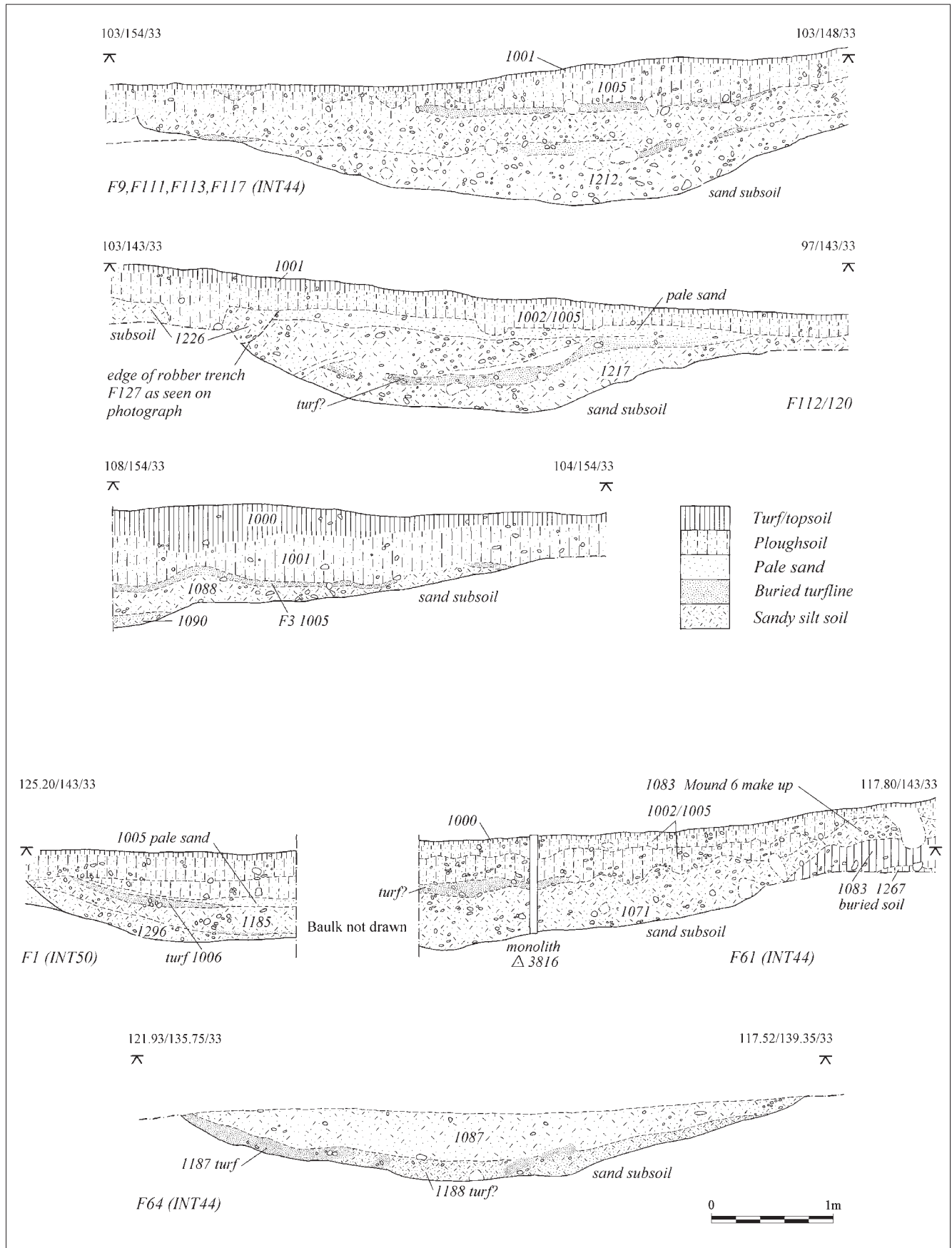
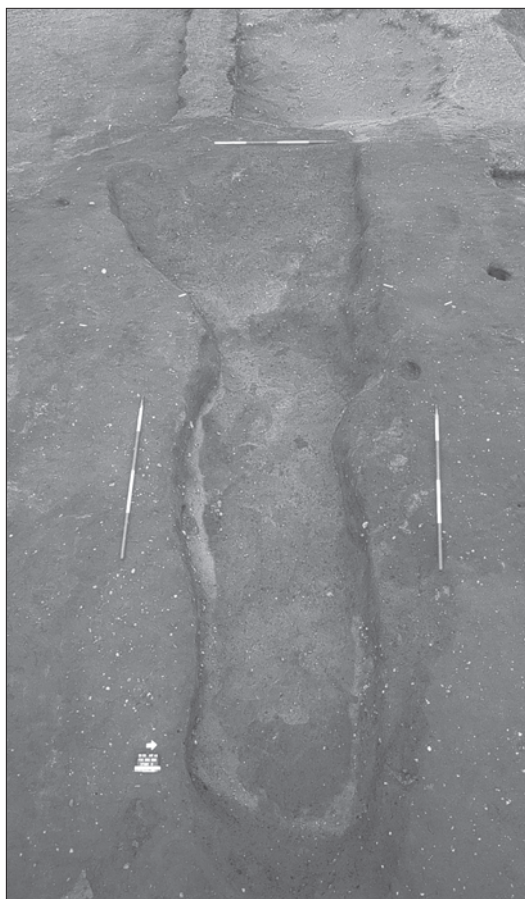


Figure 37 Sections through the Mound 6 quarry ditches.



**Plate 23** Mound 6: (a) the robber trench defined; (b) robber trench excavated, showing the nineteenth-century barrow run; (c) east–west section showing the robber trench (left) cutting the back-filled quarry ditch.

ploughsoil and subsoil, lying on the buried-soil platform. No relict turfs were visible.

#### *The Mound 6 quarries*

The quarries were dug in four main groups of excavated scoops, which created untidy arcs broadly embracing the mound (Figure 34, Table 17). The broadest systems lay in the north-west and south-east, with the other two being smaller, though deeper. The quarry systems for Mounds 5, 6 and 7 appear to relate to each other in an interesting way. On the one hand, they are distinct, and it is relatively uncontroversial which quarries were intended to build which mound. On the other hand, the builders of each mound appear to have been aware of the one adjacent to them: to the north of Mound 6, there were gaps in the quarries for both Mounds 5 and 6; while to the south of Mound 6, there were gaps in the quarries for both Mounds 6 and 7. The stratigraphic indications (such as they are) suggested that Mound 5 was built before Mound 6, which was built before Mound 7 (see above).

The Mound 6 builders seemed to be aware of a present or future Mound 7, since there is no deep quarry between them (unlike the area south of Mound 7, where the quarry ditch is continuous), but it may be that this impression is deceptive. The shallow pit F119 may have been a quarry for Mound 6 or 7, and the buried soil between the mounds might have been subject to shallow quarrying for one or the other mound. Any evidence was subsequently removed by ploughing.

There was another indication, from the morphology of their quarries, that, assuming they were not contemporary, Mound 7 could have followed Mound 6: F76/121, on the west side of Mound 7, has a flattened terminal, which appears to avoid the (therefore pre-existing) western quarry pit of Mound 6, F120.

The quarries for Mounds 5, 6 and 7 largely avoided each other. There is, however, tentative evidence that Mound 6 quarries came after Mound 5; and even more tentative, that Mound 7 followed Mound 6. The conclusion is that either Mounds 5, 6 and 7 were contemporary and their builders mutually aware; or that they were built in a planned sequence in the order of Mound 5, 6 then 7.

#### *The size of the mound*

The diameter of the mound was measured at 15 m, and its original height, computed from the capacity of the quarry ditch, was estimated as between 1.73 and 2.42 m (see Table 92).

#### *Conclusion*

Turf stripped from the area was stacked in a ring at the edge of the mound platform, as a marking-out bank. Soil and subsoil was then loaded within the bank in a random manner. A good deal more soil was generated than was needed, so the quarried soil was presumably loaded into baskets and placed under direction. The surplus was trodden in or returned to the pits. Stones rolled down the sides of the mound as it relaxed into its stable conformation. At this point it rose about 2 m above the contemporary ground surface.

#### **The aftermath (FR 5/7.15)**

##### *The back-filling of the quarries (FR 5/7.1432)*

The sections across the quarry ditches (Figure 36) show a similar sequence of deposits to that in the Mound 5 quarry pits: a

primary layer of mixed soil is capped by a turf line and then buried by a pale 'heath' sand. The primary filling (see Table 17) showed no intervening turf line on the base of the quarry pit. This first deposit seems to be most easily explained as quarried buried soil and subsoil returned to, or left in, the ditches as surplus to requirements (see Mound 5, above).

The thin band of dark soil on top of the primary fill is interpreted as a layer of turf grown *in situ*. Medieval pottery, dated to the late twelfth century (see Chapter 12, p. 461), was found on this turf layer in the north-east quarry pit, F59, and a young bull was buried in the same pit (see below).

As with Mound 5, the upper fill of the quarries, a pale sand, is interpreted as having been introduced by ploughing (see above).

Micromorphological analysis was carried out on a column taken at Station 5 on the section across F61, in the south-east quarry. This was unable to distinguish the layers, but showed that the pits contained a re-deposited podzol, which included relics of a brown forest soil. It was essentially a re-deposited version of the soils found beneath the mound (p. 385). From this it can be concluded that the soils the mound builders encountered and quarried were essentially the same as those captured beneath the mounds. Apart from stripped turf, there is no missing fraction that could have been removed from the surface and stored before mound-building.

The section drawings also suggest that the back-filled robber trench had been ploughed, and there were contexts on the slope of the mound (1002/5) which look like cultivated soil. The 'slump' layer is also likely to have been generated by ploughing, both on the grounds that it is widespread and because it is slumping down the mounds, thickening towards the downslope.

#### *Burials in the quarry pits and around the mound*

There were two human burials in or beside the Mound 6 quarry pits. Burial 52 was situated in the centre of the north-east causeway, where it was discovered under slumping from Mound 6. Burial 55 was found in the north-east quarry (F59, Int. 50/F2). Both these incidents are deemed to be focused on, and related to, Mound 5, although the burials in the north-east quarry, at least, took place after Mound 6 had been built (see above).

A young bull (see Chapter 12, p. 461), was buried in the same quarry pit as Burial 55 (F2). No cut for the grave was seen during the excavation of the quarry pit, but a section (fortuitously placed) suggested that the pit containing the bull cut the pale sand (1007). If this is so (and it was not a clear stratigraphic relationship), then the bull was buried after the ploughing of the mound. Bones from the animal gave a calibrated radiocarbon date centred on about 1650 (see Chapter 3, Table 9).

#### *The robbing of Mound 6 (FR 5/7.153)*

The Mound 6 robber trench, as finally excavated, was about 16 m long. The robbers' trench had begun within the south-west quarry. The cut was never strikingly clear, but the interpretation of the section (Figure 37) suggests that quarry F112 had already been back-filled with podzolized soil, through ploughing, when the robbers initiated their operation – searching for the correct level in the soil with a 'pilot pit' (F127). Having found the surface of the subsoil, they followed it to the burial pit, at a level



**Figure 38** Mound 6, day of burial: placing the bowl (Victor Ambrus).

beginning well below (and continuing a little below) the bottom of the buried soil.

The trench was driven into the mound from the west side, then across through the mound make-up and buried soil, and ended on the east side a few metres past the mound centre. At the west end was a splayed entrance/exit, its maximum width (at the west end) being 4 m, or greater, and tapering to a width of 1.50 m, which was maintained for the main passage of the trench.

The trench butt-ended to the east, where there was a narrow platform or step, which overlooked F124 (the remains of the burial pit). The distribution of discarded fragments suggests that the robber's finds were leaving by way of an eastern entrance (Figure 35). The platform/step (I220 in Quadrant G) was composed of re-deposited buried soil, and is interpreted as a ledge on which a person stood to oversee the burial pit. Behind (to the east of) this 'stance' the trench rose in a series of ledges, giving the impression that the east end of

the trench had provided an entrance, and was perhaps the route down for a gentleman antiquary. Conversely, on the west side, the splayed exit suggests the coming and going of labourers with wheelbarrows. This antiquarian scenario was still more graphically documented in Mound 7 (below). The finding of two ship-rivets (Figure 34), one west of Mound 6 and the other south of Mound 7, suggests that these mounds were robbed at the same time as the robbed ship-burial in Mound 2.

The trench was first back-filled with the mixture 1228, which together with 1216, a little higher up, contained most of the Early Medieval finds. These are likely to be layers trodden in by the robbers. Both 1228 and 1216 were central to the trench; 1216 was almost pure subsoil, with a few pieces of buried soil, and was probably derived from the scouring of the burial chamber. The upper fills (1067, 1072, 1102 and 1206) were thought to be turfs, presumably cut and back-filled during the robbing episode. This suggests that the robbing was of a turfed-over mound, and not of one that was then under the plough.

In its latest use, at least, a track (Track 1) appears to run over the ultimate backfill of the quarry ditches of Mounds 7 and 13. The track therefore post-dates the ploughing and, from the argument above, the ploughsoil that filled quarry F112 pre-dates the robber trench F58. On map evidence (see Chapter 12, pp. 466–7), Track 1 had appeared by 1601. These indications suggest that the ploughing which filled the quarries took place before 1601, and that the cutting of the robber trench took place after that. There is no independent dating for the robber trench, but in style it resembles the trenches cut through Mound 7 and in the second robbing of Mound 2, which is argued as dating to around 1860 (see Chapter 6, p. 153). Mounds 2 and 5 had been subjected to an earlier robbing campaign that involved vertical shafts, and is dated to the late sixteenth century (see Chapter 12, p. 462). There was no direct evidence for this sixteenth century campaign in Mound 6, but it seems probable that here too the nineteenth-century trench had been preceded by a robber shaft. Indeed, this may be the main agency responsible for the central depression interpreted as the relict burial pit.

### **Model**

Before the Mound 6 burial was enacted, the ground was pasture in which the shallow earthworks of the Iron Age enclosure S22 still showed. Its bank was levelled and turf was stripped from the bank, or the area of the mound or from the quarry areas adjacent, was stacked, and some used to build a marker-bank.

A shallow pit was dug, not more than 1.20 m below the Anglo-Saxon ground surface, and a cremation in a copper-alloy container associated with cloth was placed in the pit (Figure 38). It included a comb, gaming-pieces and a sword pyramid. A number of animals was also placed on the funeral pyre, including sheep, pig, and possibly horse.

A mound, 15 m across, was marked out, and the quarried turf, soil and subsoil loaded onto the mound platform from quarries to the east and west (in a random manner). After the mound had reached a stable maximum height, at about 2 m, the excess soil was returned, as a mixture, to the open quarry pits. After this had grassed over, human burials were placed in graves cut through the turf to the east and north of Mound 6. These are probably to be associated with those placed around Mound 5 (eighth to eleventh century).

Between the late twelfth century and 1601, the mound was reduced by ploughing and the quarry pits were back-filled. The mound and filled-in pits then grassed over again. A young bull was buried on the site of a quarry pit around 1650. A first robbing by means of a central shaft may have taken place in the sixteenth or seventeenth century – in line with the intrusions at Mounds 1, 2 and others – but there is no direct evidence for this campaign at Mound 6.

Robbing was, however, graphically indicated by a trench cut into the mound from the west. The operation began with a pilot trench or a trial pit, which cut into the side of the back-filled north-west quarry pit, and followed the surface of the subsoil until the burial pit (or the earlier robber pit) was seen. The western end of the trench was used by labourers to cart out the soil. The eastern end of the trench was used by the ‘gentleman antiquary’, who entered from the summit via a series of steps, discarding unwanted fragments in a trail. If this was the second robbing, then little would have been found. This trench should belong to the campaign of the mid nineteenth century. It was followed by further ploughing, east–west.

### **Mound 7: cremation in a copper-alloy bowl (FR 5i/7.2)**

Written by Martin Carver from excavation records by A. C. Evans and H. Geake.

#### **Summary**

Mound 7 was a cremation burial that had been thoroughly robbed by means of an east–west trench. The robber trench was excavated, and what remained of the burial was carefully retrieved (Plate 24). Finds were limited to fragments of textile, cremated human and animal bone, some fragments of burnt bone objects and a ‘reticella’ glass bead. The mound itself and the buried soil beneath it were left unexcavated.

#### **Description of the investigations (FR 5/7.21)**

##### *Strategy*

Mound 7 was one of the most prominent mounds in 1983, with a diameter of 30 m (Figure 5). It carried an east–west depression in the top of the mound, of a type attributed by previous students of Sutton Hoo to a collapsed chamber or the collapsed deck of a ship, and termed a ‘ship-dent’ (SHSB I: 318). In the event, the observed feature proved to be the remains of a previously unrecorded excavation trench (the ‘robber trench’).

The modern investigation of Mound 7 began in 1989. The results from the excavations of Mounds 2, 5 and 6, already completed by this time, were so consistent with each other and with what was known about Mound 1, that it was felt that there were insufficient additional research questions about the mound and the buried soil to justify the total removal of Mound 7. The excavation of Mound 7 therefore consisted of the dissection of a single feature, the intrusion seen on the mound surface (F63; Plate 23). This revealed the form and layout of a nineteenth-century excavation in some detail and gave signs of another expedition. The earlier excavators had found and emptied the burial pit, and thoroughly examined the soil – probably with the use of sieves – leaving very little for us. Even so, it proved possible to say something about the original burial rite.

Mound 7 was denuded of turf with a turf-stripping machine, and then defined in quadrants at Horizons 1, 2 and 3. The balk sections were drawn, and the balks removed. The robber trench





**Plate 24** Mound 7: (a) the robber trench defined; (b) the robbed cremation pit.

and chamber were then totally excavated against Horizon 3. After excavation, the mound was restored to its 1983 profile.

#### *Excavation of the robber trench*

The intrusion into Mound 7 was resolved into five main components (Figure 39 and Figure 40):

- 1 an access trench, which led into the mound from the east (F63)
- 2 the lower part of this trench as it descended towards the burial pit (F131)
- 3 the widened and scoured burial pit (F211)
- 4 the possible remains of the original burial pit (F212)
- 5 the small deposit of burnt bone abandoned by the excavators on the floor of the pit (F221)

The robber trench (F63) was seen at Horizon 2, defined at Horizon 3, and excavated without further disturbance to the mound. It was excavated in two main campaigns. In 1990, the entrance trench (F63) was excavated in seven stages (1.1–1.7). In 1991, the lower part of the entrance trench (F131) was excavated in five stages (2.1–2.5), and the ransacked burial pit (F211) was then excavated in nine further stages (3.1–3.9).

#### *The excavation of F63, the entrance trench*

Stage 1.1: The robber trench F63 was defined (Horizon 3) and planned. In addition to the main trench, a narrow depression was defined to the east (1238) and was interpreted as an ancient wheelbarrow run.



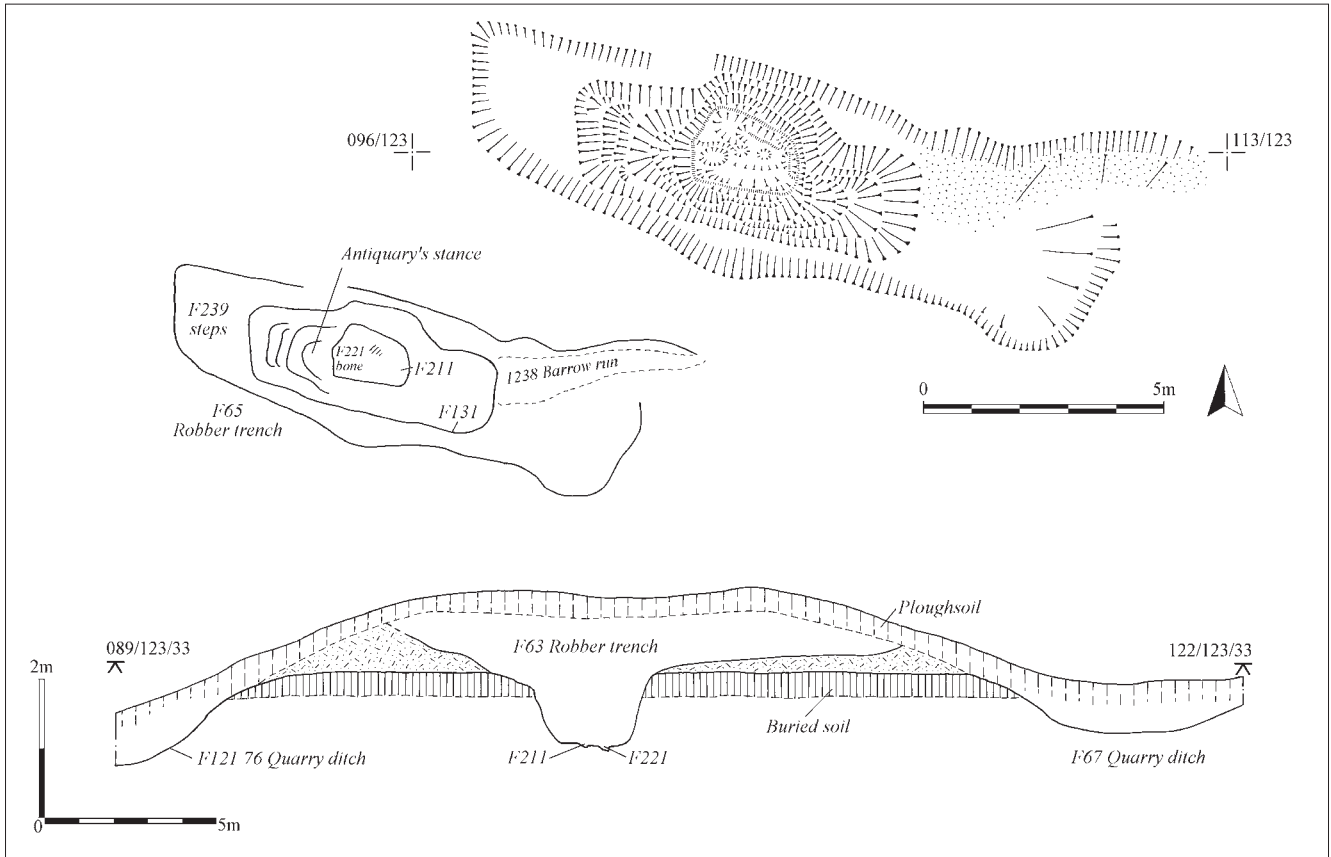


Figure 39 Mound 7: the robber trench, with steps and 'antiquary's stance', and the remains of the central burial pit (plan and profile).

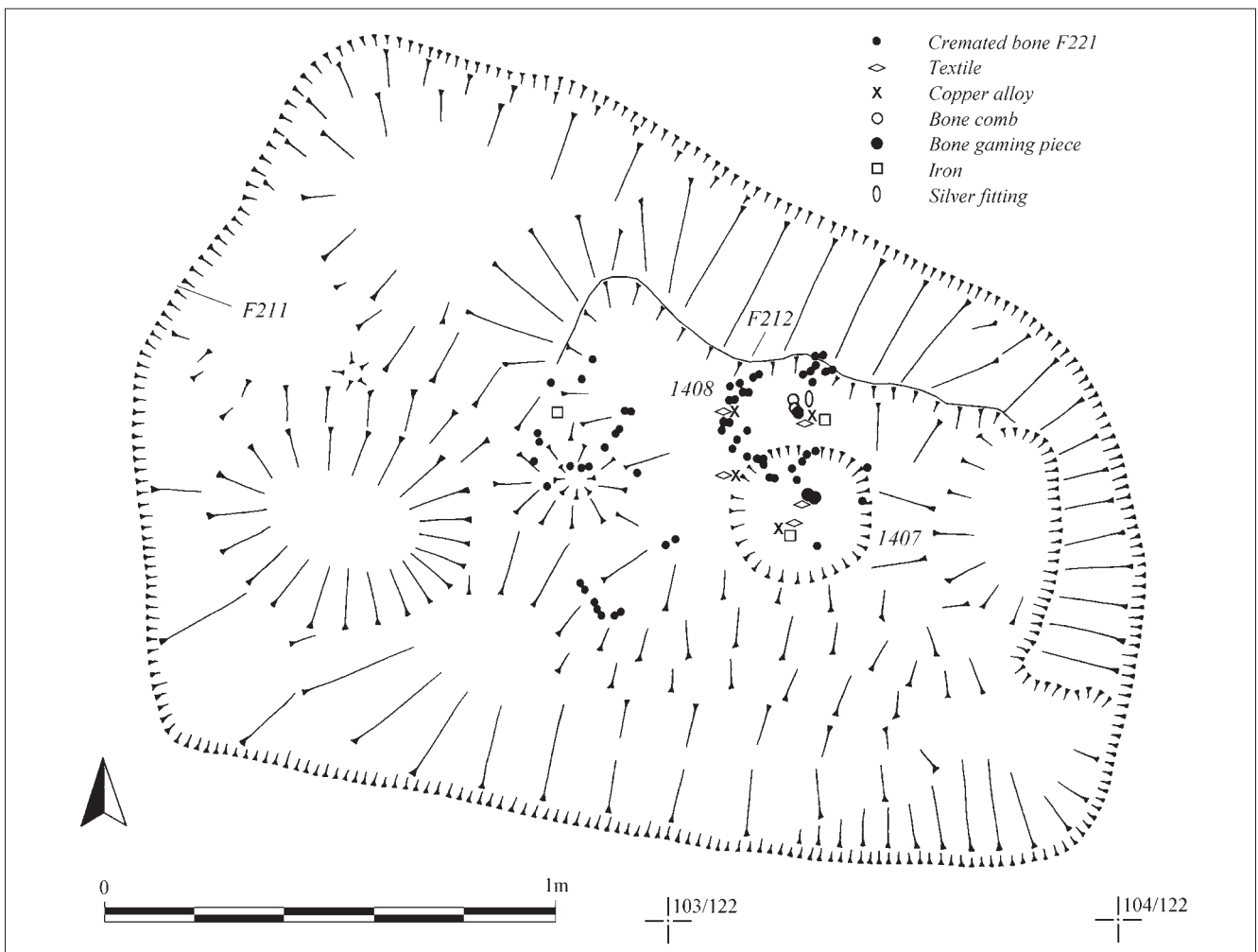


Figure 40 Mound 7: the burial pit.

Stage 1.2: The deposit on the south side (1235) of the section line was lowered at Recovery Level B in 2 m squares. The buried soil (1256) became visible in the side of the robber trench. It was found that the edge of the robber trench against the buried soil was hard to locate, but easier when done at speed at arm's length with a shovel (i.e. at Recovery Level B) than slowly with a trowel, when the excavator had to rely on memory to detect minute changes.

Stage 1.4: The fill removed was 1252.

Stage 1.5: The fill removed was 1254, the continuation of 1252.

At this point the 1990 season ended, and the feature was wrapped for the winter. During the winter of 1990/1, vandals attempted a half-hearted entry to the trench, but little damage was done.

Stage 1.6: In 1991 the lowering of the fill of F63 was continued, now at Recovery Level D.

Stage 1.7: The access trench, F63, was declared complete.

#### *The excavation of F131*

The downward continuation of the feature was numbered F131, and was dug in five stages. The first three stages of excavation were essentially of horizontal spits which, with hindsight, were taken through a single system of three episodes. In order, these were:

- back-filling (1279 at Stage 2.1, 1301 at Stage 2.2 and 1362 at Stage 2.3)
- weathering (1278, 1281 and 1282 at Stage 2.1; 1302–4 at Stage 2.2; 1359 at Stage 2.3)
- collapse (1280 at Stages 2.1, 2.2 and 2.3)

At Stage 2.3, robber steps (F239) at the west end began to show clearly.

At Stage 2.5, sandwiched buried soil and subsoil appeared along the edges of the trench. Context 1376 was identified as a possible deposit of buried soil, thrown in during back-filling.

#### *The excavation of F211*

The downward continuation of the feature had now shrunk into a subsquare shape; this was numbered F211. It was 2.2 × 1.5 × 1.0 m deep, as defined in the floor of F131.

At Stage 3.1, three types of deposit were identified:

- 1379 was 'trample'
- 1387 was backfill that had included turfs
- 1389 was a segment representing the collapsed wall of the pit: buried soil and mound make-up had stayed in formation

At Stage 3.2, the same three episodes were repeated, accompanied by some variants:

- 1380, 1383: 'trample'
- 1387, 1388: backfill
- 1389: collapse

At Stages 3.3–3.5 these contexts were removed. By Stage 3.6, almost all the fill had been removed, and the sand subsoil was clean apart from patches of fill in a few shallow scoops and at the edges of the pit. Among these patches, contexts interpreted

as trample (1397 and 1398) and containing relatively dense concentrations of cremated bone were removed at Stage 3.7.

At Stage 3.8, beneath 1397 and 1398, a few object stances were recognized. One stance, F221, lying just north of the centre of F211, contained a mass of cremated bone (1399). It was rectangular and c.24 cm deep (31.79–31.55 m AOD). It contained a crescent of burnt bone (1408) and a circular depression (1407). A slight break of slope, which seemed to form a rectilinear area embracing the cremated bone fragments, was tentatively identified as the locus of the original burial pit F212 (Figure 40).

The finds from the fill of these contexts (1399, 1407 and 1408) were removed in parcels. This method was adopted in order to recover the high density of minute bone-fragments scattered through the fill. Two fragments of bronze (15487 and 16571) were also retrieved.

At Stage 3.9, a final photograph was taken, and at an additional Stage 3.10, recording the hachure plan of the excavated feature, was also carried out.

#### **Finds recovery (FR 5/7.23)**

All the fill of the robber trench was sieved, and all the Early Medieval finds recovered by other means were plotted to the nearest 10 mm. The fact that there were so few Early Medieval finds at first provoked a misplaced optimism that the burial had not been disturbed, and we kept the excavation at a painstaking level (i.e. Level E) for some time after any reasonable expectation of an intact burial should have vanished. The eventual assemblage consisted of a small heap of abandoned cremation deposit found on the floor of the pit (F221).

The reticella bead (1547; listed as 6 in Chapter 7, pp. 208–10 and Figure 97; located on Figure 34) was found on 7 September 1988, while removing the slump on top of the join of Mound 7 and its quarry ditch in Quadrant J (grid 099.07/132.52 at 31.78 m AOD). The context of the find (1120) is consistent with its being in robber spoil deposited on Mound 7, which was subsequently ploughed and then disturbed by animal burrows. However, two ship-rivets (559 and 1297; located on Figure 34) were also found in the neighbourhood of Mound 7, which suggests that the Mound 7 robber party was related to that of Mound 2 (see Chapter 6, p. 171). The displacement of these rivets raises questions about the original context of the reticella bead; it is not inevitably a find which has strayed from Mound 7 (see Chapter 12, p. 465).

#### **The excavation of the quarries**

The Mound 7 quarries lay to the east, west and south of the mound. Their definition, fills and relationship to those of Mound 6 are discussed under Mound 6, above.

#### **A history of Mound 7, argued from the investigation (FR 5/7.22)**

##### *The burial deposit*

The presence of burnt bone suggests a cremation, and it is apparent that the burial pit was not large enough to have contained a coffin. It is probable that the original burial was a cremation placed in a bronze bowl and associated with a cloth, as in Mounds 5 and 6. But the evidence had been almost wholly removed. The 'crescent of bone' (1408) gave the distinct impression of having been tipped from a rapidly upturned bowl, which had perhaps sat originally in the depression, 1407. Both the crescent and the depression measured about 250 mm across.

*The assemblage*

The artefacts are described and discussed by Angela Evans in Chapter 7, pp. 208–10, Figure 97. The fragmentary remains provided evidence for a shallow copper-alloy bowl (1), probably used to contain the cremation, and evidence of textile (5), possibly a cloth, which covered the bowl. A fragment of burnt, decorated silver foil (2), suggests a drinking vessel. Heavier copper-alloy fragments may come from a bronze lugged cauldron (3), while an iron strip may be from an iron-bound bucket (4), and there is evidence for a bone casket (8). Copper-alloy pin fragments (9) may be from a brooch. Finally, there are fragments of bone gaming counters (7), the biconical reticella glass bead (6) and the tip of a knife (10).

Although the bead and pin fragments might suggest this is a female burial, the bead could be a sword bead and the other finds (e.g. gaming counters) would be more at home in a male grave. The bead is not securely associated with the Mound 7 burial (see above). The artefacts cannot be closely dated, but belong to the late sixth or early seventh century (see Chapter 7, p. 209).

*The cremated bone*

The cremated bone from Mound 7 (see Chapter 7, p. 276) was predominantly animal, with a handful of fragments from a human individual (see Chapter 7, p. 273). The animals identified were horse (both cremated and unburnt), cattle, sheep or goat, pig, red deer and (modern, unburnt) rabbit. The human fragments were from the robber trench, and consisted of remains of the lower arm and lower leg of a single adult of unknown sex. None of the cremated bone in the small deposit found in the original burial cavity contained any identifiable human remains.

*The construction of the mound (FR 5/7.24)*

Mound 7 was not removed, and so the buried soil was only seen in section within the robber trench and at the edges of the mound. There is no reason to suspect that the situation under Mound 7 is radically different to that under Mound 6. The height of the buried soil under Mound 7 at the edge of the robber trench was recorded as 32.85 m. Around the perimeter it varied from 32.48 to 33.00 m AOD. These figures are consistent with a natural slope down towards the west, as was reflected in the height of the subsoil beneath. On the south side, from Quadrants P to N, the base of the buried soil slopes naturally from 32.60 m (east) to 32.00 m (west). The surface of the buried soil follows a similar locus, apart from some rogue points, giving a general thickness of 400 mm, with surfaces at 33.00 m AOD (east) and 32.40 m (west).

On the north side, from Quadrants L to J, the base slopes from 32.60 m (east) to 32.50 m (west). The surface follows a similar slope: 33.00 m (east) to 32.70 m (west). The thickness is thus 400 mm over most of K, thinning to 200 mm in J. We could deduce that some soil had been taken from around quadrant J6; otherwise the mound is simply built on a slope going downwards from east to west.

*Digging the quarries*

The quarries spatially associated with Mound 7 formed a single penannular ditch that embraced the mound to the east (F67), west (F76/121) and south (F79/231). To the north, or more properly the north-east, a causeway between Mound 7 and Mound 6 was reserved and not quarried, or at least not deeply.

This could be conceived of as the result of a single quarrying operation, in which soil and subsoil were removed along the length of the ditch. There were depressions at intervals, which showed where extraction had descended to different depths, but there were few cuts visible and no strong reason for seeing the ditch as a chain of pits. The ditch was probably begun along the edge of a marked-out mound, and quarried outwards, the slope down the inner edge (cut through the buried soil) being much steeper and longer than that of the outer edge.

It was suggested that – where the outer edge of the ditch was recorded as some 0.50 m lower than the inner edge and had obviously been subjected to severe subsoil erosion – the quarrying had continued into the buried soil and subsoil beyond the ditch. The track that cut into the back-filled quarry ditch would also account for some of this erosion.

The *composition of the mound* (FR 5/7.243) was recorded by observing the distribution of material at Horizon 3. Twenty-three separate contexts were defined on the surface, of which five referred to the buried soil seen at intervals in sections around the skirt of the mound. The remaining contexts were mixtures of buried soil and subsoil, with no detectable pattern. These suggest a mound that had been composed by random loading from the adjacent quarries, as at Mound 6.

Estimation of the *original size* of Mound 7 depends on calculations from partial data. The mound was not excavated, and the quarries were not wholly contained in the excavated area. The buried-soil platform suggested a mound diameter of 20 m, and the quarry-capacity indicates a height of 1.87–2.55 m (p. 370, Table 92).

**Aftermath***The back-filling sequence in the quarries*

Table 17 summarizes the recorded sequences of backfills as single contexts, and as sections for selected quarries associated with Mound 7. The compositions and Munsell colours were not diagnostic, but the defined context sequences seen in section told a consistent story. On the south side, along KO, the quarry ditch was back-filled rapidly with mixed sandy soil on which turf grew. The turf was subsequently covered with a pale, silvery sand. This sequence was echoed to the east at LM. On the west side, the recorded sequence at J is pale sand under ploughsoil.

The assumption drawn from this information is that surplus soil was back-filled mainly into the eastern and southern parts of the quarry. This backfill became turfed over and was subsequently covered with a pale, silvery grey podzolic sand, which had arrived through ploughing.

A first ploughing was presumably responsible for the reduction of the mound at the same time as the quarries were refilled. This event had occurred before 1601, as *Track 1*, which crossed the infilled quarry of Mound 7 on its east side, was marked on a map of that date (see below). The position of the reticella bead suggests that the robbing operation, which had deposited the bead, was later than the first ploughing.

Parallel grooves from a track crossed the filled-in quarry ditch of Mound 7 to the south-east, so this track post-dates the back-filling of the quarry ditch by ploughing. This track, *Track 1* (see Chapter 12, pp. 466–7), was in use before 1601 and out of use by 1836, implying that Mound 7 was first ploughed in the sixteenth century or earlier.

*The robbing of Mound 7*

## THE EXCAVATORS' LAYOUT

The robbers entered the mound from ground level on the east side (F63). They must have climbed to the surface of the buried soil, and followed it until they recognized the discoloured fill of the central pit. Since this central pit (F131) was so much larger than the presumed burial pit (F211), the suspicion arises that it (F131) was actually the shaft of an earlier robbing. This echoes the sequence of two robberies defined in Mound 2 (see Chapter 6, p. 171).

On its east side, the robber trench retained the form of a splayed entrance. A ribbon of compacted surface, almost impermeable to water, meandered up the east side of Mound 7 and ran along the north edge of the splay (I238). This seems to have been a path made by the labourers on the excavation as they came and went with spoil. On the west side was a flight of steps and ledges cut into the mound and subsoil, suggesting that this was the antiquary's entrance.

The burial pit had been thoroughly excavated, the only traces left behind being a small heap of cremated bone (about 250 mm in diameter) on the pit floor (apparently upturned from a bowl), a few fragments of burnt bone which found their way into the subsequent back-filled trench, and a reticella bead found on the surface of the mound, where it lay in soil ploughed down the slope.

The early excavators achieved a very high level of finds recovery, suggestive of sieving. The form of the trench and the finding of ship-rivets (559 and 1297) near Mounds 6 and 7, suggest that the robbing of Mound 7 was part of the same nineteenth-century campaign that had opened with Mound 2 (see Chapter 12). The excavation at Mound 7 was more expert and more thorough – or more desperate – than those in Mounds 2 and 6, and it could be that the excavators were developing their techniques on a journey southwards through the mounds. As at Mounds 2 and 5, it seems likely that this nineteenth-century expedition was not the first, and that the proposed campaign of the late sixteenth century had visited Mound 7 too. The cut for F131 might indicate part of the locus of its central shaft.

## THE BACK-FILLING OF THE ROBBER TRENCH

Shortly after the robbers' excavation was complete, and before it was back-filled, the side of the trench collapsed into the burial pit on its north side, carrying down part of the mound and buried soil (I389). The robber pit (F211) was then systematically back-filled and trampled down. The robber trench (F131 and F63) was then filled in, but there is evidence of some weathering during the operation. This implies either an intermittent task, or one that took place in wet weather. The excavation was altogether a more ordered and thorough affair than those of Mounds 2, 5 and 6.

## SECOND PLOUGHING

After robbing, the surface of the mound was ploughed with furrows 1.20 m apart, running east–west, which were defined clearly in section and crossed the back-filled robber trench (FR 5/7.253; p. 373, Plate 52). Ploughing, before and after robbing, is seen as responsible for the spreading of Mounds 6 and 7 by some fifty per cent: the diameter of Mound 6 was 16 m at Horizon 3 (original size) and 25 m at Horizon 0 (modern size). Mound 7

was 20 m in diameter at Horizon 3 (original size) and 30 m at Horizon 0 (modern size). The first (Medieval) ploughing is also deemed to be responsible for filling the quarry ditches (then earthworks). The character of this pink-brown sandy fill suggests that, at the time, the land was a podzol, perhaps even heath, and that the heath was being broken as a deliberate, if short-lived, attempt to create new arable land.

**Model**

A human cremation, most probably placed in a copper-alloy container wrapped in or covered by a cloth, was placed below ground in a subrectangular pit, about a metre down from the Anglo-Saxon ground surface. Certain animals – including horse, cattle, sheep/goat, pig and red deer – had been cremated on the same pyre and the majority of the bone that survived the subsequent robbing was from the animals. The burial party presumably gathered both human and animal bone from the ashes of the pyre and deposited them together.

The burial deposit had also included gaming-pieces, a casket, an iron-bound vessel, further iron and copper-alloy vessels, and a silver-mounted drinking vessel. Less certainly, a reticella bead also belonged to this burial. There were no clues as to the disposition of the remains in the chamber, except that a bowl containing the cremated bone is likely to have stood the right way up, in order for it to have been turned over when emptied and removed by the robbers.

The mound raised over the burial pit was 20 m in diameter and stood about 2 m high. It was constructed from soil and subsoil thrown up from the surrounding quarry ditches.

During the Middle Ages turf grew over the mound and the quarries, which together formed a set of earthworks.

Before 1601, the mound was reduced by ploughing and the quarries refilled, and a track running north–south was established over the former quarry on the east side.

In the nineteenth century an excavation trench was cut across the mound from the east. A compacted path was created in the eastern entrance, which served as access for the removal and return of spoil. At the west end was a flight of steps, which descended through the mound to the burial pit, suggesting that this was the antiquary's entrance (Figure 39).

What was left of the burial was thoroughly excavated: the only traces left behind being a small heap of cremated bone on the pit floor (apparently upturned from the bowl), a few fragments of burnt bone which found their way into the subsequent back-filled trench, and a reticella bead which was lost on the surface of the mound, probably in a spoil heap.

The side of the robber trench collapsed into the north side of the burial pit, and the excavation was then systematically, if partially, back-filled and trampled down.

The mound was then ploughed again, in an east–west direction, across the back-filled robber trench, largely rubbing out the track.

**Mound 18: cremation in a copper-alloy bowl (FR 6/7.2)**

Written by Martin Carver, based on records by A. C. Evans and analysis by M. R. Hummler.

**Summary**

Mound 18 was a cremation burial that had been thoroughly disturbed by robbing and ploughing. The traces that remained

suggested that it was a sixth to seventh century cremation under a mound resembling Mounds 5, 6 or 7, and that like them had been excavated in the sixteenth and/or nineteenth century and then ploughed to near invisibility.

**Description of the investigations (FR 6/3.1)**

*Discovery*

Mound 18 survived as an extremely slight undulation in the turf surface, and was first seen, together with Mound 17, in 1985. On excavation in 1989, the expectation was that the position of the Mound would be defined by a spread of buried soil, and that additional thickening on the west side was due to the lynchet F224, and to the residue of Mound 18 itself. The turf and topsoil were removed by machine to a depth of 150 mm so as to define Horizon 1. At this level, no features were defined in the area of Mound 18. A further thickness, up to 250 mm of ploughsoil, was then removed by machine. The remaining soil was trowelled at Recovery Level C. Buried soil was found to survive from the 092 easting, westwards (Contexts 1027, 1028, 1056, 1058 and 1089). This was then trowelled in 20 mm spits at Level D, eventually to a total depth of about 220 mm. It was while trowelling the buried-soil platform in Quadrant B (1056), that two volunteers, Anna West and Ann Stewardson, started noticing minuscule fragments of cremated bone at a level equivalent to 31.94 m AOD.

*Definition of the burial pit*

At this stage, there was still no clear feature visible to denote the position of a cremation burial. However, after the removal of

another 20 mm deep spit, an oblong feature (F57) oriented west–east was defined. This feature had been disturbed by a series of narrow linear features running north–south (F86–7); some of these were interpreted as mole-runs, while others were certainly plough-marks.

*Excavation of the burial pit*

The oblong feature (F57) supposed to be the remains of the possible burial or robber pit was investigated in four stages. Its final dimensions were 600 (east–west) × 700 (north–south) × 180 mm deep (Figures 41–43).

Stage 1: The plough furrows were excavated and the cremated bone-fragments and scraps of copper-alloy sheet were plotted.

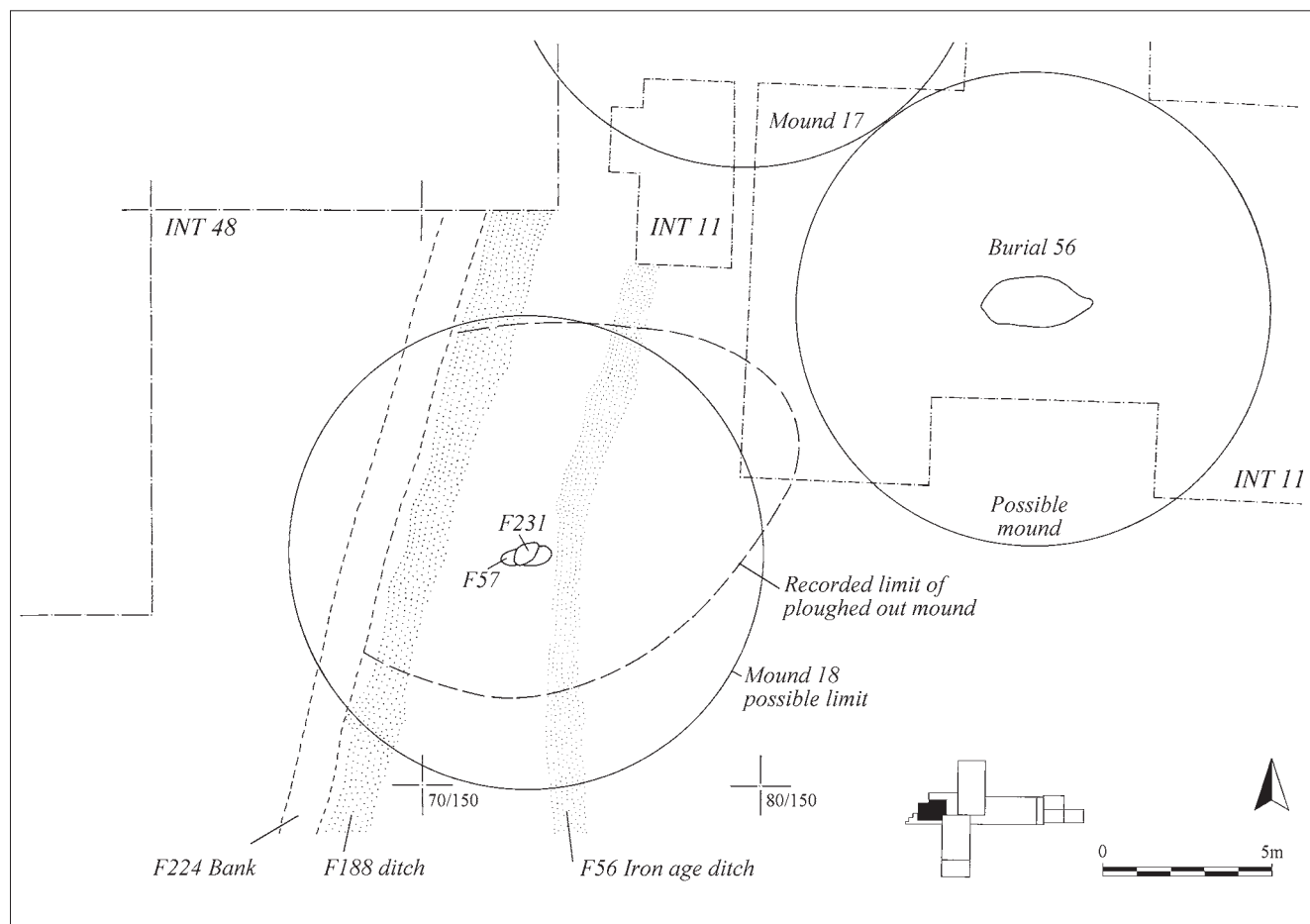
Stage 2: The spread of bone eventually contracted to the subsquare patch designated F231, the possible imprint of the original burial deposit. This was carefully excavated, but nothing significant was found.

Stage 3: The subsoil was carefully examined over an area c.2 m square and to a depth of several centimetres.

Stage 4: The area was sampled at 10 cm intervals, with a view to chemical mapping (an analysis not taken further, as its usefulness was in doubt).

*Finds recovery (FR 6/7.24)*

All the finds were plotted and the resulting assemblage comprised one hundred and sixty-seven cremated bone-fragments, seventeen fragments of copper-alloy bowl (fifteen



**Figure 41** Mound 18: location and suggested diameters of the spread mound and the original mound.

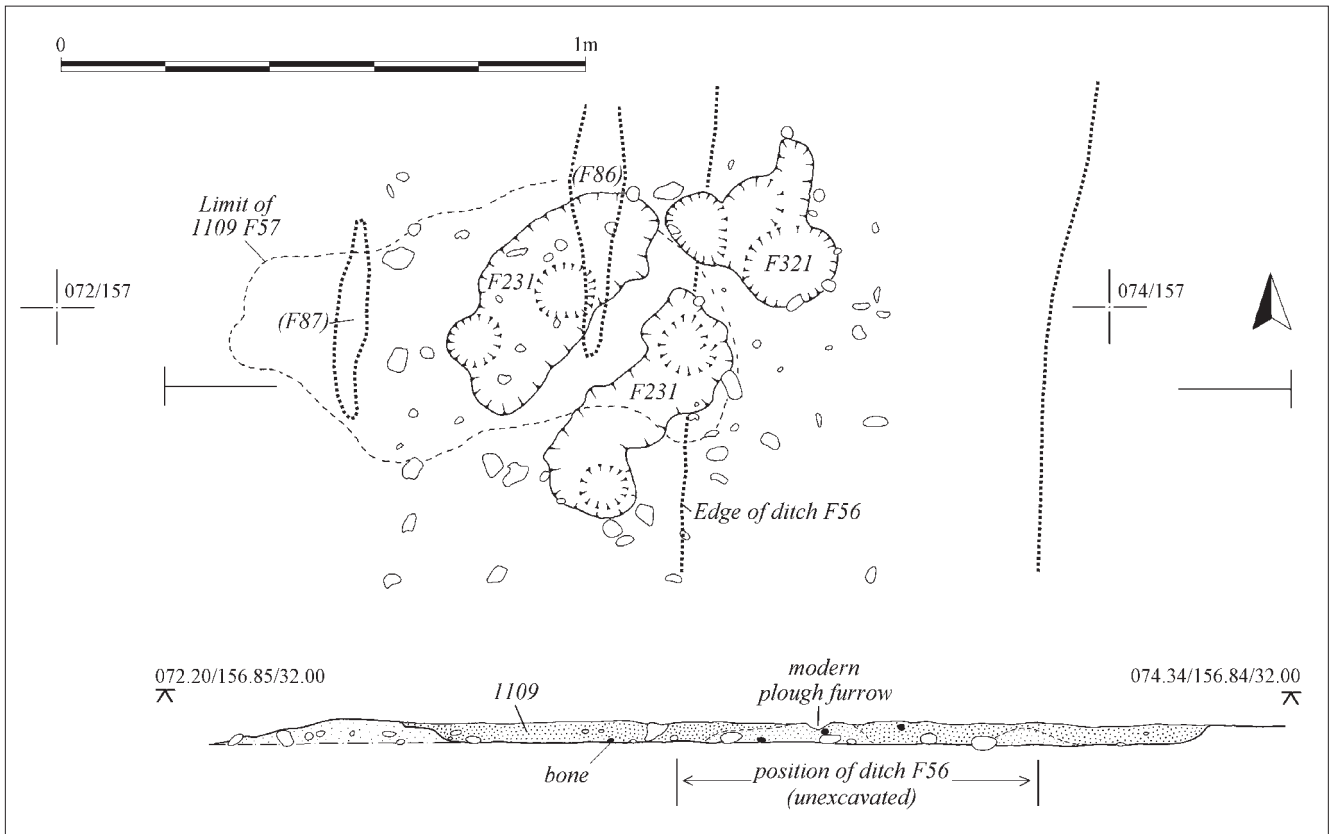


Figure 42 Plan and section of the remains of the Mound 18 burial pit.

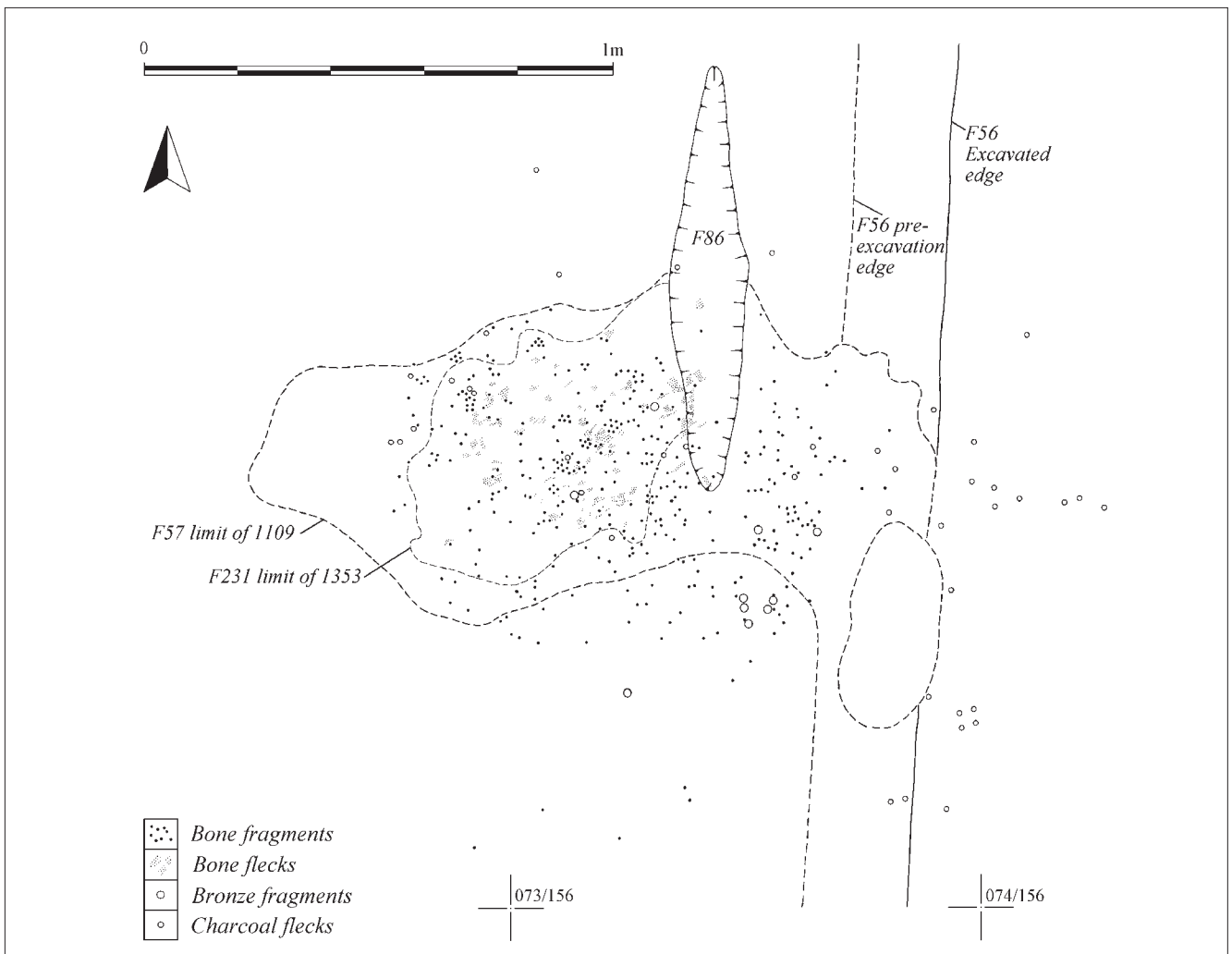


Figure 43 Plan of the central area of the Mound 18 burial pit, with distribution of cremated bone and other relevant finds.

from F57, one from F231, find no. 3216, and one from the disturbed buried soil near the cremation, 1056, find no. 771), two pieces of bone comb (one from F57, find no. 1221, and one from F231, find no. 3214) and seven instances of vitrified sand. Nearly all the finds concentrate within the features F57/F231 in the four square metres 072/156, 073/156, 072/157 and 073/157. There are only four outliers, i.e. one piece of bone comb to the south at 072/156, and three fragments of a cremated bone at 076/161. These northern and southern outliers are thought to have been dragged there by ploughing in a north–south direction, which is also the orientation of the furrows F86 and F87.

#### **A history of Mound 18, argued from the investigations (FR 6/7.2)**

The evidence for the burial rite consists of:

- the spread of cremated material with artefact fragments
- the remains of a burial pit
- the traces of a mound

A disturbed cremation was suggested by the scatter of cremated bone, amongst which were found fragments of two artefacts: a copper-alloy bowl and a bone comb (Figure 43). No unusual concentrations of disturbed ferrous or non-ferrous fragments were indicated by the metal-detector survey (*Bull.* 4: fig. 15). This suggested a cremation that had been robbed and then ploughed.

#### *The cremation pit*

The ‘cremation pit’, F231, was a rectilinear patch of mottled brown soil providing a focus for a spread of decayed bone fragments (Figure 43). The area was also distinguished by its lack of pebbles. The feature did not penetrate into the Iron Age ditch (F56) that ran beneath it or into the subsoil. It had no regular shape and may have been an anomaly created by animal disturbance.

#### *The mound*

The former existence of a mound was suggested by slight surface indications, a defined buried-soil platform and the likelihood that the burial had been robbed – suggesting in turn that a mound had existed to guide the robbers. There were no quarry ditches or pits attributable to Mound 18. By the twentieth century, Mound 18 had spread to a topographically measurable (Figure 41) diameter of 18 m. Mounds 1 and 17, also on the western edge of the cemetery, had no quarries; so the absence of quarries does not of itself disprove a mound on the site of Mound 18. But the burial pit, if it existed, is the only one studied that did not penetrate below the level of the subsoil. This implies that any burial pit would have lain within the buried soil system, where it would have been very vulnerable to the effects of animal burrowing and ploughing. Assuming that the sequence of cultivation was similar to that worked out for Mound 5 (above; and see Chapter 10, pp. 371–7), the area would have been ploughed (at least) in the Middle Ages and the late nineteenth century (the latter operation also flattened Mounds 5 and 17). The opening of Int. 48 by machine also carried the risks that some remains of the mound may have been lost within the ploughsoil removed at Level A. However, it is unlikely that anything structural survived in this deposit, already well mixed

by ploughing and bracken roots. A depth of at least 100 mm of a supposed buried-soil platform was examined in 20 mm spits, and the observed plough-marks showed that it had at some time been ploughed to the level of the subsoil. The buried soil sealed by the adjacent lynchet had also only survived to a thickness of 125 mm.

On balance, these observations suggest that the burial rite employed was cremation in a bronze bowl, accompanied at least by a comb, placed in a shallow pit beneath a small mound no more than c.14 m in diameter.

#### *The assemblage*

The finds from Mound 18 are described and discussed in Chapter 7, p. 210. They suggest little more than that the original burial had been a cremation of a human, whose ashes had been gathered and placed in a bronze bowl (1), perhaps wrapped in textile (2). The only grave good implied was a bone comb (3). The high status of this burial cannot be confirmed from the surviving grave goods, but, assuming it had a mound, it might have been comparable in original status with Mounds 5, 6 and 7. The majority of the cremated bone is unidentifiable, but it was established that a minimum of one individual was present, of unknown sex but young in age. There was a high degree of fragmentation, limiting any further information on the individual buried. The seven amber-coloured globules (48/911, 48/913, 48/916, 48/922, 48/927, 48/961 and 48/1027) recovered during excavation of 1057, were first thought to represent tiny fragments of glass. However, it was suggested, and then confirmed by neutron activation analysis, that these globules are instances of vitrified sand that had been subjected to intense heat, such as would exist during cremation at the site of a funeral pyre (Henderson, Janaway and Evans 1987). However, it is not suggested that a pyre had actually lain on that spot, as no reddening of the sand around F57/F231 could be detected and very little charcoal was found within the features. It is more likely that the few tiny pieces of vitrified sand were transported with the bronze bowl from the pyre, placed in the bronze bowl and subsequently scattered by ploughing.

#### **Aftermath: the robbing and ploughing of Mound 18**

##### *Ploughing*

There were plough-marks crossing the area of the cremation running both north–south (as F86) and east–west. The east–west ploughing possibly represents the same pre-Saxon system as defined under Mound 17 (see p. 127), in which case it was not responsible for the destruction of the Mound 18 burial. The north–south system was noticed elsewhere in Int. 48, but nowhere else at Sutton Hoo. It conceivably belongs to a Medieval or post-Medieval cultivation associated with the bank F224, which could be a lynchet formed by ploughs turning at this point (see Chapter 10, pp. 371 and 462).

There remains the possibility that the very severe scrambling of the soil in the south-west part of Int. 48 was caused by the second and much later (i.e. nineteenth century) east–west ploughing that eroded Mounds 6 and 7. It is also possible that this same episode was responsible for the observed north–south plough-marks: in which case it may have been responsible both for the formation of the lynchet and for the elimination of Mound



18. Map evidence shows nineteenth-century ploughing on the other side (the west side) of this lynchet. The evidence from the site as a whole suggests that there were two episodes of Medieval ploughing at this time, creating a first lynchet, and that this was followed by two episodes in the nineteenth century, one creating a new lynchet and the other removing Mounds 5 and 17.

#### *Robbing*

There was no direct evidence – in the form, for example, of a robber trench – that Mound 18 had been robbed. However, it was noticed that all the copper-alloy fragments except one, which lay at the interface of F231 with the subsoil, were recovered from the upper levels. These and the cremated bone had been minutely fragmented, presumably by ploughing. The possible site for the burial itself was very small (i.e. F231). This suggests that the burial had been ransacked and scattered before ploughing. The small mammals responsible for the many tunnels may have caused the dispersal of the material from an original concentration (F231) to the location they were found in (F57); but even assisted by the plough, it seems improbable that they could have been responsible for such total fragmentation. It is possible that F57 represents the ghost of a robber trench running east–west.

#### **Model**

Sometime in the sixth to seventh century, a pit, square in section, was cut through buried soil that had previously been ploughed in an approximately east–west direction. The pit is just deep enough to touch the subsoil. Its approximate dimensions can be proposed as 600 × 700 mm in plan and 580 mm deep, assuming an Anglo-Saxon topsoil at least 400 mm thick, as under Mounds 2 and 5.

Into this pit is placed a human cremation, possibly in or on a wooden container, which features at least a copper-alloy bowl, a comb and textiles.

A mound, estimated as approximately 14 m in diameter, consisting of soil scraped up from the vicinity, is erected over the cremation pit.

The mound is ploughed in the Middle Ages and later. A robber trench is driven into the mound, probably from east to west. The burial pit is ransacked. Some objects are no doubt removed and the robbers leave a scatter of cremated bone and some artefact fragments on the old ground surface in a locus that probably follows their trench (F57).

The robbed mound is ploughed in a north–south direction, and probably east–west as well, creating the scrambled version of the buried soil rich in minute fragments of cremated bone. After, or before, this cultivation episode, an army of moles or other small mammals target the remains of the bone-rich zone with their tunnels.

#### **Burial 13: unfurnished cremation (FR 6/7.3)**

##### *Description of the investigations*

Burial 13 was a cremation without an urn found during the 1964–71 campaign (Int. II, area Aiii; Longworth and Kinnes 1980: 11, Cremation A). The context is described as follows:

A heaped deposit of cremated bone lay in a scoop in the natural surface centred 3 ft north-east from the most easterly end of the skull pit [Burial 56]. The bones lay partly within the dark layer and were spread over an area 12 × 9 inches. No objects accompanied this deposit.

#### **Interpretation**

From its stratigraphic position, the burial could be either Bronze Age or Anglo-Saxon, as it was cut into the equivalent of the buried soil under neighbouring Mound 5. It had subsequently been scattered by ploughing.

The description resembles that of the burial under Mound 18, which consisted of a scatter of cremated bone in a depression just into the subsoil (natural surface), but which was better preserved. In that case, the presence of a fragment of comb determined the burial as Early Medieval rather than Bronze Age. Features originally thought to be Bronze Age cremations at Sutton Hoo were defined beneath Mound 2 (e.g. F231), but these were later re-interpreted as post-holes (see Chapter 11, pp. 449–51).

On balance, Burial 13 might be Anglo-Saxon and could belong to the Sutton Hoo cemetery during its main period of exploitation.

#### **Burial 14: unfurnished cremation (FR 6/7.3)**

##### *Description of the investigations*

Burial 14 was a cremation placed in a pot and buried in a pit. It was found and recorded during the 1964–71 campaign (Int. II, Area Aiv; Longworth and Kinnes 1980).

The context is described as follows:

A cremation [‘Cremation B’] within a plain upright Saxon urn was found centred 6 ft ENE of Cremation A [Burial 13] in the south-west corner of cutting IV. The urn had been placed in a shallow circular pit cut to a depth of 10 inches below the natural surface. No grave goods were placed with the bones. A report from N.-G. Gejvall [SHSB I: 98] indicates that the bones were unmixed from a single individual, probably under 18 years old and possibly male. The urn [SHSB I: 28, figs 22–3] can be dated to the late sixth or early seventh century AD.

The urn is described as follows.

A bag-shaped, irregular vessel with little character, the paste poorly fired, and the surface having a corky heavily pitted appearance, as though fragments of chopped vegetable matter in the paste had burnt out in the firing. Similar urns from local sites – Hadleigh Road, Ipswich and Bramford – are exhibited in Ipswich Museum. (SHSB I: 28)

This verdict is confirmed by Keith Wade (see Chapter 7, pp. 268–9).

#### **Interpretation**

The identification of the pot from Burial 14 as Anglo-Saxon (sixth to seventh century in date) means that this should be an Anglo-Saxon cremation. It may have originally been under a mound, but no evidence survives. The relationship of Burials 13 and 14 to the pit Burial 56 is considered in Chapter 5, p. 145.

#### **Conclusion**

Apart from Burial 14, no intact cremation has yet been found at Sutton Hoo, though the rite is implied in six mounds (Mounds 3–7 and 18) and two unfurnished burials (Burials 13 and 14). Such grave goods as survive do not conflict with a date within the late sixth or early seventh century, and there is no hint of the sixth-century burnished burial urns widely known from East Anglian cemeteries and seen, for example, at neighbouring Snape (Filmer-Sankey and Pestell 2001) and in the Tranmer House cemetery (see Chapter 13). The Sutton Hoo group of cremations, therefore, represents a late and unusual episode.

Five of the mound-burials (Mounds 4–7 and 18) indicate a burial rite in which the cremated remains of humans and animals were placed in a copper-alloy container (bowl or bucket) in association with a cloth. In Mound 3, the ashes were placed on a section of timber, while some were perhaps contained in a pot. In four cases (Mounds 4–6 and 7) bone gaming-pieces were amongst the surviving grave goods, and these four mounds also form a central north–south axis to the

cemetery. It will be argued (in Chapter 8) that these mounds represent a first phase of princely burial beginning from about 600 AD. The burial rites reflected earlier practices in Scandinavia and north Germany in which aristocratic males were cremated and placed in bronze containers with animal offerings.

Two unfurnished cremations, one in a pot of sixth to seventh century date, are isolated at present, but their most appropriate context may be the phase of princely cremation under mounds.

# Furnished inhumations

## Mounds 14 and 17, and Burials 12, 15, 16 and 56

Martin Carver

### **Mound 14: the chamber grave of a woman (FR 7/7.1)**

Written by Martin Carver from records by Graham Bruce, Angela Evans and Justin Garner-Lahire.

#### **Summary**

Mound 14 contained a robbed burial chamber that, on the evidence of the fragmentary grave goods, contained a high-status woman. The deceased seems to have lain on a bearer (a bed or coffin) inside a timber-lined chamber grave that had been covered by a mound about 14 m in diameter. The grave goods had included a châtelaine, a silver-framed leather pouch, silver dress fittings, a silver bowl, a silver-mounted drinking vessel and embroidered textiles.

The grave goods survived as small fragments dispersed in a layer of mud: tomb-robbers had apparently been caught in a rainstorm.

#### **Description of the investigations**

##### *Opening*

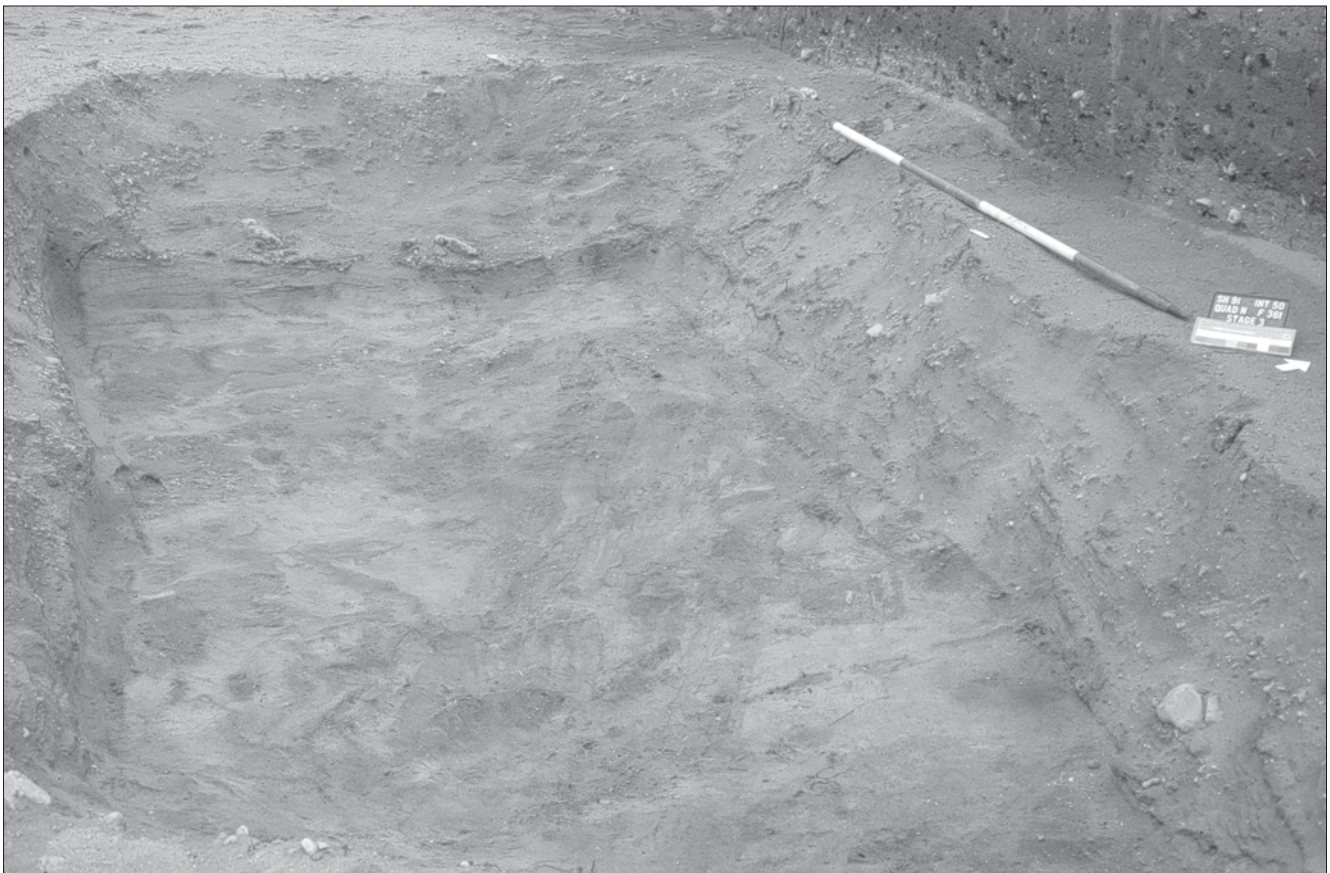
Though it was only signalled by a slight rise in the ground, Mound 14 had been located and mapped by surface observation. The eastern sector (Int. 50) was laid out so as to include slightly over half the mound (the southern half) in the area to be excavated. The intention was to capture a burial or robber pit in the excavated sample, while leaving a proportion of the mound (as nearly as possible, one half) unexcavated. In March 1991 the turf in the quadrants containing the southern part of Mound 14 was lifted, and the soil beneath (Horizon 1) was worked at Level C in expectation of encountering mound make-up or a buried-soil platform. The resulting surface (still at Horizon 1) gave a high definition to the infilled quarry ditches and central pit, against a relict platform of buried soil; no certain mound make-up was identified and it is assumed that it had all been ploughed away. The excavation of the mound platform, central pit and quarry ditch took place in two quadrants, the eastern one being removed first (Figure 44; Plate 25:a).

In the *central pit* the first layer encountered was a pale grey sand (1361), thought to have been pushed or dished from a ploughed heathland; beneath it lay a dark grey sand (1360) that was interpreted as a layer of turf (see Figure 45). A 200 mm thick layer of stony brown soil (1422) was then encountered. Beneath it lay light brown silt-sand (1440) containing a few fragments of corroded iron, under which was a complex of fine, silty, multicoloured lenses (1446) containing a substantial number of fragments derived from Early Medieval artefacts, together with the first glimpses of wooden traces of the former chamber. Spade marks were noted in the same layer. It was concluded that the central pit was the work of tomb-robbers, and that 1446 represented a rapid silting under conditions of flowing water, attributed to a rainstorm at the time of robbing. Excavation of the eastern half of the central pit was terminated at a level equivalent to the bottom of the robber pit (F263), and to the top of what remained of the burial chamber (F361). This was designated as 'Stage 1' of the excavation of the chamber. Then the eastern parts of the quarry ditches were also excavated, so that on this occasion a single north-south section could be recorded through the chamber, buried-soil platform and quarries (Figure 45). A patch of charcoal was encountered within the fill of quarry ditch F269 and was interpreted as a hearth (Context 1468; Figures 44 and 45).

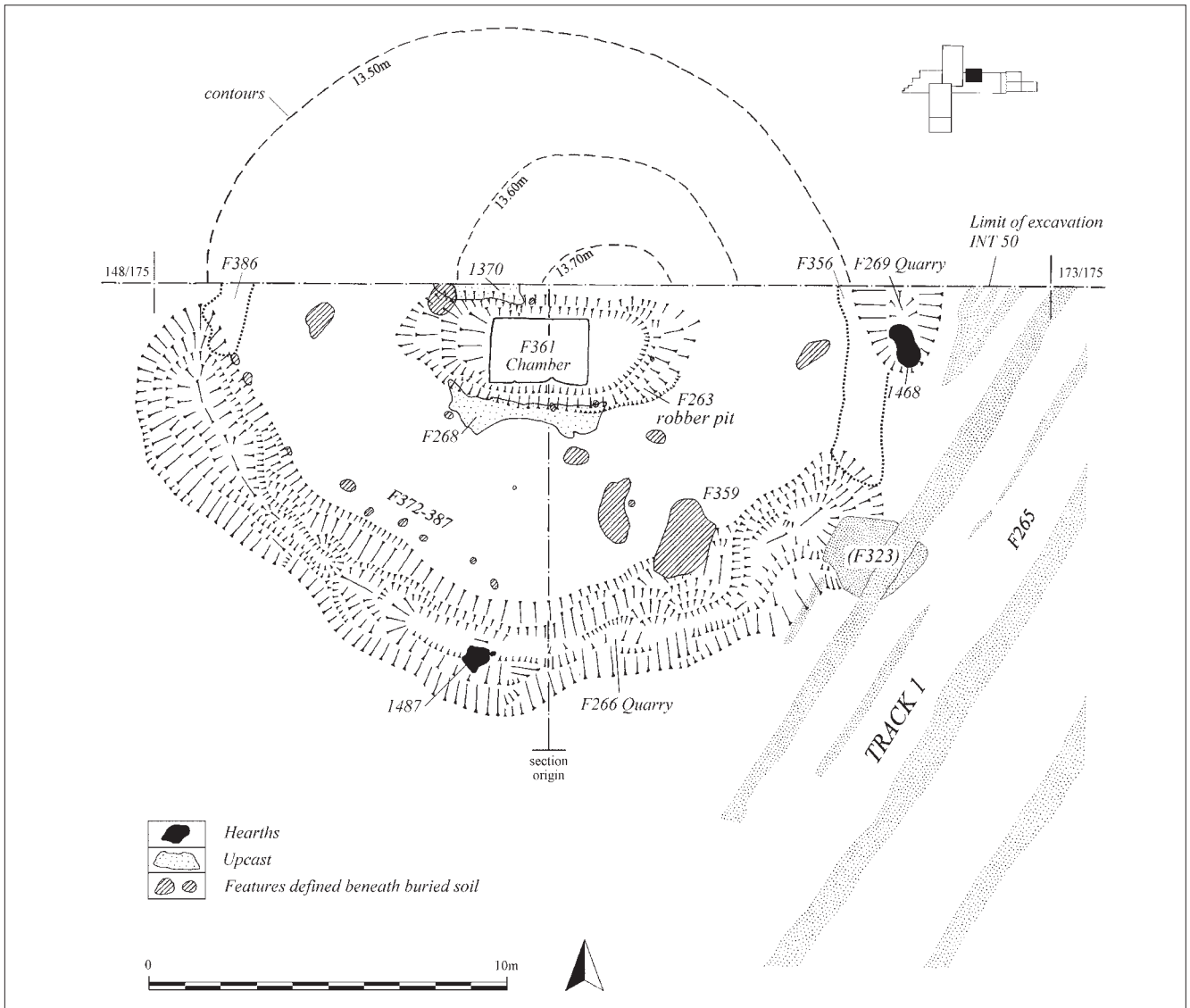
The western halves of the central pit, the quarry ditch and the buried-soil platform were then excavated, leaving the remains of the burial chamber (cut into subsoil) ready for investigation. A second hearth (1487) was defined within the fill of quarry ditch F266 (Figures 44 and 45). Features found on the surface of the subsoil under the buried soil included a group of tree pits (F359) and a row of stake-holes (F372–F387).

##### *Excavation of the remains of the burial chamber*

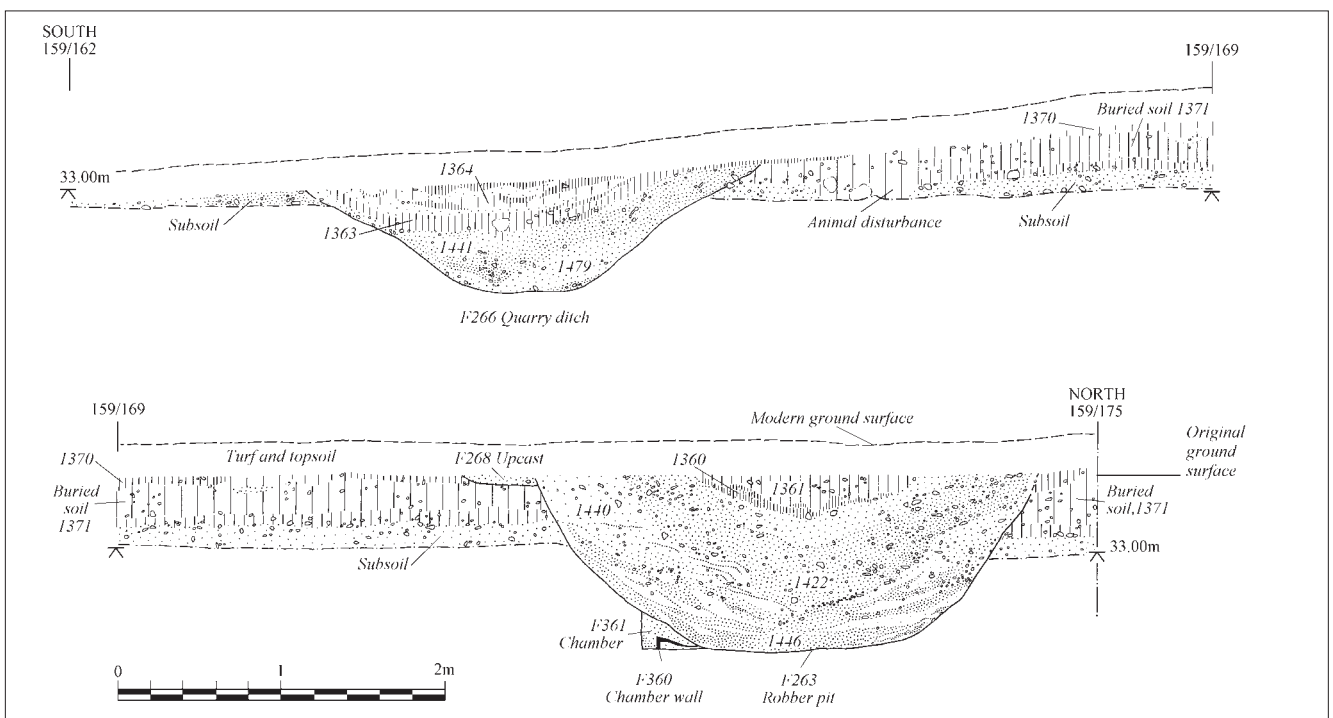
This took place in three stages.



**Plate 25** Mound 14: (a) definition of the mound; (b) the chamber after excavation.



**Figure 44** Map of the Mound 14 area, showing the extent of the mound, the quarry ditch, the chamber, the robber trench, sub-mound features, position of the Medieval hearths (in black), and the track marks (continuation of S33).



**Figure 45** Section north-south through the remains of Mound 14 and its quarry ditch.

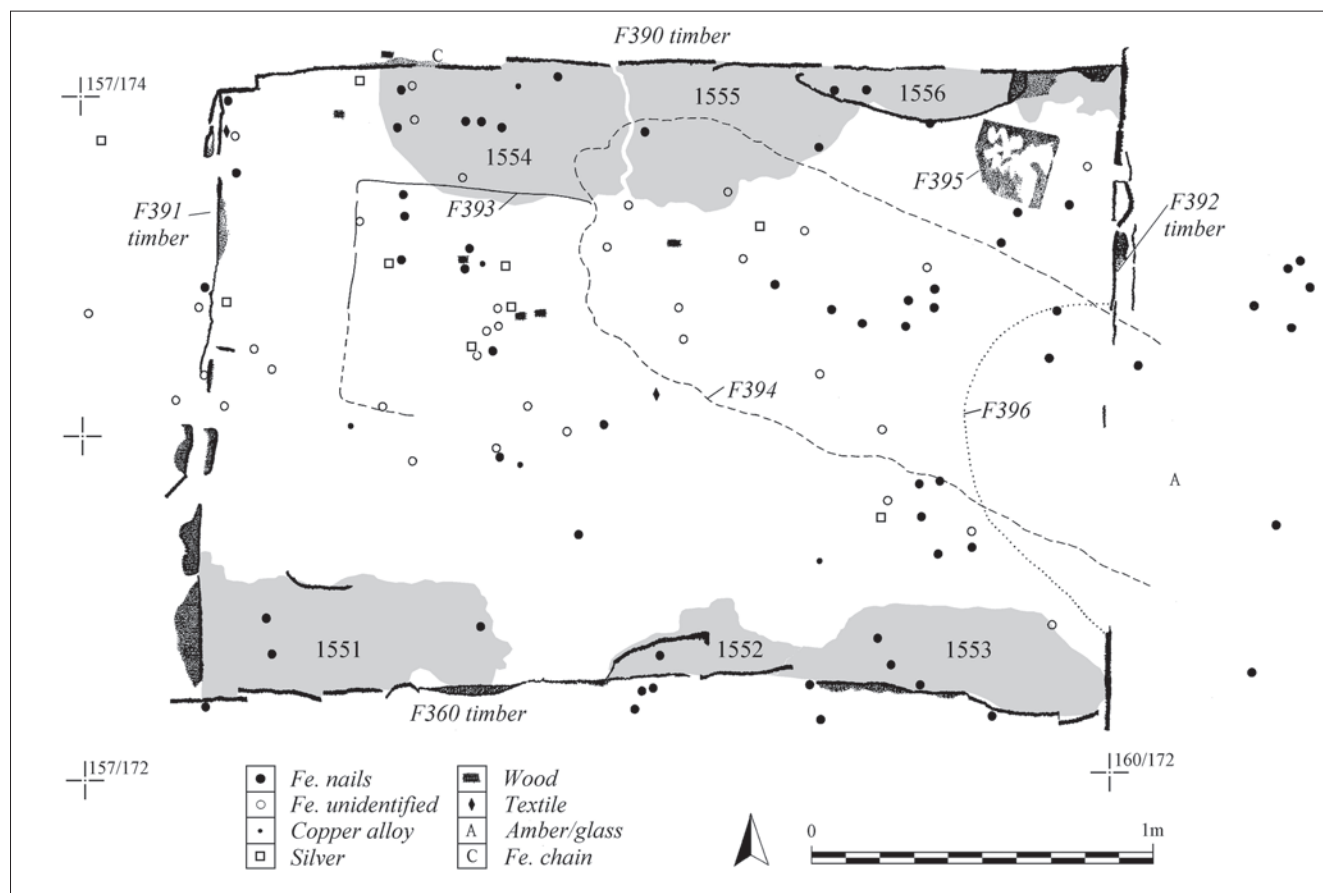


Figure 46 Plan of the burial chamber showing distribution of artefacts and nails.

At Stage 1 about 50 mm of robber-fill remained in the west half of the central pit. This was removed to reveal the traces of a west wall.

At Stage 2 the form of the chamber could be made out along the east and west ends, from stains from planking (viewed edge-on). Broader dark stains associated with iron nails were also observed across the base of the chamber (1551–6), and were interpreted by the excavator as the remains of smashed planking. These lay within amorphous patches of yellowish-red silt-sand, and were thus unlikely to be *in situ*.

At Stage 3 the traces of the north and south chamber walls were visible as black lines, a few millimetres high, in the sand (F360, Figure 46). The floor of the chamber was now generally smooth and bare, but after cleaning at Level E (using fine brushes), anomalies in its surface became visible. A raised line of concreted sand (F393), featuring a right-angled corner, was suggestive of a stance where a rectilinear construction might have stood. A square patch of discoloration in the north-east corner of the chamber floor (F395) was defined during brushing for photography. It was almost square in plan, estimated at 225 × 210 mm, and was very ephemeral, being less than 2 mm deep. The impression of a rectilinear scar (F394) crossing the floor of the trench, with an orientation roughly WNW–ESE, was also discerned. It was seen during the photography of the final tableau and then investigated along with the remains of the chamber walls. It had survived only as a slightly darker colour of the natural sand, revealed when brushing the surface of the chamber floor (F361) for photography. This tonal difference may be the result of trampling in a very fine layer of silt, though it is difficult to

understand why such an effect should be so slight yet so persistent. It appeared to have crossed over the top of F396 (Figure 46 and Plate 25b). A curvilinear depression at the east end (F396/1559) was 1.1 × 1.0 × 0.1 m deep. It had cut through the chamber wall at this point, and its sides and base were described as very smooth, indicating careful excavation – possibly using hands. This should represent the activities of robbers, who had perhaps dug a pit from above and arrived at one end of the chamber. Five hundred and twenty-five samples were taken from the chamber floor for ICP analysis, but these have not been processed and remain in store. The features in the subsoil platform beneath the mound were then excavated.

The ghostly features on the base of the chamber are discussed below. Feature 393 is interpreted as the stance for a coffin or box-bed. The depression (F396) is thought to have been due to a robbing operation. Feature 394, which overrode the depression (F396), may have been the trace of a later robber trench, or may have been planking displaced or introduced by the first robbing. F395 might have been an object stance, say for a box, contemporary with the burial; it could also be due to a spade-cut of the grave robbers. A sequence diagram (Figure 47) summarizes the stratification recorded.

#### Recovery of the finds

There was little pattern observable in the spatial distribution of the artefacts, and there is no doubt that the assemblage had been thoroughly rifled and well scattered by previous excavators (Figure 46). A small group of fragments clustered inside the locus of the supposed coffin (F393). The majority of the artefacts from the grave group were recovered from the storm-silt (1446)

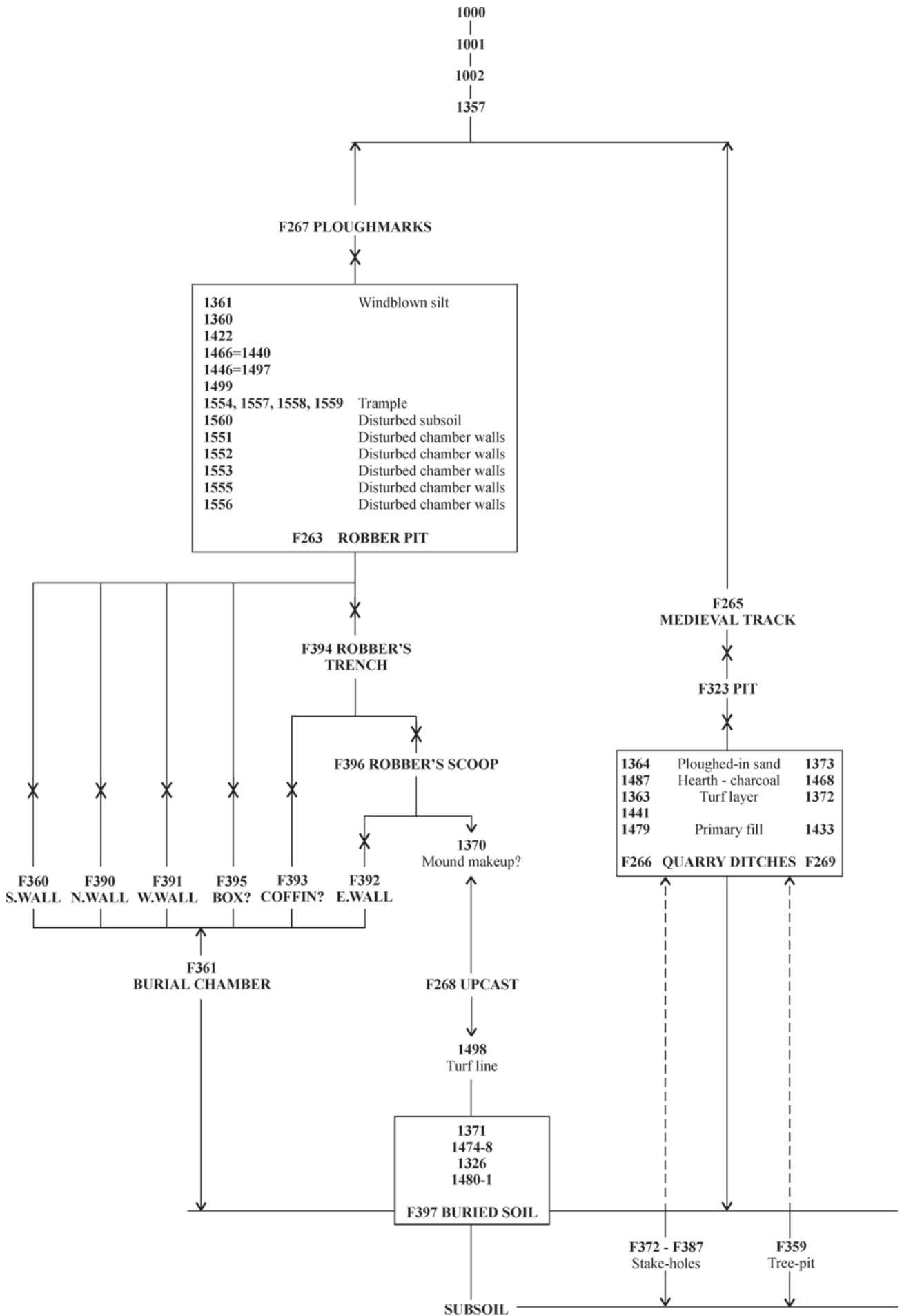


Figure 47 Stratification diagram for Mound 14.

or the two deposits below it (1497 and 1499). These contexts probably represent the tread of the robbers in the chamber.

### ***A history of Mound 14, argued from the investigations***

#### *Before the burial*

The surface of the buried soil (F397/1371) was a semicircle of relatively stoneless, mid-brown silt-sand. An amorphous patch of stony brown soil (1370) between the edge of the excavation and the side of the robber trench was distinguished from the buried soil, and may have represented a trace of mound make-up. A slick of sand (F268) was interpreted as either an animal burrow or an upcast from the original chamber. If F268 was upcast, then the buried soil under Mound 14 was relatively thin (250 mm as opposed to 400 mm under Mounds 2, 5 and 6) and the old ground surface could be taken as 33.40 m AOD. If F268 was due to a burrowing animal, then the buried-soil platform could have been much eroded: such erosion taking with it any evidence for pre-mound ploughing, normally seen at Horizon 5, about 150 mm (on average) from the old ground surface (see Chapter 10, p. 371). No plough-marks were seen on or in the extant buried-soil platform. Context 1498 possibly represented a patch of turf *in situ* on the buried soil, but the identification was dubious. Plough-marks were seen crossing the back-filled central pit (see below), showing that ploughing after robbing had later reduced the mound. It might be assumed that the buried soil under Mound 14 was originally a similar thickness to that under Mounds 2, 6 and 7 (c.400 mm), giving an old ground surface of 33.55 m AOD (subsoil at 33.15 m AOD), with 150 mm having been lost through later ploughing.

Certain features cut into subsoil beneath the Mound 14 platform may have been visible to the mound builders – or were due to them. Two curvilinear ditches emerged from the section (F356 and F386) and ended with bath-shaped terminals. They were earlier than the Mound 14 quarry ditches, but symmetrically disposed to them, and so may represent an earthwork visible in Anglo-Saxon times and quarried for the construction of Mound 14. These features are attributed to the system of banks and ditches that covered the site in the Iron Age and were still visible in the seventh century (Chapter 11, p. 457).

Feature 359 was an undated pit, defined beneath buried soil that contained traces of wood or roots, and may have marked the site of an ancient tree (see Chapter 3, p. 43). A line of stake-holes (F372–87) followed the inner perimeter of the southern quarry ditch: with stakes of average diameter 250 mm, this suggests a robust paling fence. It may have been a marker fence within which the earth for Mound 14 was piled. But it did not continue to the east and may have derived from a Prehistoric fence-line, such as S31 (Chapter 11, p. 447), of which a small part had coincidentally survived under Mound 14 and was not relevant to its construction.

#### *Constructing the burial chamber (Figures 44–6)*

The burial pit was 2.65 × 1.90 m and the height of the base averaged 32.38 m AOD, a depth of about 1.2 m from the estimated height of the old ground surface. The floor sloped downwards towards the east end. The walls of the chamber were oriented almost exactly east–west. The loci of more than forty planks or plank-fragments were mapped, most of which were in the lower parts of side-walls. No wood had survived and these planks were known only from their cross-sections, which averaged 200–300

mm in width by 5–20 mm in thickness (i.e. about 1 ft by ½ in). The plank-lines had been well trampled by the robbers. The north and south walls appear to have consisted of thin, but broad, overlapping boards standing on end. The formation of the east and west walls were less clear, but they may also have been constructed of vertical planks (which did not overlap) or of horizontal planks which had fractured.

At least eighty-seven nails or nail-fragments were located, together with a further fifty-five unidentified scraps of iron that could have been nails or fixings of some kind. Of these, two nails (5246, 5247) are thought to belong to a wooden box. Nails were recorded in material deposited in and above the robber trample (Contexts 1422, 1440 and 1446). A nail (7236) was found in the chamber wall in the subsoil (F1563). Two nails (6426–7) were certainly associated with the planking (of the south wall), with the heads on the outside of the planking against the chamber wall. The nails are too small to be structural and, from the traces of wood-grain, appear to have penetrated a single layer of wood.

A number of hypotheses might be considered to explain how these nails were employed within the chamber. One possibility, which tries to account for the nails which were the ‘wrong side’ of the planking, supposes re-used timbers or prefabricated structures, such as recycled fencing, weatherboarding, roofing or floors. Lengths of fencing cut into sections would probably have been convenient for recycling as a burial chamber revetment. On analogy with modern rural practice, the panels of such fences would be 4–6 ft (1.22–1.83 m) high and 10–15 ft (3.05–4.57 m) long, and consist of overlapping thin slats nailed onto horizontal pieces 2 × 1 ft in scantling. No signs of such horizontal pieces were found, but they would have been on the inside and at least 6 inches up from the lower ends of the planks, where they would, in this case, have been eliminated by the activities of the robbers. This arrangement requires the nails to have a shank at least 20 mm (¾ in.) long in order to fasten the planking to horizontal pieces. Planks may also have been used to roof the chamber, but no evidence of this was found, unless F394 is a trace of a plank roof.

In her examination of the nails, Angela Evans (Chapter 7, p. 213) comments on their short shanks and observes that they carry evidence of being sunk in a single layer of wood. She interprets them as tacks, which could have been used to fasten cloth to the chamber walls or to provide decorative studding on a coffin. An alternative hypothesis is that the tacks were used as upholstery nails within a coffin or bed (see below).

#### *Furnishing the chamber*

The burial was an inhumation. This is suggested by the absence of cremated bone (which otherwise gets everywhere) and the fact that there was no sign of burning on the artefact fragments recovered.

#### **BODY-BEARER**

A ‘coffin stance’ (F393) was revealed by brushing the subsoil of the chamber floor. It survived as a sand-cast with a maximum width of 5 mm and a maximum height of 2.5 mm. The raised lines are coloured orange, in contrast to the yellow subsoil that contains them. It is possible that such discontinuities are due to natural anomalies, particularly bedding planes within the subsoil (at 600 mm down from its surface). On the other hand, the raised ridges may resemble subsoil anomalies because they



were formed in the same way, that is by lines of iron pan that precipitated from percolating water at an interface. The orientation and regularity of the shape implies that the interface was provided by the vertical wooden sides of a structure of some kind. The location and orientation suggest that the structure in question was the bearer of the body of the dead person.

The stance was 670 mm across in plan and was of unknown length. The main types of bearers found in Anglo-Saxon graves are coffins, boats and beds, none of which need have ironwork, but which are identifiable when they do (see Chapter 8, p. 292). No clamps (as in the Mound 17 coffin) or rivets (as in the Mounds 1 and 2 ships) were found. A boat would seem to be excluded by the rectangular shape of the stance. At Swallowcliffe Down nails were used to make a bed: joining two thin pieces of wood at right angles (indicated by two layers of ferrified wood-grain on the shanks) within a lattice framework supporting a mattress (Speake 1989: 95–7). The Mound 14 nails do not seem to have been used in this way, as they were nailed into a single piece of wood. They may have been sufficiently robust to secure straps of vanished leather or webbing to a wooden frame, but a more appropriate use might have been as upholstery nails fastening stuffed padding to a wooden frame. A bed could thus be contrived from the F393 anomaly by supposing a carpentered box-bed or couch with a rectangular timber foundation, as at Shudy Camps (Speake 1989: 101; Lethbridge 1931: 10–12), but formed of upholstered planking rather than supporting a mattress. Alternatively, an upholstered coffin might have been used. This would differ little in form from an upholstered box-bed (see Chapter 8).

#### *The grave goods*

The fragmentary artefacts are described and interpreted by Angela Evans in Chapter 7, p. 211 and Figures 98 and 99. Personal possessions included a complex *châtelaine* (9a–d) with a tiny piece of embroidered textile attached (14), silver purse (?) fittings (3), silver wire from a foxtail (?) chain (5), silver buckle loops (6), a silver dress (?) fastener (7), two fragmentary copper-alloy pins (8) and three fragments of unworked yellow quartz (13), possibly from the purse/pouch. Luxury accessory objects include a silver bowl (1), at least one silver-mounted wooden drinking cup (2) and a box with silver fittings (4). There was also a box (?) with iron nails (11) and a large number of other small nails or tacks (10). The *châtelaine* may be taken as an indication that this was the grave of a woman. In Chapter 7, p. 213, Evans suggests a date in the early seventh century for the assemblage, while in Chapter 8 we argue for a date in the middle of the century for the burial itself.

#### *Constructing the mound*

##### DIGGING THE QUARRY DITCHES

In the area of excavation, the mound was encircled on its south side by a quarry ditch, F266 (Figures 44 and 45). This ditch terminated in butt-ends to the east and west. A second ditch (F269) continued the encirclement of Mound 14 to the north. The causeway implied by the gap between the two ditches was c.2.50 m wide, and was mirrored by a gap beginning to show on the west side, between the termination of F266 and the east–west section-line (175 northing). The plan (Figure 44) implies that Mound 14 was encircled by a symmetrical ditch,

continuous apart from two causeways, set at about 10° from the east–west axis of the chamber.

The ditch appears to have been dug as a single cut, rather than as a series of overlapping pits. The profile of the flanks is convex, with a flat base (Figure 45), suggesting an initial broad, shallow quarrying operation for soil, followed by a steeper, narrower cut for sand. Where the sand subsoil is harder (more concreted), the ditch is narrower. This might imply that the softer sand was preferred, or that easy digging was preferred – unless the concretion is a post-depositional effect.

#### *The size of the mound*

Assuming that the chamber lay at its centre and that the quarry ditch represents its limits, the mound could have been 14 m north–south by 18.5 m east–west, or 14 m in diameter if it were round. There was insufficient good data to attempt a calculation of the height, but on analogy with mounds of similar size it would have been about 1.8 m.

#### *Aftermath*

##### *The refilling of the quarry ditches*

The back-filling of the ditch F266 consisted of sand (1479), on top of which was stony brown soil (1441), then the more humic (turfy) 1363. The final layer (1364) was a pinkish-brown silt-sand containing lenses of possible turf. This backfill sequence was repeated in quarry ditch F269, and is familiar from the quarries of Mounds 5–7. Following the interpretation proposed there, the primary fills (1479 and 1441) would be surplus soil returned to the quarries at the time of the mound's construction, on which turf (1363) then formed. At a later stage, the turfy heathland was ploughed and podzolic sandy soil pushed into the ditches (1364).

##### *Medieval hearths*

Within quarry ditch F266, on the 'turf' layer (1363), was a patch (0.70 × 0.65 m) of dark charcoal-rich silt-sand with a concentration of pottery sherds (1487). The pottery suggests a date in the later twelfth century (see Chapter 12, p. 461). Within quarry ditch F269 a second, slightly larger, hearth (1468) was encountered at a similar stratigraphic level, but without pottery. Both these hearths were thus probably lit in the shelter of grassed-over quarry ditches some time in or after the twelfth century (Figure 48).

##### *The robbing of Mound 14*

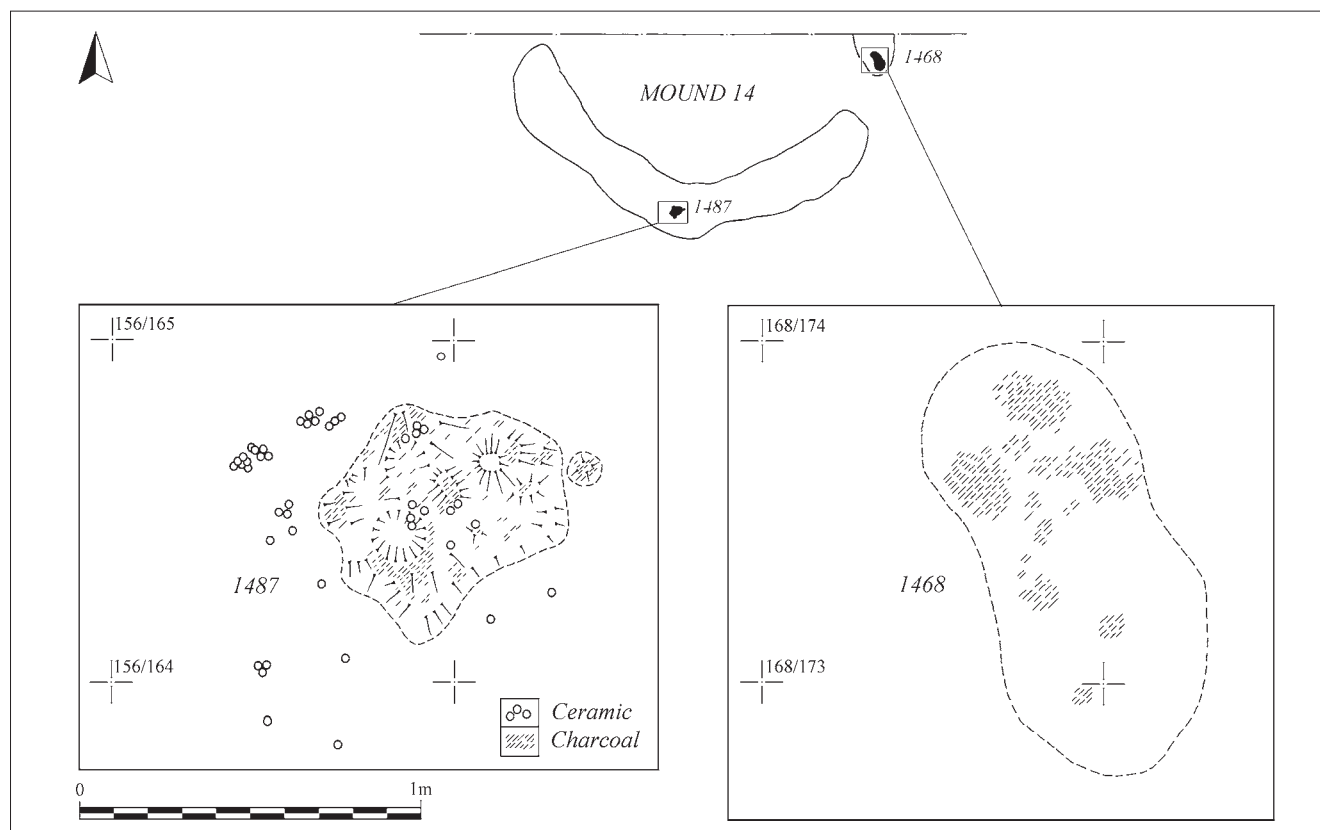
Five incidents or phases relating to the robbing of the mound have been identified:

Phase 1: A pit was cut vertically through the mound, leaving a scoop or depression (F396) at the east end of the chamber. This had dug away the centre part of the east wall and was apparently scoured out with bare hands.

Phase 2: A 'trench' (F394) about 700 mm wide was dug across the base of the chamber at an angle.

Phase 3: One or both of these incursions was enlarged into an oval pit (F263) and the chamber was thoroughly excavated, leaving no scrap of original deposit *in situ* apart from the chamber walls and the ghost of the bearer (F393) as a stain in the natural subsoil.

Phase 4: Fragments of finds were trodden into layers on the chamber floor (1497 and 1499), a process that culminated in a



**Figure 48** Plan of Medieval hearths 1468 and 1487.

silty layer (1446) that represents material brought in by a violent rainstorm. The silty layer (1446) had been cut by a spade, which suggests some small-scale, post-storm investigation. Further silting (1440) suggests that the hole was left open some time.

Phase 5: No further fragments of finds were lost, but the robber's pit was back-filled (1422) with ploughsoil which included turfs (1360).

#### *A second ploughing?*

East–west plough-marks (F267) were seen and recorded on the surface of the back-filled robber pit. These were in the form of five linear features 100 mm wide, 150–200 mm apart and less than 2 m long, as recorded. The mound was therefore ploughed after its latest excavation by mound-robbers.

#### *Evidence for a track*

The evidence for a track (Figure 44) consisted of a number of parallel grooves up to 3 m apart running north-east to south-west (F265). One of these grooves had cut the backfill of F266 and another had crossed a filled-in pit (F323), which had itself cut the filled-in quarry ditch F266 at its eastern end. The track grooves were not scored by plough-marks.

#### *Conclusion*

The aftermath at Mound 14, as elsewhere, may have featured two robberies and two ploughings, but the evidence is not strong. There was certainly one successful robbing operation using a central oval pit. The trench that might have signified a second robbing crossed at an angle, which suggests that it might have commenced from the eastern causeway. It might, therefore, have represented the ghost of a robber trench of a type that elsewhere belonged to an excavation campaign of around 1860 (see Chapter

12, p. 462). However, it was confined to a trace found beneath the robber-pit backfill (F394) and did not extend across the mound, which the examples found in Mounds 2 and 6 did. The feature seems too small to represent a trench cut from ground level, and may have derived from a number of other anomalies, such as staining from the collapsed roof of the chamber.

Ploughing had refilled the quarry ditches, and had crossed the back-filled robber pit in an east–west direction. At other mounds (Mounds 2, 5, 6 and 7) it is argued that ploughing followed robbing campaigns in the sixteenth and nineteenth centuries (see Chapter 12, p. 465). At Mound 14 the sequence observed can probably be accounted for by a single episode of robbing from the original summit of the mound, followed by a single episode in which the ground was broken up by the plough, the mound was flattened and the quarry ditches filled. Robbing and ploughing had happened sometime between the twelfth century, when hearths were lit in the shelter of the mound and quarries, and 1601, when the track (Track 1, see Chapter 12, p. 461) crossed the back-filled quarry ditches. Judging by its oval shape, the robbing most probably belongs to the campaign of the sixteenth century.

#### **Model**

There was no evidence for the old ground surface being, or having ever been, under cultivation. The area was occupied by Iron Age field boundaries and/or by a tree. The surface was cleared and the area of the mound may have been marked out with a ring of stakes.

A burial chamber was constructed in the form of a rectangular pit aligned east–west and revetted with timber planks set vertically or horizontally. An upholstered coffin or box-bed, about 2.0 × 0.6 m in plan, was placed in the chamber north



**Plate 26** Mound 17: the burial pits defined at Horizon 1 in the remnant buried-soil platform. The oval line marks the position of the human burial, with the horse grave indicated by the splash of sand to the left.

of centre and orientated east–west. The grave furnishing included an embroidered textile and a range of personal and official objects: a *châtelaine*, a purse, a silver bowl, a silver-mounted drinking vessel and a box, together with a number of other items of dress or ornament in which silver was prominent. The *châtelaine* implies that Mound 14 was the burial of a woman.

The mound was constructed by throwing up soil from a circular quarry ditch, interrupted by two causeways aligned on an axis about 10° from the east–west orientation of the burial chamber. The dimensions of the quarry ditches suggest that Mound 14 would have originally been 14 m in diameter and, following the trend of Mounds 5, 6 and 7, a minimum of 1.8 m high.

This earthwork grassed over and formed a visible part of the landscape throughout the rest of the Middle Ages. In the late twelfth century, hearths were lit in the shelter of its grassy quarry ditches. In the later Middle Ages the mound was ploughed and robbed, and by 1601 a track had been established over the back-filled quarries on the east side.

#### **Mound 17: a horse-and-rider burial (FR 6/7.1)**

Written by Martin Carver from the excavation and recording of Annette Roe, and additional records and observations by Kent Burson and Steve Timms (F319), Andrew Copp (F292) and Madeleine Hummler (Int. 48).

#### **Description of the investigations**

##### *Discovery*

Mounds 17 and 18 were first noticed, in 1985, as slight elevations backlit by a westering sun (Plate 3). The elevations proved too

slight to be picked up by the contour survey (at 10 cm vertical intervals; *Bull.* 4: 15, fig. 11). Mound 17 was situated at the north-west corner of Zone A, north of Mound 18 (Figure 49). It was overrun on its west side by the Medieval bank, S32 (Figure 49).

##### *Previous contact*

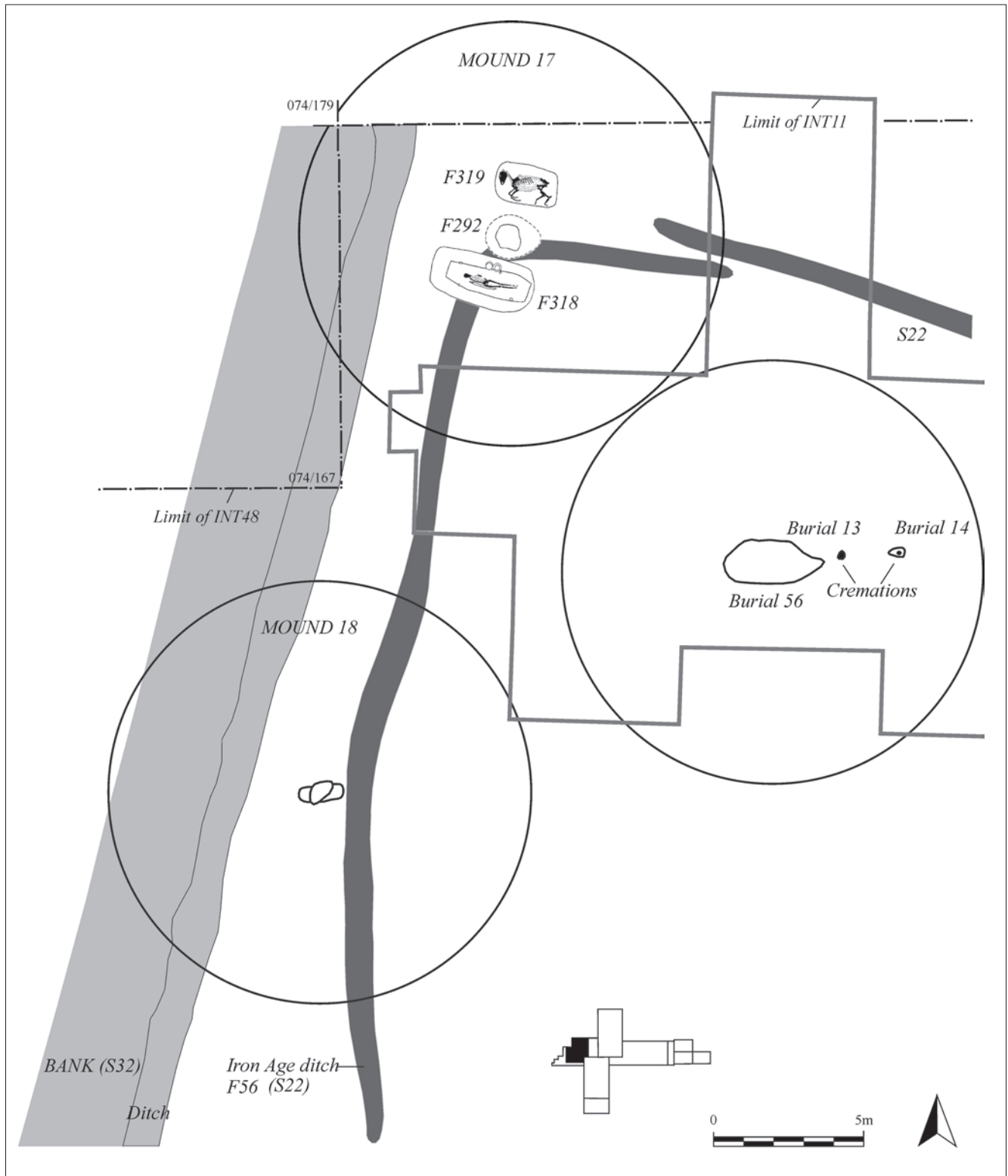
It is likely that excavations by Longworth and Kinnes in 1966 (Int. 11) had cut a section through a corner of the partially erased ancient soil platform, which was all that remained of Mound 17 (Longworth and Kinnes 1980; see Figure 49).

##### *Strategy*

Mound 17 was excluded from the excavation sample of the 1986 research design (*Bull.* 4: fig. 33), but was included in the modified version of 1987 (*Bull.* 5: fig. 3) and excluded again from the revised transect of 1989 (*Bull.* 7: fig. 1) on the grounds that Mound 18 would serve as the representative of small mounds on the western edge of the cemetery. In the event, Mound 18 proved to have been largely destroyed (see Chapter 4, p. 102) and Mound 17 was (happily) included once again in the reinstated enlarged western transect, which was finally dug in 1991 (*Bull.* 8: fig. 1).

##### *Definition of the buried soil and the features cutting it*

Excavation of the enlarged western transect (Int. 48, north) began in 1991. Int. 11 (Area A of the British Museum excavations of 1966) occupied much of the area to be excavated. Mound 17 was isolated in one corner of the transect: it was surrounded to the north by unexcavated strata, to the west by the Medieval (or later) bank and ditch, and to the east and south by Int. 11. It was



**Figure 49** Location of Mound 17, with the location of Mound 18 and the putative mound over Burial 56. The Prehistoric enclosure (S22) is in black, and the Medieval bank and ditch (S32) are in grey.

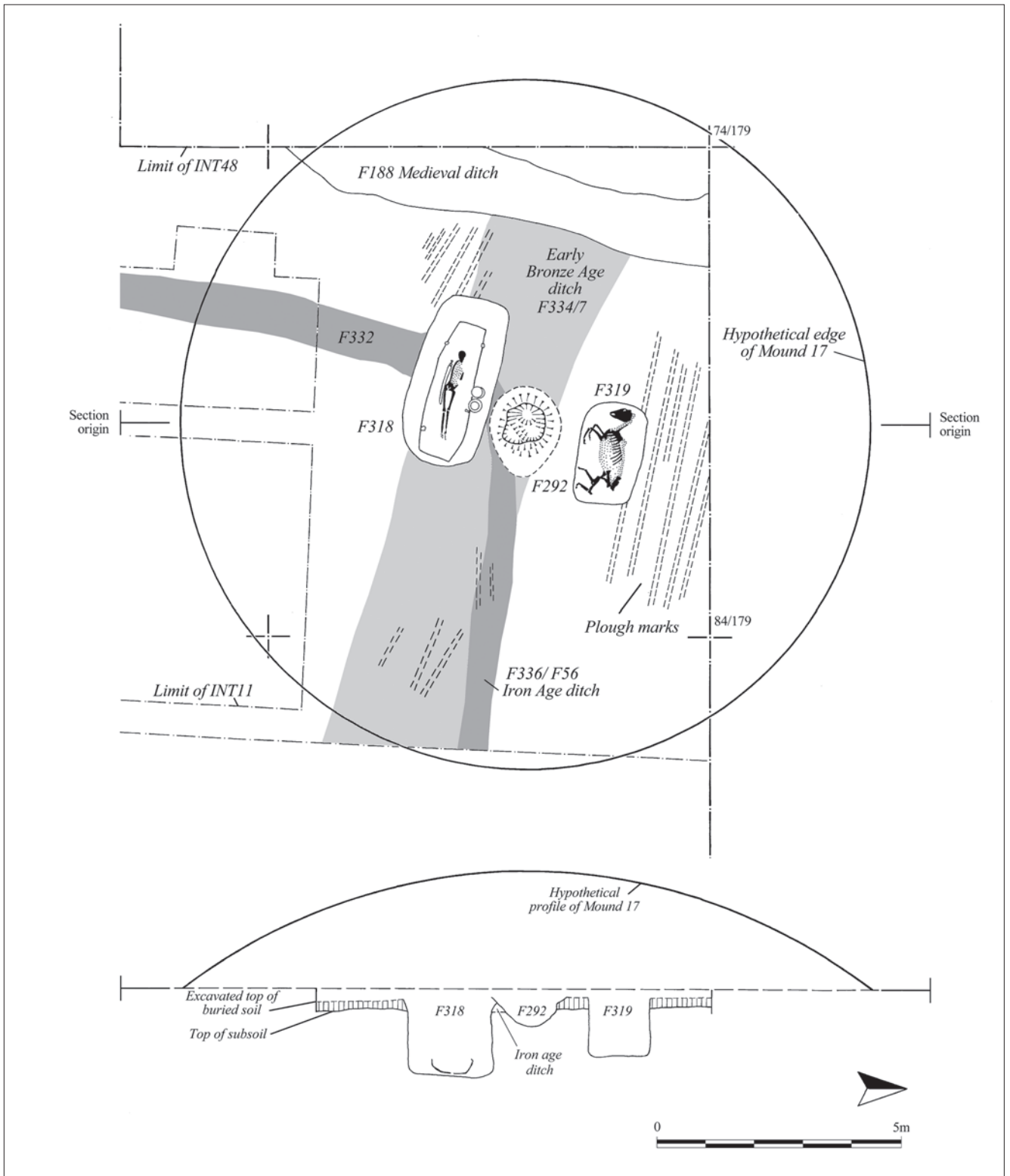
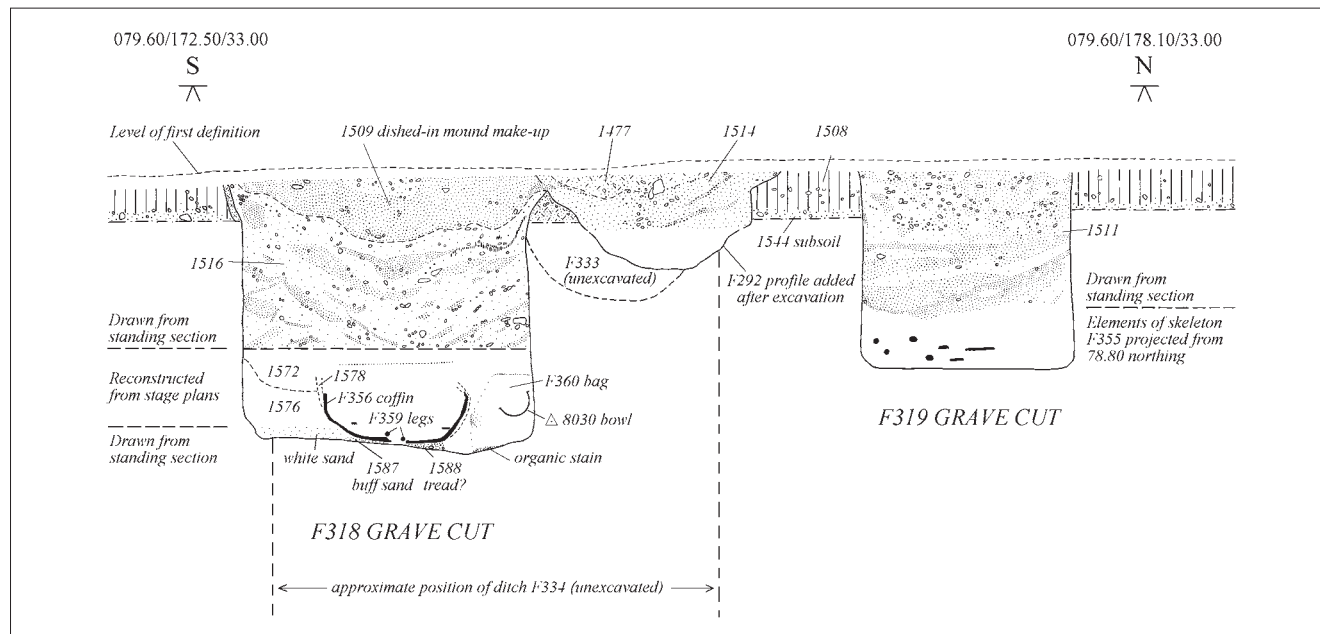


Figure 50 Plan and profile of the features under Mound 17.



**Figure 51** Mound 17: section north–south through the human and the horse burial.

predicted that several Prehistoric ditches would run beneath it.

The turf over Mound 17 was removed by machine at the same time as the rest of Int. 48 (north). In this area, the bared surface was not agitated by machine (see Chapter 3, p. 43), but was fieldwalked and metal detected, after which the expected buried-soil platform was defined by hand at Level D. Once the buried-soil platform had been defined, four features were seen to have cut it (Figure 50): the Medieval (or later) boundary ditch (F188) to the west, two parallel elongated pits designated F318 (the more southerly) and F319 (to the north), and a circular pit (F292) situated between them (Plate 26).

#### *Excavation of the remnant of the buried soil*

The buried soil platform was excavated in quadrants, taking F292 as the central point. The three central features cutting the buried soil were lowered against the quadrant sections, the sections drawn and the quadrant balks removed. All three features relating to Mound 17 were then excavated from the level of the subsoil. As predicted, they proved to have been cut into both the Early Bronze Age boundary ditch complex (S23 and F334/7) and the north-west corner of the Iron Age enclosure (S22, F332 and F336/F56). If the central point between the two large pits F318 and 319 (which was occupied by the small circular pit F292) signified the central point of the vanished mound (as seemed logical), then the mound had been placed exactly on the corner of the Iron Age enclosure (Figure 50). However, the Iron Age ditch was only seen in the surface of the subsoil (Horizon 7) and did not show at the level of the buried soil (Horizon 4).

Since neither of the large pits was central, they were initially thought to be robber pits dug in search of the burial covered by Mound 17. However, in the section (Figure 51) it was observed that F292, the central pit, was later than the two larger features (F318 and 319) that flanked it, and it became apparent that the two large pits constituted the burial and the little pit at the centre an attempted robbing. Once all three features had been isolated at the level of the subsoil (Horizon 7), excavation began of F318 and 319, using standard procedures at Level D. Although

stratigraphically the latest feature, F292 was excavated last to avoid creating a cavity on the edge of grave F318.

#### **The excavation of the human burial**

The excavation of the burial pit F318 was carried out and recorded by Annette Roe from 15 September to 3 November 1991. Her diary is contained in the Field Reports (FR 6/3921) and is cited here as 'AR'. The excavator and recorder from 2 November 1991 was Martin Carver, assisted by Elizabeth Hooper and the British Museum Conservation Team of Hazel Newey, Dean Sully, Fleur Shearman and Man-ye Liu. Martin Carver's diary (also contained in FR 6/3921 and cited here as 'MC') begins on 2 November and concludes on 7 November, with the lifting of the fragile finds en bloc. The blocks containing the fragile finds were subsequently excavated and dissected in the British Museum (Sturge Basement) under the supervision of Angela Evans. The excavation in the field took 53 days. Conditions were kind through most of this period, but in the last fortnight high winds and fading light required the work to continue in a shelter with artificial light.

The edges of F318 were defined against subsoil or the fill of the Early Bronze Age ditch (F334) that it had cut. The fill was removed in 100 mm spits at Level D (with 100 per cent sieving), preserving a running north–south section (Figure 51). After removal of a metre of fill there were strong reasons for believing that F318 was an intact burial: the edges of the feature were vertical, there were no displaced fragments of finds and, most suggestively, a circular stain appeared (later ascribed to the top of the wooden tub 9 [F353]; AR: 15 Sept.). Subsequent excavation was at Recovery Level E, and the strata were recorded in eleven stages (Figures 51–4). Stages 1–7 (taking the excavation to a total depth of 300 mm) were horizons prepared and recorded at 50 mm vertical intervals, without a standing section. In Stages 8–9 the primary grave-deposit was defined as a three-dimensional tableau, and lifted. At Stages 10–11 the remaining deposits were quadrant into subsoil, and recorded in plan and section. Only the upper fills of the burial pit are therefore recorded in section. The structure of the burial was

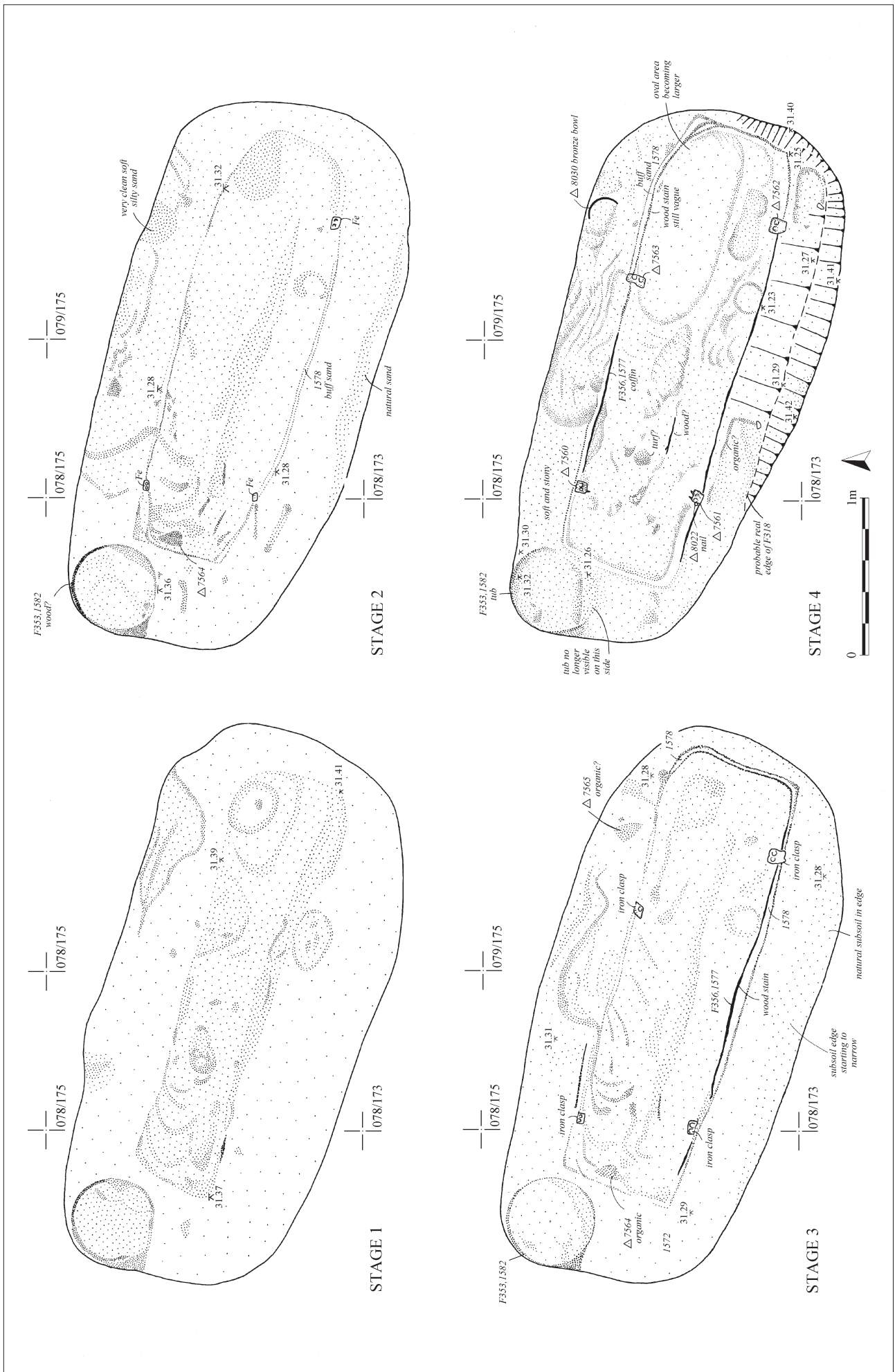


Figure 52 Mound 17: the excavation of the human burial. Stage plans for Stages 1-4.

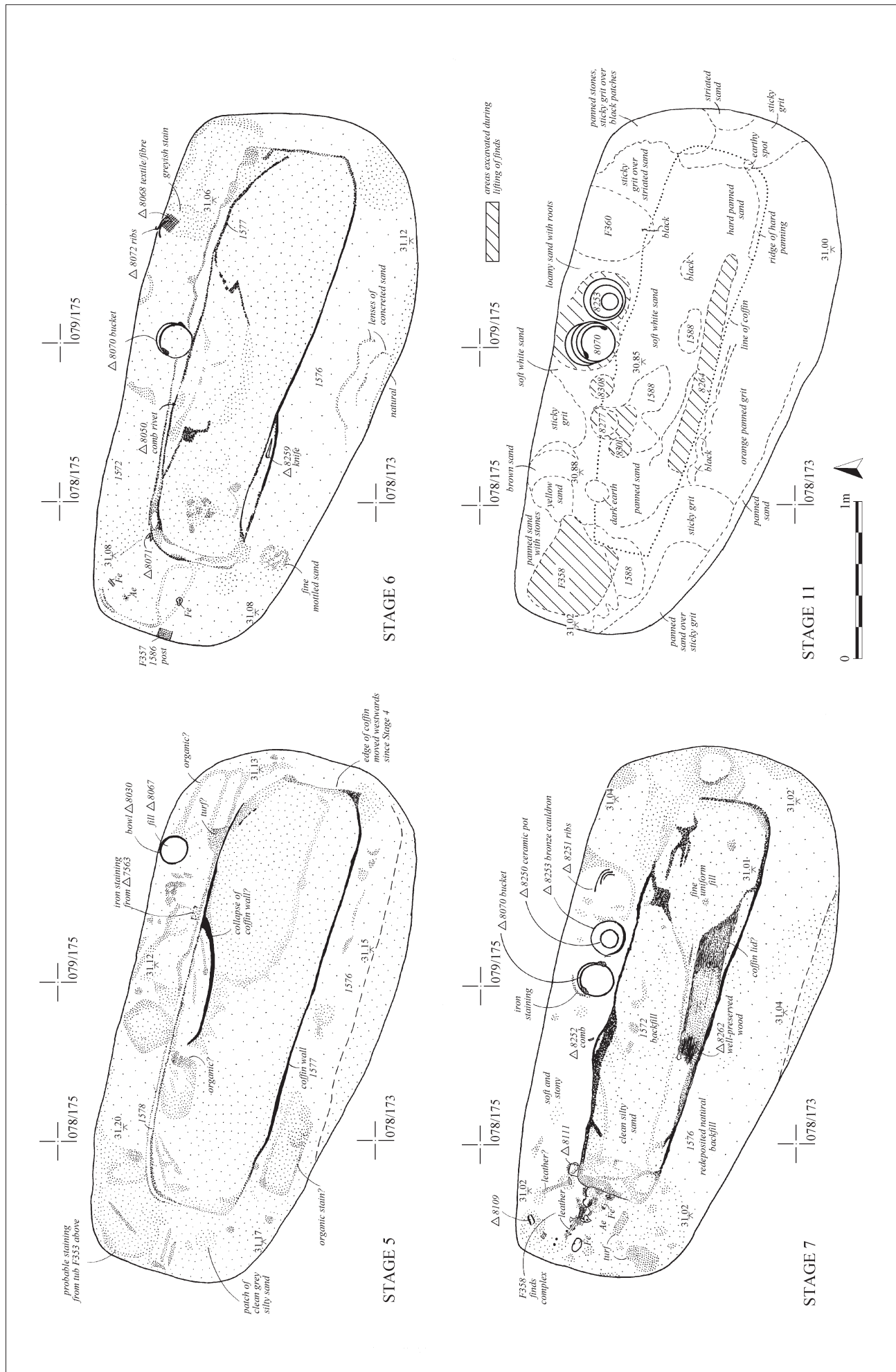


Figure 53 Mound 17: the excavation of the human burial. Stage plans for Stages 5–7 and 11.



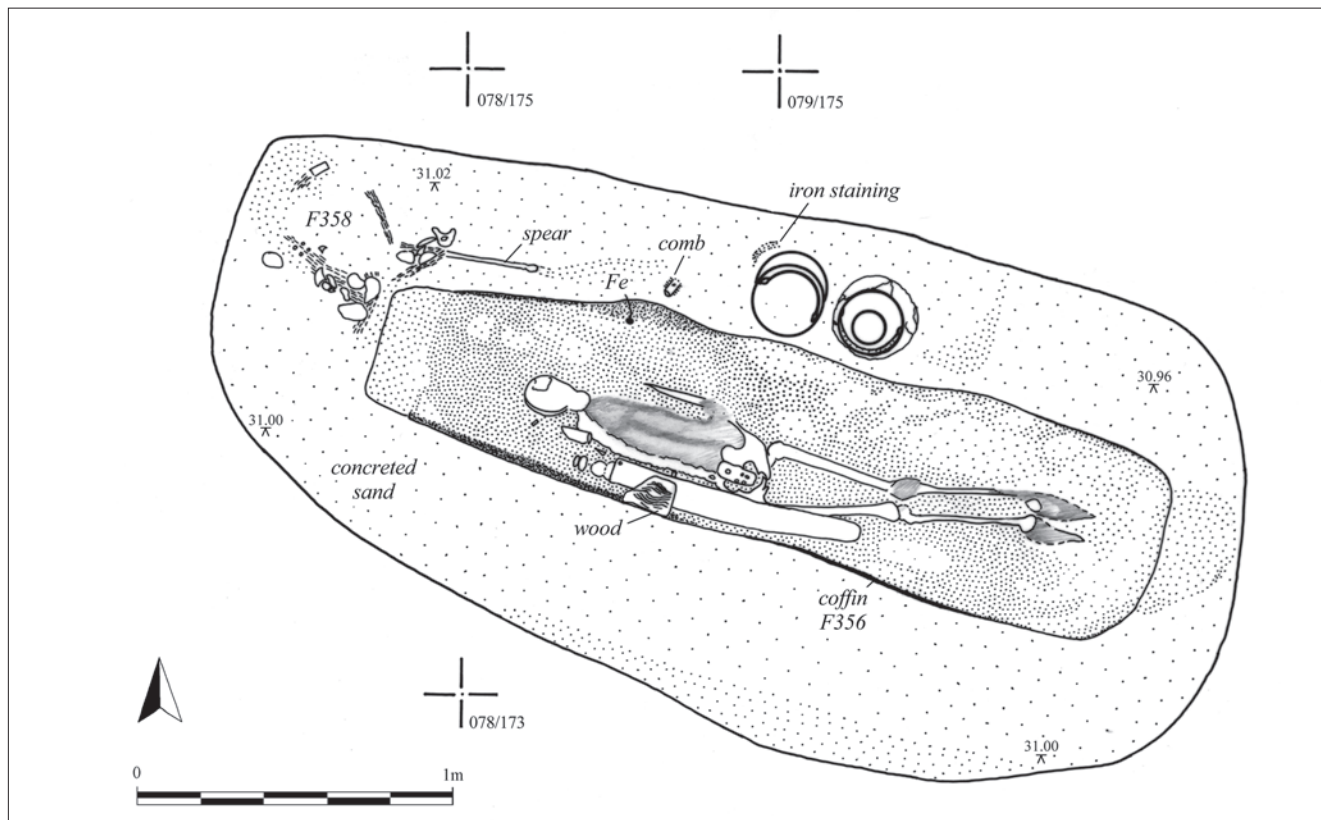
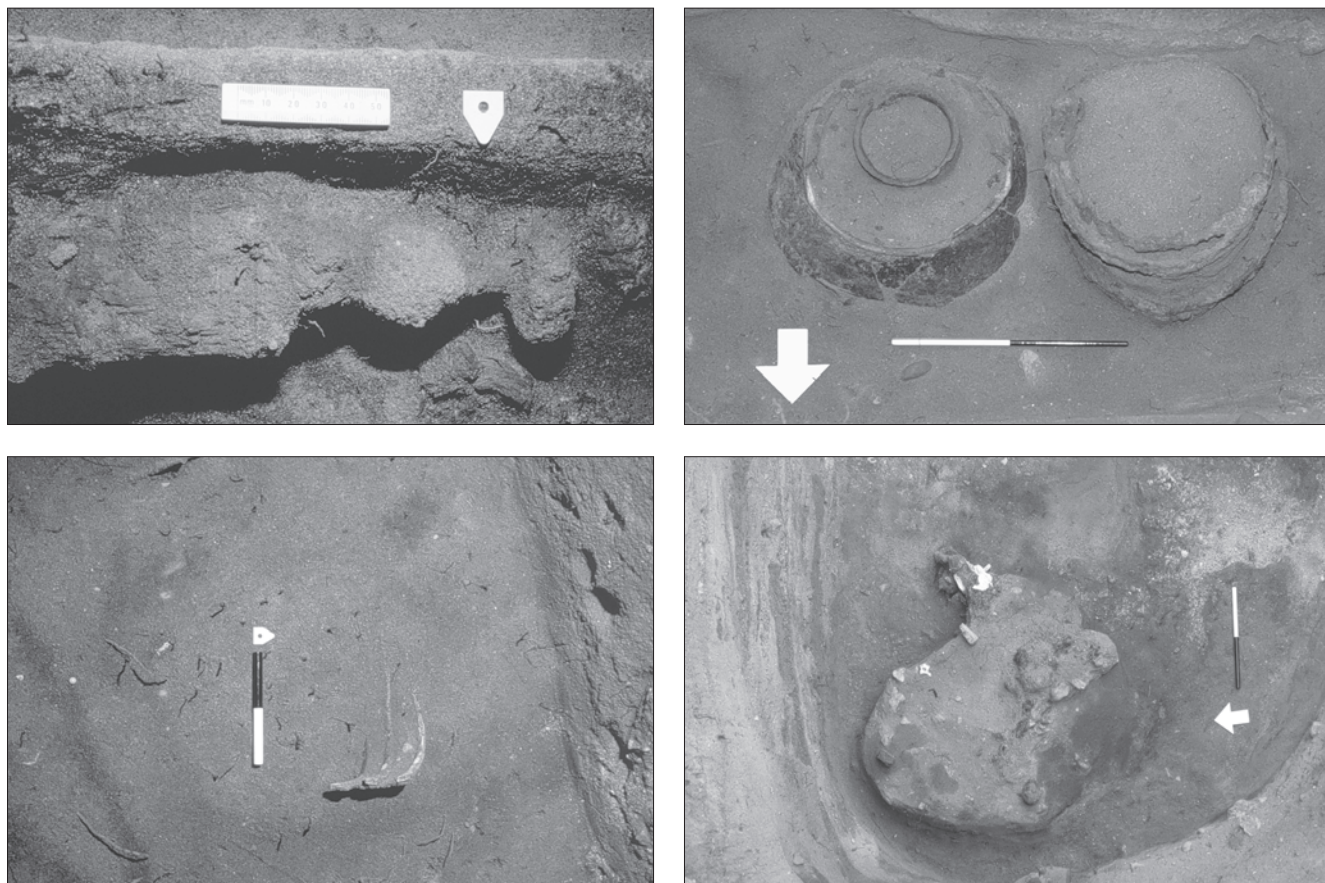


Figure 54 Mound 17: the excavation of the human burial. Stage plan for Stage 8.



Plate 27 Mound 17: the burials as excavated.



**Plate 28** Mound 17, objects in the ground: (a) sword 4; (b) iron-bound tub 13, cauldron and pot 14–15; (c) lamb ribs (17a and b) on site of possible bag 16; (d) the bridle block after removal of spears and before lifting.

reported as a sequence of surveyed colour plans (at 1:10) and colour photographs taken from overhead. These were subsequently found to give an accurate account of the geometry of the deposit, while maximising the definition of decayed organic materials by allowing them to be viewed in plan and recorded in colour. The burials, as excavated, are shown in Plate 27.

Stages 1–3 revealed the traces of a wooden tub, 9 (F353), and an emergent coffin, with its iron clasps, 1 (7560–3). At Stage 4 a bronze bowl, 18 (8030), appeared (Colour Plate 7). Stage 5 revealed the major groups of grave goods (Plate 28). The bronze bowl stood clear and was removed. Beneath it were two rib bones of a small animal, 17 (8072). A stain persisted in the area of the bowl. At this stage, the post-socket in the west wall of the pit, F357, was first identified.

At Stage 6 the top of an iron-bound tub, 13 (8070), first appeared. The first small objects belonging to a harness were noted at the west end, where the wooden tub (9) had been. At Stage 7 the top of a cauldron, 14 (8253), emerged, and within it a ceramic pot, 15 (8317/8250). At Stage 8 the harness block was defined (F358), and the spearheads, 10 (8191) and 11 (8261), appeared. The skeleton, the coffin base and the grave goods inside the coffin were revealed and recorded. At Stage 9 the outside of the coffin was clearly defined, showing that the spearheads continued beneath the coffin. At Stage 10 the coffin was quadranted and the section drawn. Beneath the coffin appeared a shield boss. Investigation of the deposits beneath the coffin revealed possible layers of silt and trample. At Stage 11 the investigation of the visible natural deposits on the chamber floor was concluded, prior to the lifting of the

fragile finds, including the harness block, F358, after emergency on-site conservation and consolidation by a British Museum team.

#### *Use of a cradle*

The excavator used a cradle made by Mr Peter Berry. This was constructed of scaffold poles supporting a board on which lay a child's cot-mattress. The scaffold poles were borne by planks, which in turn were borne by a wall of sandbags along the grave edge (Plate 27). It could be removed (by four people) for photography. A small version was built for the simultaneous excavation of F319.

#### *Use of a shelter*

As the weather worsened the excavation of F318 was provided with a shelter, also constructed by Mr Berry, made of timber and translucent corrugated sheeting. From late October working hours were extended with the aid of lighting powered by a car battery.

#### *Excavation method*

All excavation was carried out by hand, using standard Level E procedures (FR 10/243). Soil samples of 30 g were taken from each spit. All spoil was removed by bucket, and sieved separately. Sieving eventually yielded one Early Medieval find, the silvered axe-shaped harness-pendant 30a (8069). The remaining 111 finds were plotted in three-dimensions and, of these, 72 belonged to the harness complex that was lifted en bloc and excavated in the British Museum (at Level F).



**Plate 29** Mound 17: (a) Annette Roe excavating on the cradle; (b) the British Museum conservation team in action; (c) Man Yee Liu and Fleur Shearman lifting the sword 4.



### Records

In accordance with prescribed practice at Level E, full colour plans were drawn and colour photographs were taken at every 'stage'. Planners used glass-headed pins, placed at appropriate points, which were located in three dimensions by remote plotting (see Chapter 3, p. 45). Any context groups suspected of being structural had feature numbers assigned to them and generated an additional feature card. Examples of stratigraphic units accorded this higher level recording are: F318 – the grave cut; F353 – the wooden tub; F356 – the coffin; F357 – a socket for

a square-sectioned wooden post; F358 – the soil block subsequently found to contain the harness; F359 – the skeleton; and F360 – a haversack.

Each find (including all samples) was assigned a separate find number and a site inventory sheet (Y723). All artefacts recovered on site were also provided with a 'Finds Location Record' (see Chapter 3, p. 41).

The catalogue in Chapter 7 lists the finds from Mound 17 with their original registration numbers given on site and the numbers used in this publication. Publication numbers are in

bold and are usually followed by the original finds number, thus: sword **4** (8264).

*Consolidation and lifting of finds by a British Museum conservation team*

After definition of the group of metal objects and leather straps (the harness complex, F358) at the west end in Stage 7, it was decided that they would be best lifted together as a soil block and excavated in the laboratory (AR: 15 Oct.). At the same time, the fragile condition of other finds beginning to appear from Stage 7 onwards made technically assisted lifting essential. Accordingly, the British Museum dispatched a team of conservators, who arrived on 2 November. Since the operation of binding and lifting the finds and jacketing the soil block would inevitably disturb the chamber floor, virtually all recording had to be ‘pre-emptively’ completed before the conservation started. It was to be a balance of priorities between recovery and recording.

On the night 2–3 November the weather broke in earnest, with 100 mph winds followed by heavy rain (MC: 3 Nov.). The wind had not blown itself out by the morning of 3 November, when the final photographs of the burials were taken prior to their dismantlement (Plate 29). In the event, thanks to the Berry-shelter, no wind or water damage was sustained and, to our knowledge, no finds or potential evidence were damaged, marred or lost.

The lifting operation was generally successful, and a good match was achieved between detailed recovery and detailed recording. The finds were lifted by the BM conservators in this order:

- 1 sword, **4** (48/8264)
- 2 cauldron, **14** (48/8253)
- 3 iron-bound tub, **13** (48/8070)
- 4 rivets of shield, **12b** (48/8308–9)
- 5 shield boss, **12a** (48/8277)
- 6 spears, **10** and **11** (48/8191, 48/8261) – withdrawn from within the harness block
- 7 harness block (F358)

The method employed in lifting the sword was to cover it in cling film and aluminium foil, and then to apply a layer of pre-coated plaster bandage. When dry, a strip of ‘Polyflexol’ polyester resin and fibreglass was laid over the plaster-covered sword and trimmed. After curing the resin with an ultraviolet light-source, the sword was carefully turned over and placed, in its support, in a padded polythene trough, for transportation. Plaster bandages were used for the bucket, cauldron and purse.

Recording in advance of lifting continued until 7 November, by which time the lifting operation had rendered the base of the grave unreadable (MC: 7 Nov.).

*Lifting and excavation of soil block F358*

On site, the soil block F358 was isolated, planned and photographed vertically beneath a grid. At this point, seven objects could be seen, and their positions were recorded in three dimensions, providing the framework for positioning the eventually reconstructed plan (Figure 59). The seven objects were:

- an iron object, **32b** (48/8109)
- a silvered axe-shaped pendant, **30b** (48/8212)

- the back of a large gilt-bronze axe-shaped pendant with leather straps visible, **25a (ii)** (48/8168)
- a small buckle, **28a** (48/8110)
- a gilt-bronze axe-shaped pendant, **25d** (48/8185), with disc (48/8186)
- a strap-end, **26a** (48/8111) – this was at the north-west corner of the coffin at Stage 7
- a large buckle, **31b** (48/8318)

After its surface had been recorded, the block was covered in aluminium foil and consolidated with polystyrene foam (under a chicken-wire former). It was then undercut with a steel plate, with the aid of six aluminium rods driven beneath it. The block was then turned over by hand, at which point some slight movement of the objects on the east side may have occurred (see FR 6/7.1926; MC: 7 Nov.). The block was then turned over again and lifted from the grave using the back-actor of a mechanical excavator. It was placed on a purpose-built platform at the height of the tailgate of a Ford Granada, to which vehicle it was then transferred for transportation to the British Museum.

In the British Museum the block was immediately X-rayed in *Real Time*, and the objects observed were traced directly onto transparent film at 1:1. The block was then transported by trolley from the X-ray machine to the Sturge Basement, where the conservators opened it. A grid was initially set up to aid the recording of the position of objects, but this was later abandoned in favour of a single tape stretched across the block. The heights were taken with a dumpy level. The plan generated from these measurements was later adapted to show the positions of all objects relative to the burial, using as reference points the seven objects that had been recorded both on site at Sutton Hoo (above) and in the Sturge Basement of the British Museum. Figure 108 (p. 224) shows this plan, which features the objects in their conserved form.

The BM excavation took place in four main stages:

- At BM Stage 1 the surface was cleaned.
- At BM Stage 1–2 a ring of dark soil, radius 115 mm, was recorded in the north-west corner. This can be attributed to the base of the wooden tub **9** (F353) – see below.
- BM Stage 2 revealed the bit, **21a** (48/8173/4).
- By BM Stage 3 the disentanglement of the **21a**, **25d** and **22c** (48/8173, 48/8185 and 48/8178) groups had begun. A number of dark lines invested with rootlets, and attributed to leather, was observed, the most persistent joining the **21a** (48/8173) group (the bit) to the **25d** (48/8186) group (a brow band).
- By BM Stage 4 the objects had been revealed and defined.

The grave pits of F318 and F319 were covered for the winter and a team returned in April 1992 to complete the excavation of F292. When this had been done, the area of Mound 17 was back-filled and consolidated. Both operations were supervised by Andrew Copp.

*Analyses undertaken for burial pit F318*

The records were analysed by Martin Carver in August 1993, drawing on preliminary work by Annette Roe, and were subsequently checked by Annette Roe, who then composed the drawings. The principal analyses undertaken were:

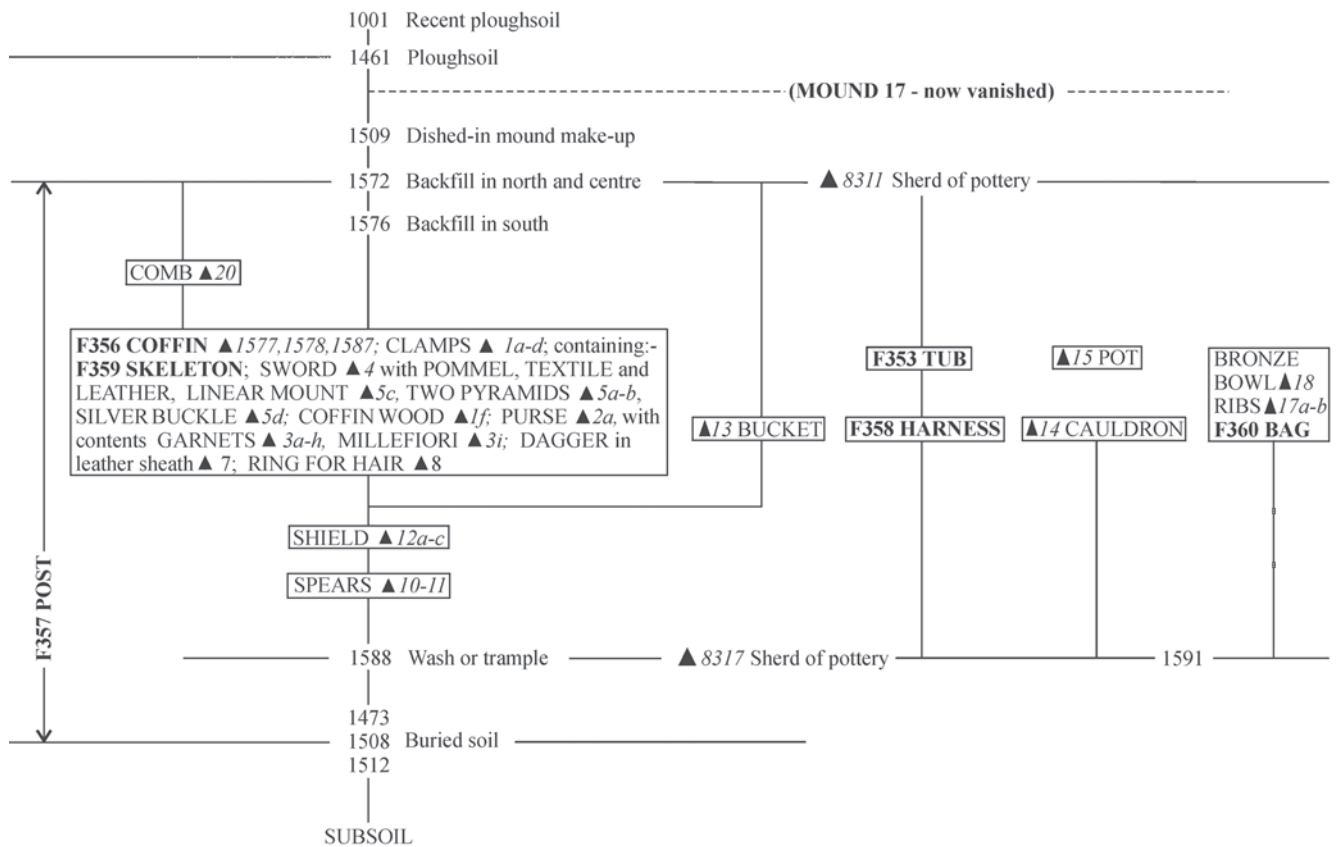


Figure 55 Mound 17: stratification diagram.

- of the stratified sequence
- of the structure of the coffin, F356 (see below)
- of the structure of the tub, F353 (see below)
- the structure of the bag, F360
- the composition and reconstruction of the harness, F358

This last analysis was undertaken in two independent operations by Martin Carver (see Carver 1998a: 113, fig. 68) and Angela Evans (see Chapter 7, p. 224).

Other analyses undertaken were:

- of the human skeleton by Frances Lee (see Chapter 7, pp. 269 and 280)
- of the Early Medieval artefacts by Angela Evans and staff at the British Museum (see Chapter 7, p. 201)

The *stratified sequence* (Figure 55) was deduced using the order of deposition recorded in plans and context cards. The sequence includes finds, contexts and features, and models the events from the cutting of the grave pits to the erection and destruction of Mound 17. The results of these analyses are used to reconstruct the history of the burial (see below).

*Some analyses not undertaken: investigation of anomalies inside the backfill of F318*

Apart from wooden tub, 9 (F353) – above – and the rectangular shape that signalled the coffin, there were few anomalies in the backfill. A circular patch on the south side and an elongated slick on the north side (AR: 18 Sep.) were seen at Stage 1 of the pit's excavation, but had disappeared at Stage 2, and were attributed to backfill. A circular stain with a dark centre within

the east end of the coffin was also noted (AR: 20 Sep.). It had disappeared at Stage 2, but overlay a silty patch, oval in shape, which was strongly marked at Stage 4 and was also present at Stage 3. This anomaly gave the impression of a cavity filled with silt. The circular patch at Stage 1 appears to belong to a chain of swirling 'vortices' over the area attributed to the coffin lid. It is argued below that this area is not the lid itself, but rather a pattern of soil vortices created by the collapse of the lid onto the coffin base. At Stage 2–3 there were also two organic lumps, sample numbers 48/7564 and 48/7565, both of which are most likely to be back-filled turfs (AR: 1 Oct.).

At Stage 4, anomalies on the south-west side of the burial pit suggested planking (see above), but these are also more likely to be turf, in spite of their (fleeting) linearity. There was also a 'possible faint organic stain towards the south' recorded in a Polaroid while preparing for Stage 5 (AR: 8 Oct.), sampled as 48/8043.

At Stage 6 there were a number of anomalies that might represent the lid of the coffin, or the remains of something placed upon it (always allowing for any of them to be explained instead as backfill). A mottled patch towards the west end, inside the coffin, was sampled as 48/8080 and 48/8083, as a suspected floral tribute. A square patch of possible wood was sampled as 48/8089. Samples 48/8093, 48/8096, 48/8102 and 48/8106 are all from possible residues carried by the lid.

At Stage 7 other targets for residues over a collapsed lid were 48/8225, 48/8226, 48/8234, 48/8235, 48/8237, 48/8238, 48/8240, 48/8241, 48/8247 and 48/8248. In general, the removal of this sampled soil after Stage 7 exposed the body and the wood from the lid together. But at Stage 8–9 there was one sample (48/8249) of yellow sand that could be both under the

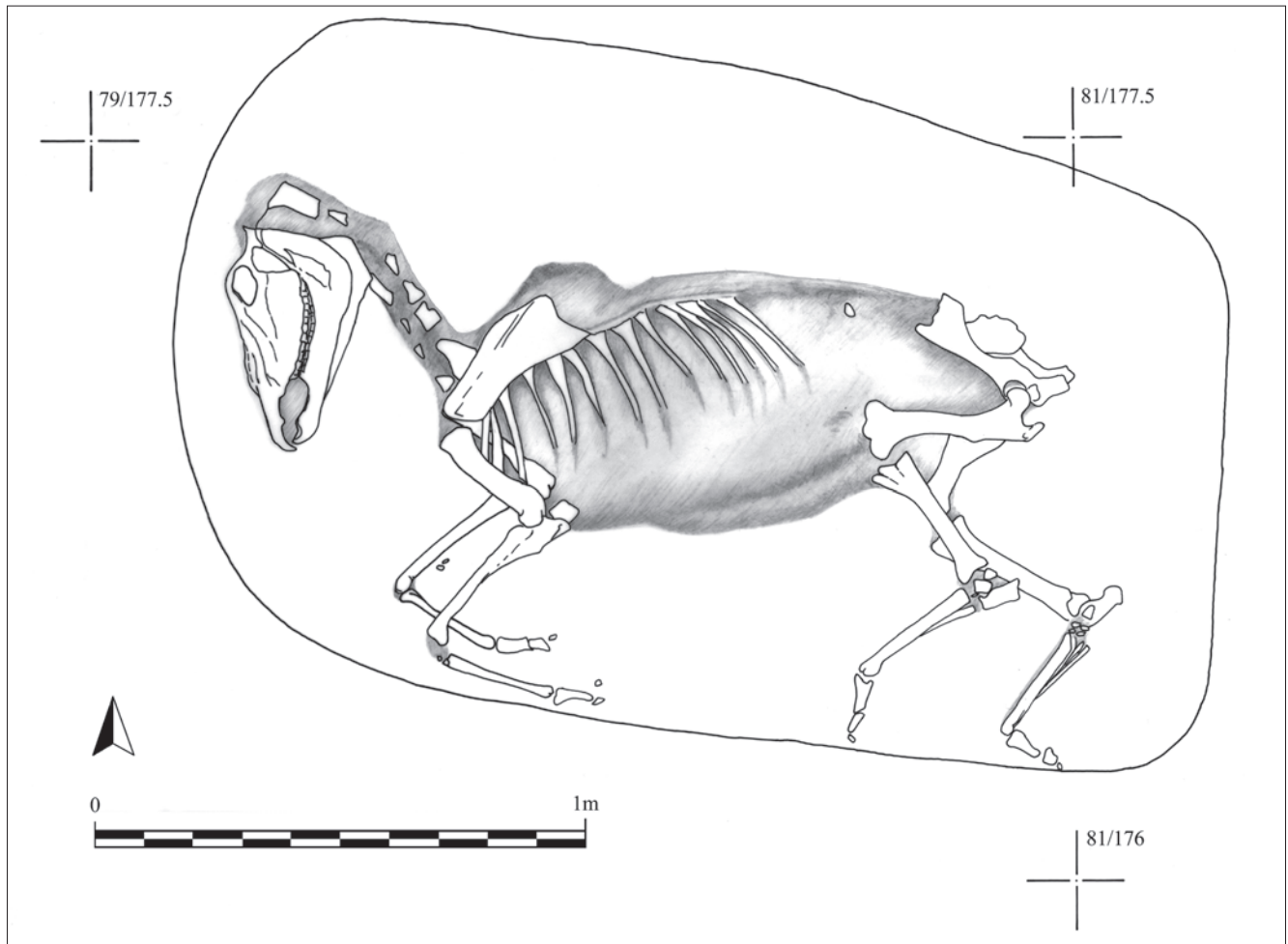


Figure 56 Plan of horse skeleton and body stain.



Plate 30 Burial 10: the horse in the ground.

lid and over the body, and another (48/8322) which was adjacent to the head.

At Stage 10–11 samples 48/8288–90, 48/8292, 48/8294, 48/8296, 48/8298, 48/8299, 48/8314, 48/8315 and 48/8337 were taken from beneath the grave goods or beneath the coffin. Samples 48/8294 and 48/8337 lay directly beneath the body area.

Most of these anomalies can be satisfactorily explained as patterns in back-filling. Soil samples, as itemized, are held in store pending the development of further research questions, and the appropriate technology and protocols to answer them.

### **The excavation of the horse burial F319**

The oval pit F319 was defined at the same time and at the same stratigraphic horizon as F318. Excavation began on 12 September 1991, and the excavator and recorder was Kent Bursom until 14 October, at which point Steve Timms took over. Originally considered to be a robber pit, the data acquisition level on F319 changed from Level D to Level E at the same time as for F318 (15 September). By this time, the backfill on the east side of the pit had been removed to a point just below the surface of the natural subsoil, against the principal north–south section through Mound 17.

The feature was then excavated in plan, following the standard procedure for burials (FR 1/2.43), in seven stages as follows:

Stage 0: Removal of the upper backfill (yellow sand 1511).

Stage 1: Definition of ‘organic deposits’ 1580 and 1581 (the latter in backfill 1579). These were initially thought to be parts of a collapsed chamber wall and were then re-interpreted as organic debris – or perhaps hay or fodder. Extensively sampled (7456 etc.), these stains can now safely be attributed to turf in the backfill.

Stages 2–3: Following the appearance of the foot of a horse, the body stain (1592) was explored and defined.

Stage 4: A new context was defined, in addition to the horse skeleton (1575) and body stain (1592), in the form of a consistent yellow stain running from the head to the front radius and along the body to the rear knee. It was given context number 1593, and was provisionally interpreted as a rope or halter, and was sampled accordingly.

Stage 5: The ‘rope stain’ was discovered to be an integral part of the body stain.

Stage 6: The horse body was completely defined (Figure 56; Plate 30).

Stage 7: The skeleton was dismembered and lifted. The bone was in relatively good condition, with only the head losing some of its integrity on lifting, collapsing under its own weight (MC: 7 Nov.).

### *Analyses undertaken for F319*

The horse skeleton was analysed by Terry O’Connor (see Chapter 7, p. 281). Bone from the horse skeleton gave a calibrated radiocarbon date centring on the early seventh century (see Chapter 3, p. 59 and Table 9).

### *Anomalies in the backfill of the horse burial F319*

The anomalies encountered in the backfill were 1580, 1581 (at first thought to be fodder or vegetation of some kind) and 1593, a ‘rope’. All were later attributed to turfs or patterns in back-filled soil.

### **A history of Mound 17, argued from the investigations**

An account of the Mound 17 burial as drawn from the analyses is presented here. Note that this differs from previously published accounts in two respects. The wooden tub has been shown to have stood directly over the harness and not, as suggested in the interim report (Carver 1992b: 363), over 30 cm of backfill. The form of the coffin, at first thought to be tree-trunk and then remodelled as rectangular (Carver 1998a: 112 and fig. 69), has been restored to a tree-trunk coffin, following observations by Sue Hirst.

### *The buried soil*

Mound 17 lay over two Prehistoric ditches, one of which (S23, F334), dating to the Early Bronze Age, had been completely back-filled before the other, relating to an Iron Age enclosure (S22, F332), was cut across it (Figure 50). Burial pit F318, which contained the human burial, was placed on the corner of this Iron Age enclosure, so as to cross the ditch and the putative line of an internal bank. Both Early Medieval burial pits were cut through the buried soil, which had survived to a maximum thickness of about 300 mm. Plough-marks were seen within the buried soil, but it was hard to tell if they were Prehistoric or later, as the Mound 17 area had certainly ultimately been reduced by ploughing from a similar level (see below). Plough-marks aligned WNW seem to respect the Iron Age enclosure ditch (see similar plough-marks recorded under Mound 5, Chapter 5, p. 371), while others running east–west crossed the back-filled Iron Age ditch (Figure 50). Turf was found in the backfill of the Mound 17 burial pits, which implies that the land was not all under the plough, at least not at the time that Mound 17 was constructed.

### *Visible earthworks*

The Early Bronze Age ditch system is not thought to have been visible when Mound 17 was constructed, and so is not significant for its siting. The Iron Age enclosure, on the other hand, must have been a marker for Mound 17, as it was for Mounds 5, 6, 18 and, possibly, 14 (see above). Burial pit F318 had cut through the corner of the Iron Age enclosure ditch and across the line of its putative internal bank. This implies that the Iron Age ditch was visible as an earthwork, and perhaps also that the human burial (F318) was sited before the horse burial (F319). However, no bank survived and the ditch was not recognized in the buried soil surface. For Mound 6 we reconciled this contradiction by supposing that the Iron Age earthwork was visible in the seventh century AD, but that the bank had been levelled and the ditch refilled just before the burial pit was dug and the mound erected. There was also evidence for some turf stripping and stacking under Mound 6 (see Chapter 4, p. 91). At Mound 17, too, the mound builders may have noted the bank and ditch and sited their mound accordingly, but then eliminated them by levelling the platform. The model here would assume that turf was first stripped from the earthwork and any remnant bank was pushed into the remnant ditch. Such a filled-in ditch might be hard to detect in a buried soil platform.

### *Digging the pit for the human burial F318*

#### THE FORM OF THE PIT

F318 was a vertical-sided pit, 1.7 m deep from the top of the extant buried soil and subrectangular in plan, with 3.6 × 1.7 m

maximum dimensions. The edges of the pit were not easy to discern, owing to its first being dug through two back-filled Prehistoric features and then through a series of unevenly and discontinuously banded subsoil deposits comprising orange gravel, yellow sand and fine wet black and yellow gravel – strata nicknamed ‘sickly grit’ (Stage II).

Although the ‘sickly grit’ was attributed to a glacial melt-water channel or underground stream (MC: 3 Nov.), the geology of this local system was not adequately studied. The fact that it was so different from the deep natural strata contacted in the Mound 2 chamber and elsewhere on the site may account for the unusually good preservation of the bone under Mound 17. In particular, the grit was noticeably damp and sometimes wet. This might be attributable to a coincidence with the spring line.

#### ANOMALIES ON THE PIT BASE

The ‘sickly grit’ and its associated natural system were carefully searched for anomalies that might relate to the structure of the burial pits, or to activities within them (MC: 3 Nov.). As the natural deposits were so varied – being banded, sloping and of contrasting colours – many anomalies were recorded at the base of the burial pit, but none could be shown to have been anthropogenic, and the dark smudges generally disappeared beneath the extensive natural bands.

#### A CLOTH LINING?

Towards the bottom of the grave, particularly at the eastern end, there seemed to be a very thin, brownish lining just above the subsoil. This called to mind a cloth or rug laid before the deposition of the grave goods and coffin (AR: 16 Oct.). This observation could not, however, be captured in the form of a record, and the possibility remains that the phenomenon observed is related to the primary wash or trample (1588; see below). Examination of the feet of the iron-bound bucket (13) suggested that it had stood on grass; and the copper-alloy bowl (18) was associated with sphagnum moss (17c; Chapter 7, p. 246). The grass and moss provide a more plausible covering for the burial pit floor, and an explanation for the observed anomaly.

#### RAIN WASH AND TRAMPLE?

The stratigraphically lowest, artificial, deposit was a thin layer of homogeneous brown sand (1588) that was defined beneath the coffin at its lowest point (30.85 m AOD). It merged with a stratigraphically equivalent layer beneath the harness block (1591). Beneath the coffin (only), the brown sand (1588) was covered by fine buff sand (1587). Elsewhere, Contexts 1588 and 1587, if present, were not distinguished from backfill (1572 and 1576). From Context 1588 came a single sherd of pottery (8317), which was stratified beneath the coffin and was Roman or Prehistoric in date (see below). The composition of Contexts 1588 and 1591, and their location at the lowest points of the burial pit, suggest they were due to rain wash, trample or both.

#### A HOIST?

The only other context that might belong to the unfurnished grave pit was the post-socket (F357) set into the subsoil in the west wall of the burial pit, F318 (Figure 54). It was situated centrally, 160 mm up from the base of the pit. It was first

recognized at Stage 5 and showed clearly at Stage 6. The feature was formed by a post 80 × 80 × 90 mm in scantling. The socket was filled with dark sand (1586) and survived to a depth of 80 mm in the west wall of the grave. No signs of this post were discerned in the upper or lower fills. From the shape of the socket, the post was recorded to have entered the grave wall at an angle of about 10° to the horizontal (MC: 7 Nov.). It is, therefore, unlikely to have served as a marker post. Neither is it likely to have rotted *in situ*, given the timber traces left by tub F353; a post 3 in. square should most certainly have left traces in Stages 1–5. The post had therefore been removed, and may have functioned as a temporary step or hoist for the furnishing of the grave.

#### CONCLUSIONS

Some rain-washed silt probably collected in the pit base, but the other anomalies can be attributed to decay products collecting at the interface between the pit fill and a wet, banded subsoil. None were demonstrably the remains of artefacts or the direct result of human activity.

#### **Furnishing the human burial, F318**

A composite plan of the grave tableau from the Mound 17 human burial is reproduced in Figure 57. The objects encountered in the grave are presented in the order in which, according to the stratigraphic analysis (Figure 55), they were placed in the grave. First come those which furnished the burial pit; then the coffin, with the body and the grave goods it contained; and last are the grave goods added after the coffin had been put in place and before the pit was back-filled. The detailed descriptions, illustrations and discussion of these objects will be found in Chapter 7, p.215ff.

#### *The spears*

The spears, **10** and **11** (48/8261 and 48/8191), appeared at Stage 8, and were the first artefacts to be placed in the grave. At first thought to be a single spear, the fact that there were two spearheads fused together by corrosion came to light during conservation. The relative positions of each spearhead have been restored in Figure 57. The spearheads had disappeared beneath the coffin, and were clearly stratified beneath it. The spearheads were also stratified beneath the harness block (F358), the most westerly spearhead being physically extracted from beneath the block before it (the block) was lifted. A small ferrous nodule (48/8297) was originally proposed as a ferrule indicating the position of the end of a (broken) spear; it was subsequently (in the laboratory) shown to consist of compacted sand (pan).

#### *The shield*

The shield, **12**, appeared at Stage 10 and consisted of a shield boss, **12a** (48/8277), and two rivets, **12b** – one to the west (48/8309) and one to the east (48/8308). Each rivet was elongated and aligned north-west to south-east in the ground. The top of the east rivet was at 30.899 m AOD and the top of the west rivet was at 30.901 m AOD, showing that the shield had been laid almost horizontally, with the boss pointing up. A single ‘rivet’, **12c** (48/8190), located beyond the assumed edge of the shield boss was shown in the laboratory to be a small buckle. A very thin patch of wood stain, 48/8301, with a grain aligned approximately east–west (MC: 2 Nov.), was located near the



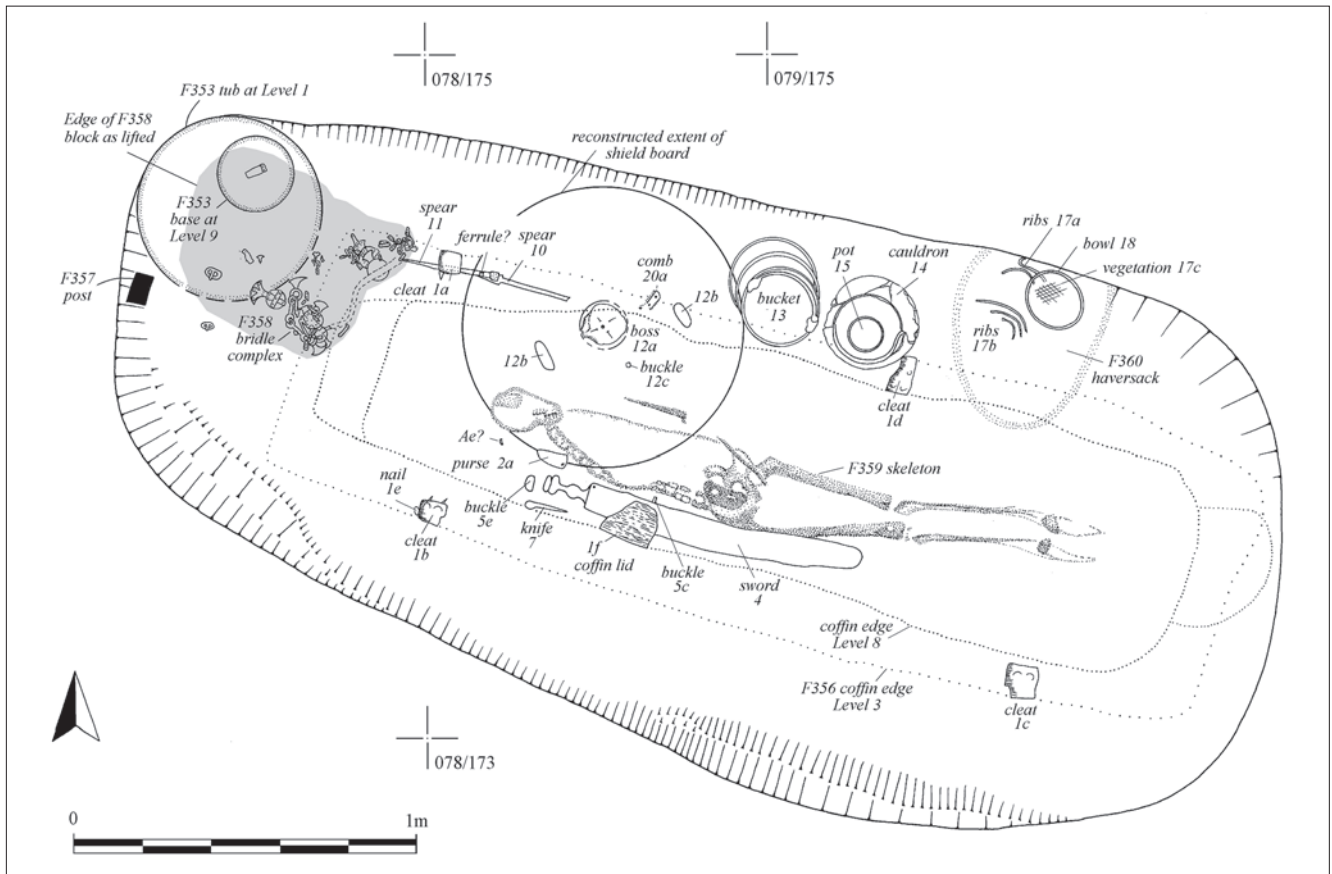


Figure 57 Mound 17, the human burial: composite plan of the grave tableau.

iron-bound tub, 13 (48/8070), and was thought to have belonged to the shield-board, but the identification was not strong (MC: 5 Nov.). The elements of the shield were lifted en bloc without consolidation, the boss and (unidentified) buckle being taken together.

The shield certainly lay under the coffin, as the stud of the shield boss had penetrated the decayed wood. The position of the shield boss relative to the spears showed that the shield had overlain the spears. A small patch of ferriferous wood on top of the spears probably belonged to the shield-board. If the wood stain (48/8301) represented part of the shield-board, then the shield also just underlay the iron-bound tub, 13 (48/8070) – MC: 3 Nov.

The maximum radius of a horizontally positioned shield was 400 mm, which conformed well to limits suggested by the wood patches on the spears and under the buckets. The measurements recorded on the ground were:

- shield boss stud to wood patch on spear – 400 mm
- shield boss stud to W. rivet – 200 mm
- shield boss stud to E. rivet – 220 mm (MC: 7 Nov.)

This gives a shield approximately 800 mm in diameter.

#### The iron-bound tub

The iron-bound tub, 13 (48/8070), appeared at Stage 6 and was originally of wood and bound with three iron bands. It had collapsed southward under compression, giving the impression of being squashed by the coffin (AR: 16 Oct.). It had been placed slightly over the shield-board, and lay below the northern edge of the coffin as it appeared at Stage 5. At Stage 7 the excavator

reported that the lowest ring was slightly crushed on the southern side, which was possibly caused by the coffin being inserted after the tub (AR: 16 Oct.). The likelihood is that the coffin was responsible, directly or indirectly, for the southward compression of the bucket. Around the tub was a jacket of concreted ferrified sand (sampled as 48/8312).

#### The cauldron and ceramic pot

The cauldron, 14 (48/8253), appeared at Stage 7, and contained the small pot, 15 (48/8250) – see below. No stratigraphic relationship was observed with either the bucket or the coffin. However, the excavator reported the cauldron (like the bucket) to be slightly crushed on its southern side (AR: 16 Oct.). Both tub and cauldron occupied a narrow space between the coffin and the north wall of the pit; they were probably both placed in the grave before the coffin.

Within the cauldron was the ceramic pot, 15 (48/8250). How the pot came to rest in such a position is uncertain. The materials within both pot and cauldron were subsequently examined in the British Museum laboratory, but no trace of any material other than sand was found. The cauldron itself was surrounded by a jacket of concreted sand (sampled as 8313).

#### A bag containing a copper-alloy bowl and other finds

A 'haversack' or bag, 16 (F360), was inferred from a group of finds, which, from their three-dimensional loci, must have been contained in something. They were: a copper-alloy bowl, 18 (48/8030); animal ribs, 17a (48/8072); animal ribs, 17b (48/8251); fibrous organic material, 17c (48/8068); and ephemeral soil stains (samples 48/8080, 48/8098, 48/8099, 48/8232, 48/8233, 48/8273, 48/8274, 48/8278 and 48/8298).

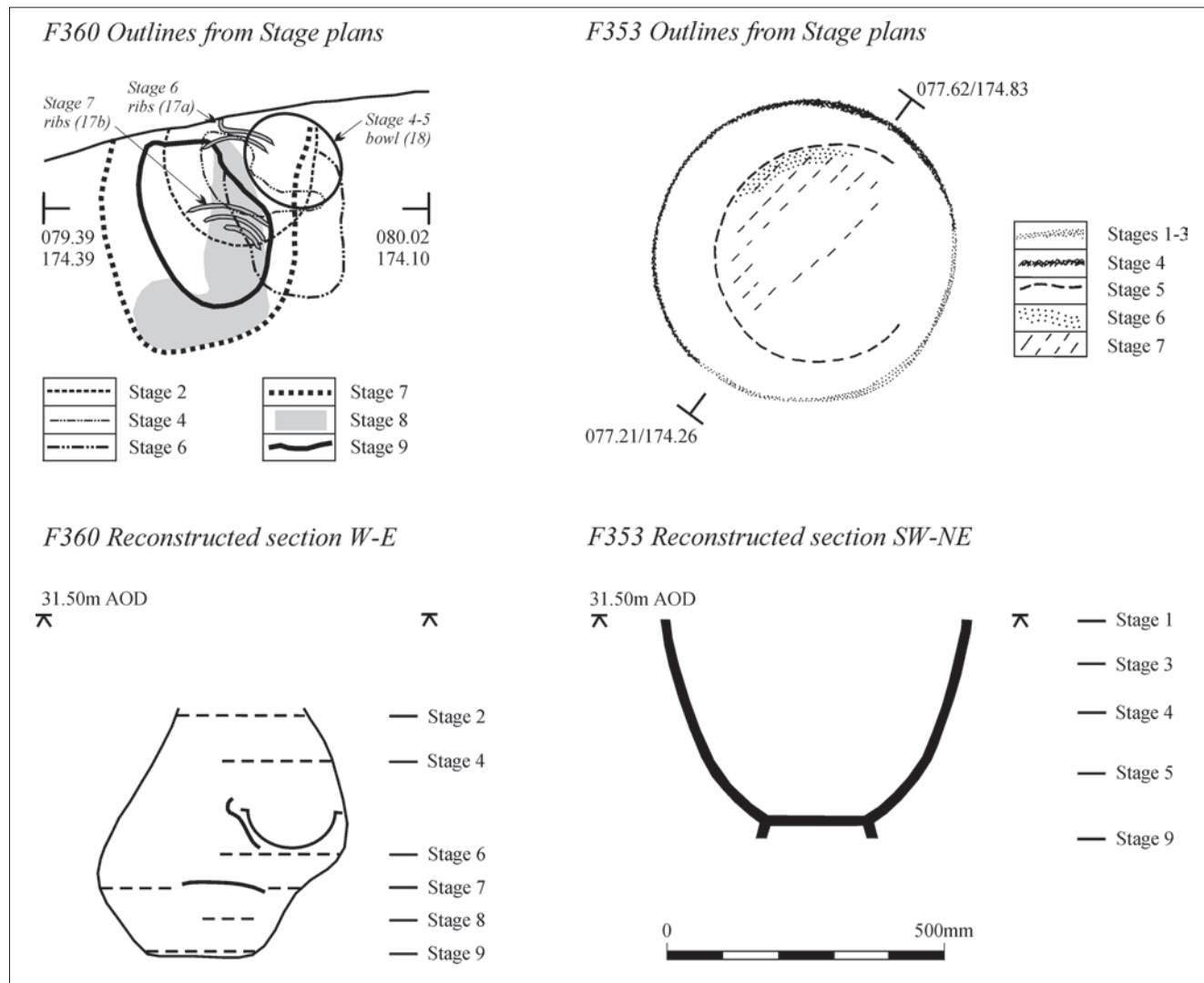


Figure 58 Reconstruction of 'bag' and contents (left) and wooden tub (right).

The copper-alloy bowl 18 appeared at Stage 4 (AR: 2 Oct.) at 31.26 m AOD, and lay clear at Stage 5, well above the level (Stage 6) at which cauldron and bucket first showed. It was therefore either placed in the grave when back-filling had already commenced – in which case it was the only object to be so treated – or some other artefact had supported it. When the bowl was lifted, between Stages 5 and 6 (AR: 15 Oct.), a concentration of fibrous material preserved by its contact with the bronze was underneath it. This was initially thought to be textile, but proved to be sphagnum moss and couch grass (17c). At the same time, two rib bones (17a) of a small animal (identified as lamb or young sheep/goat) were revealed under the bowl and between the bowl and the grave wall (AR: 15 Oct.). One end of the soft bone emerging from behind the bowl was mistakenly trimmed with scissors, in the belief that it was a root (AR: 15 Oct.). The bowl had tipped, as though to empty south-west, and immediately to the south was a greyish stain that almost looked like something spilled from the bowl.

There were no signs of any residues except on the underside of the base. The initial colour, on excavation, was dark green at the rim, brighter green on the curve and pale green at the centre of the base, where rotted organic materials appeared concreted to the surface. The base rested on a pad of moss and grass (17c) with some bone (17a), which may explain the pale green concretion. On the south-west face were traces of grass or

roots (?), and some kind of fibrous material. All over the bottom of the bowl, quite randomly spaced, the excavator noted small, white circular concretions of 6 mm diameter, and asked whether these could be from worms or maggots, where meat rotted on the bones.

After the removal of the bowl (18), moss (17c) and ribs (17a), the grey stain persisted faintly in this area at Stage 6. At Stage 7 the stain became stronger, and the case for a soft container was proposed and investigated. 'The greyish stain (sample 48/8098)', wrote the excavator, 'was surrounded by a brown organic-looking stain (48/8099) and contained a further three rib bones 17b (48/8251; height 31.02 m AOD) which should be associated with (17a) and constitute a food offering. However, the different levels make it necessary that these items, perhaps including the bowl, were contained in something' (AR: 16 Oct.).

At Stage 8 there was 'still a darker patch, but it becomes less convincing and the greyish sand that was around the bone disappears' (AR: 16 Oct.). At Stage 9 (Colour Plate 8), to the east of the cauldron 'there is a dark, almost black, concentration on the natural bottom. This concentration of small black patches coincides with the position of the staining round the meat and bowl higher up and may possibly be the stain left from a leather bag (?) which could have contained all the food offerings. ...the natural subsoil does contain blackish lenses, but these are slightly more convincing as organic stains' (AR: 16 Oct.).

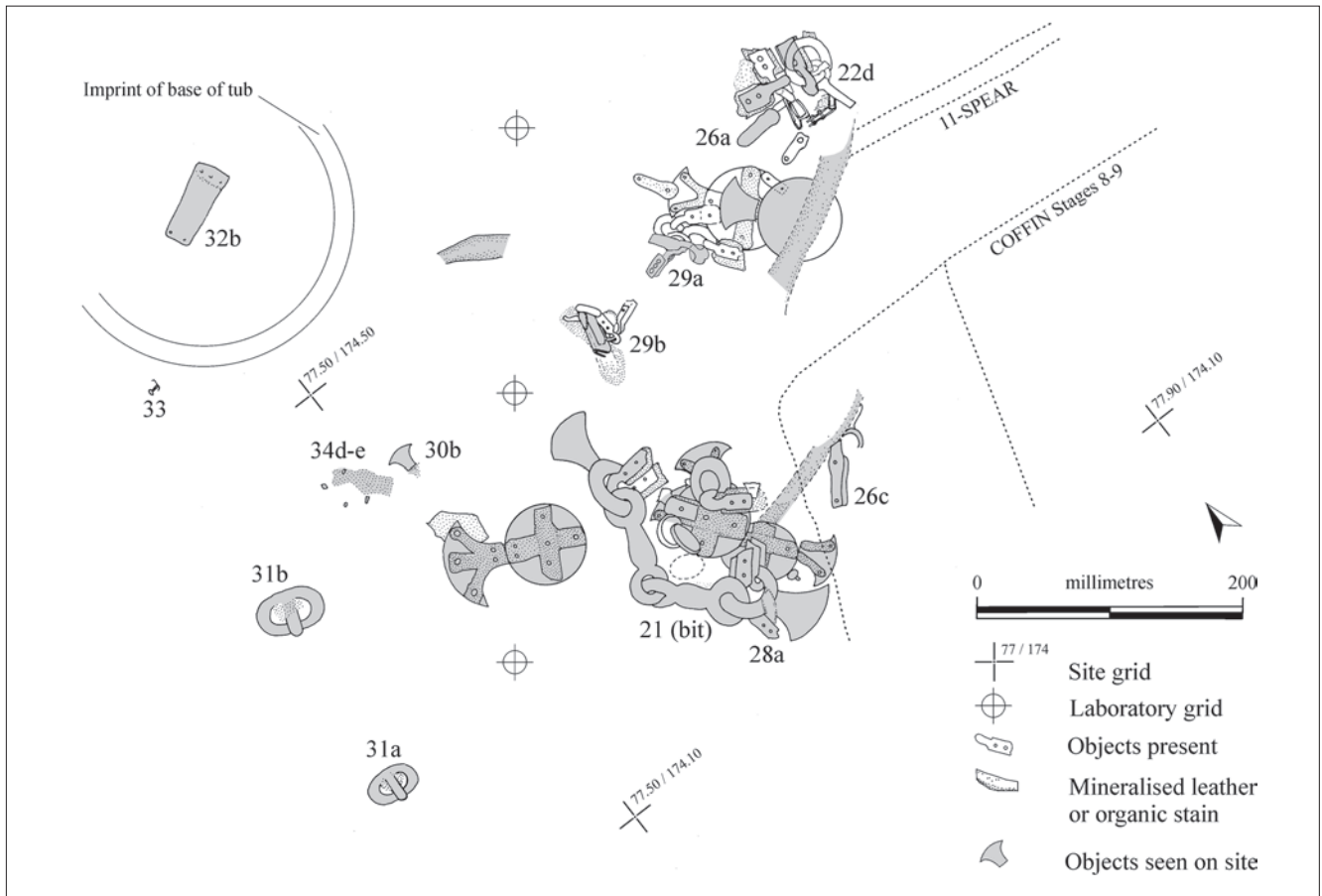


Figure 59 Mound 17: plan of the harness fittings *in situ* in the grave.

A persistent anomaly in the form of a circular or subcircular stain was thus noted in the area of the bowl. It may actually have been present higher than the bowl, and seemingly first showed at Stage 2, at a height of 31.32 m AOD (Figure 52). The anomaly was still detectable as ‘brown earth with a clay component’ at Stage 10 (MC: 5 Nov.), when the stain-zone was subsquare, with a dimension (diameter or width) of 320 mm. It was reported (MC: 5 Nov.) as lying 230 mm below the impression of a rib (17a) still visible in the grave wall (at 31.26 m AOD), i.e. at 31.03 m AOD. The anomaly is visible in the north–south section, a millimetre or so above the subsoil (at 30.900 m AOD) – Figure 51.

It is possible that all this persistent staining is ultimately owed to copper salts migrating from the bronze bowl; but there are some arguments against this being their sole cause. Green staining due to copper was certainly observed, but appeared to be local to the bowl. The staining above and below the bowl was not green and appeared to be confined to a region that would be described by a cylinder standing vertically. Within this region were not only the bronze bowl (pitched at an angle and well off the base of the pit), but also a number of rib bones, some set together as though derived from a single cut of meat – as in a rack of lamb. This suggests that bowl and ribs were originally contained in a bag of some kind. The form of such a bag would have been tubular (like a military kitbag), and would have stood upright (Figure 58). Its diameter would have been about 320 mm and its height, as compressed by backfill, 420 mm (31.32–30.90 m AOD).

The bag had contained (at least) some meat chops and a bowl. But it must have originally contained several other solid, if degradable, objects to give it rigidity during the back-filling,

when it remained upright. These could have included grass and moss to wrap or pad the foodstuffs. The slicks of grey sand are most likely to have been formed by fine sand filtering through the neck of the bag to fill the cavities created by decayed meat or by other perishables such as bread.

#### The harness

##### THE DEFINITION OF THE FEATURE

The excavators were alerted to the possibility of a complex of small artefacts at the west end, following the recovery of a small axe-shaped pendant, 30a (48/8069), by routine sieving of the spoil on 16 October, during preparation for Stage 6. Soon, ‘Several other pieces of iron were visible as well as a tiny bronze pin in leather (?) [33 (8107)] and a complicated composite object of iron, wood and gilt bronze [29a (48/8071)]’ (AR: 16 Oct.). That 30a was an end or pendant for a leather strap was soon confirmed in the finds hut. Item 29a (48/8069) was also lifted and identified as ‘part of a bridle ... possibly’ (L. Peacock, Site Inventory). The bronze pin, 33 (48/8107), was also lifted, together with an iron buckle, 31a (48/8108).

At this point the area of F358 was scarcely distinguishable from the backfill, and in practice this uncertainty of boundary continued until it was lifted. Although it was assigned three context numbers – 1589, 1590 and 1591 (MC: 5 Nov) – no useful distinction was observed between 1589 and 1572 (the backfill), or between 1591 and 1588 (the tread or wash). Context 1590 was a device for describing the particular conditions created by decayed leather and other materials: cavities, pockets of sand and grit, and preferential colonization by the roots of plants. In practice, therefore, F358 was defined only by its population of

finds. It comprised a block of backfill containing small objects of metal connected by dark fibrous strips, often formed of tiny roots, that were thought to represent decayed leather.

#### STRATIFICATION

The excavators recorded that the grey wood-stain that projected from the west end of the coffin (termed a ‘coffin-flap’) ‘may overlap the finds complex F358’ (AR: 16 Oct.). When removed this coffin-flap ‘came away’ from the face of F358 (MC: 5 Nov.). Finds **29a** and **32a** (8071B) were also recorded as being ‘crushed against the corner of the coffin’ (AR: 16 Oct.). This, however, only implies that part of the coffin had collapsed onto the harness heap.

The harness lay on top of the spearhead, which was pushed ‘beneath [a] leather strap and over the grey earth (1591) inside F358’ (MC: 5 Nov.). Figure 59 shows the disposition of the objects within the harness heap as they lay in the ground, and Figure 57 shows the relation of the heap to the spears, coffin and wooden tub. The objects are described and the items reconstructed in Chapter 7 (p. 221). The harness complex evidently consisted of three principal components – a bridle, a body harness and a saddle – deposited, in that order, one on top of the other.

#### The wooden tub

The wooden tub, **9** (F353), like the ‘haversack/bag’ (above), was never recovered, being inferred only from soil stains. It was one of the earliest anomalies to be recorded, being noticed at Stage 1 as a circle of dark earth about 500 mm in diameter, ‘slightly less than 1 metre’ below the defined edge of the grave pit F318 (AR: 15 Sept.). The height of the rim at Stage 1 was 31.49 m AOD. It remained as a strong soil mark until Stage 4, and was largely excavated in three dimensions up to that point, the dark sand wall of the tub being left standing. The excavator reported that it held together well, ‘a fairly solid black sandy stain’ (AR: 24 Sep.). Inside the tub the sand was redder, which may have been due to iron compounds migrating upwards from the iron object, **32b** (8109, possibly part of a saddle), that lay below.

At Stage 4 the excavator believed she had found the base (AR: 3 Oct.) and took a sample in the hope of identifying the wood (8024). The diameter at this point (31.32 m AOD) was 460 mm (externally). However, a ‘darker stain, probably still discoloration from the tub’ was still visible after Stage 5, and a circular impression about 230 mm in diameter was recorded during the excavation of the soil block F358 at BM Stage 1. This ring was sited directly below the sequence of circular stains which form the tub, and should also be part of it. In this case some kind of flange or pedestal is implied. At this stage the supposed pedestal and object **32b** were at about the same height (the latter recorded as 31.122 m AOD). This should mean that the tub stood directly on the saddle, leaning against the corner of the grave.

These anomalies are interpreted as slices through a decayed wooden tub, designated F353, standing in the north-west corner of the pit, over the ‘harness complex’ F358. The dimensions of the tub given by observations on site and in the soil block excavation are:

- height – from 31.49 m AOD to 31.12 m AOD – 370 mm
- width at top – 540 mm internal, 560 mm external

- width at base – 180 mm internal, 230 mm external
- thickness of base – not known

No binding was observed, so the tub was presumably dug out of a block of wood. The diameter at the top was broader than at the bottom, implying a vase-shape and the kind of container that might be used to feed oats or bran to a horse. It is reconstructed in Figure 58.

#### The comb

The comb, **20**, was first contacted (as a rivet, 48/8090) in preparation for Stage 6, 300 mm to the west of the bucket, **13** (48/8070). The comb emerged fully in preparation for Stage 7, and was allocated the number 48/8252. It was found ‘sloping down almost vertically. This should mean that it is sitting in something, but there is no sign of any vessel’ (AR: 15 Oct.). The excavator remarked ‘it seems likely, in the absence of any container, that it had been placed on top of the coffin and had slipped off, landing end-down in the sand leaning against the coffin wall’ (AR: 15 Oct.). The base of the comb was recorded at 30.95 m AOD, some 50 mm higher than the coffin-base bottom at that point. The comb therefore arrived in its final position after back-filling had commenced, when the soil beside the coffin was about 5 cm deep. It had either been thrown in after back-filling commenced or had been sited on the coffin lid and been swept off by the action of back-filling (e.g. from the south).

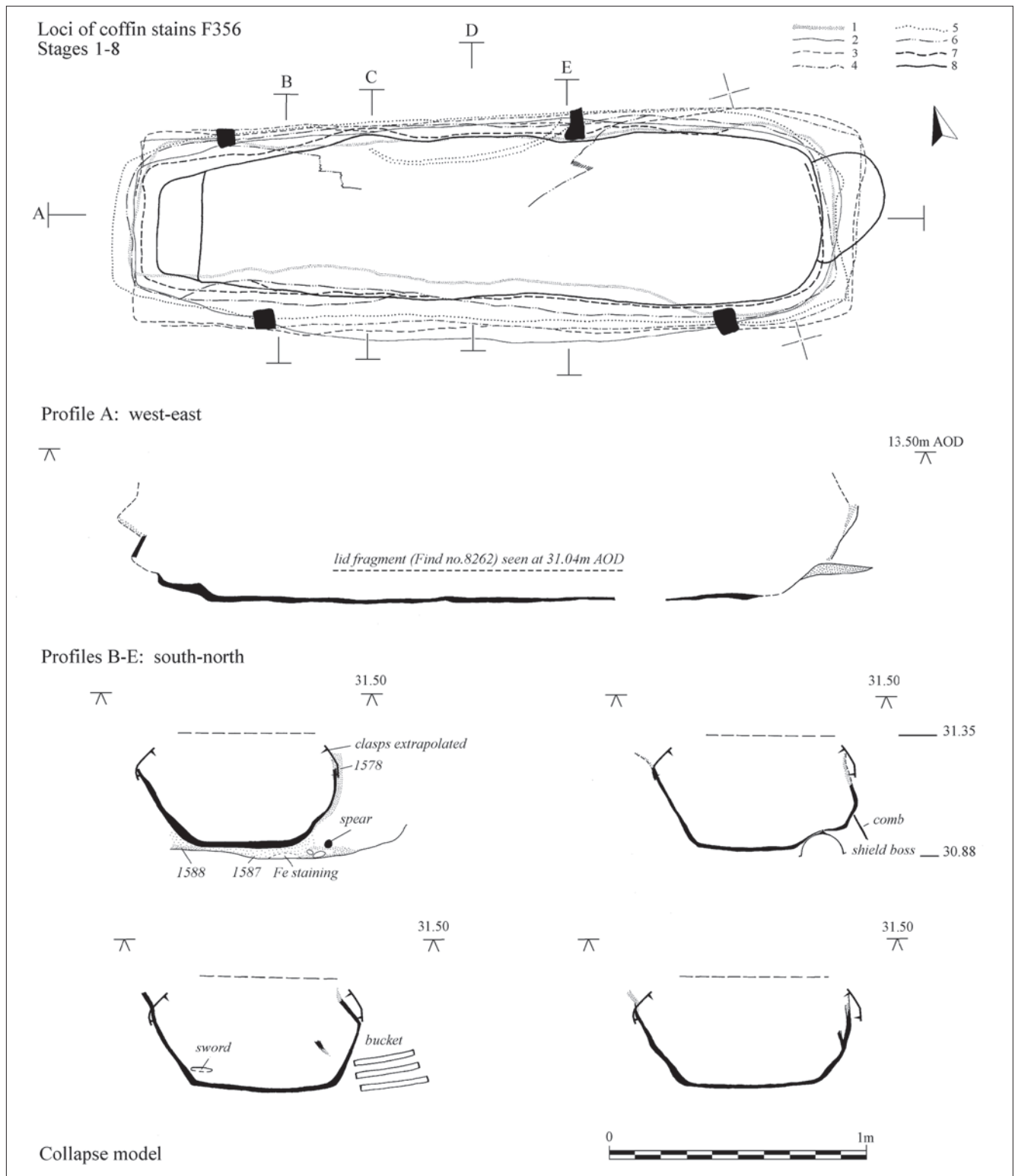
#### The coffin

##### THE NATURE OF THE EVIDENCE

The existence of a coffin was principally inferred from linear stains that were observed in the backfill from Stage 1 to Stage 10. There were also four iron clasps that occurred in positions, and at angles, suggestive of their use as fasteners for a large wooden container. Recoverable wood survived only as small isolated fragments in contact with metal objects (e.g. 48/8262 in contact with sword, **4** [48/8264]). The wood has been identified as oak (sp. *quercus*) heartwood (and thus unsuitable for radiocarbon dating, see Chapter 3, p. 54).

At Stages 1–3, the patch attributed to the coffin was rectangular in plan and featured a brown and yellow swirling pattern (Figure 52), which was originally interpreted as the top of an unworked timber with heavy bark (AR: 18 Sept.). At Stage 2, some of the wavy lines of dark soil spilt over the northern edge, prompting the suggestion that they were ‘straps for lowering the coffin’ (AR: 24 Sept.). The colour of the brown soil attributed to the coffin limits was close in hue to that of tub F353, which was confidently identified as a decay product of wood.

Also at Stage 2, four iron cleats, clamps or clasps, **1a–d** (48/7560–3), became visible and remained visible to Stage 4, a vertical interval of 100 mm (AR 1 Oct.; Figure 52). There were two on the north side of the coffin and two on the south side, but the arrangement was not symmetrical. The clasps were situated on the outside of the coffin stain, were set vertically and were curved, concave side inwards. The northern clasps, **1a** and **1d** (48/7560 and 48/7563), were described, in the ground, as ‘flat rectangular bands, smoothly curved in section’ and had nails at each end ‘evenly spaced and symmetrical’ (L. Peacock, Site Inventory). There was an additional nail, **1e** (48/8022), which was adjacent (south-west) to clasp, **1b** (48/7561), but was



**Figure 60** Mound 17, the coffin: a reconstruction of the original coffin and its collapse trajectory (below), based on the plans of the coffin loci at consecutive stages (above), with the reconstituted running sections (centre).

not part of it (L. Peacock, Site Inventory). The south-east clasp **1c** (48/7562) was angled in section, rather than curved. On site, the four clasps were interpreted as having fastened together the lid and the base of a coffin.

At Stage 3 a yellow or buff sand 'jacket' (1578 and 1587) accompanied the timber line on its outside edge. At Stage 5 a split appeared in the north wall (Figure 53). At Stage 6 a split appeared in the south wall, the bulge taking the knife, 7 (48/8259), which originally lay inside the coffin, outwards with it. Two plank-like soil stains were visible at Stage 4 between the

coffin and the south grave wall; they were barely detectable at Stage 5 and had vanished by Stage 6. These are unlikely to be part of the coffin because they lay outside clasp **1b** (48/7561). At Stage 7 the edges of the coffin were reported as hard and black. The coffin was reckoned to have 'bulged as it rotted', pushing into the bucket and the cauldron (AR: 16 Oct.). A piece of well-defined wood, 48/8262, lay over the sword, which had no doubt helped to preserve it.

At Stage 8 (Figure 54) the coffin was 450 mm wide at the west end, and was 680 mm at its widest, towards the east. The

hollowed out part was 2.40 m long and the bottom had a few holes, where yellow sand (1578) showed through. 'The sides curved in fairly gently and the base was fairly flat' (AR: 16 Oct.).

As excavated in Stages 9–10 (Figure 53), the coffin base was generally 10 mm thick, but it was 30 mm thick at the curved joints and 20 mm thick at the vertical walls. Since the thickness of the base depended on the amount of excavation, and since the bones of the body were generally perched up above the subsoil, the true thickness is likely to be nearer 20 mm for both walls and base. This is also the thickness shown in the Stage 6 plan (Figure 53), when the coffin wall was strongly marked but the base had yet to show.

#### ANALYSIS OF THE EVIDENCE FOR A COFFIN

Analysis of the stage plans (1–10), and the section at Stage 10, supported by the photograph taken at each stage, enabled the three-dimensional reconstruction of the form of the coffin. The precise geometry of the original coffin lies beyond the reach of the data provided by traces of decayed wood. The real thickness of the wood is likely to have been greater than that which survived. The wood had also softened and adapted to the shape of what lay beneath it, as can be seen from the distortion over the shield boss.

In plan, the coffin was a rectangle with parallel sides. However, its width varied considerably from one horizontal section to the next: from an average of 550 mm at Stages 1 and 9, to an average of more than 800 mm in Stages 2–4. It was the excavators' observation of this variation, together with the curved clasps, that gave rise to an interpretation of the coffin as cylindrical in section, and as being probably constructed from a tree trunk (AR: 16 Oct.). Evidence for a lid was elusive. The coffin stain at its highest level (Stage 1) took the form of a soil mark measuring 2.70 × 0.55 m. This was coincident, in plan, with its eventual base. If this soil mark had been due to an *in situ* lid, it would have disappeared during the preparation for Stage 2, as the spit was lowered through the thickness of a lid. But it was still present in roughly the same form, with the same dimensions and in the same position in plan in Stages 3–6, suggesting that each of these soil marks represented the infilling of a rectangular cavity contained by the coffin walls. Occasional pieces of wood appear from Stage 4 downwards, the most positive of which includes the patch of well-preserved wood inside the south wall at Stage 7 (identified as oak; **1f**, 48/8262). This lies at 31.02 m AOD. If this forms part of a lid, it is 180 mm below the clasp, **1b** (48/7561), at 31.30 m AOD. Strong evidence for continuous wood across the body space only emerged with the base beneath the body.

Were it not for the clasps, it might be thought that the coffin lay open, and the rounded shape might suggest a dugout boat-piece with 'flaps' at either end representing vertical bulkheads. However, the clasps, together with the piece of wood **1f** (8262), suggest that there was a lid. To explain the eventual form of the coffin, this lid must have given way under the dead weight of the backfill and the mound and descended to the level of the body, where it rotted and left the partial wood stain observed at Stage 7. For such an action to take place the lid would have had to part company with the clasps and be pushed inside the coffin, as the clasps themselves remained *in situ*. This, in turn, might account for the distortions observed in both the sides and the ends of the coffin, where massive forces splayed the coffin outwards. The

state of the skull, which had been flattened from above, offers some support for this interpretation.

The coffin had been laid on the trampled but uneven surface of the grave floor (1588) and on top of the shield boss **12a** (8277) – AR: 16 Oct. The result was that the coffin canted over, causing the body to roll. After the lid had collapsed (above), the wood subsequently settled and softened, embedding the shield-boss stud deeply in the wood and forming a bulge around the boss itself. Fresh sand filtered into the cavities beneath the coffin (1578 and 1587).

A model for the original form of the coffin and its mode of collapse is shown in Figure 60. This surmises that a tree trunk with a girth of about 800 mm was split, along the grain, at about two-thirds its width, and then hollowed out to give a trough c.600 mm across and c.350 mm deep (internally). A lid, which might have been the other third of the tree-trunk, was placed on top and held in position by four clasps.

The use of tree-trunk coffins was widespread in the Early Medieval north and is often difficult to distinguish from the use of dugout boats (see Chapter 8, p. 292).

#### INSIDE THE COFFIN

The matter inside the coffin, argued (above) as being below the collapsed coffin lid, was located with certainty only at Stages 8 and 9. The following finds were all located inside the coffin.

##### *The skeleton*

The skeleton (Plate 27) was described as 'c.1.70 m long from head to heel ... It is lying with head to west, looking northwards ... The body, although seemingly well laid out with its hands over the pelvis [is] distorted to the south. This is most likely due to the rolling of the coffin when it was placed in the grave' (AR: 16 Oct.).

The skeleton was in relatively good condition by the standards of Sutton Hoo, although the skull had been crushed and flattened, presumably by the collapsed coffin lid. The clavicles and ribs were missing and the left humerus was much decayed. Parts of the vertebrae were spongy, 'almost body stain', in the middle. The feet were 'almost all body stain and have points to them reminiscent of soft-pointed shoes. Only the ?heel bones survive' (AR: 16 Oct.). The body was that of a man aged between 25 and 35 years (see Lee in Chapter 7, p. 280).

##### *The sword*

Over the right arm and pelvis of the body lay the sword, **4** (48/8264), 'the pointed end dipping slightly as if it were broken' (AR: 16 Oct.). The sword complex was lifted en bloc and was later dissected in the British Museum. Under piece of wood **1f** (8262), and above the sword, were bronze and garnet buckle, **6** (48/8196), and pyramidal sword mount, **5b** (48/8197). Beneath the sword lay a pyramid, **5a** (48/8166), a small silver buckle, **5d** (48/8171), and a curved narrow bronze and garnet buckle, **5c** (48/8263). The sword itself had a horn pommel and pattern-welded blade in a wooden scabbard (willow or poplar) clad in leather and lined with fleece. Close to the hilt was iron buckle **5e** (48/8291).

##### *The knife*

In Stage 6 an iron knife in a leather sheath, **7** (48/8259), was recovered from between two coffin stain-lines to the south-west.

It lay parallel to the handle of the sword, with its own handle to the east, and its blade to the west (i.e. in the opposite direction to the sword). The tang of the handle lay 60 mm above the sword and the blade tip was 140 mm above the sword. The cutting edge of the blade pointed downwards.

Beyond the tip of the sword was 'another iron stain, possibly showing through from some object under the coffin, since no metal is visible at this stage' (AR: 16 Oct.). This was lifted as a 'knife', find number 48/8310, and was sent to the British Museum, where it was identified as being a stain only, with no detectable artefact.

#### *The purse complex*

Adjacent to the back of the skull was a bronze rivet, **8** (48/8260), piercing a fragment of leather. This was at first identified as a hair-tie, but it is probably associated with the purse.

The purse complex, **2** (48/8257), was found on the south side and adjacent to the neck of the skeleton. This appeared as a D-shaped concretion, described during excavation as follows: 'woody (bone?) ... with whitish paste; and a hard lump like glass slag! However, at the eastern end there is a little bronze showing and a flake of garnet (**3h**) and a flake of millefiore (**3i**) come from this object. It is possible that there is a brooch facedown and that the D-shaped part is in fact part of F359's shoulder blade. There are no other finds – not even a buckle although other things may have slid under the sword' (AR: 16 Oct.).

The object was identified on dissection in the British Museum as an iron purse-mount/firesteel, **2a** (48/8257A), the organic complex being composed of leather, wood and textile. A copper-alloy buckle, **2b** (48/8257B), eight loose garnets, **3a–h** (48/8257C and 48/8256), and a fragment of millefiore glass, **3i** (48/8266), were in the soil lifted with the purse. It is presumed that these items were enclosed in the purse when deposited in the grave. A small flint-like pebble was also found with this collection, though this may have been fortuitous.

In Chapter 7, p. 243, Angela Evans discusses the objects and the assemblage as a whole, suggesting a date in the late sixth century for it. Studies in Chapter 8 propose a date for the burial itself in the early seventh century. This receives some endorsement from a radiocarbon date on bone from the horse burial between 560–670 AD (Table 9, p. 54).

#### **The horse burial, F319**

##### *Digging the pit for the horse burial*

F319 was a pit with vertical sides that were 1.23 m deep from the top of the extant buried soil, and was subrectangular in plan, with maximum dimensions of 1.35 × 2.15 m. It was cut through banded natural strata, and the horse that was buried in it was laid on clean, hard yellow sand without anomalies.

##### *The horse skeleton*

The horse was laid on its right side with its legs folded (Figure 56; Plate 30). The skeleton was in relatively good condition and was accompanied by a clear soil stain. It proved to be that of a stallion or gelding with a height of 1.44 m at the shoulder, or fourteen hands, and about five to six years old (see O'Connor in Chapter 7, p. 281).

#### **How the pits were back-filled and the mound was constructed**

##### *The back-filling of the human burial, F318*

Sand, soil and turf were used to back-fill the pit for F318. A number of turfs were identified with confidence, for example the dark patches south of F358 on the natural surface. Contexts 7564 and 7565 were defined as cut turfs (see above). Context 1537 was a square of dark brown silt sand, 140 mm thick, and was identified as a turf thrown into the north-west corner in pre-Stage 1 backfill 1516. Turf was thus thrown in, or fell in, at each stage of the back-filling.

A distinction between the bright sandy backfill to the south of the coffin (1576) and the darker blotchy backfill north of the coffin (1572) was noticeable at Stage 5. In so far as it could be defined, 1576 was stratigraphically earlier, implying that back-filling began in the south with yellow sand that presumably derived from the burial pit. A spoil heap topped with yellow sand is implied on the north side, or, given the position of F319, to the east and west of the north side.

The backfill on the north side (1572) was identified as redeposited natural and fill with Prehistoric features and many streaks and lumps of decomposed turf. This implies a spoil heap, so composed, on the south side. At the upper levels (Stage 3 and higher) the distinction was no longer apparent. The final filling of the pit was an even heterogeneous mixture (1516). The section photograph shows sand and turf being tipped in from all directions.

The top layer encountered (1509) formed a concentric oval of dark soil inside a ring of 1516, which lay beneath it, across the pit. The oval of 1509 is too neat to be a back-filling pattern, and it should represent mound make-up dished in following the collapse of the coffin.

##### *The back-filling of the horse burial, F319*

The burial pit for the horse (F319) was back-filled with sand (1579) – favoured by the northern part – and turf (1580–1) – favoured by the southern part – and was finished with fresh sand (1511). Turf again occurred throughout the back-filling process. There was no analogue to 1509, which presumably reflects the fact that there was no coffin in F319 to collapse and provide a cavity for dished mound make-up to fill.

##### *Evidence for the construction of a mound*

The layer 1509 represents virtually the only evidence for the material that may have composed Mound 17. It is rich in silt sand and the recorded description closely identifies it with 1537 (the turf defined in F318 at Stage 1):

- 1509 is 95 per cent friable crumbs of clean 5 YR 3/4 < 10 mm silt sand (sample 8335)
- 1537 is 100 per cent friable crumbs of clean 7.5 YR 4.2 < 10 mm silt sand (sample 7688)

There was no quarry pit or ditch identified for Mound 17; so it is most likely that the mound was constructed from cut turf, including turf which had been previously stripped from the area subsequently occupied by the mound. There is no direct evidence for the diameter of the mound or its height, but a diameter of 14 m can be proposed on the basis of the buried soil platform and the probable positions of neighbouring mounds covering Burial 11 (Mound 18) and Burial 56 (Figure 49).

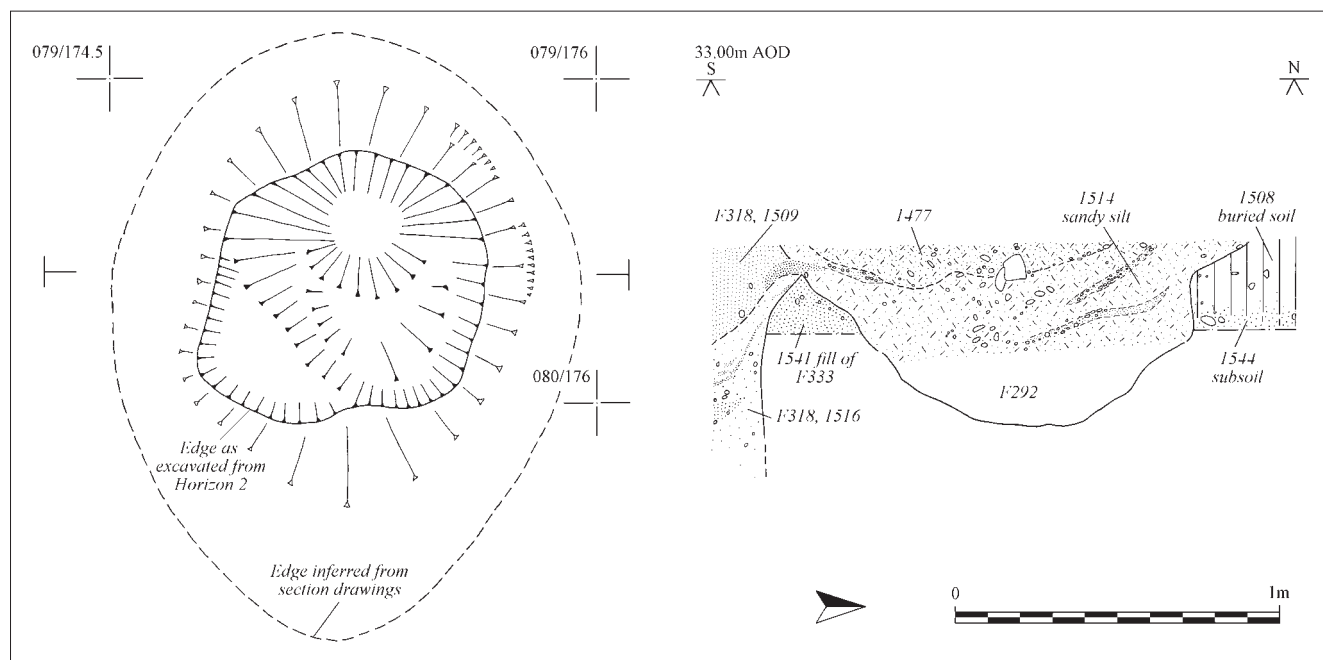


Figure 61 Mound 17: plan and section through the central pit (F292) resulting from an attempted robbing.

### Aftermath

#### *An attempted robbing? (Figures 61 and 62)*

Cutting the buried soil, and situated between the two burial pits F318 and F319, was F292, a small pit. It was about 1.00 m in diameter and 0.26 m deep, as excavated (32.13 to 31.87 m AOD). The stratigraphy and identity of this pit are uncertain. It was originally defined (in definition spit 1512) as an oval pit, running parallel to F319 (i.e. east–west), and cut by F318. From overhead, however, it could be interpreted instead as an oval pit running north to south and cutting F318. The quadrant taken through the buried soil gives a section that endorses that stratigraphic order: F292 cuts an already back-filled F318.

When the feature was excavated in 1992 it proved to be subcircular in plan. Its fill (1514) was described as ‘very fine silt filling a depression’ and this is what was visible. The excavator felt that it should be identified as a post pit – ‘there is little doubt that the feature would have held a post’; but the context description is not supportive – ‘the overall impression [is] that this fill derived from the severe weathering of its subsoil edges which were left open. No sign of any organic (wood) stains to support position of a post. No charcoal was present.’ (FR 6/7196.5).

The choice for the interpreter lies between a robber pit and a post-hole, from which the post had been removed. Neither is entirely satisfactory, but the scales perhaps tip in favour of a robber pit. If free-standing, a post 1 m in diameter would require a depth of at least the same to sustain it, even temporarily, in a vertical position. It might have had a turf mound piled around it, but as there was no post-shadow within the pit it had not rotted *in situ*, so the implication is that it had been removed. It would not, however, have been an easy operation to extract a large post from a mound.

On the other hand, the central position would make good sense for a robber pit. The most widespread robbing operation recognized at Sutton Hoo involved central pits dug into mounds in the later sixteenth century (see Chapter 12, p. 462). In this case the robbers were unsuccessful, as their pit reached into the subsoil at a point which lay between the two burials.

### Later ploughing

Like all other mounds at Sutton Hoo, Mound 17 was probably reduced by later ploughing, both before 1601 and after the mid nineteenth century (see Chapter 12, p. 465). The lynchet (S32, Figure 49), which had a ditch to the east of it, seems to belong to a ploughing operation to the west that touched and eroded Mounds 12, 17, 18 and 1. Map evidence would date the latest manifestation of this lynchet to between 1783 and 1836 (see Chapter 12, p. 461). Mound 17, like Mound 5, was reduced to an eroded platform of buried soil, and by 1881 was not visible to surveyors.

### Model

The analysis argues for ten principal phases as follows. Figure 62 shows a reconstruction of the scene on the day of burial.

Phase 1: Ancient soil (1508) previously ploughed in the Iron Age, but now grassland with the low earthworks of an Iron Age enclosure, is stripped of turf. The turf is piled up nearby.

Phase 2: In the early seventh century an oval pit (F318) with vertical sides, approximately east–west in alignment, is excavated over the corner of the Iron Age enclosure. Soil, some turf and Prehistoric ditch-fills are heaped up to the east and west. A third spoil heap is created on the south side. It is rich in the natural sand that the gravediggers are cutting through. The pit may have been measured up, so exactly does it accommodate its subsequent furnishing. A second pit (F319) is dug parallel to the first and a few yards distant from it. It is largely cut through yellow sand and gravel.

#### Phase 3:

3A: The grave pit F318 may have been left open long enough for a little sand to wash in and collect at its lowest point (1588). A beam 8 × 8 mm in scantling (F357) was jammed into the long axis, and the grave was furnished using this beam to facilitate access.

3B: Moss and grass may have been laid on the floor of the pit.

3C: Two spears were placed on the grave floor and then covered with a shield, about 800 mm in diameter, lying





**Figure 62** Mound 17 on the day of burial (Victor Ambrus).

horizontally, boss uppermost. An iron-bound tub and a cauldron (perhaps containing grain), on which a pottery vessel rested, were then placed along the northern edge of the pit. Next, to the east, a sausage-shaped leather or textile bag or haversack, about 1 ft 6 in. (46 cm) long and 1 ft (30 cm) wide, was placed upright. It contained a rack of lamb, and probably other organic foods (e.g. bread and apples; though, no direct evidence of these was found), wrapped in moss and grass, and was topped with a shallow bronze bowl for eating or drinking.

3D: At the west end, a harness with gilt bronze and silver fittings was dropped in a heap. On top of the heap was placed a saddle, and on top of that a tapering, hollowed out wooden tub about 1 ft (25 mm) tall.

Phase 4: After removal of the furnishers' beam, a coffin was lowered into position in the centre of the pit, where it rested on the stud of the shield boss. The coffin was a dugout fashioned from an oak tree trunk and had a lid held on by four iron clasps nailed into position by sixteen nails.

Phase 5: Inside the coffin was the body of a young man of about 25–35. He was accompanied by a sword with a horn pommel, bronze buckles and mounts inlaid with garnets, and by a strike-a-light purse with a bronze buckle that contained eight garnets and a piece of millefiore.

Phase 6: A comb was then thrown or placed on the flat-topped coffin. It was later struck by spoil during back-filling and fell to a vertical position against the north wall of the coffin.

Phase 7: A horse, about five years old and fourteen hands high, was killed and placed in the second grave pit (F319).

Phase 8: Both pits were then back-filled. The back-filling of

pit F318 commenced with the north, east and west spoil heaps (mainly sand), and concluded with the south spoil heap (mainly soil and sand, with some turfs). The filling of pit F319 was of sand from the south side, with turf being added from the north just before the top.

Phase 9: The mound was built up with stacked turfs.

Phase 10: Probably in the course of the sixteenth century, an attempt was made to rob the mound by digging a circular pit, vertically down, at its centre. The attempt was abandoned when the excavators drew a blank as their pit touched subsoil between the two grave pits. The robber pit was left open and silted up. The mound was ploughed, probably first in the sixteenth century, and again before 1881, when it was reduced to a small platform of ancient soil and became scarcely visible.

#### **Other furnished burials which may have featured mounds**

##### **Summary**

Apart from those discovered underneath mounds, six other burials that were, or may have been, accompanied by grave goods have been identified at Sutton Hoo (Figure 63). Of these, Burials 13 and 14 were cremations (see Chapter 4, p. 105). They were excavated in the 1965–71 campaign near a pit containing a skull (Burial 56). It is suggested here that Burial 56 was originally a mound-burial that had been robbed during one of the earlier excavation campaigns.

Three other inhumations, Burials 12, 15 and 16, were excavated during the 1983–93 campaign to the east of Mound 5. They were sparsely furnished graves, probably of children or adolescents.

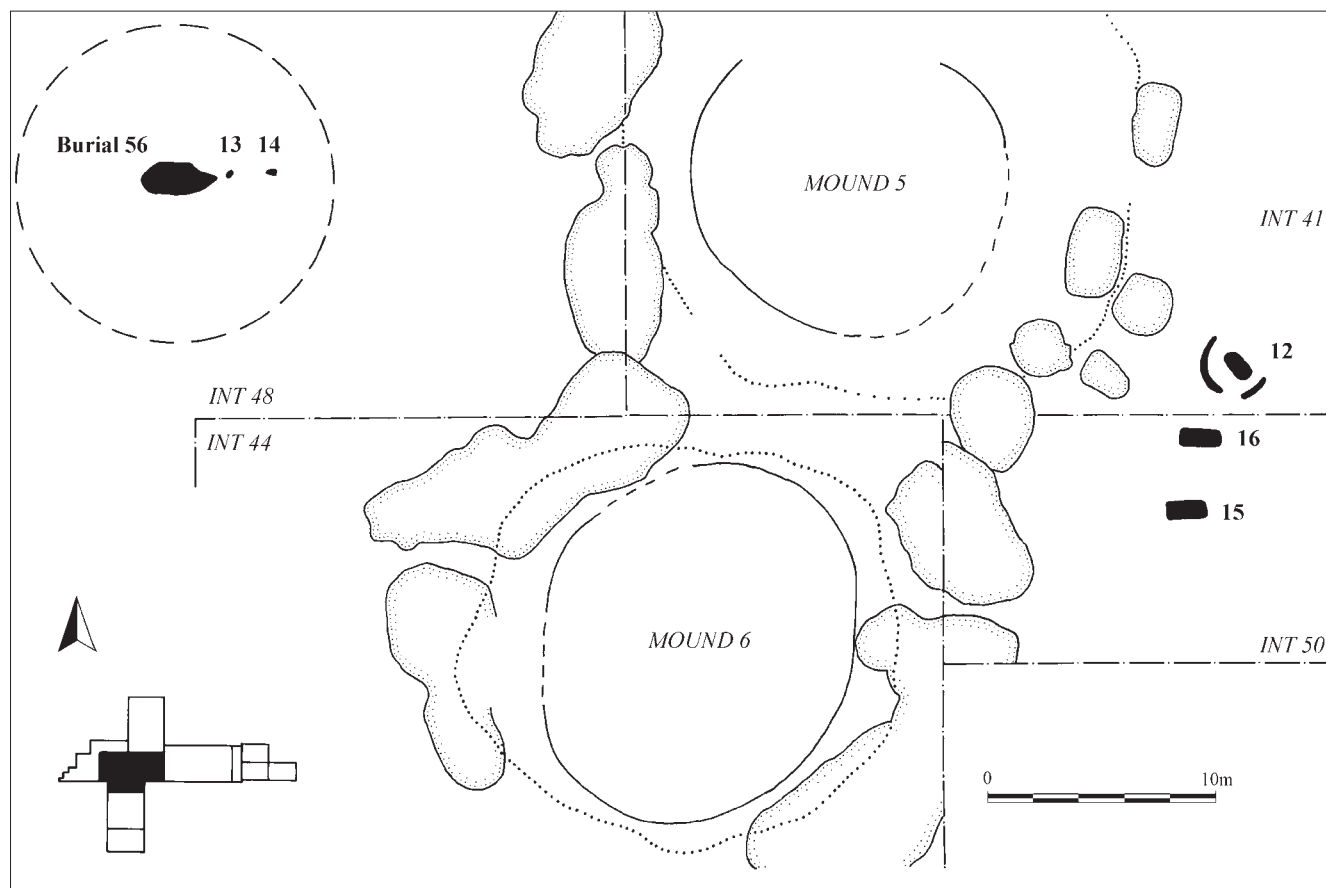


Figure 63 Location plan of other furnished burials.

### Burial 12 (FR 4/7.3)

Written by Martin Carver from field records by Mark Johnson.

#### Description of the investigation (FR 4/73)

The grave (F114) and its surrounding ring ditch (F113) were first recognized during the preparation of Horizon 2 in Quadrant Y (Int. 41) – Figure 64. The features appeared as a dim ‘cloud’ of lighter soil, against the subsoil to the north and the infilled Early Bronze Age ditch (S23, F562) to the south, and were spotted by Cathy Royle. It was recognized that the traces were extremely elusive and would withstand very little trowelling. The ring ditch (Plate 31) was the first feature of Burial 12 to be excavated and recorded; after excavation (width c.300 mm, depth c.30 mm) it was filled with sandbags for protection.

A post-hole (F112) was also seen at Horizon 2, adjacent to the grave and inside the ring ditch. However, it may have belonged with a set of post-holes that are Prehistoric (S31).

The grave (F114) was defined by gentle trowelling and by continual enhancement with water to maintain a contrast with the Prehistoric ditch-fill that it cut. The silt-sand of the grave fill (I213) at first appeared darker than the Prehistoric ditch fill, but at a depth of 250 mm it began to look lighter again. The grave fill contained some flecks of charcoal and was removed by stages in 100 mm spits. The fill was sampled in a continuous array along three axes.

At a depth of 32.54 m AOD (440 mm below the surface) a linear stain appeared on the east side. This was the first indication of a coffin. At the same level, it was decided that we were overcutting the grave, and a length of 300 mm of soil, rich in iron pan and at the side of the east end of the grave, was re-

assessed as ditch fill. The redefined grave had greater symmetry with the ring ditch.

There was then an attempt to recover the coffin and the body presumed to be in it, in three dimensions. The patchy dark soil dished (downwards) from all sides towards the centre. An iron arrowhead, 1 (or miniature spearhead, see Chapter 7, p. 249), at first thought to be a nail, sloped gently downwards towards the south-east. The excavator was uncertain as to whether it had lain inside or outside the coffin: ‘although coffin lid stains have been removed from over part of it, it may be the case that an object as heavy as this would have fallen through the decayed coffin lid and into the internal area of the coffin itself.’ Given the attitude of the object, if it was a spearhead the shaft would have sloped downwards towards the far end, implying that the whole spear lay inside rather than outside the coffin.

The coffin ‘lid’ merged with the outer, patchy remains of the coffin and with the remains of the body, and it proved impossible to resolve either clearly. Removing the ‘lid’ a new configuration was achieved. At the centre of the stain lay a small buckle, 2, which appeared to lie on a patch of decayed leather. Towards the south-east lay a small pin, 3, oriented NNW.

Although the distinction of the coffin lid from the other remains was not straightforward, the evidence is in favour of all three finds lying by or on a body within a coffin.

#### The assemblage

The child was buried with miniature possessions appropriate to his rank – a spear (1), a simple belt buckle (2) and a pin (3). These artefacts are described in Chapter 7, pp. 249–52, see also Figure 118.

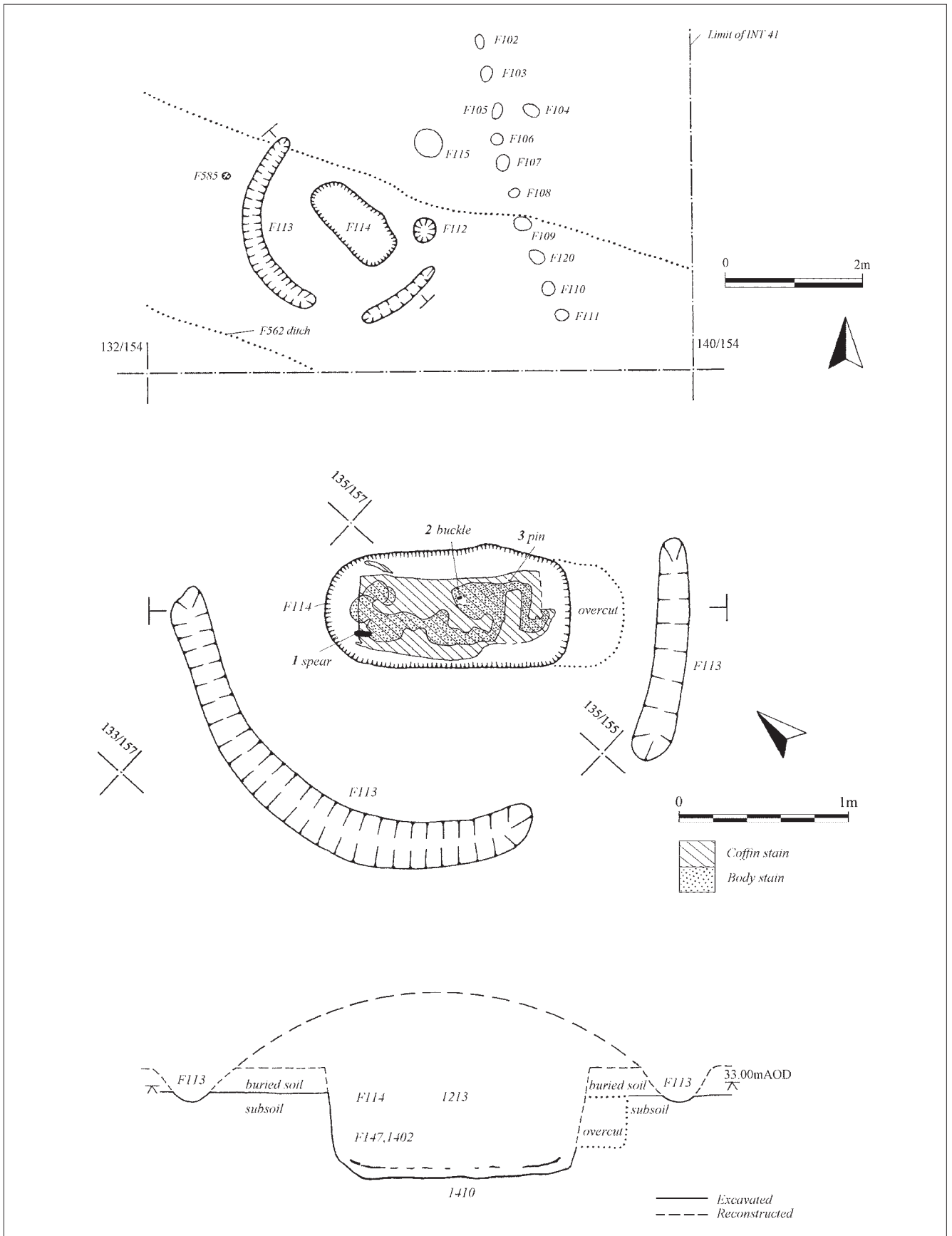
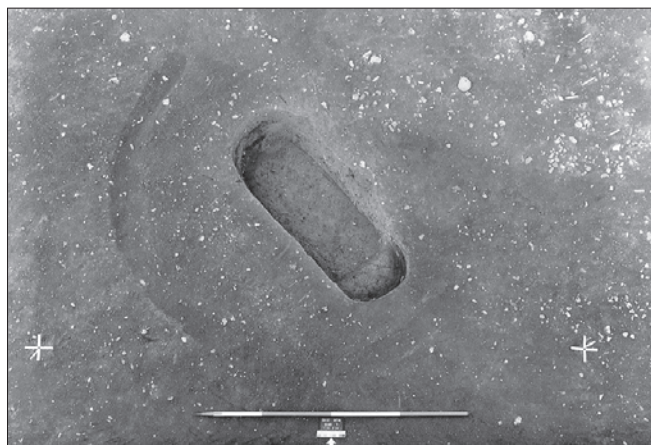


Figure 64 Burial 12: showing location (above), plan (centre) and profile (below).



**Plate 31** Burial 12: (a) ring ditch; (b) the burial.

#### *Interpretation of Burial 12*

The burial must have been that of a child (height about 1 m) who had probably been laid in a coffin, in a position, judging from the body stain, on their left side, slightly flexed. The child was equipped with a small buckle, probably to fasten a belt, a copper-alloy pin (positioned by the upper tibia) and a spear of maximum length 1.10 m. The position of the objects with respect to the body was ambiguous. If the head lay to the south-east, then the pin is in the right position to have fastened a cloak, but the spearhead is point down near the feet. If the head lay to the north-west (as the excavator thought), then the spearhead lay by the shoulder and the pin lay near the feet. If this was a cloak pin, then the cloak must have been thrown over the body (or the coffin) the wrong way round, with the pin attached. The grave

was back-filled and covered by a small mound not more than 2.50 m across. Soil was excavated for this purpose from a ring ditch. The mound was later flattened and the ring ditch filled in, probably by ploughing.

#### **Burial 15 (FR 7/7.2)**

Written by Martin Carver from field records by Madeleine Hummler and Andy Copp.

#### *Description of the investigation*

The grave-pit F54 (Burial 15) and its companion F58 (Burial 16) were recognized and defined at Horizon 2 in Int.50. The grave for Burial 15 (F54) was excavated in stages according to standard practice.

The top of the fill at Stage 1 was blotchy and heterogeneous (turfy?), and included dumps of clean sand and concreted subsoil. The amount of subsoil increased at Stage 2. At Stage 3 the fill was described as mainly redeposited natural, with a concretion of a brown fill towards the centre. At Stage 4 dark patches appeared, which were mostly interpreted as redeposited buried soil. However, appearing among them were the ‘suspicious’ linear stains along the south side, which were attributed to a body-bearer, coffin or bier (F85). It was only from Stage 5 that any of the stains were convincing as decayed wood. At this point a sinuous dark-brown line formed along the northern side and around the south-east corner of the grave, suggesting the line of a coffin. A sweep over the surface with a metal detector located a potential target in the north-east corner, just east of the head. At Stage 6 the fill between the linear stains of the coffin was removed, revealing the body (F137) and the grave goods (Figure 65; Plate 32).

#### *The assemblage*

##### THE BODY-BEARER (F85) – COFFIN, BIER, BOAT OR BED?

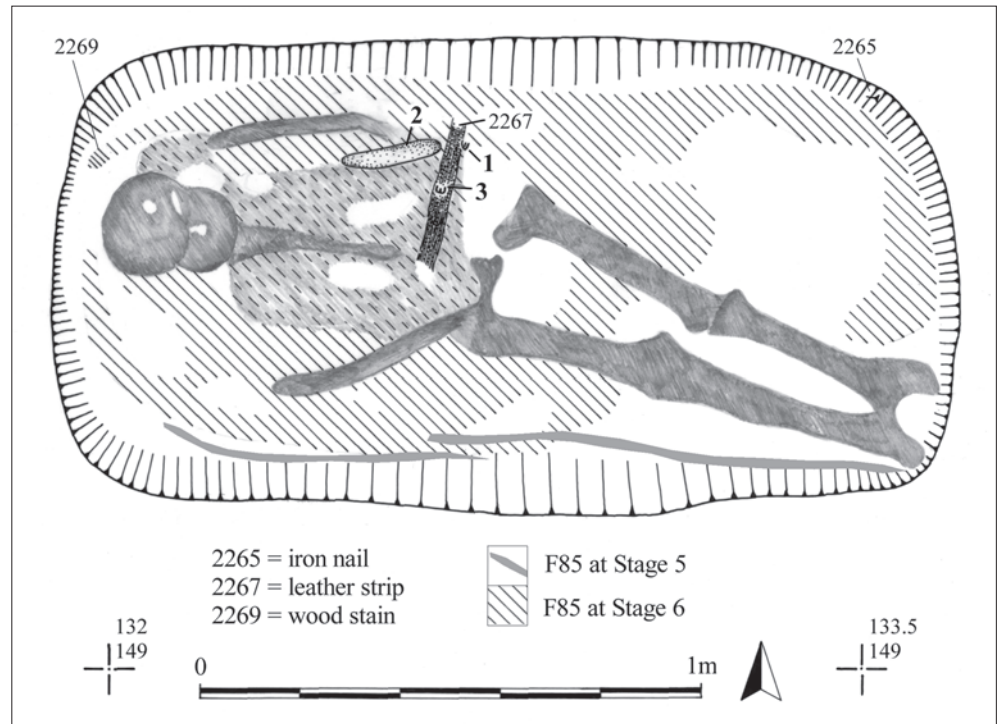
In a consideration of the shape of F85, the excavator described it as a ‘type of tray which dished upwards at the edges’ (compare Mound 3).

‘The part best preserved was around and underneath the upper part of the body’s legs ... Although in plan there was a greyish stain that continued round the north-east corner of the grave, it was much less convincing than the western part and was not seen at all around the feet and the eastern run of the southern edge. It is therefore suggested that the object stopped at about the knees of the body. If it was a wooden tray, it only curved upwards on the north, south and west sides, finishing flat on the eastern edge where the legs overlapped it.’ (*Field Records*: F85)

The final grave tableau produced was of a rather two-dimensional ‘flat’ body surrounded by, and lying over, a distinct grey-brown stain identified as decayed wood. Around the abdomen the two organic stains were inseparable, but the wood base or ‘tray’ did continue beyond the edge of the body toward the northern, western and southern edges of the grave. On the east side it was not visible beyond the knees. Against the western edge the sides of the tray did rise up off the floor of the grave, suggesting that it had been deliberately shaped. In section, the surviving stain was no more than 1 mm thick. But no stain was observed immediately above the body.

There were some objects that might have been associated with the bearer. Find 2265 (4) was a large nail, which lay in the

Figure 65 Burial 15: plan.



side of the grave, at its north-west corner. It appeared to be vertical, with its head uppermost, and to be about 100 mm long. Find 50/2226 was a piece of charcoal, which lay at the south side of the grave, towards the east end. Find 50/2269 was a piece of wood, which lay at the west end to the north of the head. At 32.53 m AOD the nail 2265 (4) is, however, 190 mm higher than the adjacent putative coffin stain (32.32 m AOD). The wood at the west end (50/2269) rises to 32.38 m AOD. The body was seen at Stage 5, at 32.40 m AOD, at which point a coffin edge is also arguably shown. The internal base of F85 lies between 32.19 and 32.22 m AOD.

Traces of F85 were always patchy, so it can be accepted that much of it had already disappeared. The stain, although weaker, had continued to the west end. Some dark traces at higher stages might have belonged to upright planks. A coffin would be a possibility, but a simpler interpretation would suggest a plank or boat piece was used as the bearer and assume that the nail had come in with the backfill.

#### EVIDENCE FOR GRAVE GOODS

In the central area of the body/coffin stain, five finds, which were certainly grave goods, lay together. A buckle (3) lay east-west on a 'dark black strip, which, when it dried out, had a leathery texture' (*Field Records*: F85). This is leather strip 50/2267, which was 2 mm thick on excavation. Around the buckle were some 'strange white flecks' (50/2268), which were interpreted as the remains of a thin plate of tin (?) alloy. Enough matter survived from 50/2268 for it later to be identified as a 'fragment of thin bone or ivory sheet'. When lifted, the buckle (3) proved to be attached to a square bronze backplate. Organic matter on the buckle loop was probably much degraded textile, although it looked more like wood (with grain running north-east to south-west).

A second, equally small, buckle (1) lay 120 mm to the north. It proved to be 17 mm long, 8 mm wide and 2 mm thick. It was attached to a thin plate, 10 × 12 mm, which had a rivet visible in one corner. The tongue of the buckle pointed west. The plate was tucked under, so that any strap would also run west-east.

A little, 100 mm, to the north-west, an iron object ran east-west. It was 190 mm long and 50 mm wide, and tapered towards the east end. This proved to be a knife (2) in its sheath. The leather locus (50/2267) overlay (stratigraphically) the iron knife (2).

This tableau therefore suggests a leather belt, or belts, secured by two buckles and suspending a knife. The central buckle (3) is ornamented with a tiny garnet set in a gold cell and possibly a bone or ivory inlay. Analysable artefacts are described and discussed in Chapter 7, pp. 249–52 and see Figure 118.

#### THE ARTICULATED BODY (F137)

The stain associated with the body lay east-west over the wooden base, where the relationship was observed particularly clearly around the well-preserved upper legs. Very little bone survived on the skeleton (see Chapter 7, p. 281). The body was lifted in components, most of which were convincingly identified. The legs were particularly well preserved, but little remained of the skull. In practice the specialist was only able to identify 'fragments of tooth enamel and a piece of vertebral body' (see Chapter 7, p. 281). The body had lain on its back with one arm, or perhaps both, across the lap, and with the head turned slightly to the right (south-east). The human remains proved insufficiently preserved for a determination of age or sex. The size of the body indicated by the stain was 1.65 m, which might be appropriate to an adolescent.

#### Interpretation of Burial 15

The grave seems to have been dug through turf and to be of a size to suit the body-bearer. The person buried was about 1.65 m tall, and was perhaps a young adult placed on a bearer that may have been a section of a boat or dugout. The person was originally equipped with a leather belt and a bronze buckle inlaid with garnet. A knife in its sheath was suspended from the belt by a detachable strap with a buckle. There was no evidence for a mound or for the destruction of a mound.

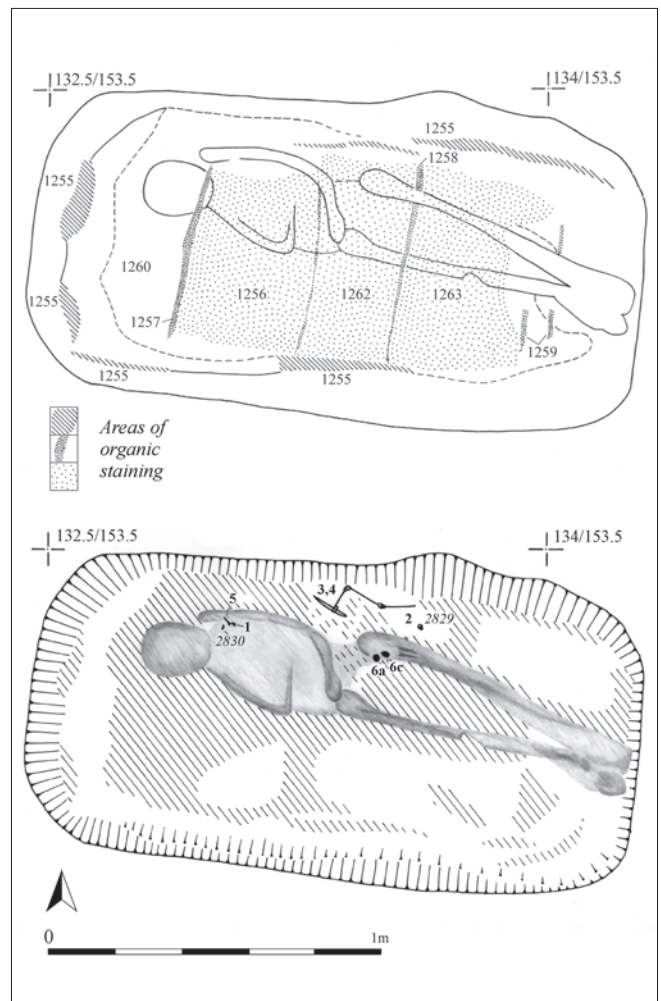
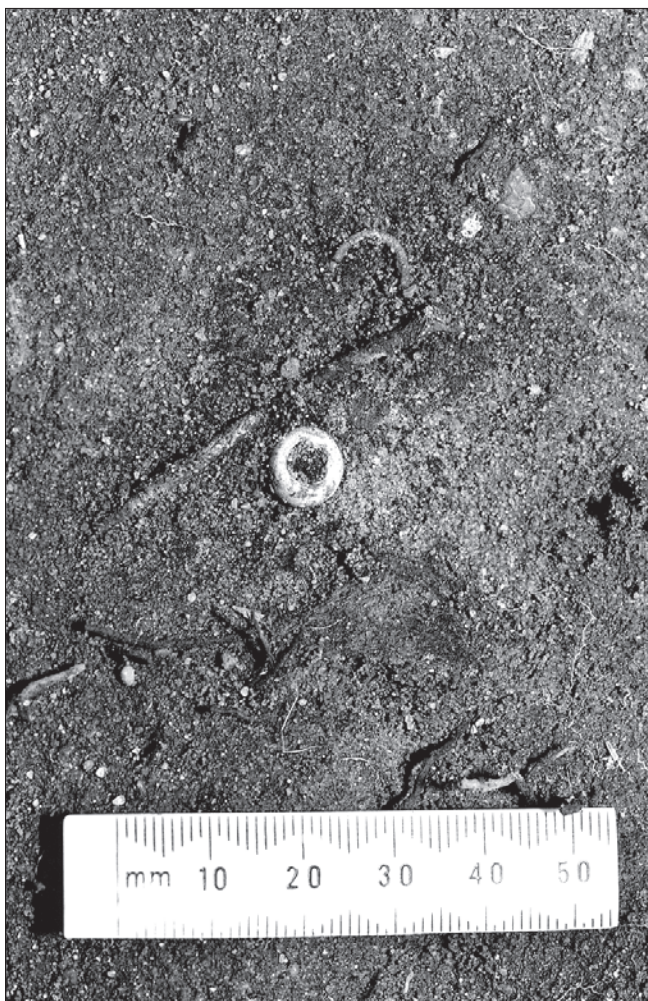


Plate 32 (a) Burial 15; (b) Burial 16; (c) ring pin and bead in the ground.

Figure 66 Burial 16: plan of body and timbers.

**Burial 16 (FR 7/7.2)**

Written by Martin Carver from records by Annette Roe.

*Description of the investigation*

F58, the pit for Burial 16, was first seen during shovel-scraping prior to the preparation of Horizon 2 (Int. 50). The edges were clearly visible at Horizon 2. It was confirmed (by trowelling off a further 60 mm) that there was no trace of a quarry ditch surrounding this grave. Post-holes F57 (west) and F61 (east) were at first thought to be possible markers, but F57 (at least) was found to pre-date the grave.

The grave was excavated in stages. The upper fill (1080) was a silt-sand with patches of sand, lenses of pea-grit and lumps of concreted subsoil disturbed by tunnelling rabbits. Feature card F58 mentions that 1080 contained 'turf patches' as well as redeposited subsoil. The excavator noticed that bands of concreted subsoil and pea-grit appeared in the sides of the grave as it was defined.

A crescent shaped stain at the west end at Stage 3 had become a curved linear stain at Stage 4. It was defined and excavated, but later considered to be 'insubstantial and unconvincing'. At Stage 4, before timber stains were removed, the grave-fill was metal-detected, but no contact was made with any nails or fittings. At Stage 5, linear stains were seen on the north and south sides, that to the south continued on the east side. These were shown, on excavation at Stage 6, to curve under the feet of the body; while around the western edge the stain curved under the head. Also at Stage 6, two dark brown linear stains were seen to cross the body area, north-south, about 500 mm apart. Assuming these were traces of timber, they had a scantling of c.50 × 50 mm. The fill just below the wooden cross-members was removed, and the body and its grave goods were exposed beneath it, lying on top of a strong timber stain (Figure 66; Plate 32).

During the excavation of the stains, measurements were noted for those thought to belong to the bearer. The cross-members varied in thickness from 50 mm (1257) to 10 mm (1258 and 1259).

*The assemblage*

## THE BODY

The body was rather flat, and was riddled with tiny rootlets. Definition of the body was difficult against the base of the bearer – particularly between the chin and pelvis, where the skeleton is less robust. The articulated body was aligned north-west to south-east, with the arms flexed – the left arm lay across the pelvis and the right arm lay over the chest. The feet are possibly crossed. Bone survival was very poor. The body and bearer stains were generally indistinguishable, except by shape and position, and were therefore often removed together.

## GRAVE GOODS

There were four groups of finds lying stratigraphically above the body. On the left shoulder of the body lay the following: a small pin (5) with a split ring (broken and displaced) at its south end, the point to the north; a small white glass bead (1), 9 mm in diameter and perforated by a relatively large hole; and a curved leather strip (7), 5–10 mm wide and 10–20 mm long (Plate 32:c).

On the left pelvis/upper thigh of the body lay two fragments of leather (6a and 6b), which were later found to be folded and

are thought to derive from a drawstring bag (6). 'These were in perfect condition...' and were approximately 20 × 20 mm. They were discovered after the removal of the left femur.

On the left side of the left femur lay a patch of leather with a leather pellet, 2b (50/2829), which appeared to act as a 'stopper', closing one end of a thin bronze cylinder, 2a (50/2821). This was associated with more folded leather. On recovery the cylinder proved to be hollow and empty, apart from fine sand. There was a spread of decayed leather beneath the left thigh.

Beside the left hip was an iron object 50/2822, which was later shown to be a châteline, 3 (50/2822A), and a knife, 4 (50/2822B). This complex was consolidated with Vinamul and lifted.

The lifting of the finds was accomplished on the last day of the 1990 season. The body (its excavation postponed until 1991) was covered with a foam mattress and the grave was sealed with anti-rabbit netting, planking, thick plastic sheet and sand bags. Unfortunately this grave attracted the attention of vandals in the winter of 1990–91. The edges of the cut for Burial 16 were destroyed, but there was only light damage to the body (F186).

So as to recover the best possible evidence for the anatomy of F186, its excavation waited six weeks into the 1991 season, when Frances Lee arrived. In the event, the only recoverable bone was the bundle of fragments at the top of the left femur, which had been adjacent to the bronze cylinder (2).

*Interpretation of Burial 16*

## COFFIN, BIER OR BED?

In general, it is clear that a body-bearer with a flat base, vertical sides and at least three (probably four) cross-members was encountered. It is possible that this represents a coffin with a lid strengthened by cross-members. However, the cross-members recall the beds with slats recorded at Högom (Ramqvist 1992: 49; plate 12) and Oberflacht (Grodde 1989) – see Chapter 8, p. 292ff. The horizontal slats at Högom (mound 2) were at intervals, which varied from 220–400 mm, and are thought to have been fastened to the sideboards with pegs or wedges. A 'box-bed' was proposed for Mound 14 (above), which resembles a coffin but in that case was upholstered. In Burial 16 it is possible to discern a box-bed with upright sides (1255) and slats (1257–9), in which a body lay on some organic material (1256, 1260, 1262, 1263). But in this case we should have to explain why this arrangement appeared to be upside down, with the slats above the body.

The stratigraphy of the grave, body and timbers was elusive, confusing and difficult to record consistently. Organic stains were said to be under as well as over the body. Context 1260 is recorded as consistently beneath. Other contexts that denote organic traces are said to be over the body; of these, the cross-member subsequently designated 1257 is recorded as over the body, but 1258 is drawn as both over and under. Context 1259 is drawn as possibly under, but is stated in the written records as over: 'The stain 1259 proved to be overlying the legs of the body'. The evidence of the photographs is similarly equivocal, as the camera, like the excavator, found it difficult to distinguish the sand stains of timber and of body matter.

In sum, it is legitimate to consider Burial 16 as a possible bed-burial, but the bearer may have been a carpentered container of another kind.

## THE LAYOUT OF THE BODY AND GRAVE GOODS

There was no bone, but the body survived as a strong three-dimensional effigy, which was sufficient to determine its basic position. It lay on its back, with the legs extended, the left arm slightly flexed, the left hand over the abdomen, the right arm bent and the right hand over the midriff. The direction of the skull was not determined. There was insufficient material for the determination of age or sex. The length of the body was 1.52 m.

After analysis, the grave goods can be grouped into three:

**Pin and leather strip (by the head):** A narrow curved leather strip (7), a ring-headed pin (5) and a perforated white bead (1) were located together, near the head. It seems likely that the bead was originally attached to the ring head of the pin, which may have fastened a garment at the left shoulder. The leather strip might be associated with the garment fastening, or it could perhaps have been used to tie the end of a plait coming forward over the left shoulder.

**Bag or pouch (under the left thigh):** The amount of leather traces encountered was actually quite considerable, although only a few fragments were recoverable. Most of the leather lay under the left thigh, in two separately observed patches. The first lay on the right side of the thigh, and was recovered as two finds: **6a**, described on examination in the BM as ‘folded leather, perhaps from a bag’, and **6b**, described as a possible toggle for a drawstring. The second lay on the left side of the thigh: a pellet of leather (**2b**) was recovered. A small bronze cylinder (**2a**) had this pellet in its upper mouth. The leather zone is not linear, and is more appropriate for a bag than a belt. If all the elements cited belong to it, then the bag is at least 230 mm across, in its squashed position under the left thigh. The bronze cylinder was not clearly inside the bag, but it could have had leather thongs inside it, acting as a sleeve for a pair of leather draw strings with their toggles – one of which was **2a**. If inside the bag, the cylinder might have belonged to a needle case, or perhaps to the handle of a wooden object. The position of the bag suggests that it originally hung over the left buttock, probably supported by a belt. The belt itself was likely to have been cloth or linen, given the survival of leather elsewhere in this burial and in Burial 15.

**Châtelaine and knife (by the hip):** On the left hand side of the body was an iron complex, which, on examination in the British Museum, was resolved into two separate objects. A châtelaine (3), 340 mm long, was made up of delicate iron rods joined by figure-of-eight links. An iron knife (4), 104 mm long, had hung by the châtelaine.

## CONCLUSION

The grave was dug through turf, to a size anticipating the body-bearer. There was no evidence for a mound, but Burials 15 and 16 were aligned. This implies that, unless the two burials were contemporary, the earlier one should have been visible or marked in some way. Although no information was recovered from the skeleton, the hair tie, bag and châtelaine imply a female burial. The body had been placed either on a box-bed or in a rectangular wooden coffin made of thin board reinforced with lateral struts.

**Burial 56 (FR 6/7.3)**

A re-interpretation by Martin Carver, from the published account by Longworth and Kinnes (1980).

*Description of the investigation*

Burial 56 was excavated during the British Museum campaign of 1965–71 (Figure 49), which defined it as a pit containing a skull (Longworth and Kinnes 1980; SHSB I: 99). The south edge of the pit was located in Cutting III in 1966, and was excavated after opening Cutting VIII in 1968 (Figure 67). Cutting VIII was continuous with III, so there was no section drawn between them. The pit (‘skull pit’) was first defined ‘at the top of [the] natural’ (Longworth and Kinnes 1980: 11).

The fill of the pit was removed in 50 mm spits, and was planned at each stage. It ‘showed no stratigraphy, being filled with a homogenous mixed fill. No trace of upcast material remained outside the pit’ (ibid.). The material taken from the pit consisted of a bead, which was found in a mole-run, some bronze fragments and a skull.

*The assemblage*

## HUMAN REMAINS

Only a skull (and two vertebrae still in articulation) was located ‘9 inches above the floor of the pit’ (ibid.) and at the east end of the pit. The skull rested on its right side, facing south-west. The state of the bone precluded the assignment of sex, or observation of whether the vertebrae had been cut (D. R. Brothwell, SHSB I: 99). The skull was radiocarbon dated to the eighth century AD (radiocarbon date: BM-584 1204 +/- 79 BP [c. AD 746] – Burleigh, SHSB I: 682) or AD 670–830 uncalibrated, which has been calibrated by J. Ambers as seventh to ninth century (see Chapter 3, Table 9).

## ARTEFACTS

These descriptions of the artefacts follow reports by M. Guido (bead) and L. Webster (bucket fragment) in Longworth and Kinnes (1980: 29).

**A glass bead:** ‘globular bead with cylindrical perforation: turquoise swags on white background. Although badly made, the bead belongs to a well-defined group of Saxon date, dating to fifth to early seventh century AD. Diameter 7 mm; diameter of perforation 2.5 mm’ (M. Guido in Longworth and Kinnes 1980: 29).

**Fragments of copper-alloy mount:** ‘Three pieces of copper-alloy sheet folded over and riveted at three places. Max./min. length 26 mm. Two of the fragments are plain, but the bottom-most bears a partly obliterated repoussé decoration consisting of two interlocking looped and beaded strands surmounted by three ovoid shapes. One edge bears faint traces of a beaded frame around the design. ... The fragments as they survive are assembled in such a way that the plain sheets must have obscured a substantial proportion of the decorated sheet. In addition the decorated sheet is folded back across part of the upper edge of the design.’ The material was identified as scrap, or a clumsy attempt at repairing or reinforcing the rim or edge of an organic object. Its original use may have been on a bucket mount, and the ornament is probably seventh century in date (L. Webster in Longworth and Kinnes 1980: 30). The ‘scrap’ may alternatively have resulted from a looting operation (see below).

*Re-interpretation of Burial 56*

The original burial was an inhumation, but the majority of the bones were missing. There is little possibility that the careful excavators in 1966 would have failed to notice a body stain and, in



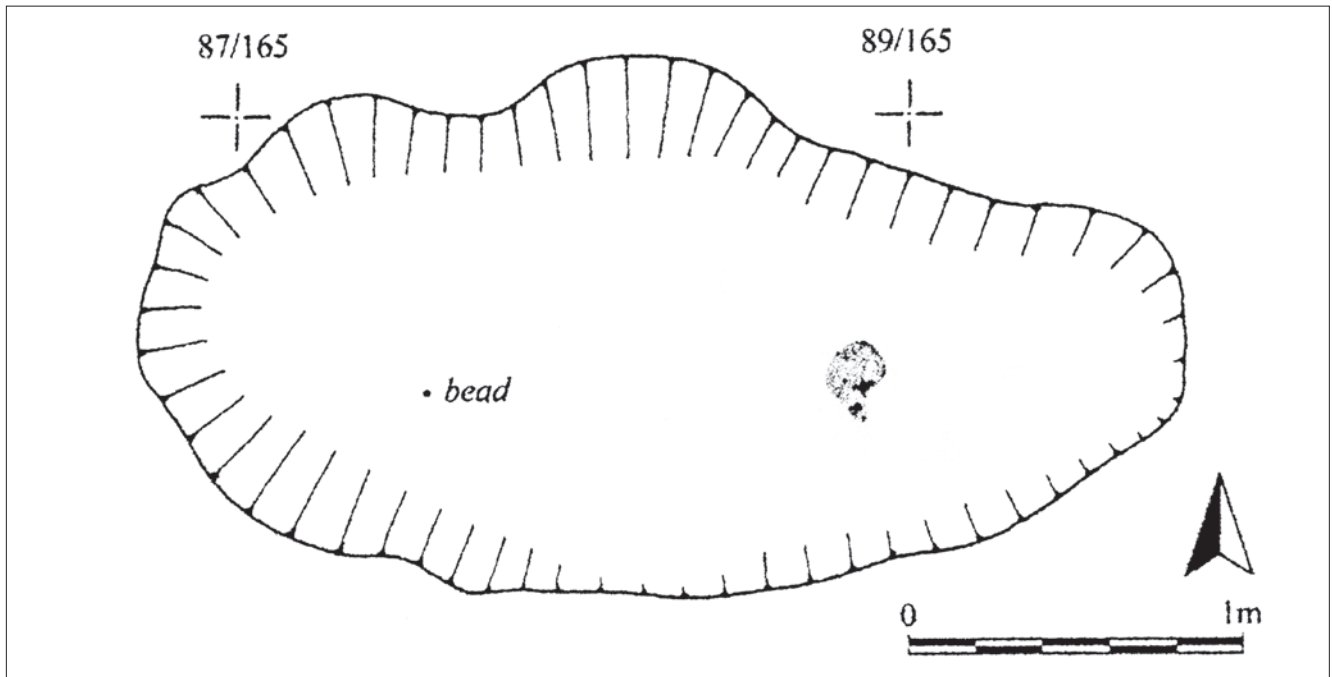


Figure 67 Burial 56: plan of robber pit, with skull and bead.

any case, the preservation of the head and vertebrae suggests that other parts of the skeleton would have been intact (Brothwell, SHSB I: 99). The excavators considered that the pit had been dug for the burial of a severed head on its own, accompanied by sparse grave goods. Two alternative hypotheses might be considered, from the new vantage point provided by the recent excavations: first, that this was an execution burial (see Chapter 9); second, that it was a furnished grave that had been robbed.

The date of the skull, in the eighth century, would strongly support its interpretation as the severed head of an execution victim from the gallows on Mound 5, 15 m to the east (see Chapter 9); for whereas no dated mound-burials are later than the seventh century, the majority of the executions are eighth century and later. However, apart from Burial 53 (see Chapter 4, p. 83), the other execution burials are in or near quarry pits, most are on the east side of Mound 5, and none has grave goods. All were laid at the base of the grave that was cut for them.

In Pit 1 the skull lay 230 mm above the pit floor, which strongly suggests that it was thrown into a partially re-filled pit. The grave goods also support a secondary deposition. The bead was not located in a position appropriate for furnishing (near the hypothetical position of an ankle). And while the bronze fragment could have been recycled in antiquity, it is as likely that it had been scrunpled up by looters and jettisoned.

This suggests that Pit 1 represents the robber pit of an inhumation from which most finds and bones had been extracted, the skull and bronze piece thrown back and the bead lost. No trace of an earlier feature cut by Pit 1 was reported; but a robber pit that obliterated all sign of the robbed feature would not be out of place at Sutton Hoo. For a robbing to be accepted as the likely explanation for the form of Burial 56, two questions need to be addressed. How did the skull and vertebrae stay in one piece, and how did the robbers know where to find the grave? If the robbing operation was as late as the nineteenth century, then it would have to be assumed that the head still retained its structure. This is certainly not impossible. The skulls

of Burials 43 and 52, for example, were preferentially preserved. If the head and two vertebrae were lifted together (on a spade), there is a chance that they would stay together, even if journeying to and from a spoil heap. The skull may not, of course, have ever left the pit, but may have been pushed to one side in the search for objects. In this case, the skull and vertebrae would have increased chances of staying together.

To explain how robbers could have found Burial 56, it might be supposed that it originally lay beneath a barrow. There is room, between Mound 5 and Mound 17, for a mound of c.14 m in diameter to cover Burial 56 (Figure 49). The 1966 excavators indicated that they may have observed, and were expecting, a burial mound: 'In 1966 four 18' squares were laid out within the grid (cuttings I-IV); in the case of III and IV, modified to give cross-section through a possible low scraped-up mound. This on excavation proved to be a recent accumulation of superficial sand, the product of rabbit action' (Longworth and Kinnes 1980: 7). The 'modification' presumably refers to the section line between III and IV, which implied that the centre of the mound they saw was at the balk intersection. The description by no means excludes the possibility that a robbed and rabbit infested mound had once been there. Insofar as it is diagnostic, the form of Pit 1 recalls the oval robber pits attributed to the expedition of the sixteenth century (see Chapter 12, p. 262).

In the untidy circumstances of a sixteenth-century campaign, it is not impossible that the skull of an execution victim had been found and re-deposited in a robber pit. There is, in fact, a skull missing from Burial 54. However, there is no direct evidence for such an unnecessarily ingenious scenario.

#### A CONTEXT FOR CREMATION BURIALS 13 AND 14

If a mound can be proposed to have covered Burial 56, then Burials 13 and 14 either pre-date it or were cut into it. Unmarked cremations are very rare at Sutton Hoo, these being the only candidates in over a hectare of excavation. If Burials 13 and 14 pre-date Burial 56, then the placing of the Burial 56 mound

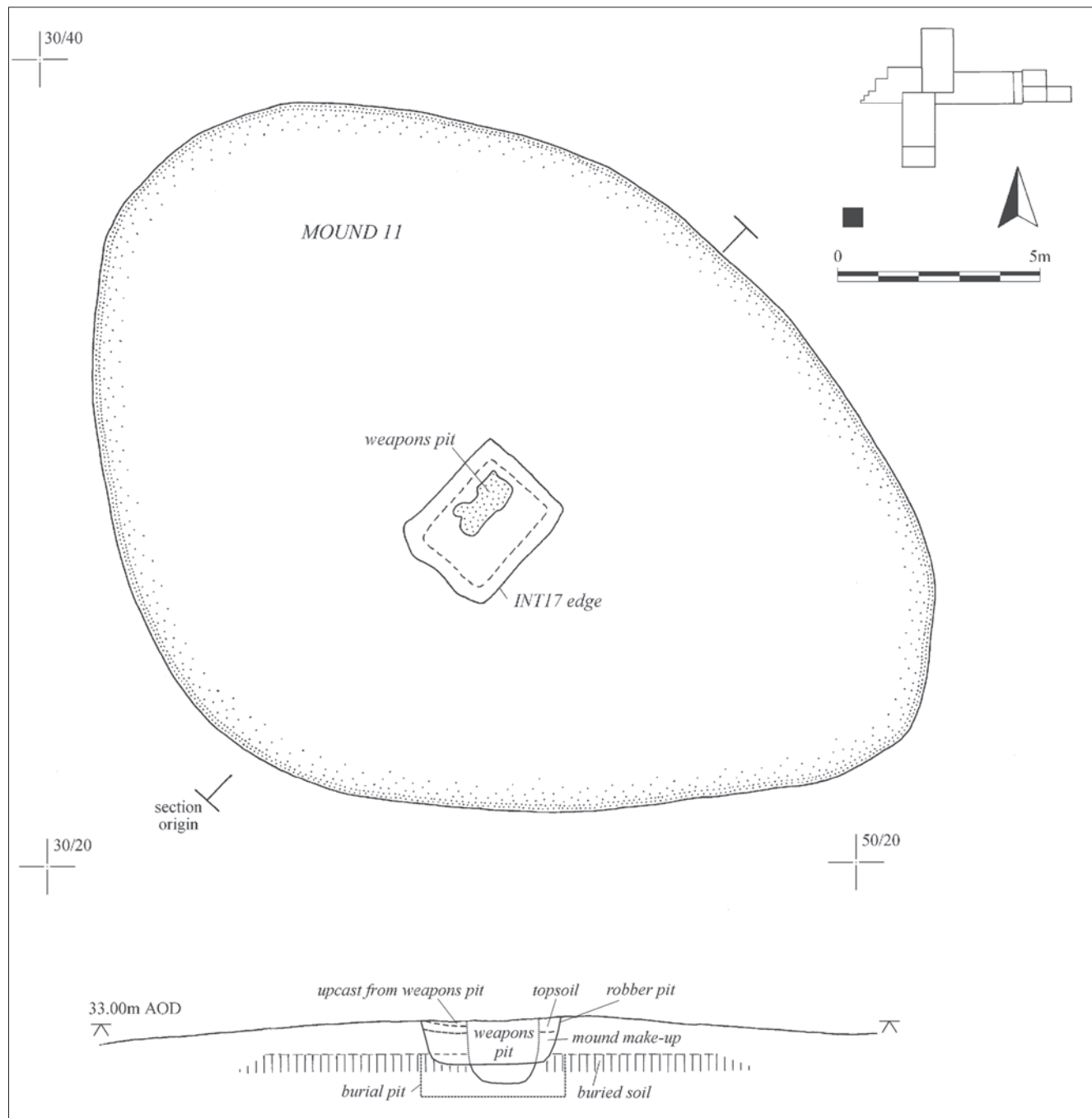


Figure 68 Mound 11: plan and profile of the mound area, as revealed by the 1982 robber pit.

would be fortuitous. If Burials 13 and 14 were secondary to a mound, then they would have been fairly deep, but the variation in their depths might endorse the presence of a former mound: Burial 13, nearest to the centre, barely touched the subsoil, while Burial 14, towards the edge of the putative mound, was dug 10 in. (c. 250 mm) into subsoil.

**CONCLUSION**

The recalibrated radiocarbon date of seventh to ninth century allows the burial in Pit 1 to belong either to a robbed inhumation of the seventh century or to an execution burial of the eighth to ninth. Of the two explanations, the simpler is perhaps that of a robbed inhumation. Burial 56 would be an inhumation accompanied (at least) by a bead and a decorated bronze object, and was covered by a mound. The most likely robbers would be

those of the sixteenth-century campaign, whose vertical pit would have widened the grave into the form observed in Pit 1.

**Other partially explored mounds**

**Mound 11 (FR 2/7.3)**

*Investigation and result*

Mound 11 was the subject of a clandestine robbing operation that was drawn to the attention of the landowner (Mrs A. Tranmer) on the afternoon of 13 February 1982. It had been executed at some time after 30 January, when the mound had last been seen intact. A square pit, measuring 3.4 × 2.7 m, had been dug in the centre of the mound. It had penetrated to a depth of about 1 m.

On 16 February Rupert Bruce-Mitford visited the site, and the pit was recorded by Stanley West and Bob Carr for the

Suffolk Archaeological Unit (Figure 68). The robber's pit was found to have coincided with a 'weapon-pit' (i.e. a defensive machine-gun position) previously cut into the top of Mound 11 during the time that Sutton Hoo had served as a military training area (see Chapter 12, p. 470). The cut of the 'weapon-pit' was seen to continue on the clean base of the robber-pit, and the robbers had not excavated it further. The height of the buried soil was noted in section. No bone or artefact fragments were reported.

The useful depth of a weapon-pit would be c.1.50 m, and the likely thickness of buried soil would be c.400 mm (see Chapter 10, p. 370). The likely depth of a burial pit, on the experience of other mounds, would be c.1 m from the surface of the buried soil. This implies that neither the weapon-pit nor the 1982 robber-pit is likely to have touched the site of the original burial.

### **Mound 13 (FR 5ii/7.2)**

Written by Martin Carver from excavation records and analysis by Madeleine Hummler and Luigi Signorelli.

#### *Summary*

The western part of the low mound, Mound 13, was excavated, together with segments of its quarry ditch and an east–west robber trench. The centre of the mound was not reached and the burial was not located. However, from finds in the robber trench, it is likely that previous excavators had reached and ransacked an inhumation burial.

#### *Description of the investigation*

Mound 13 was visible on the surface as a low mound (surface height at 32.22 m AOD) surviving some 200 mm above its surroundings (Figure 69). The centre of Mound 13 was located, approximately, at site grid I24/101.

The western part of Mound 13 was investigated in two interventions, Int. 44 and 55, with the line between them serving as an east–west section. The north-west and south-west quadrants of the mound, so formed, were excavated to subsoil, while the central and eastern parts of the mound were left unexcavated.

The robber trench (F227) and quarry ditches (F57 and F223) were defined at Horizon 2, with the robber trench being excavated first. It was emptied up to the edge of the excavated area (I22 easting), where it continued into the section. The quarry ditch was defined at Horizon 2 and the northern half was lowered against the north-facing section. It was 2.00–3.50 m wide and cut 40 cm into the subsoil. The north segment of the buried-soil platform was then lowered against the north-facing and west-facing sections. In this way, sections were obtained through the robber trench and through the quarry ditch fills (Figures 70 and 71). The whole area was then reduced to subsoil, and the remainder of the quarry fills were removed.

Once Mound 13 had been cleared of its capping of ploughsoil (i.e. once it had reached Horizon 2), the platform which remained had a maximum height of 32.97 m AOD (250 mm below the surface of the turf), 430 mm above natural subsoil (equivalent to Horizon 7) at 32.54 m AOD. On analogy with Mounds 5–7, the lower 400 mm of this was probably buried soil, with the upper, largely scrambled, 30 mm belonging to the relict mound make-up. The buried soil was removed in spits at Recovery Level D. However, apart from the surface of Horizon 2

(= Horizon 4), no other horizons were recognized until the subsoil, or Horizon 7, was reached.

#### *Evidence for the Mound 13 burial rite*

The burial pit was deliberately left outside the excavation area (see above), although the robber trench had probably reached it. There was no bone, burnt or otherwise, to suggest the character of the original burial, although the absence of burnt fragments hints that Mound 13 may have covered an inhumation.

#### *The assemblage*

The only candidates for Early Medieval finds recovered from the Mound 13 robber trench were two fragments of iron (1 and 2, Figure 120), which possibly originated from a cauldron.

#### *The construction of the mound*

The portion of the quarry ditch examined was 2–3 m wide. It had penetrated 250 mm or so into subsoil, leaving a regular profile.

#### *Aftermath*

##### THE BACK-FILLING OF THE QUARRY DITCH

In F223 (high point 32.83 m AOD, low point 31.72 m AOD), the sequence of backfill from top to bottom, as conflated from the written records and section, is:

1403: pink-grey, wind-blown sand

1402: dark brown soil on the shoulders of the ditch – turf?

1423: gravel on the east side, rain-wash from mound

1424: gravel and soil from rain-wash

1425 and 1427: turfs

1426 and 1428–30: silts

From this it can be seen that the back-filling sequence in the Mound 13 quarry ditch is broadly comparable to those in Mounds 6 and 7, apart from an early silting. This may derive from rain-wash during construction, then covered by turfs and soil returned from surplus quarrying, which in turn becomes turfed over. The ultimate fill is a pink-grey sand, representing wind-blow or ploughing.

##### THE ROBBING OF MOUND 13

The east–west trench cut through Mound 13 was 2.00 m wide and at least 5.00 m long. Two cuts were defined, F224 and 227; the latter proved to be the real edge of the robber trench (Figure 71). The north–south section (Figure 70) shows the cut of F227 (lowest point 32.16 m AOD). The trench slopes gently downwards from west to east, towards the centre of the mound, which lay beyond the limit of the excavation. The trench proved to be rectangular in shape, with a relatively flat floor. The robber trench had apparently cut through the back-filled quarry ditch.

##### PLOUGHING

The east–west section under Mound 13 (Figure 71) showed some evidence for ploughing after the robbing of the mound.

##### THE TRACK

The silted-up fill of the north-west quarry ditch, including its last wind-blown deposit, was cut by a track (F225/233 – Track 1, see Chapter 12, p. 461). This track was therefore established or re-

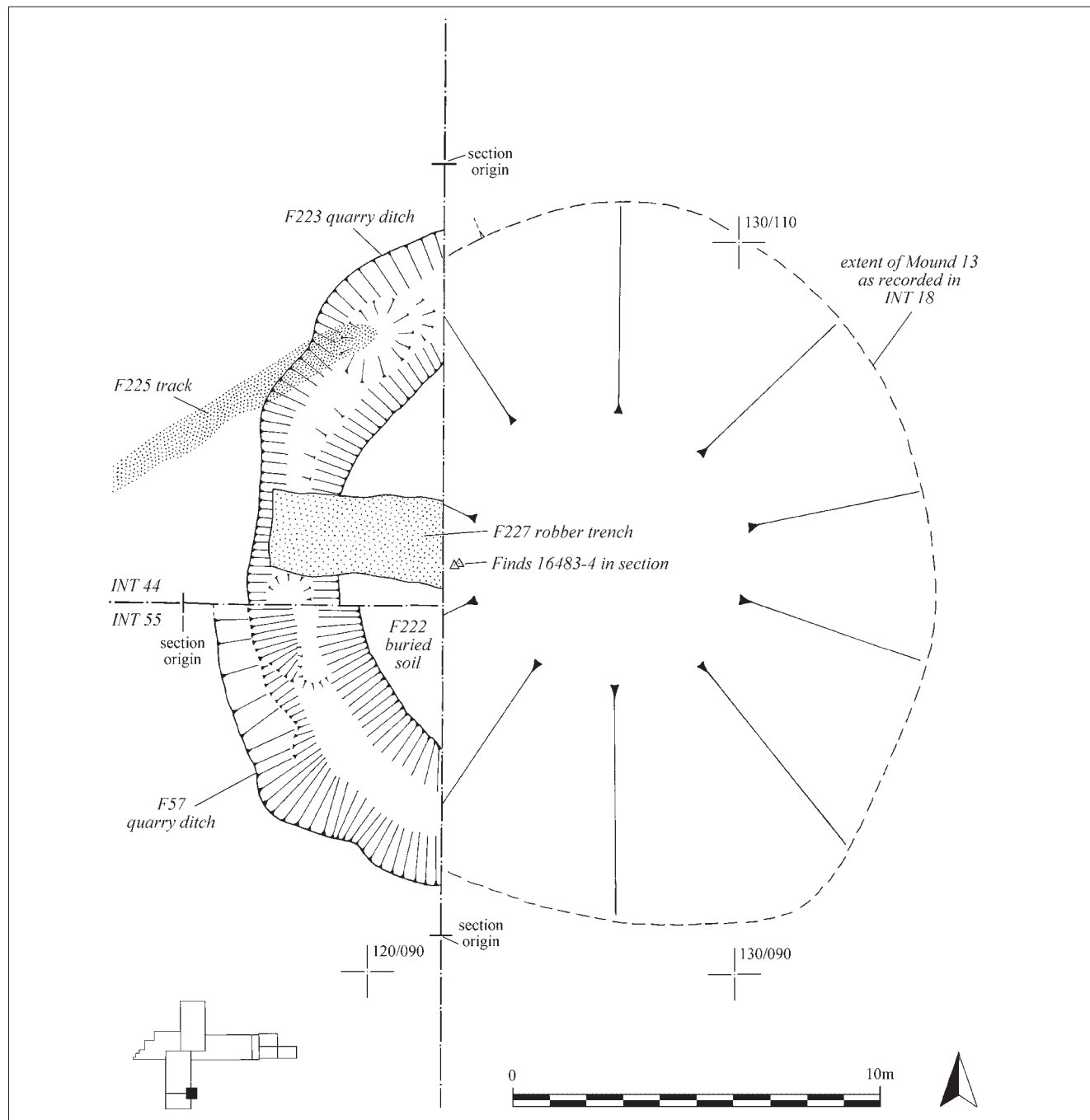


Figure 69 The Mound 13 perimeter, part of its quarry ditch and the robber trench (stippled).

established after the quarry ditch had been filled in by ploughing.

*Mound 13 model*

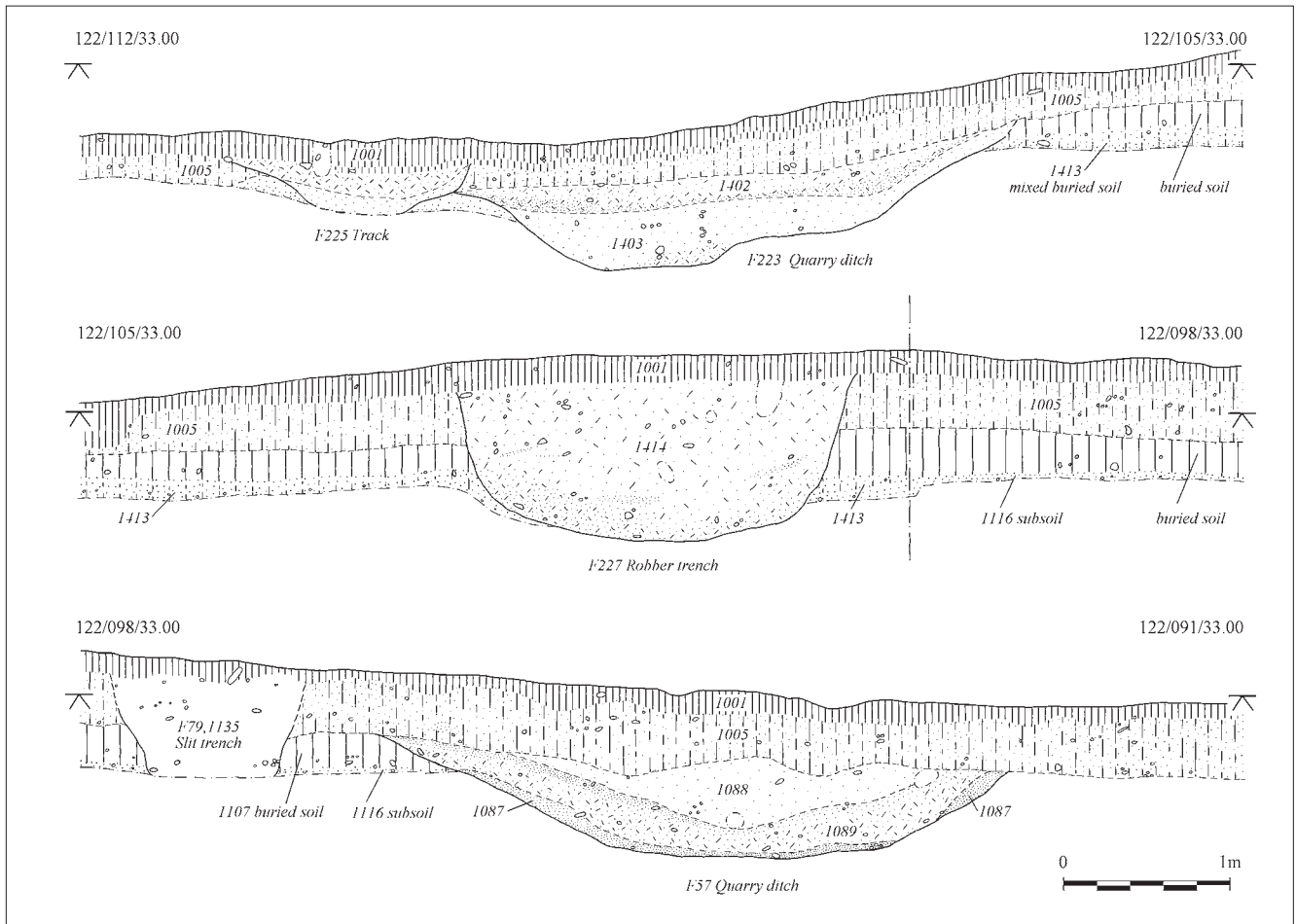
The mound was about 13 m in diameter (estimated from the inner diameter of the quarry ditch), and was erected over a burial that was probably an inhumation. The quarry ditch was refilled, presumably by ploughing, and robbed by means of an east-west trench, then rubbed nearly flat by ploughing. A track was established or re-established over the filled-in quarry ditch, passing Mound 13 on its north-west side.

**A stray find (FR 5ii/7.3)**

A cylindrical gold and garnet mount (Int. 55/65) was found as a stray find in Int. 55, on the flat ground between Mounds 7, 13, 3

and 4 (Figure 72). The object is described and discussed in Chapter 7, p. 254. The find-spot was at site grid 10514/08756 and 32.47 m AOD, in an area once attributed to a possible 'Mound 19', roughly in the position occupied by the site hut during the BM campaign of 1965-71 (*Bull.* 4: figs 12 and 15). The object lay in Context 1004, a ploughed soil below the turf. Below this context was a track (F11) that overran a quarry for Mound 4, but which was cut by Track 1 (Figure 72).

The context suggests that the object is unlikely to have been dropped in this century, as no recent ploughing has been recorded in this area. The slightly raised ground supposed to be Mound 19 is identified as spoil from the robbing of mounds, probably Mound 3 or 4 (FR 5ii/7.1), a robbing campaign thought to have taken place in the sixteenth century. Track 1 dates from the same period, as does F11, and the earliest ploughing is the



**Figure 70** Mound 13: section north–south through quarries and robber trench, showing relative position of track.

same date or is from the same time (see Chapter 12, p. 466). Object 65 must have arrived over F11 after the filling of the Mound 4 quarry pit. It is, therefore, either a loss from a later robbing (say the campaign of the mid nineteenth century, see Chapter 12, p. 462), or a displaced loss from the earlier sixteenth-century campaign. It may have come from Mounds 3, 4, 7 or 13, or from further afield in the robbed cemetery. Of the neighbouring candidates, Mound 3 was probably the most likely.

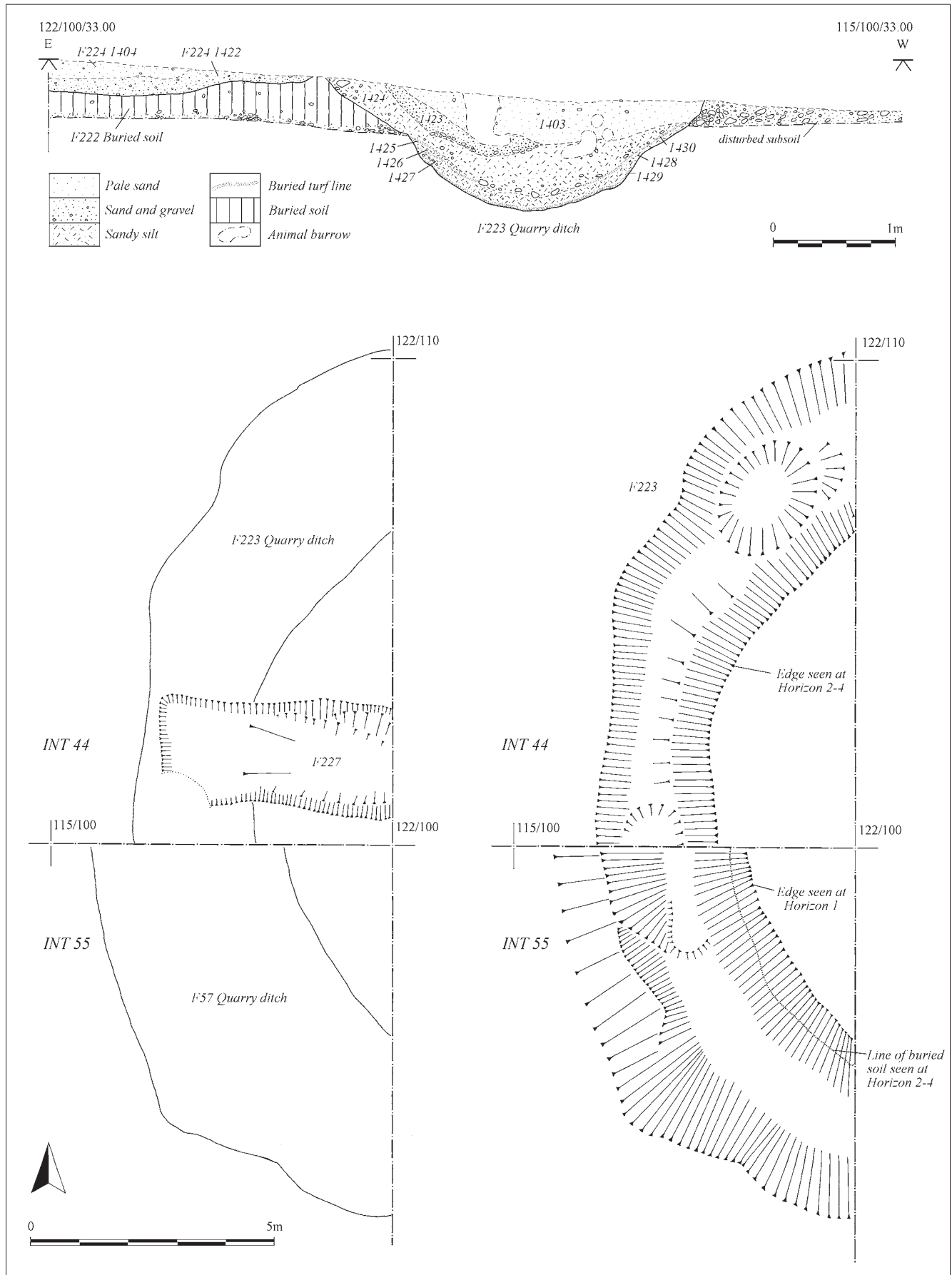


Figure 71 Mound 13: section east-west through quarry ditch (top), and plan of robber trench (bottom left) cutting quarry ditch (bottom right).

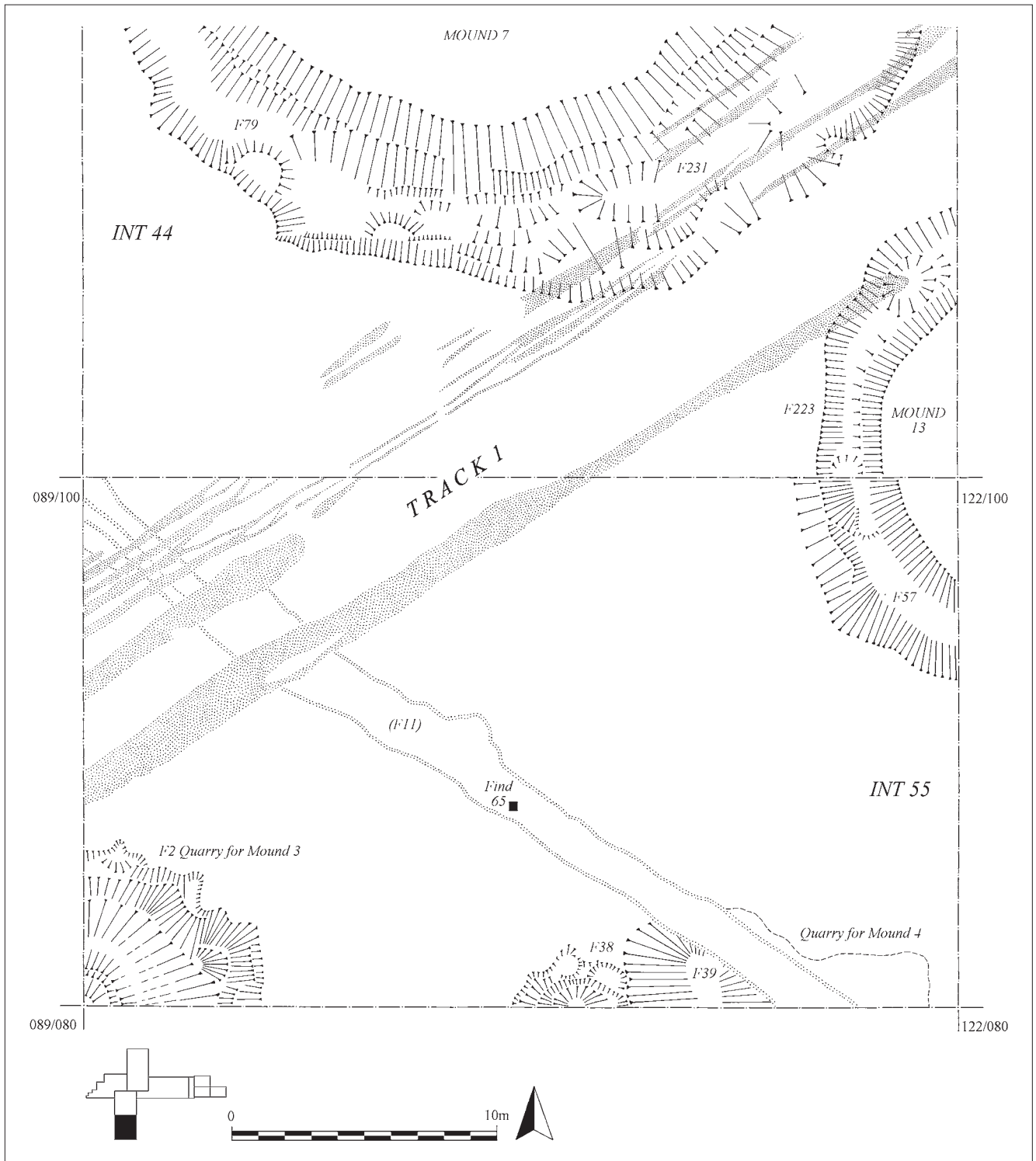


Figure 72 Plan of Int. 55, showing quarry ditches of Mounds 3, 4, 7 and 13, the track marks and the position of Find 65.





## Chapter 6

# Ship-burials

## Mound 2, with a reconsideration of Mound 1

Martin Carver

### The Mound 2 ship-burial

Written by Martin Carver, from records by Basil Brown, Gillian Hutchinson, Angela Evans, Andrew Copp, Mark Johnson and Klara Spandl.

### Summary (FR 4/7.1)

The history of Mound 2 begins in the seventh century, with the digging of a burial pit in which a wooden chamber was constructed. The chamber was furnished with weapons and feasting equipment, and then a ship, up to 24 m long, was placed on top of it. A mound about 3–4 m high was then raised over the ship, using earth and sand extracted from a quarry ditch running around the mound.

In the late sixteenth century a large oval pit was dug through the mound and the remains of the ship, and the majority of the grave goods then looted. This excavation was followed by extensive ploughing, which reduced the mound and filled up the quarry pits. In 1860 the reduced mound was revisited with a trench, and a large consignment of ship-rivets was found and removed (Int. 1; Plate 33a). The mound had another trench dug in it by Basil Brown in 1938 (Int. 3), and was completely excavated between 1984 and 1988 (Int. 26 and Int. 41).

### Description of the investigations

#### Investigations before 1938

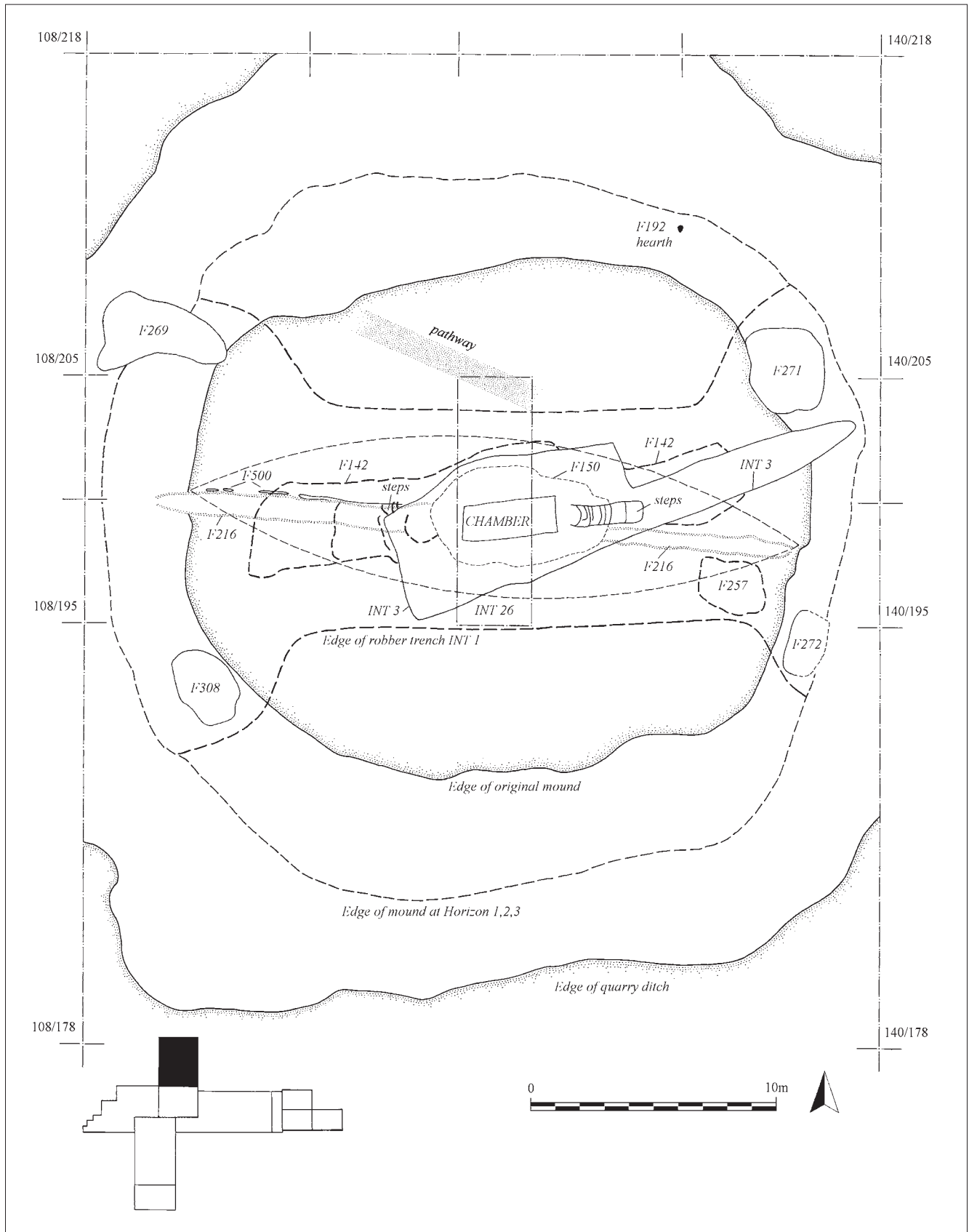
In the late sixteenth century a large pit was excavated in the centre of Mound 2. This robber pit reached the chamber and removed the majority of the finds. The mound was subsequently spread, and much reduced in height, by ploughing. A second robbing operation followed when a trench was cut east–west through the mound, and the burial chamber revisited. This second episode was probably that referred to in the *Ipswich Journal* for 24 November 1860, when ‘two bushels of iron screw-bolts’ were found in an excavation at Sutton (see Chapter 12, p. 468). Evidence of these two early excavations came to light during the 1983 campaign, which defined them on the ground and proposed a date for them (Figure 73; see below, p. 174).

#### Investigations in 1938

Basil Brown cut a trench through Mound 2 (his Tumulus D) for Ipswich Museum and Mrs Pretty in 1938, beginning on 6 July (Int. 3; SHSB I: Ch. 2; Plate 34, Figure 74). This trench, approaching from the east and aligned ENE–WSW, was also re-excavated and mapped during the 1983 campaign. The east part of Brown’s trench ran over buried soil and encountered a Bronze Age hearth, from which was retrieved a blue faience segmented bead (see Chapter 11, p. 393). In the western half of Brown’s trench, which actually lay mostly within the limit of the previous excavations, a number of objects were found



Plate 33 Mound 2: (a) iron ship-rivet 39; (b) silver-gilt drinking-horn terminal 23.



**Figure 73** General plan of the investigations and discoveries at Mound 2. The central burial chamber had a ship placed over it. The first excavation by robbers is a central, oval pit. The second, dated to 1860, is an east–west trench with steps on the west side. The third excavation, by Basil Brown in 1938, is aligned north–east to south–west. The fourth excavation, Int. 26, is a central north–south trench. Sub-mound areas are stippled.

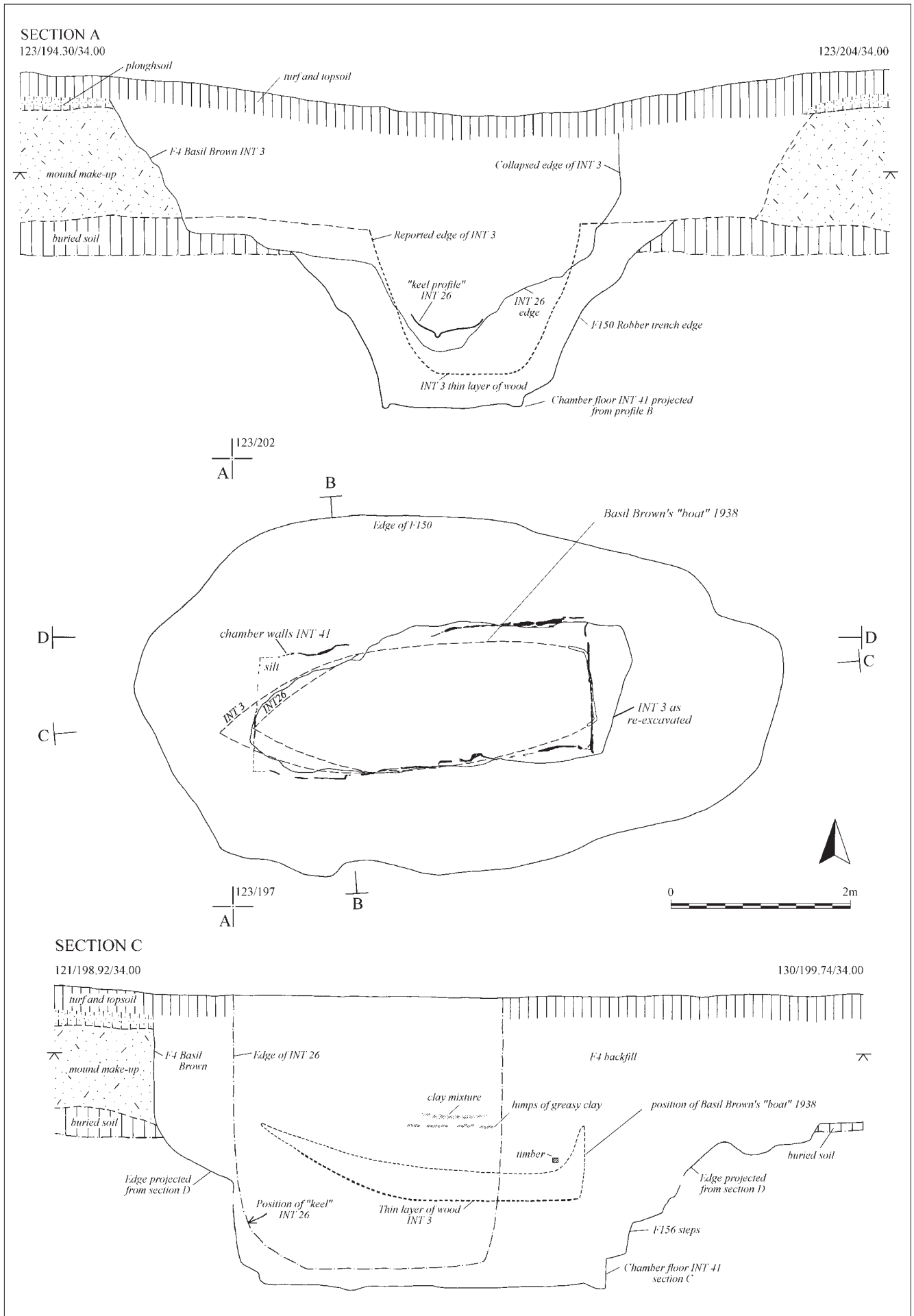


Figure 74 Mound 2, the central pit: plan (centre) and reconstructed profiles north–south (above) and east–west (below), combining information from Ints 3, 26 and 41.



**Plate 34** Mound 2: (a) the partially excavated chamber from the east, showing, sectioned at rear, the two shoulders of re-deposited fill that led Brown to believe he had contacted the prow of a boat. The north wall of the chamber can be seen on the right; (b) the boat-shaped pit excavated by Basil Brown in 1938; the sticks mark the position of rivets.

(see Chapter 7, Catalogue of finds from Mound 2, p. 260). Brown also recognized and located a number of ship-rivets, thinking some of them to be *in situ*. As a result, he defined the shape of a boat that was either half a boat or a boat with an unusual transom-stern. The identification was reinforced by a layer of dark deposit that was identified as wood, on the basis of his previous experience in Mound 3.

Angela Evans notes that Brown's interpretation was not widely accepted when the boat was reassessed in early discussions of the Sutton Hoo finds. Charles Green (1963: 57, fig. 16) reconstructed it as a typical double-ended boat with a hypothetical length of 6.9 m, a maximum beam of 1.8 m and a depth amidships of 0.9 m. Following Green, Bruce-Mitford (SHSB 1: 127–8, fig. 86) noted the apparently undisturbed, striated sand at the east end of Brown's pit, and elaborated on the possibility that the boat had been deliberately cut in half for burial – a practice seen in an earlier context at Slusegård, Bornholm (e.g. grave 693; see now Crumlin-Pedersen 1991: 128, fig. 40) and suggested for Mound 3 at Sutton Hoo (see Chapter 4, p. 67).

Subsequent excavations (see below) demonstrated that Basil Brown's 'boat' was formed of a pattern of trampled soil left by grave robbers. The chamber was actually rectangular, and the rivets had derived from a full-sized boat or ship that had been placed above it at ground level (see Figure 74 and below). Basil Brown's trench was re-excavated in 1986 and a pair of steel roller-skates was found in his sieved backfill. A test pit attributable to Basil Brown was found to the south-west of the

mound (F14, Figure 84). It contained the remains of an iron bucket dating to the 1930s.

#### *Investigations in 1983–9*

##### EVALUATION AND STRATEGY

Mound 2 was intensively surveyed during the evaluation phase of the latest campaign. The surface of the largely invisible quarry ditch was traced under oblique lighting at night (Plate 4), and radar transects implied the presence of a large east–west trench from a previous excavation (*Bull.* 4: fig. 17; see Chapter 2, p. 70). In 1984 a section of backfill was removed from Basil Brown's earlier trench, in order to allow inspection of conditions inside the mound and to assess the legibility of the stratigraphic sequence visible in the sides (Int.26; Figure 74). The 'boat-shaped impression' defined by Brown was found, with some marker-sticks still in position (Plate 34). There was no certain contact with the subsoil, and the boat seemed to have been defined at an interface within the fill, where rivets were fortuitously arrayed. Below the boat, on the west side, a curvilinear profile attributed to a 'keel' appeared in what subsequently also proved to be backfill (see below, p. 168). The character of the primary burial of Mound 2 was not resolved, but the previous excavations had clearly been incomplete.

These evaluation exercises indicated the scale of the operations of previous excavators, the difficulties they had encountered and the problems of interpretation they had bequeathed. A better understanding of the Mound 2 burial rite was required, but excavation on a large scale would be needed

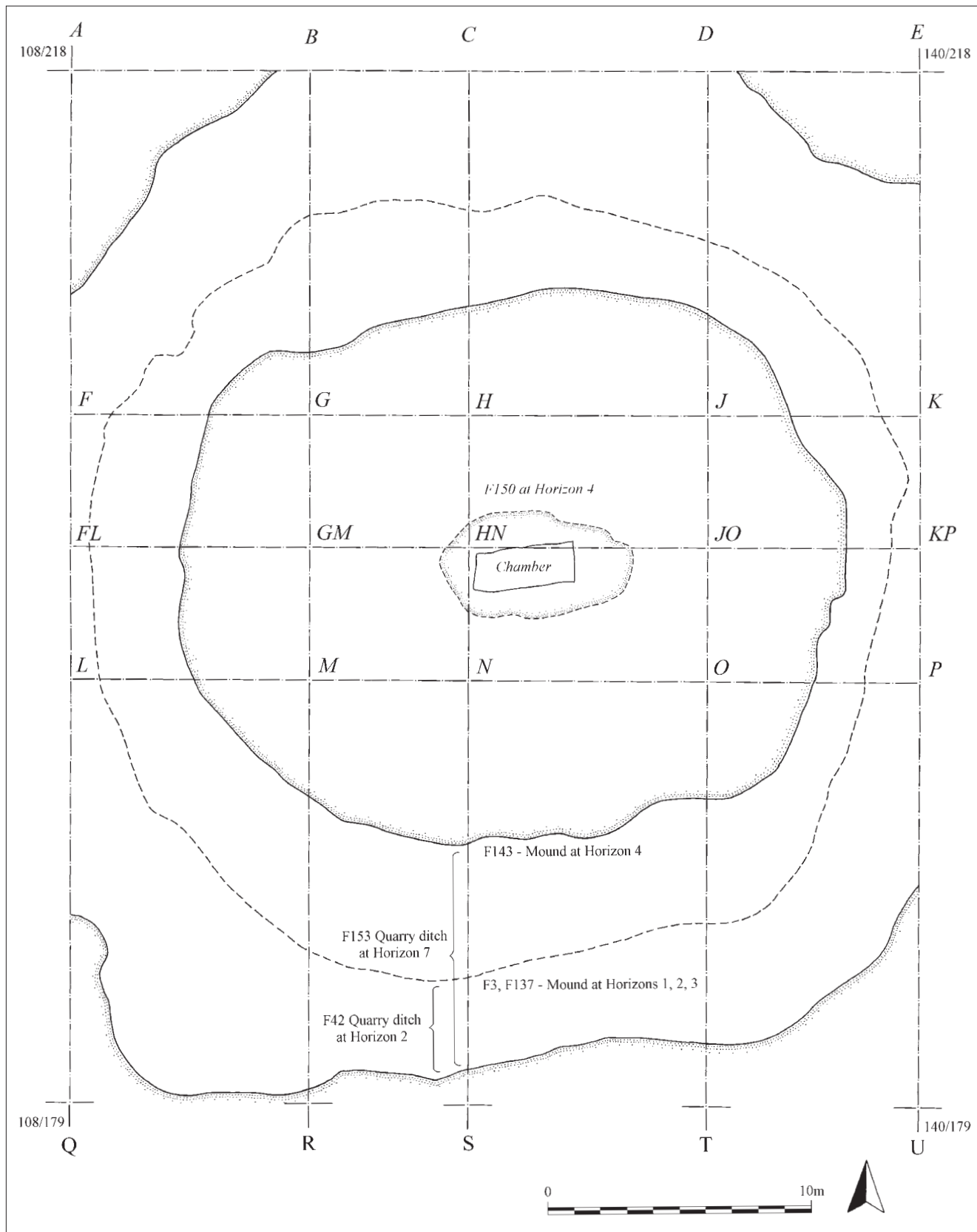
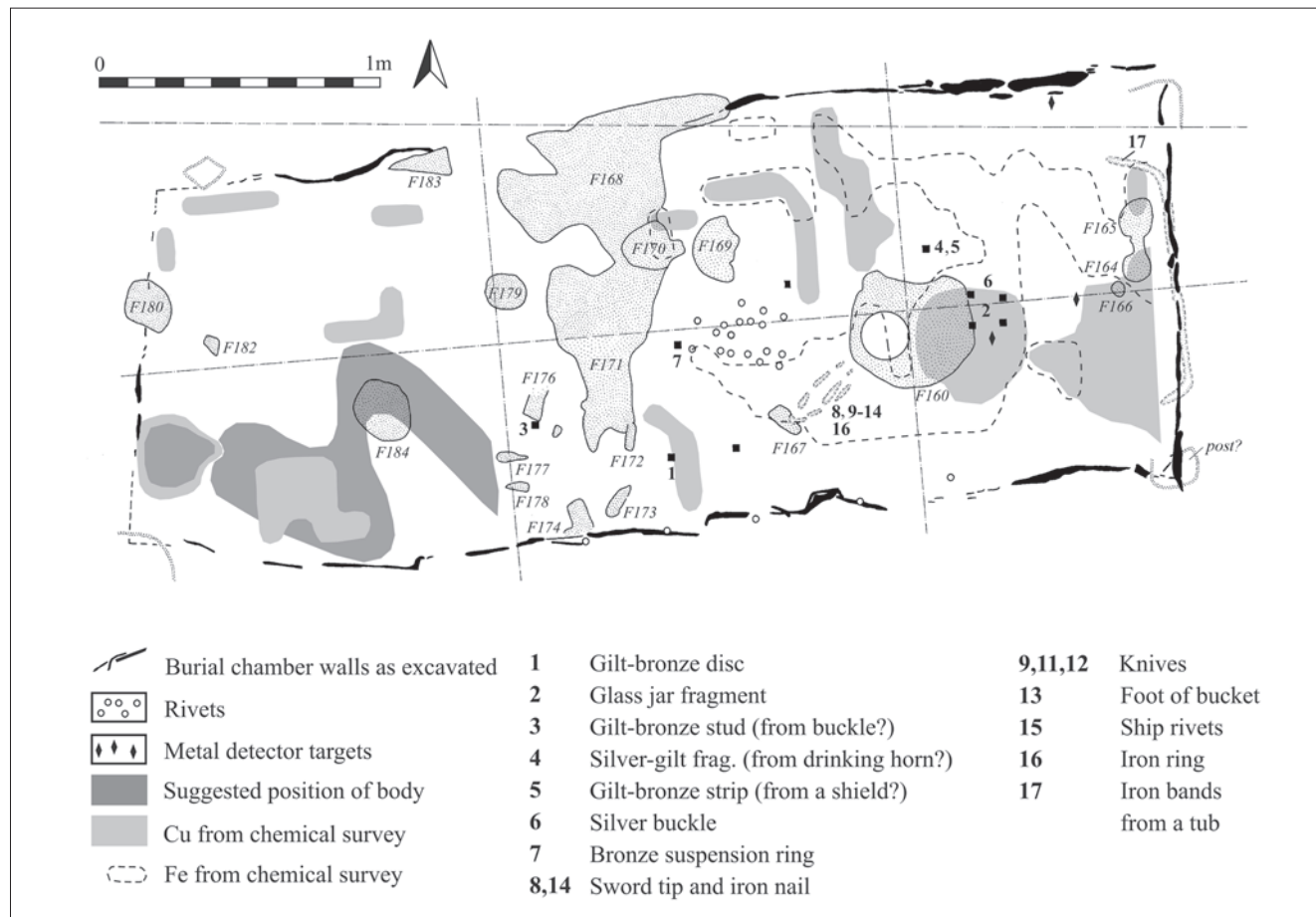


Figure 75 Excavation procedure for Mound 2, Int. 41, showing quadrants and the edge of the mound at successive horizons.





**Plate 35** Mound 2: (a) overhead view of the chamber showing the east wall and anomalies on the chamber floor; (b) the chamber as excavated.



**Figure 77** Mound 2: composite map of the chamber floor showing finds made by Basil Brown together with the results of metal-detector and chemical surveys of the chamber base (see also Figure 20).

to resolve a sequence that was already so disturbed. Accordingly it was decided to excavate Mound 2 completely, and to address the following questions:

- what burial rite was employed?
- how had the mound been constructed?
- what was the explanation for the unusual form of boat observed by Brown?

**EXCAVATION AND RECORDING OF THE MOUND**

In 1987 the Mound and its quarry ditch were totally excavated, over an area of 32 × 39 m, using running sections in a series of horizons within quadrants (Int. 41; Quadrants F to T; Horizons 0 to 7; see Figure 75). The mound was recorded in plan at each horizon. Balks were left standing between horizons and the exposed sections were drawn in colour. The composite sections produced by adding each drawn piece together are summarized in Figure 76 and examples of the drawings are given in Colour Plate 9. In general, the primary mound was of mixed soil and turf (Horizon 3), capped by sandy soil (Horizon 2), topsoil (Horizon 1) and the extant turf (Horizon 0). Horizon 4 was the surface of the buried-soil platform beneath the mound. Horizons 5 and 6 were interfaces seen within the buried soil system. Horizon 7 was the surface of the subsoil.

In spite of the intensive character of this excavation, neither the ship nor the robber trench was defined, except very partially, *in situ*. Large numbers of ship-rivets were plotted in position (Figure 80). The distribution map showed that they had been scattered from an original east–west alignment, which

positioned both the ship and the robber trench. The edge of the robber trench where it cut through the mound was only located in parts (Figures 73, 76, 80 and 83).

**EXCAVATION OF THE CHAMBER**

A large oval central pit (F150) was recognized at Horizon 4. Its fill was very mixed and stratigraphically complex, the result of many re-diggings and re-fillings. Its origin proved to be a sixteenth-century robber pit, which had cut into a subterranean seventh-century burial chamber. It had later been widened by re-excavation in the nineteenth century and by Basil Brown's excavation of 1938.

The burial chamber (F162) was recorded in five stages:

- 1 A preliminary reconnaissance in 1984 (Int. 26) removed the backfill of Basil Brown's trench, relocated Brown's 'boat' and planned it in outline (Figure 74).
- 2 In 1987 the central pit (F150) was defined at Horizon 4, after removal of the mound.
- 3 The extant limits of the burial chamber (F162) were defined within the central pit in eight stages. At this point it was discovered that the stain of Brown's 'boat' did not lie on natural subsoil, but lay on backfill that covered the remains of a rectangular wooden chamber. The boat's 'transom stern' was the east wall of the burial chamber, and the rest of the boat feature had masked the north, south and east walls (Plate 35).
- 4 The burial chamber walls were then recorded (Figure 77).
- 5 The base of the chamber was then mapped from chemical samples (Plate 36) and by metal detector, in order to locate



the body and the possible stances of metal objects (Figure 77; see Chapter 3, p. 49).

From these investigations it was possible to deduce the shapes of the original hole and the burial chamber constructed in it, and how the latter had been furnished by the seventh-century burial party. Something can also be known of the ship, which was placed at ground level and buried by the mound. The later intrusions due to excavators in the sixteenth, nineteenth and twentieth centuries were also mapped, if imprecisely (Plate 37, Figure 81).

Several other features were later recognized as probably relating to the Mound 2 burial. These were a Medieval hearth (F192) and four Medieval pits within the quarry ditch (the so-called 'corner-pits' F269, F271, F272 and F308), and the pit F257 and its turf lump F261, which were part of robber episodes.

### **A history of the Mound 2 burial, argued from the investigations**

*Before Mound 2: the ground surface at the time of the burial (FR 4/713II)*

#### THE BURIED SOIL

The buried soil under Mound 2 was a smooth, brown, silty soil, much disturbed by rabbits, which had entered deep into the mound and under it. The surface sloped down towards the north-west, south-west and south-east from a high point at the north-east. The average heights were 33.50 m (top of buried soil) and 33.10 m AOD (top of subsoil). The average thickness of the buried soil was 400 mm, thinning to 200–300 mm on the north side (FR 4/44). It was often difficult to distinguish the buried soil from the mound make-up on top of it, because there was no clear interface (as in a turf layer) between them. The surface of the buried soil was undulating, but did not have the regular undulation of a plough-land (FR 4/363.2). However, the soil under Mound 2 had certainly been cultivated at one time. Plough-marks were not visible on the old ground surface (Horizon 4; FR 4/382.4), but they were recorded at Horizon 5 (Figure 78; see Chapter 10, p. 373) at an average depth of 250 mm below Horizon 4. Most artefacts recovered from beneath the mound were Prehistoric (see Chapter 11), but the assemblage from the buried soil (F158 and F202) included Roman pottery (see Chapter 11, p. 457) and four rims and one body sherd identified as possibly early Saxon (see Chapter 7, p. 268). The buried soil may have therefore been ploughed in the century before the mound was built.

It can be concluded that the land under Mound 2 had been ploughed but was not under the plough at the time of burial. As there was no turf line beneath the mound, but there was turf in the mound make-up itself (see below p. 170), the surface had most probably been stripped of turf before mound construction began.

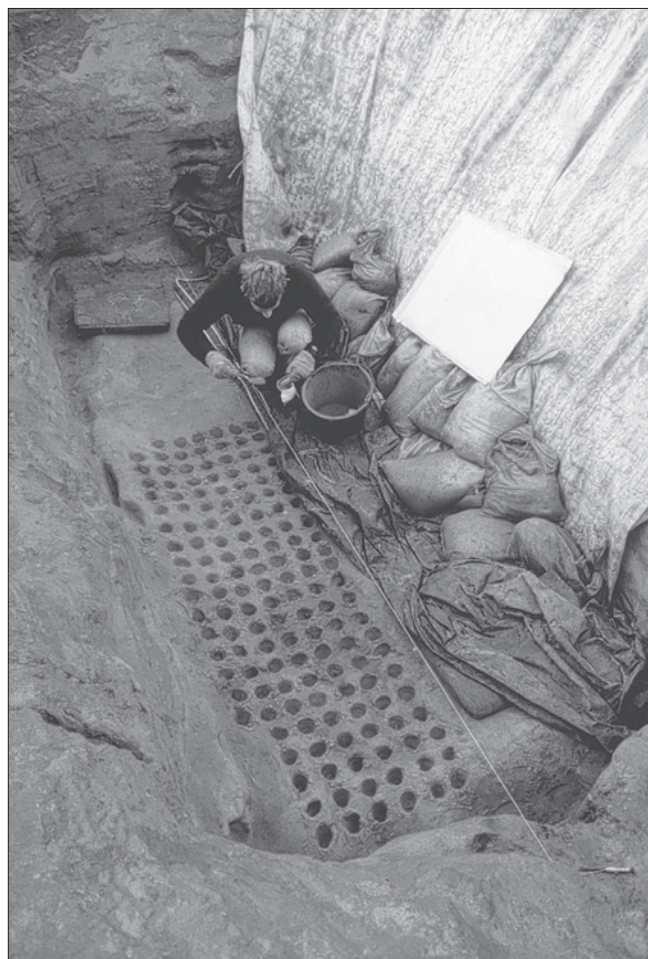
The micromorphologist noted that up to 500 mm of the soil profile was missing, and ascribed its removal to Anglo-Saxon quarrying for mound-building. However, the plough-marks showed that the buried soil was under cultivation (to a depth of c.250 mm) from the level at which it was found (400 mm above subsoil). It seems more likely therefore that the 500 mm missing from the soil profile had been removed by the plough before the Anglo-Saxons constructed their mounds. The relative heights of the old ground surface in Prehistoric, Roman and Saxon times are argued in Chapter 10, p. 377.

#### PATH

The northerly area (quadrants G and HN) was crossed by a 'path', which ran from the north-west perimeter of the mound, along the surface of the buried soil, towards the north-east corner of the burial chamber (Figure 77; FR 4/382.2). This was a slight depression, which ran beneath the layer identified as the sandy upcast of the chamber (see p. 164). If it formed part of the burial procedure, then its life would have been limited to the period between the stripping of the turf and the digging of the chamber, hardly long enough, presumably, to wear a walkway. On the other hand, the path was parallel with the plough-marks, and may therefore have been associated with Prehistoric or Roman activity before the mound was built.

#### LINEAR GULLY F216: IRON AGE EARTHWORK OR SHIP-GROOVE?

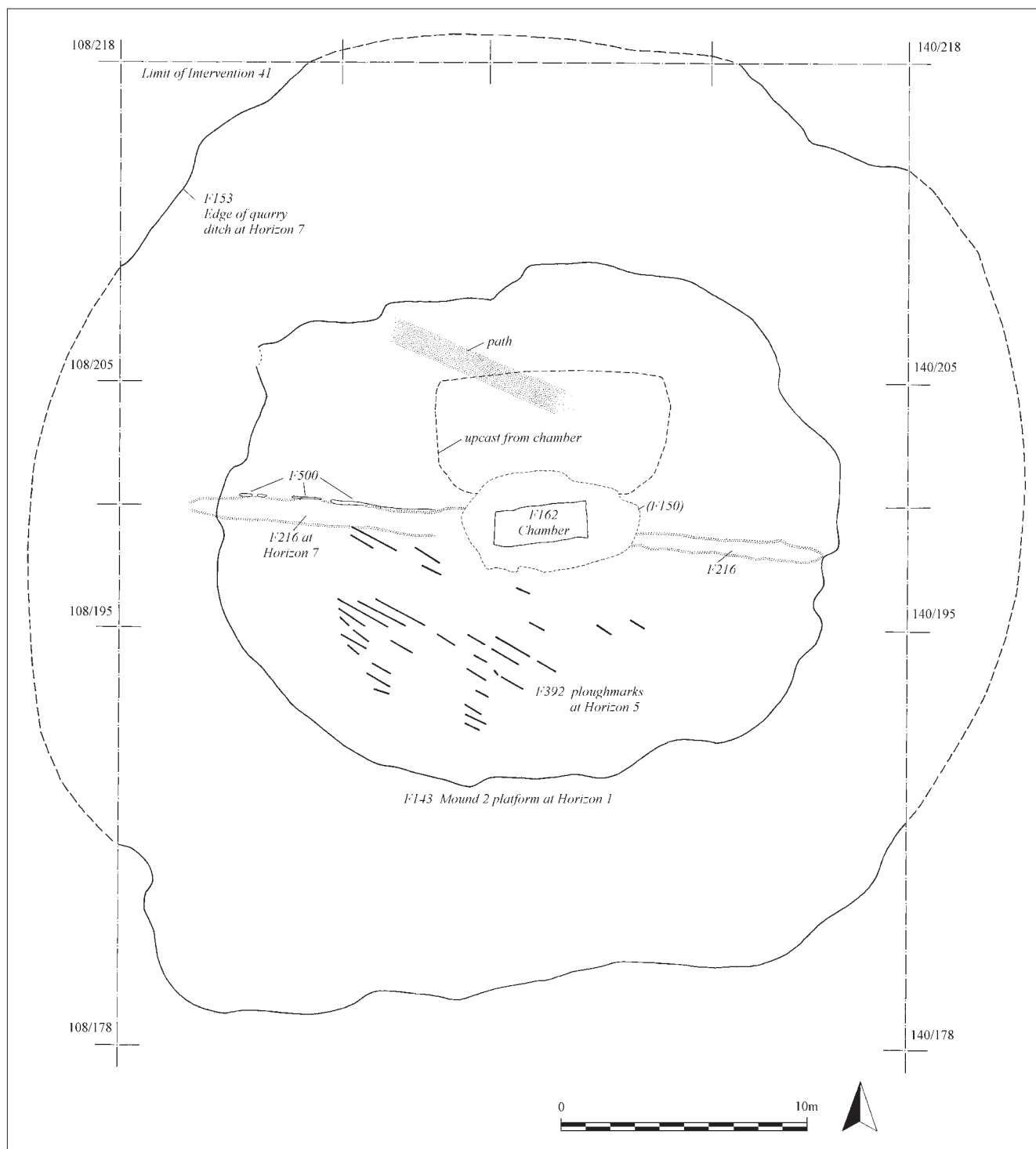
A gully ran east–west under Mound 2, within the buried soil. It had been cut by the quarry ditches and the central pit (Figure 78, Plates 53 and 54). The position of this gully in relation to Mound 2 is suggestive, and two possibilities are considered here: first, that it was part of an upstanding earthwork, and was used to site Mound 2; second, that it was a slot used to bed the keel of a ship that was thought to have been sited above the chamber (see below). At Horizon 6, F216 was seen, but the excavator remarks that it might have been cut from higher up and that it was consistently recorded as one of the latest features under Mound 2 (FR 4/392.14). In general, the plough-marks respect the gully, although 'one tiny stretch of plough-mark may just have clipped F216' (FR 4/4.6). The three hundred and seventy-six finds included mainly Iron Age pottery and one sherd of



**Plate 36** Mound 2: samples for ICP analysis being taken from the chamber floor.



**Plate 37** Mound 2: the excavated chamber, with the steps of the nineteenth-century excavators (rear), Basil Brown's trench (front) and the oval pit believed to be due to sixteenth-century excavators (centre).



**Figure 78** Before Mound 2: the buried-soil platform, showing the path and the plough-marks, and the later chamber, with the reconstructed limit of upcast from its construction and the central pit.

Roman pottery (FR 4/4.6). At Horizon 6 the gully was 750 mm wide and 250 mm deep. If cut from the Anglo-Saxon ground surface, then it would have been 550 mm deep. The feature is comparable with the ditches of the Iron Age enclosure S22, which it is believed were used to site Mounds 5, 6, 17 and 18 (see Chapter 4, p. 91 and Chapter 5, p. 127), and may have formed part of another enclosure, itself part of a system of ‘Celtic fields’ (see Chapter 11, p. 457). The stratigraphic reasoning is that the earthwork was visible in the seventh century, but levelled before mound-building began.

Alternatively, the position of the feature may reflect the position assigned to the ship that is thought to have been sited

on the surface of the buried soil above the chamber (see below). The gully (F216) is not parallel to the Iron Age enclosure to the south, and so may not relate to it. The feature appears to terminate at the edges of the Mound 2 platform (Figure 78), suggesting that it occurs only under Mound 2 and is not part of a bigger system. On the north side of the western run of F216 are a series of narrow grooves (F500) contemporary with F216, suggesting that some narrow blade had been pulled along (though it is the wrong side for a steering oar). The profile of F216 at half a metre deep would be acceptable for seating a ship, assuming it continued up to the old ground surface, where it was not distinguished but was presumably much wider (Figure

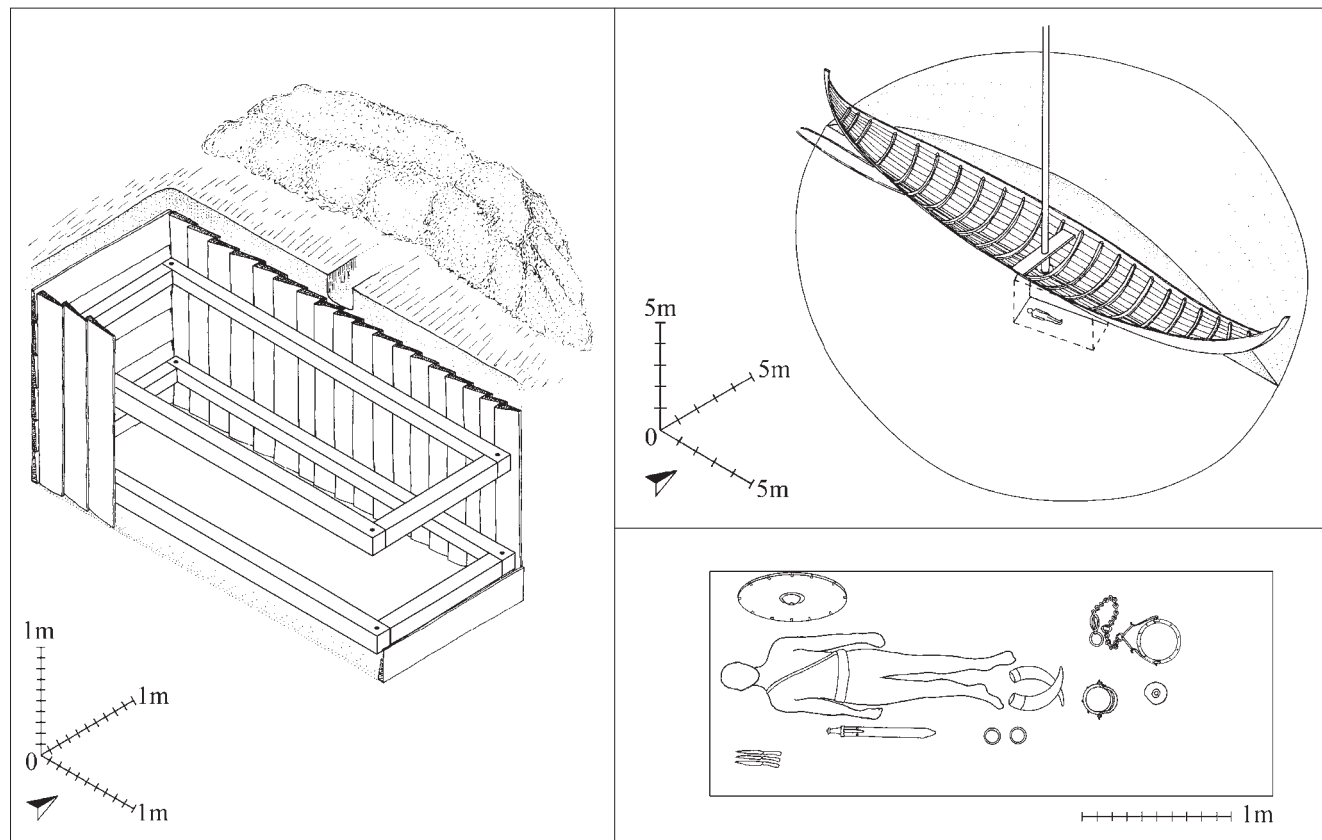


Figure 79 Reconstruction of the grave tableau (below right), the chamber (left) and the position of the ship (above right).

78). However, had F216 been used as seating for the ship, then one would have expected some rivets within it, if not a series still *in situ*.

Either hypothesis is possible, but neither is proven. Both require F216 to show at Horizon 4, which it did not. But it seems unlikely that the relationship between F216 and Mound 2 is fortuitous, and the idea of an Iron Age earthwork visible to the mound builders probably has the edge in the argument.

*The burial chamber*

DIGGING THE BURIAL PIT (FR 4/7131)

It is likely that the digging of the original pit for the chamber would have been initiated with a hole only a little broader than the chamber itself. Judging by the extant dimensions, it was most probably a rectangular pit about 1.5 × 3.8 m in area and 2 m deep from the contemporary ground surface. The way that the pit was dug can be inferred from the locus of its upcast of subsoil on the contemporary ground surface. Although this layer was discontinuous because of the many visitations made to the mound, and only intermittently seen and recorded during the definition of Horizon 4, part of the locus of the upcast could be tracked from the sections as bright yellow sand lying directly on buried soil (see p. 161 and Figure 76). The sand was piled high to the north of the chamber (it lay up to 150 mm thick in the centre, at site grid 123/201) and the heap spread to nearly the edge of the mound platform, (at site grid 123/205 it was still 20 mm thick). Upcast subsoil was not observed on the south side, although the sand fill of F215 (see below) suggests that some upcast may have been piled close to the burial pit on this side also.

Also belonging to the same pre-mound period were splashes of coarse sand on the north-east part of the buried-soil platform

(Contexts 1384 and 1388; Sections J–D), which resembled the weathered deposits seen on spoil heaps after rain. The sequence of operations suggested for the first phase of the burial rite is therefore as follows:

- 1 turf is stripped and stacked, presumably beyond the proposed quarry ditch
- 2 the burial chamber is dug and the upcast piled (mainly) on the north side, covering a pre-existing path
- 3 coarse sand is washed by rain from a heap (perhaps the heap of upcast from the chamber) onto the north-east part of the mound platform

THE STRUCTURE OF THE CHAMBER (FR 4/7132)

The shape of the base of the chamber was that of a rectangular box, of which only the lowest 150 mm remained. The traces of this structure were slicks of dark sand, often speckled with carbonized wood pellets, flakes and grains. This darkening was often discontinuous, making it hard to trace the locus of planks.

In the north and south walls the shapes recorded suggested planks originally about 25–40 mm thick, set end-on. Where the planks were set into the sand they penetrated 40 mm or less. The planks could not be excavated in elevation unless sectioned, as they often sloped inwards at an acute angle. On the south side the planks could be sometimes seen to be overlapping. On the north side some of the planks at the east end were seen to have been set vertically, but were not shown to have been overlapping. At the east end the planking appeared to be continuous, so it may have been set horizontally; this could also have been the case at the west end, where the wood stain was

intermittent. If horizontal, edge-on planks were used, then they would have been about 1.5 m long.

No clear evidence was recorded as to how the corner joints were achieved. There were no iron fastenings *in situ*. A number of post settings were seen fleetingly, but their stains were exceedingly thin: they had made no impression in the subsoil and did not survive attempts to define them by excavation. A square post form was originally seen in at least two corners (north-east and south-east), with some circular candidates along the wall lines. Those at the north-east and south-east corners were 120 mm and 170 mm wide, respectively, and remain possible structural elements. Patches seen at the south-west corner and midway along the west wall (F180) were anomalies that did not, however, resolve into comprehensible structural elements that could be related to the chamber (*Bull.* 6: fig. 4). The structure was built up against the cut face of the subsoil, and would have risen vertically to at least 900 mm, assuming it conformed to the vertical faces of the subsoil cliff that survived.

A central band of stains (F168, F170 and F171) was thought to be derived from wood. It was in a suitable position for a partition, but there were no traces of plank impressions, either edge-on or side-on, in the central part of the floor. These were more likely to have been the remains of timbers fallen from above.

There were no nails used in the construction of the chamber, and any interpretation relies on the thin and distorted loci of decayed wood. A variety of constructions is possible, as has been seen in other, better preserved, chambers. The sixth-century chamber in mound 2 at Högom (Sweden), which was lifted in its entirety and excavated in the laboratory, proved to have no corner joints (Ramqvist 1992: 46). At Oberflacht (Bavaria) chambers were constructed with broad horizontal planks set on edge on all sides, with horizontal planks laid flat across on a ledge for the roof (Paulsen 1992: 13–23; Schiek 1992: Abb. 16; see also Chapter 8, p. 294). The Sutton Hoo Mound 2 chamber could be reconstructed on the basis of the vertical planking observed on one long side (south) and the horizontal planking observed on one short side (east). This suggests a simple revetment: with the north and south sides consisting of vertical shuttering, held in place by horizontal boards and stressed with horizontal struts. The unstressed short sides could then be filled in with horizontal planks held between the shuttering and the natural face. In such a structure there is no obvious need for corner posts. This gives the reconstruction offered in Figure 79, left.

#### FURNISHING THE CHAMBER (FR 4/7133)

The evidence for the furnishing of the chamber was obtained from three sources:

- 1 The artefacts found during Basil Brown's excavations of 1938 (Int. 3; see Chapter 7, p. 256) and during the subsequent excavations of the present campaign, in 1984 (Int. 26) and 1987–9 (Int. 41).
- 2 The 'find-stances', i.e. impressions left on the chamber floor and attributed to the bases of artefacts that had once stood there (Plate 35, Figure 77). Linear anomalies were seen on the chamber floor during the re-excavation of Basil Brown's trench in 1984; they were designated as Context III4 in Int. 26. On investigation, some were shown to have been caused

by bracken roots. Three years later they were re-exposed, first in the area already visited by Brown and then over the whole chamber floor, including the west end where he had not excavated. The anomalies were set into two slightly different layers of final fill: a yellow sand (I506) to the east, and a dirty yellow sand (I476) to the west. These were separated, approximately, by the line of anomalies (F168 etc.). The fill was up to 15 mm deep, and the anomalies nowhere deeper than 10 mm. Altogether, twenty-one anomalies were defined and excavated. The shapes of the find-stances were only diagnostic of real artefacts in two cases: F160 was a persistent subcircular patch of the kind left by a bucket, tub or other circular container; immediately east of this was a pattern which may have indicated the impression left by a chain.

- 3 The chemical mapping of the chamber floor, carried out as part of the Leverhulme Trust Project (LTP) for the investigation of taphonomic process and the detection of human remains in acid soils. Samples were analysed for their relative quantities of particular elements that are thought to indicate the former locations of artefacts or bodies (see Chapter 3, pp. 49–51).

All three kinds of evidence are incorporated in Figure 77. The principal difficulty with the evidence for the layout is that its status and date are uncertain: the anomalies, like the locations of the finds, may derive their context from the excavations of the sixteenth or nineteenth century, or 1938, rather than from the burial rite adopted by the Anglo-Saxons. Both positive and negative arguments can be advanced.

Arguing positively, the general layout presented by the LTP, with a body at the west end and a concentration of iron and copper products at the east end, is a credible tableau. A central discontinuity is also maintained by all sources: in the final fill (which differed either side of it), the stain from planking, the absence of chemical traces and the absence of Basil Brown finds.

Arguing negatively, very few of the find-stances admit of any credible identification. Of the two exceptions, the 'chain' was discontinuous and ephemeral, and the iron-bound bucket, although implied by Brown's findings and surviving as a circular find-stance, was reported as a copper product by LTP. Given the exceedingly fragile character of the find-stances and the chaotic distribution of the finds that remained, the chances of the robbers leaving such stances unmolested, or of Brown leaving them uninvestigated, seem remote. Similarly, the metal-detector mapping was deemed to refer to fragments that had already been displaced.

On balance, it would seem safest to accept the chemical mapping of the LTP as a coarse account of the original tableau, and to disqualify most of the 'find-stances' from being imprints of the original layout – they are more probably derived from the activities of the robbers or Brown. If they reflect the position of finds, it will be at second or third hand. It should be noted that while anomalies sealed by the robber fill (see below) offer *prima facie* evidence that they are not due to Brown, there are in fact hardly any that fall into that category: those at the west end either deriving from timber stains or occurring within the V-shaped gap between the shoulders of robbers' fill that formed Brown's 'boat'. If, as suggested by LTP, the body lay at the west end, this would not exclude that end from the possibility of find-

Table 18

## Mound 2: incidence of ship-rivets

Context	Description	Total fragments	Complete straight rivets	Complete angled rivets	Head and shank	Head and rove straight	Head and rove angled	Gunwale spikes	Rib-bolts
1002	Horizon 1	31			4	2			
1006	Horizon 1	61	4	2	7	1	8	1	
1022	ploughsoil between Mounds 2 and 5	2			2				
1132	spread in Quads T and Y	2			1				
F14	B.B. trench (?); west side of Mound 2	1							
F162	Mound 2 burial chamber	1							
F127	feature on west side of Mound 2	3	1						
F257	pit beneath east side of Mound 2	3	3						
F4	B.B. 1938 trench	8		2	1				
F3	Mound 2, Horizon 1	84	16	14	17	3	8	2	
F137	Mound 2, Horizon 2	121	25	30	19	1	10	2	2
F143	Mound 2, Horizon 3	8	1	2	2		2		
F135	robber trench	35	10	7	4		2		1
F142	robber trench	61	7	25	7	4	3	3	
F42	secondary quarry ditch	4		1	5				
F153	primary quarry ditch	71	12	30	12	2	6	2	
TOTAL		496	79	113	81	13	39	10	3
Total no of fragments		834							

Minimum number of rivets of each type:

complete straight: 79

complete angled: 113

head and shank: 81

head and rove (straight): 13

head and rove (angled): 39

gunwale spikes: 10

rib-bolts: 3

**Total: 338**

Minimum number of angled rivets: (39 + 113) = 152

Minimum number of straight rivets: (79 + 13) = 92

Others: 94

Rivets recovered by Basil Brown: c.45

**Total: 383**

stances. Indeed, some of the most persistent stains would be expected from a sword or helmet, both of which were represented in the fragmentary assemblage. Given that Brown noticed 'several formless black patches' during his excavation (BBD: 147), it would seem that some, at least, of the anomalies were already there, and can be attributed to the robbers. Of others, we could, with extreme caution, propose that a few chance forms survived the turbulent depredations of the robbers to bear witness to the stances of original finds. Of these, the iron-bound bucket and, perhaps, the chain are the only candidates which might be held to reinforce the overall picture of the assemblage.

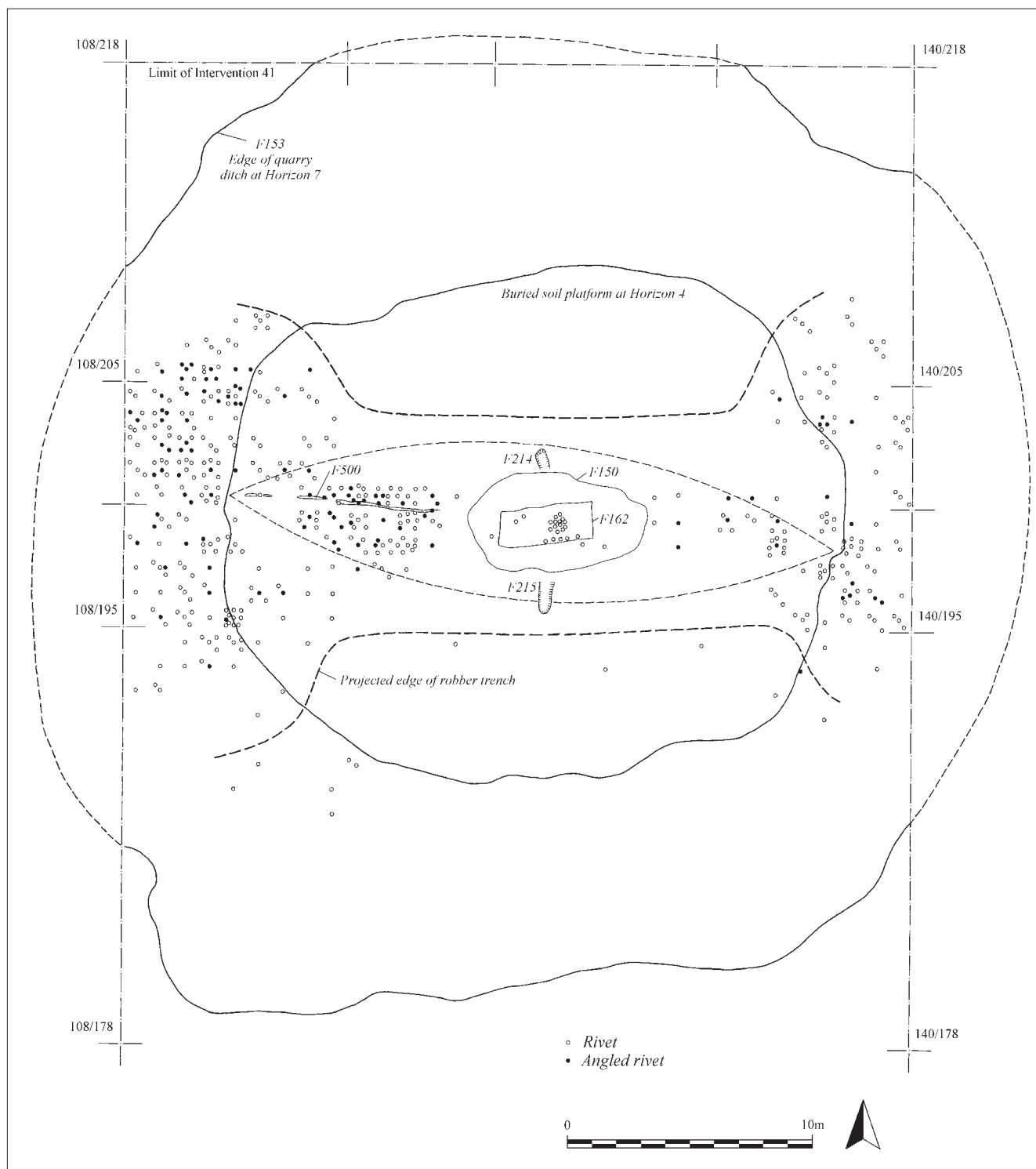
#### *The surviving assemblage*

The fragments of Early Medieval artefacts recovered from Mound 2 are described and discussed by Angela Evans in Chapter 7. It can be deduced that an original furnishing included a sword (8), a scramasax with a silver buckle (11 and 6), a shield decorated with a dragon in appliqué (5 and 25), an iron-bound yew tub with a diameter of 510 mm (17), two cauldrons (28 and 29), a copper-alloy bowl (30), knives (9, 10 and 12), drinking-horns (4, 22 and 27), a blue glass jar (2), silver-mounted boxes and drinking vessels (18–20 and 23), and a pair of circular gilt-bronze box-fittings (1 and 21). These finds show a close association with the Mound 1 burial, and suggest a similar date within the early seventh century AD.

The chemical mapping (LTP, see above) was based on the concentrations of particular elements that were present as insoluble compounds in the sand below the chamber floor and thus might be representative of the original layout. Iron signals were strongest at the east end, perhaps the original location of the iron-bound tub, and included a link-pattern that might have referred to a cauldron chain. Copper signals were strongest along the north wall. At the east end, this could have referred to cauldrons and bowl, and at the west end, perhaps to shield fittings. Deposits at the west end were relatively rich in aluminium, barium, strontium, phosphorous and lanthanum, elements which at Sutton Hoo reflect the former presence of a human body (see Chapter 3, p. 49). Overall, the assemblage implies the burial of a man of high status laid with his feet to the east in a subterranean timber-lined chamber.

#### *Evidence for a ship in Mound 2 (FR 4/715)*

The existence and form of a ship buried in Mound 2 was deduced from four sources: the character of the rivets, the distribution of the rivets, the position of a beam across the chamber and the observation of a possible section through the keel (see p. 168, below). Of these, the most decisive evidence came from the rivets themselves. Angela Evans deduces that the Mound 2 ship was a clinker-built vessel which, in its form, constructional detail and



**Figure 80** The ship in Mound 2: plan of the Mound 2 platform, showing the distribution of rivets, the beam slots (F214 and F215), the grooves (F500) and the hypothetical outline of the ship.

status, closely resembled that excavated beneath Mound 1 (Evans and Bruce-Mitford, SHSB I: 345–435).

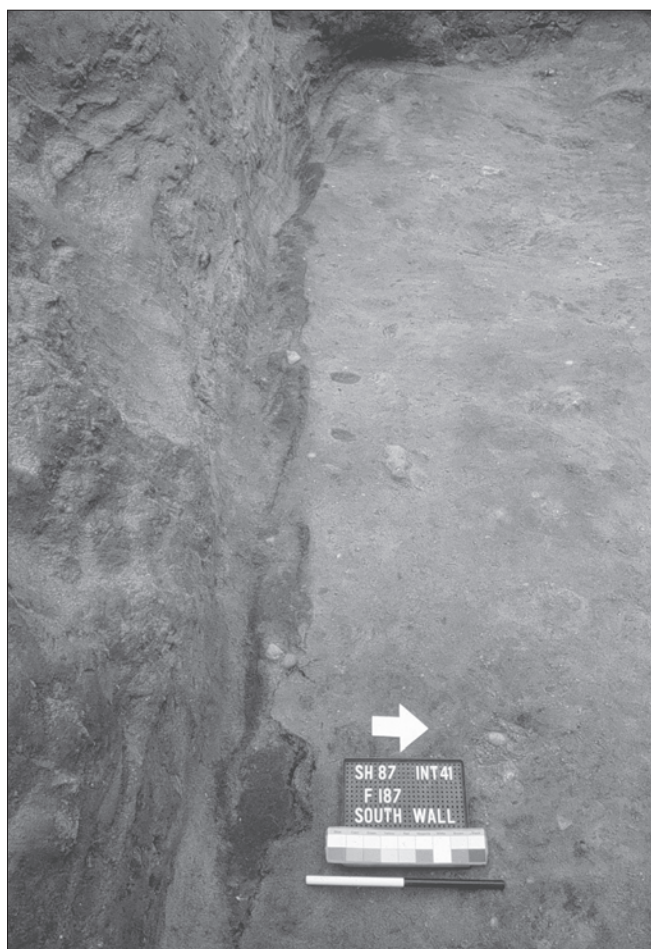
#### EVIDENCE FOR THE LENGTH OF THE SHIP AND ITS POSITION IN THE GROUND

##### THE DISTRIBUTION OF THE RIVETS

Ship-rivets were located by eye at Level D, and the ground was routinely scanned with a metal detector. Each rivet was individually plotted, and its attitude noted (Table 18; Figure 80). No two rivets were aligned to an extent that implied that they could still be *in situ* on a timber vessel. Neither was there any

consistency in their height. They had certainly been disturbed from an original configuration at a time after the wood had gone soft. The resulting two-dimensional plan is given in Figure 80.

The solid dots on the plan distinguish the ‘angled’ rivets, that is, those used in the stem and stern of the ship (see Chapter 7, p. 258). Since so few rivets were complete (192 in all), the number of angled rivets and their distribution is uncertain, but the proportion of the whole seems relatively high. The plan is based on an initial identification of 152 angled fragments, out of the total of 383 fragments plotted. Some indication of the size of the Mound 2 ship can be gained by comparison with that in



**Plate 38** Mound 2: (a) the slots for the beam or beams that crossed the top of the chamber and may have been designed to support the ship; (b) slots for vertical planks of the south wall of the chamber; (c) the west wall of the chamber.

Mound 1. About 1500 rivets were retrieved from Mound 1 (SHSB I: 345) from the presumed complement of about 2500 (excluding patches) implied by the reconstruction drawing (SHSB I: fig. 325). The Mound 1 ship had nine strakes a side, and it was argued (SHSB I: 360) that each strake was secured to the stem or sternpost by at least two angled rivets, making seventy-two in all. However, 30 rivets are shown in SHSB I (fig. 274), joining six pairs of strakes to the stem post, implying about 45 for the two ends, or 90 in all. The inference is that in Mound 2 a relatively high proportion of the rivets from the stem and stern has survived among the collection. Their collection, and their distribution, suggests that the stem and stern of the Mound 2 ship lay on either side of the burial pit.

The description of the campaign of 1860 in the *Ipswich Journal* for 24 November in that year speaks of ‘nearly two bushels of iron screw-bolts’, which have been attributed as being derived from the Mound 2 ship (Carver and Evans 1989; Carver 1992b: 357; see also Chapter 12, p. 468). These objects were sent to a local blacksmith to be made into horseshoes. A bushel is a measure of volume equivalent to 4 pecks or 8 gallons, or 36.37 litres and reckoned as 1.2445 cubic feet in dry measure, equivalent to a box 6 × 10 × 36 in. long. If each rivet occupies a space about 1 × 1 × 2 in., such a box could carry 1075 of them. A coarse approximation of two bushels is thus 2000 rivets. This is quite a load, and it presumably only represents reasonably robust examples suitable for re-forging into horseshoes. It is probably legitimate to assume that in 1860 a large number of rivets was found in the central part of the excavation, where they were conspicuously lacking in 1987 (Figure 80), and that they originally belonged to the central parts of the hull of a clinker-built vessel that collapsed into the chamber.

Combining these inferences, the Mound 2 ship could have had 2500 rivets, sufficient for two pointed ends of six to nine strakes each. A ship similar to, but not quite as large as that in Mound 1 is implied, of a length commensurate with the 24 m diameter of the original Mound 2 (Figure 80). The ship had stood, or was propped up, along an east–west axis on the surface of the buried soil (the Early Medieval ground surface) and over the top of the burial chamber.

**THE PROFILE OF THE ‘KEEL’ FOUND IN INT. 26**

The section at the west end of Int. 26 (Figure 74, top) appeared to offer evidence for the profile of the hull and keel within the central pit. The feature did not continue west, and would thus have to be interpreted as rising rapidly with the west side of the central pit. This ascending line would make it the trace of a prow or stern, both of which are unlikely given the number of rivets and the seating proposed for the ship. The fill of the slot resembled that of Basil Brown’s own backfill. A more prosaic explanation might be that this was an exploratory cut by Brown, coincidentally appearing ship-shaped to us, just as some of the early excavators’ deposits had to Brown.

**THE SUPPORTING BEAM OVER THE CHAMBER**

Two slots (F214 and F215) were defined on the surface of the buried soil at Horizon 4, one each side of the central pit that had cut through them (Figure 80, Plate 38). These slots are interpreted as the seating for a strong beam with a scantling of



450–550 mm × 160–200 mm. If a single beam, then it would have passed over the chamber at a point coincident with the ‘wood’ partition on the chamber floor (F168 etc.), which raises the possibility that the ‘partition’ is in fact the broken beam dropped to a lower level. The slots were back-filled with clean sand derived from burial chamber upcast. This means that the features are firmly connected to the burial ritual. It also means that the beam was either removed before back-filling, or that the beam was suddenly up-ended out of its trench, presumably by a sudden fracture.

The position of the beam, amidships, offers at least strong circumstantial evidence that it was intended to support a ship over the area of the chamber. In this scenario the ship would have rested most of its weight on the old ground surface and would have required props to hold it upright. This beam could also have served in the furnishing of the chamber, as a support for a ladder.

#### THE ‘SHIP-GROOVE’ (F216)

The possible association of this gully with the Mound 2 ship has been discussed above, where an open verdict returned. If it does represent the seating for the ship, then this implies a length of at least 24 m, and that the stem and stern of the vessel would have protruded from the mound.

#### MODEL FOR THE POSITION OF THE SHIP

Taking into the account the evidence presented, the model proposed is that a ship about 24 m long, and probably resembling the Mound 1 ship in most particulars, was dragged on rollers across the de-turfed platform and positioned over the centre of the furnished chamber on a beam sunk into the ground to either side.

Once the mound was built the vessel was filled with earth. At some point, while the timbers were still rigid, the beam amidships and the central part of the hull collapsed into the chamber, perhaps impressing the edges of the chamber into a shallow dish.

The only recorded parallel to this arrangement is the tenth-century ship-burial excavated in 1908 outside the defensive bank of the Viking port of Hedeby near Schleswig, north Germany (Knorr 1911; Müller-Wille 1976). The grave was defined by a layer of large stones, which covered a layer of rivets. At the west end, the rivets were aligned and suggested strakes *in situ*. At the east end, the rivets lay disordered in a layer covering a pit in which three horses had been buried (Müller-Wille 1976: 18, 111). In the centre, rivets had collapsed, along with the stones, into a cavity about 4.5 × 2.5 m. This was the site of the burial chamber. The structure of the chamber was not recorded, but it had remained well furnished, so in this case the cavity is not thought to mark the site of a robber pit. Enough aligned rivets remained *in situ* to show that the chamber had not been dug through the hull of the ship at a later date (Müller-Wille 1976: Abb. 7). Four hundred rivets were reported for a ship with six strakes aside and a length of about 18 m. The excavation records were not precise, but in their later analysis of the burial rite Ole Crumlin-Pedersen and Michael Müller-Wille argue for an arrangement whereby a furnished burial chamber was covered by a clinker-built ship, which in turn was covered by a low mound, leaving the stern, mast and upper strakes exposed (Müller-Wille 1976: 116). The centre of the ship subsequently

collapsed under the weight of the mound, allowing broken strakes and rivets to enter the chamber (see Chapter 8, p. 304).

Even if the Hedeby example is highly unusual, and 350 years later than Mound 2, it provides at least one endorsement of a parallel practice in northern Europe.

#### *The construction of the mound (FR 4/716)*

The excavation revealed the extent of the intact buried-soil platform on which Mound 2 had been constructed, and also the greater part of the quarry ditch which had been dug to supply material with which to make up the mound (Colour Plate 6). The mound platform at Horizon 4 was oval and measured 19 m north–south and 22.3 m east–west. The quarry ditch, after excavation, was c.7 m wide and featured two ‘causeways’ to east and west, where the ground had been less deeply quarried. The north and south edges of the ditch lay beyond the excavation area. In general the quarrying operation appears to have been well planned but informally executed.

After nearly a year dismantling and recording Mound 2 in all weathers, excavators had no confidence that material derived from the quarry ditch, or elsewhere, was being dumped according to any kind of pattern. Subsoil, buried soil and turf were all recognized, but seemed to have been thrown together onto the platform (FR 4/3722). Although the general variation in dumping could not be followed by eye at close quarters, a pattern did, however, emerge from analysis of the sections and context descriptions. The character of the make-up was most readily appreciated from the drawn sections, which provided the most graphic and reliable account of the interfaces between the various dumps (FR 4/7171.2; Colour Plate 9). In an additional analysis, we took the descriptions that were given to the contexts that made up the mound, the back-filled quarry ditch, the buried soil and the subsoil, and explored their movement by means of a colour diagram or ‘tintogram’ (Colour Plate 10). Together with the surveyed topography, these two analyses were the main sources for understanding the way that the mound had been constructed and how it subsequently eroded and spread to reach its twentieth-century form.

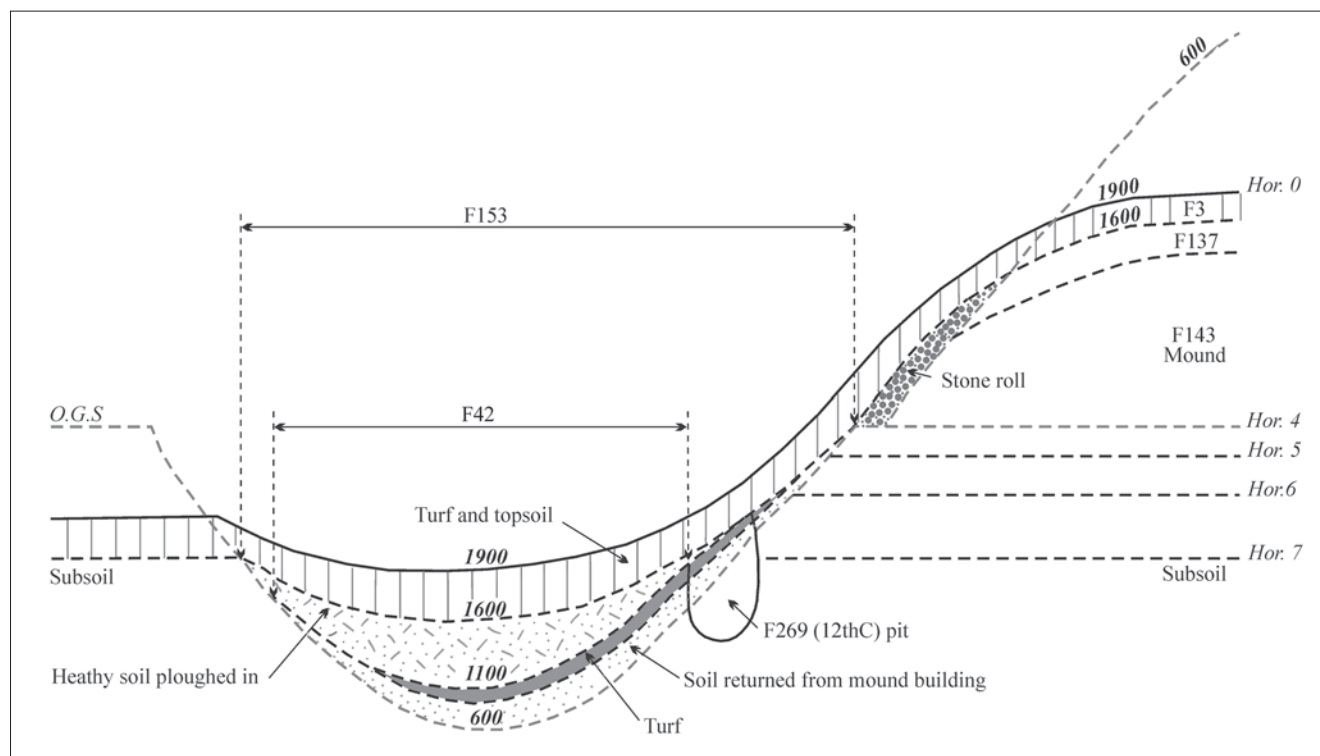
#### ORDER OF CONSTRUCTION

Feature 71, which may have been a quarry pit for Mound 5, was stratigraphically earlier than F42/153, the quarry ditch for Mound 2 (FR 4/394.4). This implies that Mound 2 was constructed after Mound 5.

#### EVIDENCE FROM THE DRAWN SECTIONS (FR 4/7171)

The sections (summarized in Figure 76) were drawn along the face of the trailing balks of the quadrant array (Figure 75). Each section was drawn (at 1:10) and colour-coded (Colour Plate 9) by the same person (C. L. Royle) to assist consistency. As parts of the quarry ditch were outside the excavation area of Int. 41, the section through the ditch has been extrapolated to give a complete profile. The majority of the strata that formed Mound 2 and its quarry ditch fills were badly scrambled by rabbits and diggings. The main episodes identified from the sequences in section are reported here.

The upcast from the burial chamber could be tracked as re-deposited subsoil on the surface of the buried soil. On this indication, it was located mainly in a heap on the north side of the chamber (section S–C).



**Figure 81** Diagrammatic section through the Mound 2 quarry ditch (K–L), and an interpretation of the sequence of infilling.

The first make-up of the mound was largely turf at Section J–JO (Figure 76: Section T–D), H–C (Figure 76: Section S–C), N–O and M–N (Figure 76: Section L–P). Sand with turf was often the next dominant layer, then brown soil, and then yellow sand. In general this is consistent with a loading deriving from the quarry ditch, from which first turf, then buried soil and finally sandy subsoil would have been extracted.

The quarry ditch showed two major episodes: a broad ditch up to 7 m across and back-filled with a thin mixed sandy soil that had been turfed over (F153); which was succeeded by a ditch 4.50 m wide and containing a stone-free pinky-brown or mushroom-coloured pale sand that was up to half a metre thick (F42) – modelled in Figure 81. The broad ditch (F153) was only recognized at Horizon 3 (Figure 75). The inner edge of the quarry ditch was particularly difficult to define, as the contrast here was, it emerged, between the edge of the buried-soil platform and re-deposited buried soil that had been quarried to build the mound but then returned to the quarry. The key was the ‘stone roll’, which marked the upper exposed surface following construction. This interpretation was endorsed by observations of our spoil heaps, and by the behaviour of the apron around the experimental reconstructed Mound 2 (Plate 15). In the experiment the stone-rolls corresponded with the final loading of the mound. Stone-rolls were recorded in Sections T–D, S–C and R–B onwards (Figure 76), and the width of the band varied from 0.2 m at Quadrant G to over 1 m at Quadrant R.

The broad ditch (F153) is interpreted as the primary quarry ditch, which contained mixed deposits surplus to mound-building that subsequently turfed over. The later ditch (F42) is interpreted as its upper profile, which filled in, probably rapidly, with a light heathy sandy soil. This latter episode is dated to the late sixteenth century (see below and Chapter 10, p. 465).

#### EVIDENCE FROM THE EXCAVATED CONTEXTS

The ‘tintogram’ was an attempt to represent the make-up of the mound and its quarry ditches from the diagnostic components of the recorded contexts. The key variables were the Munsell colour and the relative proportion of silt, sand or gravel. Eight typical values of these variables were colour-coded and assigned to each context. Some trials were also carried out to ensure that the variation was not due to recorders. The result is shown in Colour Plate 10.

The ‘primary mound’ (F143) is a fossil of the original mound that was constructed. The first loads seem to be buried soil (or turf stripped from it) dumped in south-east, west and centre, and followed by subsoil in the north, south and west. These may be derived from the quarry ditch or from the burial pit.

The primary quarry ditch (F153) was initially back-filled with mixtures of soil and gravel, with stony concentrations in the south-west and north-east. These would seem to be left in the ditch or re-deposited during the process of mound construction.

The ‘secondary mound’ (F137) continues the loading of subsoil in south, west and centre. It is capped by an overall layer of 10YR (Munsell) silt-sand that has no obvious derivation. As this occurs at the level of Horizon 2, it is likely to represent the fossil of a soil that formed after the mound had been reduced by ploughing. Deposits of the same colour as F137 are mainly found in the final form of the quarry ditch, the secondary quarry ditch (F42).

The original mound make-up (F143) was therefore taken from all the buried soil horizons and from sand and gravel subsoil. The same mixture collected in the base of the quarry ditch (F153). Later a light silty soil formed over the mound (F137) and filled up the quarry ditch (F42). Then a darker silty-sand soil formed on the mound and over the quarry pit – the turf

layer that was extant at the time of the excavation (F3). This interpretation is consistent with that of the sections.

#### MICROMORPHOLOGICAL ANALYSIS

Analysis by Charles French showed that the buried soil beneath Mound 2 was a truncated podzol that had been used to build Mound 2, and that the same truncated podzol, re-deposited, was found in the quarry ditch (see Chapter 10, p. 384). The Bh and Ea horizons were not only missing from the buried soil, but also from the re-deposited contexts, which implies the buried soil had already been truncated before Anglo-Saxon mound-building began (see Chapter 10, p. 374). Apart, perhaps, from a layer of turf that was stripped off by the mound builders, Horizon 4 represents the Anglo-Saxon old ground surface.

#### THE SIZE OF THE MOUND (FR 4/7173)

The relative extents of the mound and its quarry ditch at the different horizons are shown on Figure 75. At Horizon 1, Mound 2 was 31 m in diameter and was surrounded by a quarry ditch 4.50 m wide. The spoil heaps found beneath the 1983 turf, attributed to Basil Brown and/or the army, confirm that the height in 1940 had been approximately the same as in 1983 (35.15 m AOD). At Horizons 2 and 3 the mound was subcircular, with a maximum recorded diameter of 29.0 m. At Horizon 4 the definition of the inner edge of the 'primary quarry ditch' (F153) gave a base area for the original mound (F143) as 26 m east–west and 21 m north–south.

The size of the original mound was calculated in two ways: the first used the cross-sectional area of the drawn section to predict the height of the mound. The second method used the volume of soil excavated from the original quarry ditches to calculate the original height (see Chapter 10, p. 390). Using the measured capacity of the quarry ditch, extrapolated to an average old ground surface at 33.50 m AOD, the volume of earth extracted from the quarry ditch came to 790.25 m<sup>3</sup>. Assuming that the primary fill represents soil returned immediately to the ditch as being surplus to construction, the volume of soil actually employed in the mound was 543.17 m<sup>3</sup>.

The diameter of the original mound was reckoned at 22.3 m. Its quarry ditch was calculated as 102 m long and, at the level of the old ground surface, about 10.25 m wide. These dimensions give a height for the original mound of between 2.7 and 3.8 m. At the rate of one cubic metre of soil moved for each man-day, Mound 2 would have taken about 800 man-days to build, that is 80 people for 10 days: a major event in the Suffolk countryside.

#### **Aftermath: the ploughing and robbing of Mound 2**

##### GRASSING OVER OF THE QUARRY DITCHES

The first back-filling of the quarry ditch was of a mixed soil, deposited with no intervening turf line, on the clean subsoil base of the quarry ditch (F153) – Figure 81 and Figure 82. This formed a narrower ditch (F42) that overgrew with turf. Observations at the modern site suggest that grass would take firm hold within a few years and that the topography would remain stable unless broken by digging or ploughing. Mound 2 and its grassed-over quarries saw some activity over the next 900 years. A hearth (F192) was lit in the north-east part of the quarry ditch, using the shelter of the earthwork. Similar activity was observed at Mounds 6 and 14 (see Chapter 4, p. 94 and Chapter 5, p. 113, respectively), both dated to the twelfth century by sherds of

cooking pot (see Chapter 12, p. 461). Also using the grassed-over quarry ditch, but more puzzling in function, were four features situated symmetrically around the mound and termed the 'corner pits' (Figure 82).

The 'corner-pits' (F269, F271, F272 and F308, see FR 4/712 and Figure 82, Table 19) were observed as shallow 'smudges' on the base of the quarry ditch, and were first recorded and identified as parts of the quarry ditch (F153) or as Prehistoric features. They were subsequently recognized by Madeleine Hummler, during her phasing of the sequence under Mound 2, as potentially non-Prehistoric. All the excavators concerned had found these pits hard to define, and their stratigraphic position with respect to the mound, the quarry ditch and the buried soil was often reported as equivocal. Feature 269 appeared to become a tunnel, running beneath buried soil and Mound 2. None of the pits was seen until the quarry ditch (F153) had been excavated; all were very disturbed by rabbits, and bones of rabbits were also recovered. The location of the four pits (see Figure 73) was suggestive of some function connected with the mound, either before or after its construction, and required an explanation.

The position of the pits in plan was symmetrical with respect to Mound 2. They described a rectangle, aligned to the compass points, in which the eastern side is slightly shorter than the western. The dimensions measured on the ground, centre to centre, are:

- NW (F269) to NE (F271) 24.0 m
- SW (F308) to SE (F272) 24.0 m
- NW (F269) to SW (F308) 14.0 m
- NE (F271) to SE (F272) 12.0 m

This symmetry, and the regularity of the spacing, provoked an (erroneous) hypothesis that they may have functioned as a set of marker pits for the mound (Carver 1998a: 121).

The fills of the pits were not typically Prehistoric (see Chapter 11), but resembled the buried soils or the mixture already deposited in the quarry ditch. In F269 and F308 stones tended to concentrate near the base, as though the pit had been used to drain liquids. The depth reached by two of the pits was over a metre from Horizon 4, which is deeper than most local Prehistoric features and perhaps implies that they had been cut from within the quarry ditch.

The assemblages of the pits were highly varied and fragmentary, and the pottery mostly unidentifiable. This suggests a mostly secondary assemblage. Pit F271 contained a Roman sherd (34312). Pit F269 contained five Medieval sherds (Finds 42070, 42172 and 42131–3) dated to the twelfth century, as well as four identifiable Bronze Age fabrics. The presence of Bronze Age pottery implies that the pits were dug through the burial soil.

##### INTERPRETATION

It would be possible to theorize that these pits were dug before Mound 2, and were used to lay it out, or were even employed for ritual purposes, such as the pouring of libations. However the Medieval pottery from F269 places this pit, and by association the other three, in the twelfth century or later. The pits were probably dug before the end of the Middle Ages, as F269, at

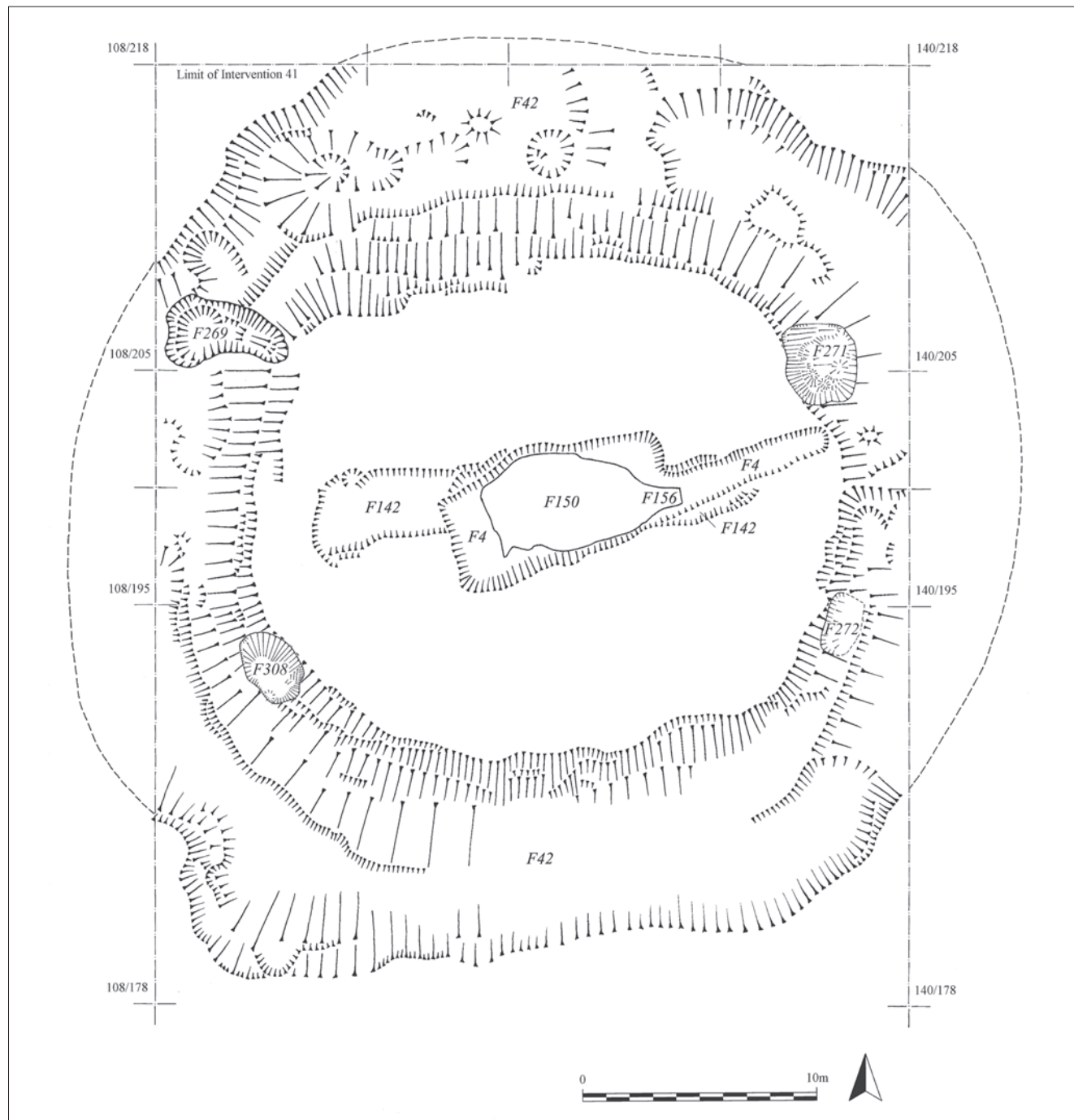
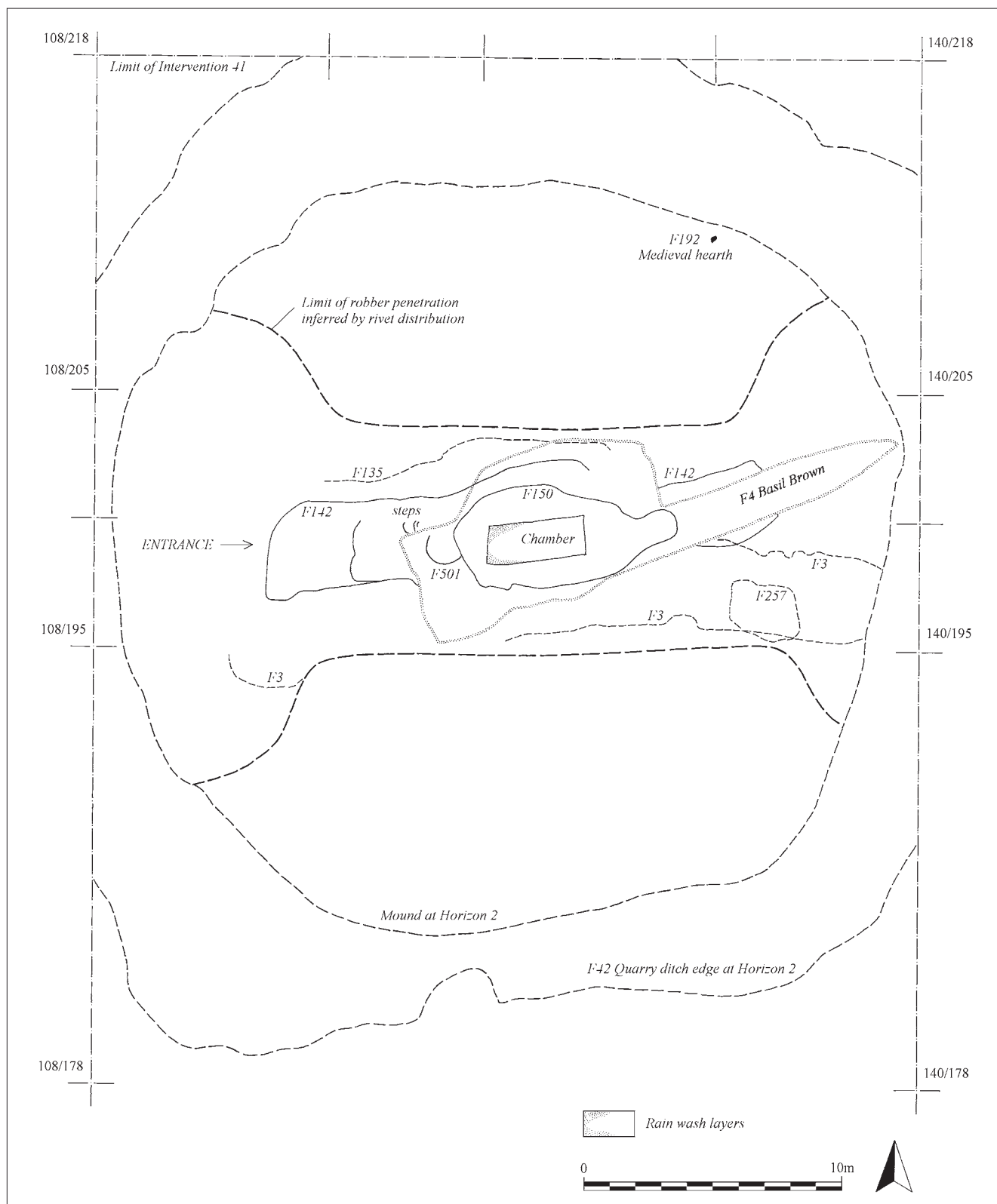


Figure 82 Plan of the Mound 2 quarry ditch, showing corner pits and robber trenches.

Table 19

**Mound 2: attributes of the 'corner pits'**

Attribute	F269 (NW)	F271 (NE)	F308 (SW)	F272 (SE)
Local Horizon 4 (mAOD)	33.40	33.50	33.50	33.40
Base (mAOD)	31.92	32.63	32.48	32.76
Notional depth (m) from OGS	1.48	0.87	1.02	0.64
Fill: context no.	1262	1642	1679	1643
Fill: colour	5YR 3/3	5YR 4/6	5YR 3/4	5YR 3/3
Fill: gravel content	11%	11%	20%	3%
Fill of adjacent quarry: colour	5YR 3/4	10YR 2/2	5YR 3/3	5YR 3/3
Buried soil (Context 1455): colour	5YR 3/4	5YR 3/4	5YR 3/4	5YR 3/4
Pottery: no. of sherds	123	13	19	4
Identified non-prehistoric pottery sherds	5 twelfth-century	1 Roman		



**Figure 83** The robbing and excavation campaigns in Mound 2. The earliest would appear to have been responsible for the oval pit (F150), and must have originated as a vertical shaft cut from the summit of the extant mound. The second intervention comprised an east–west trench, the edges of which were contacted at different heights (F3, F135 and F142). To the same episode is assigned the pit containing rivets (F257). The limits of this intervention probably extended to a much wider area, as indicated by the pattern of disturbed rivets. Rain-washed silt entered the rifled chamber on its west side, forming the ‘pro-w-shaped’ shoulders later found by Brown, whose trench was cut north-east to south-west in 1938 (F4).

least, was sealed by the pale sand thought to result from late Medieval ploughing (see Chapter 10, p. 375). This dating also makes better sense of the depth and fills of the pits, as they would be dug from the sides of the quarry ditch, which at that time were empty apart from a layer of turf covering the primary deposit of mixed soil (see Figure 81 above). A better explanation for the position of the pits at the edge of the mound is that they were used by warreners. Each pit would represent the point at which ferrets were introduced to the burrows that by then laced the mound, so as to 'farm' the warren. This explains the tunnelling observed in F269, the presence of Prehistoric pottery (from the disturbed buried soil) and the disturbance by numerous rabbits. The symmetry, if intentional, might imply a measure of organization, or even a division of assets, among rabbit farmers.

#### PLOUGHING

The hearths and the warreners's pits all lay beneath the re-filling of the quarry pits with pale sand that is attributed to the reduction of the mound by ploughing (see above and Chapter 10, p. 375). Elsewhere this had occurred before 1601, by which time the ditches of Mounds 7 and 14 were crossed by Track 1 (see Chapter 12, p. 461).

#### THE FIRST ROBBING OPERATION (F150)

By virtue of its shape and size, the oval pit in the centre of the Mound 2 platform (F150; see Figures 82 and 83) was interpreted not as a cut for the burial chamber, but as the bottom of a shaft driven vertically downwards through Mound 2 to rob the grave goods. Its limits against the subsoil were well defined, but the exact size and shape of the original pit were unknown, as it had been revisited and enlarged at least twice, in c. 1860 (see below) and in 1938. It is likely to have been a large, irregular pit, down and up which diggers scrambled with the aid of ladders. It was aimed at the centre of the mound, where the burial deposit was anticipated (correctly) to lie, and there are reasons for thinking that the robbers were very successful, and obtained most of the grave goods (see Chapter 12, p. 468).

There was no direct evidence for the date of this pit, except that it came before the second excavation in c. 1860. Some 71 fragments of rivets were found in the primary quarry ditch, F153 (Table 18), which implies that a robbing had already occurred during or before the first ploughing had filled the quarry ditches with pale sand. However, as can be seen in Figure 80, this is not straightforward data, as the majority of rivets cluster to the east and west, where the later robber trench is thought to have run. It is not excluded, therefore, that these rivets were in fact distributed by the disturbance due to a second robbing or a second ploughing. Robbing Mound 2 with a central shaft would be a more practical proposition once the plough had reduced it in height. This is the sequence implied for Mound 1, where a first ploughing had distorted the shape of the mound and caused the robbers to miss their target (see below).

#### THE SECOND ROBBING OPERATION (F135/F142)

A large trench, at least 3 × 20 m, is supposed to have been cut at about buried soil level through Mound 2, in a west–east direction (Figure 83; Plate 37). This trench was rarely seen directly, but its presence and locus has been inferred from a number of convergent factors. There was no depression on the

surface of the mound before excavation, but a radar survey during the evaluation phase had picked up a linear anomaly running east–west (see Chapter 2, p. 20). At Horizon 2 the edges of a linear feature were seen and designated F135. Its fill was a very dark brown or black, suggesting back-filled turf, and resembling the fill of tree pit (F139), which derived from a tree that had stood on the Mound 2 summit at site grid 132/196. Elsewhere, the back-filling of the robber trench was generally the same as the mound through which it had been cut, and interfaces were rarely observed. The line of the trench was principally traced by the distribution of rivets, all of which were clearly re-deposited (see above). At Horizon 3 the robber trench was designated F142. The pit (F257) in Quadrant O (Figure 83) also contained three rivet fragments. Although this pit was first seen at Horizon 4, there was a concentration of rivets at this point from at least Horizon 2, and it is likely that the pit was cut from higher up.

Feature 501 appears to have been a shallow scoop with a post-hole at the bottom (Figure 83). There is some doubt about the stratigraphic position of this feature: it could be Prehistoric or part of the burial chamber, but more probably formed part of the robbing episode. The initial shape was interpreted as a step cut by the robbers, but it proved impossible to distinguish F501 from the Prehistoric gully (F216), the Early Medieval burial chamber and the putative robber trench. An analysis of the relevant fills (Table 20) suggests that the hollow F501 is most likely to be robber-period and is least likely to be Prehistoric, so its identification as a step cut by the robbers is plausible. The subcircular depression at its centre may have held the base of a post.

The nineteenth-century robber trench fill could be followed from the west side down into the burial chamber, which was apparently explored in every part at this time. Numerous rivets and a number of fragments of objects (1–17) were trodden into the base of their trench, which terminated just above the chamber floor.

The splayed distribution of the rivets to east and west implies that ingress and egress took place on both sides, with spoil being scattered over the quarry ditches. That the robbers left their trench open was inferred by a layer of silt that appeared to have washed in during a long (or heavy) process of erosion by rain. Soil washed down their access route on the west side, creating two shoulders of sand in the corners of the ransacked chamber, and forming a V-shape like the prow of a boat (Plate 34).

There was no direct evidence for the date of this expedition, but a study of the documents and maps equates it with the diggings recorded in the *Ipswich Journal* for 24 November 1860 (see Chapter 12, p. 468).

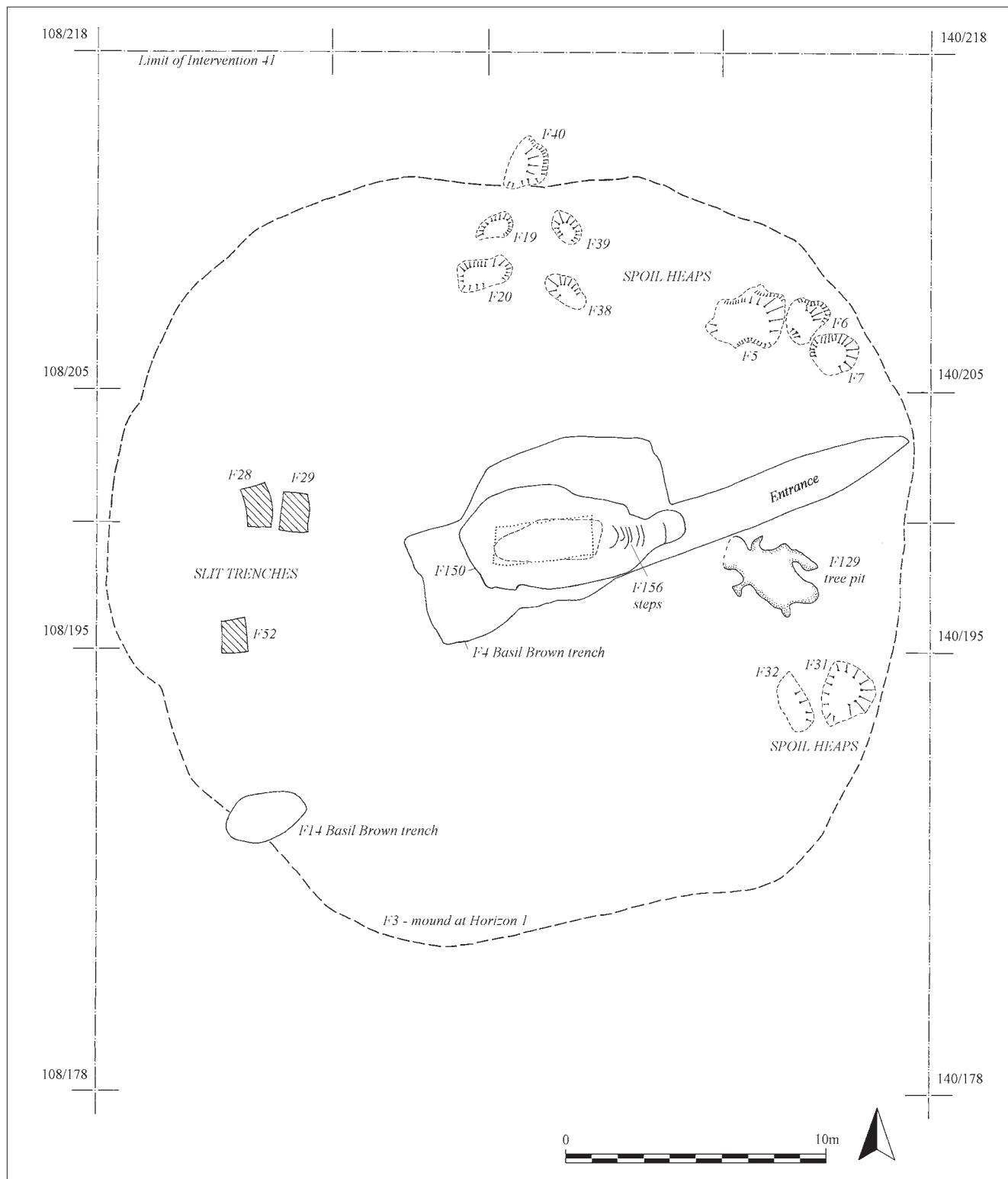
#### TWENTIETH-CENTURY LAND USE

The 1938 excavations (Int. 3) were described by Basil Brown in his diary and were published by Bruce-Mitford (BBD and SHSB I: Ch. 2). The account can now be supplemented by the latest excavations, which revealed the actual line of Brown's trench and explain some of his findings. Basil Brown seems to have followed (rather sensitively and accurately) the base of the pit left by the 1860 expedition, supposing it to be a boat still *in situ* (Figure 84). His excavation recovered sixteen pieces of grave goods and forty-five rivets missed or left by the previous excavators.

During the war years that followed (1939–45) the site of Sutton Hoo was used as a military training area (Figure 84). Slit

**Table 20**  
**Mound 2: fills of certain intrusive features compared**

Feature	Fill context no.	Colour	Description	Interpretation of feature
F501	1923	7.5YR 4/4	silt-sand charcoal	
F216	1576	5YR 3/3	silt-sand charcoal	gully, now thought to be prehistoric or to be a ditch for seating the keel of the ship
F214	1572	10YR 5/8	silt-sand clean	slot cut into buried soil, perhaps to support the ship
F215	1573	10YR 5/6	silt-sand clean	slot cut into buried soil, perhaps to support the ship
F143	1394	10YR 6/8	sand clean	lowest make-up of mound; Context 1394 is in Quadrant M
F151	1527	7.5YR 4/4	silt-sand clean	oval dishing of robbers' excavation of ship impression



**Figure 84** Mound 2 in the twentieth century. A tree grew on the east side. The various heaps are probably owed to Brown's 1938 excavation. Three slit trenches were cut on the west side of the mound during the site's period of service as a military training ground.



**Figure 85** Mound 2: the day of burial (Victor Ambrus).

trenches were defined on Mound 2, along with cartridge cases and ammunition clips from .303 rifle ammunition (or blanks) and 2-inch mortar bombs (see Chapter 12, p. 470). When the mound was dissected in 1987 a number of spoil heaps from earlier excavations were defined, as well as a pit with a twentieth-century bucket (F14; Figure 84). This may have been a trial excavation of the type favoured by Basil Brown (see Chapter 4, p. 67).

### **Model**

#### *Seventh century*

The part of the landscape that was chosen for the burial was a former Prehistoric enclosure that was still visible in Anglo-Saxon times. The enclosure had previously been ploughed in a WNW–ESE direction, and was latterly bounded by a path worn into the surface to the north, which endured up to the time of the Mound 2 burial.

The builders of Mound 2 began by stripping the turf from a designated area (the future site of the mound) and stacking the turfs outside it. About 400 mm of topsoil then remained under their feet.

A rectangular pit about 1.5 × 3.8 × 2 m deep was excavated in the presumed centre of the platform. The upcast of buried soil and then subsoil was thrown up into a large heap, mainly on the north side of the platform, and covered the path.

A subterranean chamber was excavated and lined with timber planks. In our hypothetical reconstruction (Figure 79), the north and south sides consisted of vertical overlapping

planks held in position by horizontal joists jammed back by struts running across the chamber and probably secured with wedges. The shorter east and west walls were formed from horizontal boards. The chamber was presumably furnished by clambering down the shoring, or with the assistance of a beam set across the top of the chamber at ground level.

A tub, a cauldron with a chain, and an iron-bound bucket were placed at the east end. At the west end was the body of a man laid east–west (feet to the east, no doubt), with a sword and shield. Near his feet were five knives, a silver-mounted box, a blue glass jar, drinking-horns, textiles and other objects of bronze and iron.

A ship up to 24 m long was then dragged or rolled onto the mound platform and over the chamber, which was protected by a beam (Figure 85). The ship was probably held upright by wooden props.

A quarry ditch about 10.25 m wide was excavated to provide spoil for the mound, which was then constructed over the ship. Turf, buried soils and subsoil were loaded onto the ship and mound platform. Unwanted mixed soil was trodden in or returned to the quarry ditch once the mound had reached a height of between 2.7 m and 3.8 m. Stones rolled down the mound and onto the base of the ditch, marking the final surface of the mound. The mound may have been finished by capping it with turf reserved from the initial stripping of the mound platform.

With the weight of the mound, the ship broke her back amidships. Sets of strakes with their clenched nails eventually broke away and fell into the chamber.



### *Seventh to sixteenth centuries*

Turf grew over the deposits at the base of the quarry ditch. A hearth was used in the north-east part of the ditch. Warreners farmed the mound, digging four access pits for rabbits and ferrets.

### *Sixteenth century*

Before 1601 a major robbing operation was carried out. Robbing took the form of a pit driven down through the centre of the mound. The chamber was found and looted. The centre of the decomposed buried ship was cut through, disturbing hundreds of rivets, most of which were left in the pit. The mound was subsequently spread and reduced in height by ploughing.

### *Nineteenth century*

In 1860 a trench at least 3 × 20 m was driven right through the mound from west to east. The clench nails from the rotted ship were sought out, scattered and dispersed into spoil heaps, east and west. A set of steps was cut down into the chamber on its west side and the chamber was thoroughly explored, but little was found of value. The prevailing materials were the rusted nodules of the ship-rivets, already rejected by the previous explorers. A few boxes of these were gathered up and sent to the local blacksmith, as some consolation for a disappointing enterprise. The robber trench was left open and received rain-wash, especially down the steps at the point of entry. Two cones of erosion formed at the bottom of the steps. The trench was filled in and the mound was ploughed again.

### *Twentieth century*

In 1938 Basil Brown cut a trench ENE–WSW through the mound. He entered the already excavated chamber from the east, and mistook the cones of erosion left by the robbers at its west end for the prow of a boat. The other end of his supposed boat was vertical, being broadly coincident with the east wall of the chamber. His excavation was later filled in, with a fill incorporating a pair of steel roller skates. His findings were eventually published in 1975 by Rupert Bruce-Mitford (SHSB I).

During the 1939–45 war the mound was used for military training. Slit trenches were dug on the west side, facing Top Hat wood, and (blank) ammunition cases deposited in them. Mound 2 (west side) probably served as the site of an exercise in ‘platoon in the defence’, confronting a hypothetical enemy coming from the River Deben and out of Top Hat Wood.

### **The Mound 1 ship-burial revisited (FR 2/7.1)**

Written by Martin Carver from published material in SHSB I, II and III (with additional guidance, advice, information and research from Rupert Bruce-Mitford, Katherine East, Angela Evans and Charles Phillips, which is gratefully acknowledged).

### **Summary**

Mound 1 was excavated between May and June 1939 by a team led by Basil Brown, who exposed the length of the ship with the burial chamber at its centre, and between July and September 1939 by a team led by Charles Phillips, who excavated the burial chamber and the ship. The ship was recorded in September 1939 by a team from the Science Museum led by Lt. Com. Hutchison. The site was re-opened and excavated to subsoil between 1965 and 1971 by a British Museum team led by Rupert

Bruce-Mitford. The records and finds were studied between 1943 and 1983 in the British Museum, the results being issued in three volumes entitled *The Sutton Hoo Ship-burial* (here SHSB I, II and III). This remains the authority for the Mound 1 burial. The purpose of this contribution is to offer the reader a summary of the findings in Mound 1 to place alongside accounts of other mound-burials in this book, and to discuss new ideas for the form of the burial, inspired by the experience of the 1983–92 campaign. Some additional information has been drawn from an unpublished memoir by Charles Phillips (FR 2/3.3) and his autobiography (Phillips 1987). A more comprehensive account of the arguments presented in this section will be found in FR 2/7.1.

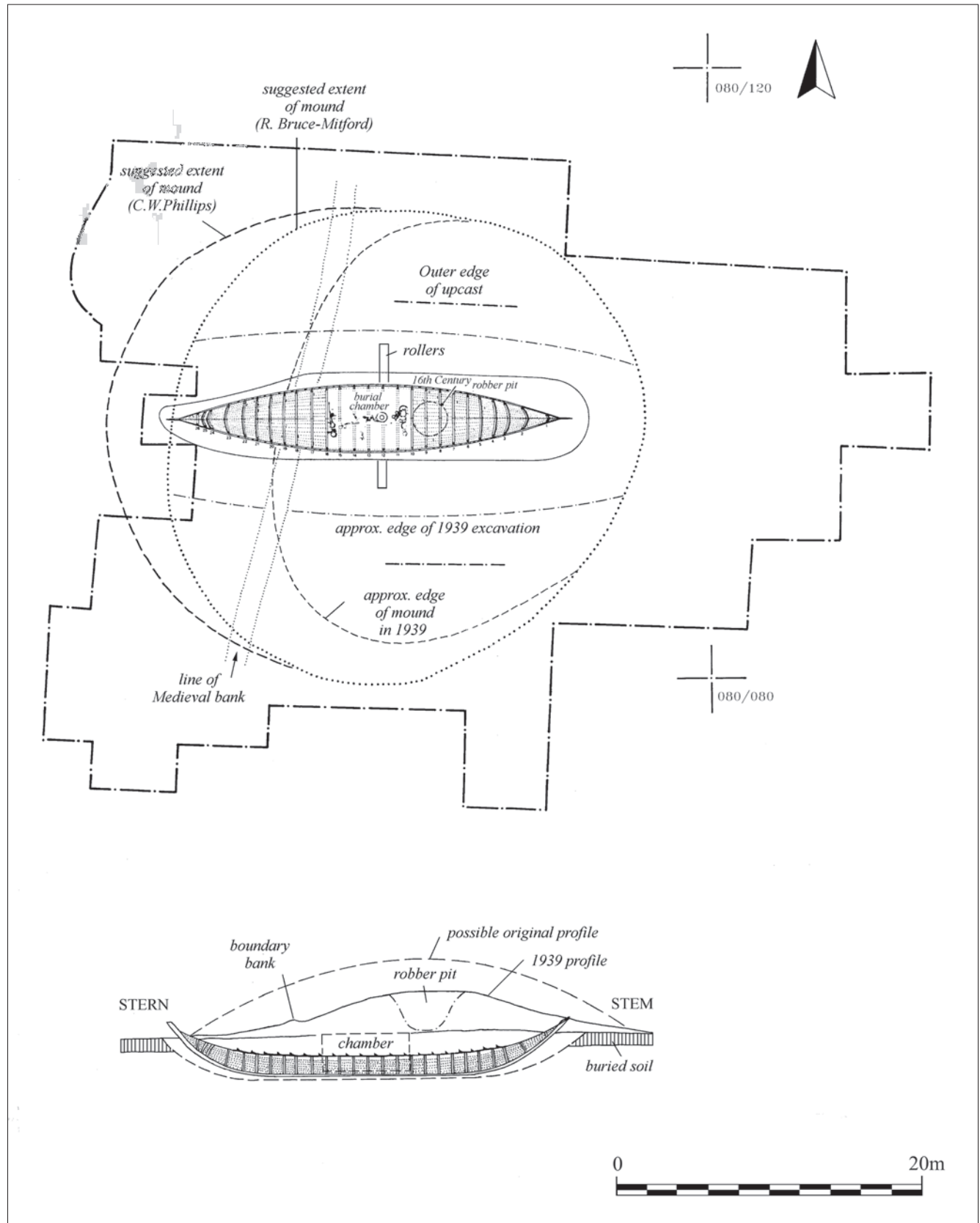
The model published in SHSB I–III is not radically altered. In the early seventh century a ship 27 m long was placed in a trench and a chamber was erected amidships. This chamber had end walls of horizontal planking laid edge-on, and had a plank floor and a roof, which was probably ridged.

The layout of the grave goods included weapons and regalia at the west end, feasting equipment at the east end and personal accoutrements in the centre. A body had originally been laid out in the west central area. The bearer of the body is uncertain, and arguments are considered here for a platform, bed, bier, cart or coffin, without definitively resolving the issue. The inside of the chamber was probably adorned with textiles.

A mound with an initial diameter of about 36 m was piled up over the ship and chamber. It was ploughed down in the later Middle Ages, and the west end was largely ploughed away before 1601. In the sixteenth century a robber pit was dug into the then centre of the mound without touching the chamber area. Mound 1 may have been included in the 1860 excavation campaign.

### **Description of the investigations**

Although Mound 1 was subjected to some preliminary probing in 1938 (see Chapter 1, p. 3), its excavation proper began on 8 May 1939, when Basil Brown and two assistants (John Jacobs and William Spooner) drove a trench 6 ft (1.83 m) wide into its east side. The trench eventually passed right through the mound, revealing the upper parts of a ship and a central burial chamber. Brown’s method was to follow a predicted level, namely the old ground surface (see Chapter 4, p. 67). He was confident that he could recognize this surface and guide others to it: ‘the workmen were particularly instructed to keep to the exact ground surface and do no levelling. If there was a slight rise or ridge it was left; if a slight depression it was carefully cleared out’ (SHSB I: 158). However, this method was not to be effective in Mound 1. On 11 May Jacobs found a ship-rivet and Brown realized (following his experience in Mound 2) that there might be a buried ship *in situ*. Thereafter he followed the inner skin of the buried ship, going from rivet to rivet. As the trench neared the centre of the mound it became deeper, and on 30 May it collapsed. It was subsequently widened to 40 ft (12.2 m) – Evans 1986: 19; Figure 86. In digging his trench and cutting back, Brown and his assistants used shovels (e.g. SHSB I: fig. 310); but in defining the rivets, Brown used small tools and his hands, and was guided by the bright orange patches in the sand which warned him where a rivet lay hidden. He left ‘plenty of surrounding sand for safety’ over the rivets once they were located (SHSB I: 161–2).



**Figure 86** Mound 1: a new plan of the 1939 and later excavations, showing the position of the ship, ship trench, chamber and robber pit (Elizabeth Hooper, sources: Phillips 1940; SHSB I: figs 96, 218, 224, 225 and 230).

When Charles Phillips took over the excavation (on 8 July), he appears to have taken over Brown's methods: he reported that the ideal tool for defining the burial chamber was found to be a stout coal shovel at the end of a long ash handle (Phillips 1987: 73). This presumably entailed the *planum* method of lowering by spits, but using the action of a shovel-scraper. Garden trowels (SHSB I: 110), pointing trowels (SHSB II: fig. 192), soft brushes, small brushes of the pastry type, knives, penknives, bellows and the dustpan and brush were all used (SHSB I: fig. 132; FR 2/3.3). W. F. Grimes reported using a curved packer's needle and a glue brush. Several objects and complexes were lifted en bloc. Moss (from Top Hat Wood) was used for packing objects in tobacco tins.

Phillips described the strata he encountered as 'all sand. Wood traces were manifested as thin layers of discoloured sand, associated with bands of more or less the same material leached white by the action of the acids liberated by the decay of the wood.' But, he adds, 'none but the vaguest ideas could be formed of the size and shape of the wood.' He reported that 'the whole of the ship and the burial deposit had always been wet' (Phillips 1940: 9–10). 'Bracken roots were found to have followed the timber lines' (Phillips 1956: 163) and had penetrated right into the chamber, where they could be mistaken for wood or other organic traces (SHSB I: 214). Phillips remarked that it 'appeared that the bottom of the boat may have been strewn with bracken' (1940: 13). These are, however, likely to have been bracken rhizomes penetrating the interface between the ship and the sand many centuries after the burial. Bracken roots were also found deep in the Mound 2 chamber.

The excavation was open to the sky and subject to wind and

weather. Phillips reported that 'the firmness of the unmoved sand was remarkable and nothing but the heaviest rain, of which there was plenty in the latter part of July, made it run in' (SHSB I: 164). W. F. Grimes remarked (in a television broadcast) that the burial deposit was robust, but that the 'amount of gold leaf blowing about was frightful' (Carver 1998a: 17). Photographs of the excavation in progress, and later reminiscences for the film camera, can give a misleading impression of nonchalance, which invites readers to suspect that some things may have gone unnoticed. However, Phillips and his team (W. F. Grimes, Stuart Piggott and Margaret Guido) were among the most experienced excavators of their day, and it would be wrong to assume that they might have missed or misinterpreted important anomalies, such as a body, cremated bone or lines of timber.

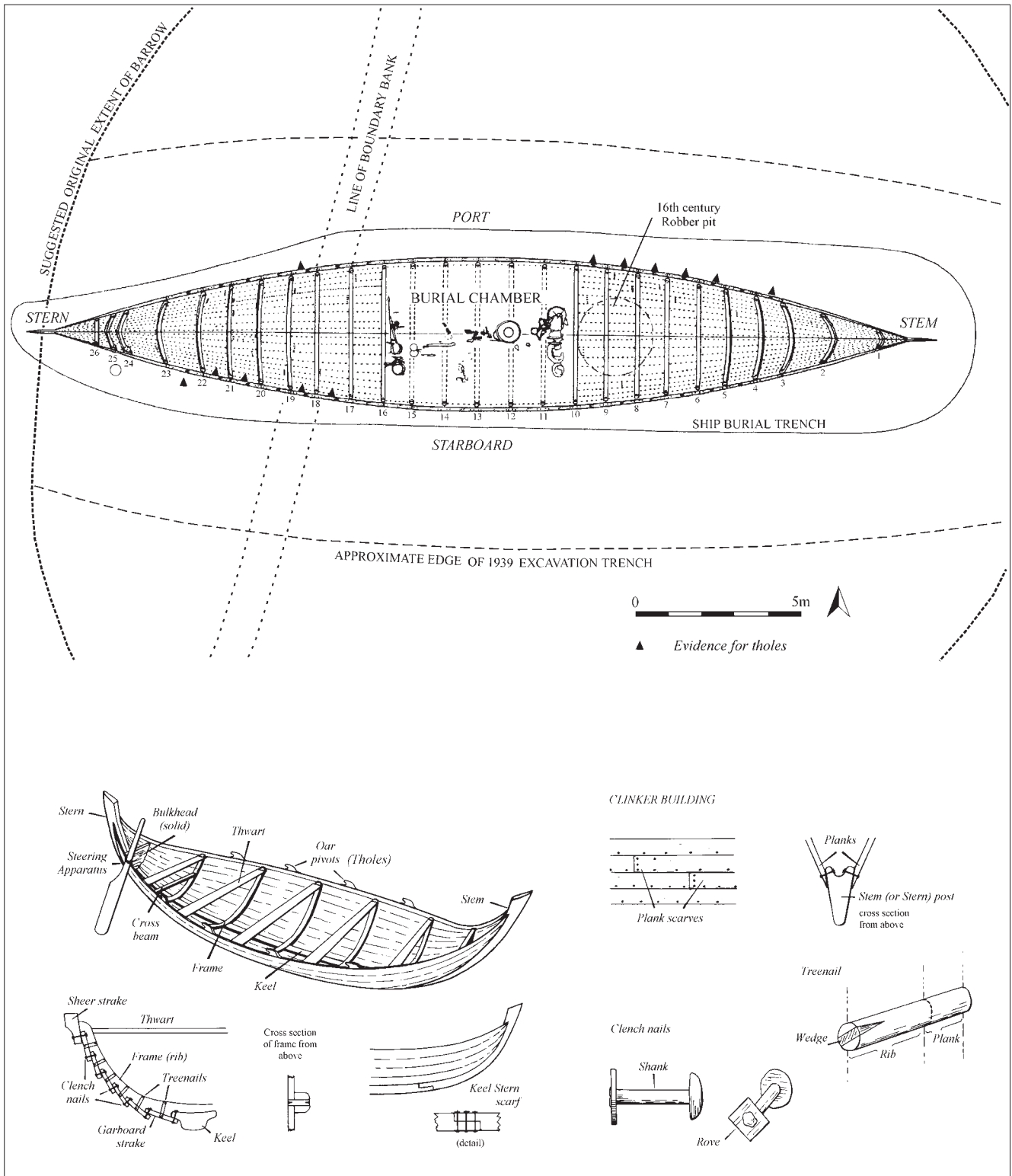
### ***A history of the Mound 1 burial, argued from the records***

#### *Before Mound 1*

The buried soil beneath Mound 1 (SHSB I: 48–65) was c.400 mm thick, (Plate 39; Figure 86) and the last stratigraphic episode before the deposition of the mound was a previously cultivated soil, with no turf line. Rather than suggesting that the mound had been constructed on a ploughsoil, Geoffrey Dimbleby proposed that turf formed on an abandoned plough-land had first been stripped off, and the mound then constructed on the bared, truncated surface (SHSB I: 154n.; and see Chapter 10, p. 374 for similar conclusions for Mounds 2, 5 and 6). Thus the stripped turf was presumably stacked apart for use in an eventual mound. A trench was then cut into the surface, to take the ship (Figure 86).



**Plate 39** General section through Mound 1 (photograph: P. Ashbee).



**Figure 87** The ship, showing the numbered strakes and ribs and known position of tholes (Elizabeth Hooper, after SHSB I: fig. 325). Below: a picture-glossary of the parts of a clinker-built ship.

### *The ship trench*

This trench was 80 ft long, 20 ft wide and 10 ft deep (24.40 × 6.10 × 3.05 m; SHSB I: fig. 230). A yellow sand upcast attributed to the digging of this trench was observed on the surface of the buried soil. Some of this material would have been used to back-fill the ship trench (see below), but there was still a pronounced layer (SHSB I: 320). Phillips reported that 'the layer of sand from the digging of the [ship] trench underlay the barrow on either side' (Phillips 1940: 12). It was traceable for almost the full length of the ship on both sides of the trench, and had an average thickness of 2–4 in. (50–100 mm). The sand is also described as being in 'piles': the north pile being 15 ft (4.5 m), and the south pile 22 ft 6 in. (6.9 m), clear of the ship trench (SHSB I: 166). These may represent the sites of the original heaps before they were spread by back-filling the ship trench. Although a layer of fresh sand was trodden in all the way round the trench, the main spoil heaps from the excavation of the trench were initially 15–22 ft (4–7 m) back from the trench edge, allowing the timber rollers, and later visitors, to pass unimpeded on either side of the trench.

### *The form of the ship*

The lines of the ship were marked by the positions of rivets and other iron fastenings, and by the darkening or hardening of the sand, which indicated the position of planks, ribs and tholes (wooden rowlocks) – Figure 86. The form of the ship has been reconstructed by Angela Evans from the records made during the 1939 excavations and a survey of what remained of the ship in 1965–71 (SHSB I: ch. v; Figure 87; see also FR 2/712.1). The hull was 89 ft (27.15 m) long, and 15 ft (4.5 m) wide and 4 ft 6 in. (1.35 m) deep amidships. There were nine strakes each side of a keel, held together with upwards of 2000 rivets or clenched nails spaced at intervals of 6 in. (150 mm). The width of the planks varied from 10.5 in. (262 mm) amidships to 2.5 in. (62 mm), or less, where the planks entered the stem or stern posts. Towards the ends of the ship, the rivets show an increasingly acute angle between rove and shank, reflecting a change of angle between the flange on the stem post and the approaching end of the strake (SHSB I: 390). The upper strakes lay outside the lower strakes, and were joined by rivets just under 2 in. (50 mm) long, implying that the planks were 1 in. (25 mm) thick. There was no direct evidence for caulking or luting, but finds of Stockholm tar (SHSB I: Inv. 250 and 251) suggested the use of this material, with or without animal hair, for plugging holes, as in the Graveney boat (SHSB I: 373). Each strake was formed of five to six planks, fastened end to end with a scarf joint using three 1 in. (25 mm) rivets. There was evidence for 26 ribs. Where measurable in the body of the ship, the ribs were c.5 in. (127 mm) across in section (SHSB I: 367). The ribs were secured to the hull with a single, substantial rivet (rib-bolt), with an angled rove and a shank up to 7 in. (175 mm) long, through the gunwale strake (Strake 9) – SHSB I: 371, 367. The ship had wooden tholes (blocks against which to pull an oar) fastened to the gunwale by iron thole pins. Eleven tholes were observed (four on the starboard gunwale and seven on the port). Symmetry suggests at least ten pairs, with fourteen likely, in seven pairs either side of the burial chamber (SHSB I: 418, fig. 318). If the burial chamber area also originally had tholes (which were removed, as suggested in SHSB I: 413), then the total number of oars was twenty pairs or forty oars.

The hull had been repaired in at least two places (SHSB I: 412). Between Strakes 5 and 6, on the port side, there had been a reinforcement of extra rivets that ran for 18 ft (5.5 m) between Ribs 15 and 21. This implies a collision, which had weakened the hull at this point. There was also a patch, indicated by two rows of five rivets on the starboard side at Strake 1 (the garboard strake), between Ribs 20 and 21. The additional rivets are 2 in. (50 mm) in length, implying an external patch of wood 1 in. (25 mm) thick riveted to an existing strake.

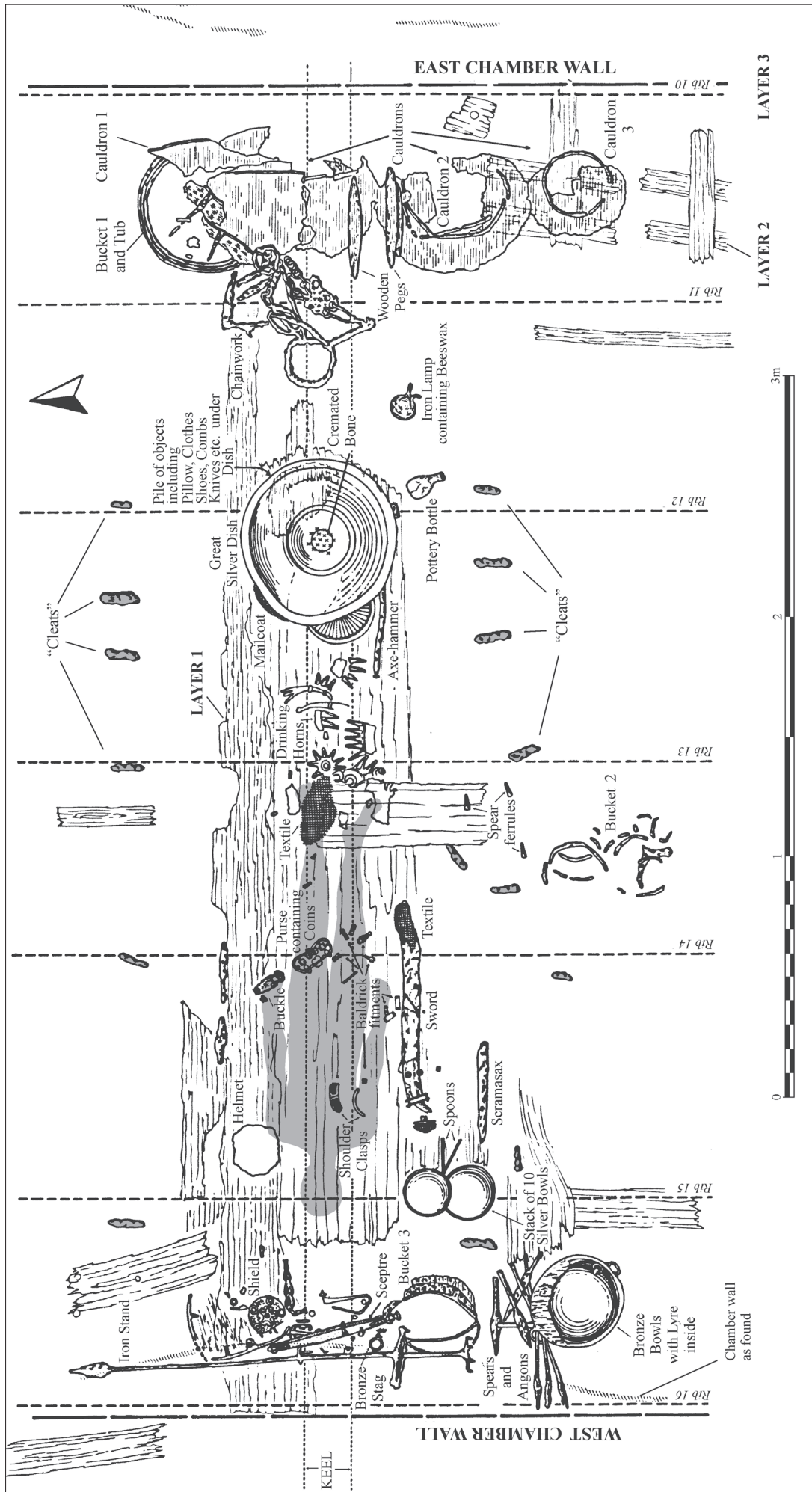
A foundation for a steering gear was implied by the close spacing of Ribs 24 and 25. Rib 24 carried a cluster of rivets on the starboard side, which probably indicated that a wooden boss, or leather or rope knot, had been fastened to the outside of the hull in order to carry the steering oar (SHSB I: 407–8). This also implied that the west end was the stern of the ship.

The Sutton Hoo Mound 1 ship (SH1) produced no direct evidence of a mast, or of fittings for shrouds or stays (SHSB I: 420–4), but Arne-Emil Christensen nevertheless called it the oldest ship of Scandinavian type sufficiently developed to carry rigging (SHSB I: 422). Angela Evans had no doubt that the ship was capable of sailing, and belonged to the North Sea tradition. She calls it 'the first northern ship to have a hull sufficiently developed for sailing and a fixed steering position. It shows the established Germanic or Scandinavian type of vessel in Britain, unmodified by Romano-British or other external influences, exemplifying again the tradition of the light elastic shell with widely-spaced ribs first seen at Hjortspring and maintained through Nydam to Kvalsund and the warships of the Viking period' (SHSB I: 434–5).

Trials by the Giffords have increased confidence that Sutton Hoo 1 could sail (Gifford and Gifford 1996). Their replica, *Sae Wulfing*, was half size, but its performance allowed the inference that the original ship could make 10 knots under sail over an arc of 200°, giving a journey time to Canterbury of half a day (cf. Carver 1990). As with the Oseberg replica (Carver 1995a), the problem lies less in coping with strong winds, than in tacking, as the Giffords reported: 'Double reefed sails (half full sail area) make the boat very stable and safe in a fresh breeze, but it could not make to windward' (Gifford and Gifford 1996).

### EMPLACEMENT OF THE SHIP

The ship was placed in its east–west trench with its prow pointing away from the river or, more indirectly, towards the sea (SHSB I: 154; Figures 86 and 87). The bottom of the ship, amidships, was between 8 ft 6 in. (2.57 m) and 10 ft (3.05 m) below the uneven seventh-century ground surface, as defined by the layer of fresh sand interpreted as upcast from the trench. This is equivalent to 97–98 ft 6 in. (c.30 m) AOD (SHSB I: 154). The ship fitted the trench closely at either end, without a ramp (SHSB I: 169, 327; Phillips 1987: 77). Phillips suggested that the ship could have been lowered into the trench using rollers (Phillips 1940: 12). If so, the rollers would have to be at least 22 ft (7 m) long, 16 ft (5 m) spanning the ship trench and 3 ft (1 m) either side on the old ground surface (SHSB I: 169). There would then be 12 ft (3.7 m) of space between the ends of the rollers and the nearest spoil heaps (see above). The floor of the trench was uneven: the ship had a list to starboard of between 5–10° to the horizontal, and its back had eventually broken in at least one place (SHSB I: 169).



**Figure 88** The Mound 1 burial chamber: a summary of published data according to Phillips 1940 and Bruce-Mitford 1975 (Elizabeth Hooper, from SHSB I: figs 111 and 112, includes areas A-C, I-IV).



**Plate 40** Mound 1, in the chamber. Left to right: Charles Phillips, W. F. Grimes and Stuart Piggott (Photograph: O. G. S. Crawford, Institute of Archaeology, Oxford).

### *The form of the chamber*

The direct evidence for a chamber amidships consisted of lines of wood and a few pieces of iron (Figure 88). Indirect evidence was provided by the intimation that some of the grave goods had become brittle, and that the ship's planking had sagged in places, as though inside an open room. According to Phillips, the remains of a burial chamber 'could easily be seen' (Phillips 1940: 12; Plate 40). In his evidence to the inquest, Piggott said: 'On removing the sand with the normal caution of archaeological excavation, we found that a mass of decayed wood, clearly not belonging to the actual structure of the ship, lay in such a way as to form a low irregular heap along the centre line of the vessel, and [on Scandinavian analogy] we interpreted this as the remains of a collapsed timber chamber erected in the centre part of the ship for the purpose of the funeral – an interpretation later confirmed by other evidence found earlier in the excavation. It was therefore evident that the burial deposit would lie below this tumbled-in planking' (SHSB I: 723). In correspondence, Piggott described the large amount of decayed wood as lying over the burial deposit 'like a blanket' (SHSB I: 180).

### THE WALLS

The locations of the east and west walls are relatively uncontroversial. They were seen in plan as thin dark lines, which were sufficiently continuous to imply horizontal

planking, viewed edge-on (SHSB I: 171; Figure 88). By contrast, vertical planks seen end-on in the Mounds 2 and 14 chambers showed as discontinuous dark slots in the horizontal plane (see pp. 110 and 158). A horizontal plank wall would seem to imply uprights, but no signs of any were observed; alternatively they could be supported by, or tenoned into, the ribs of the ship (Figure 89).

Horizontal planking also accounts more satisfactorily for the curvilinear locus of the decayed wall. In the west wall, only the two lowest planks were observed, and these had been pushed in an easterly direction into the burial chamber. When drawn by Piggott on his 'plan 3', the west wall had bulged inwards [eastward] 'a minimum distance of about 14 [in., or 350 mm]' (SHSB I: 485); according to Phillips it was 9 in. (225 mm; SHSB I: 178). Bruce-Mitford (SHSB I: fig. 112) opts for 12 in. (305 mm). The east and west walls seem to have stood near Ribs 16 and 10, respectively (SHSB I: 485), giving a chamber about 18 ft 3 in. (5.57 m) long. The continuity of the planking argues against a door in the east or west wall (FR2/713.2), so that the chamber would have been furnished by way of the roof space, and before the roof planking was laid in position (see below).

### FLOOR AND ROOF

The pieces of timber planking recorded in the chamber (summarized on the plan Figure 88) were very fragmentary, but

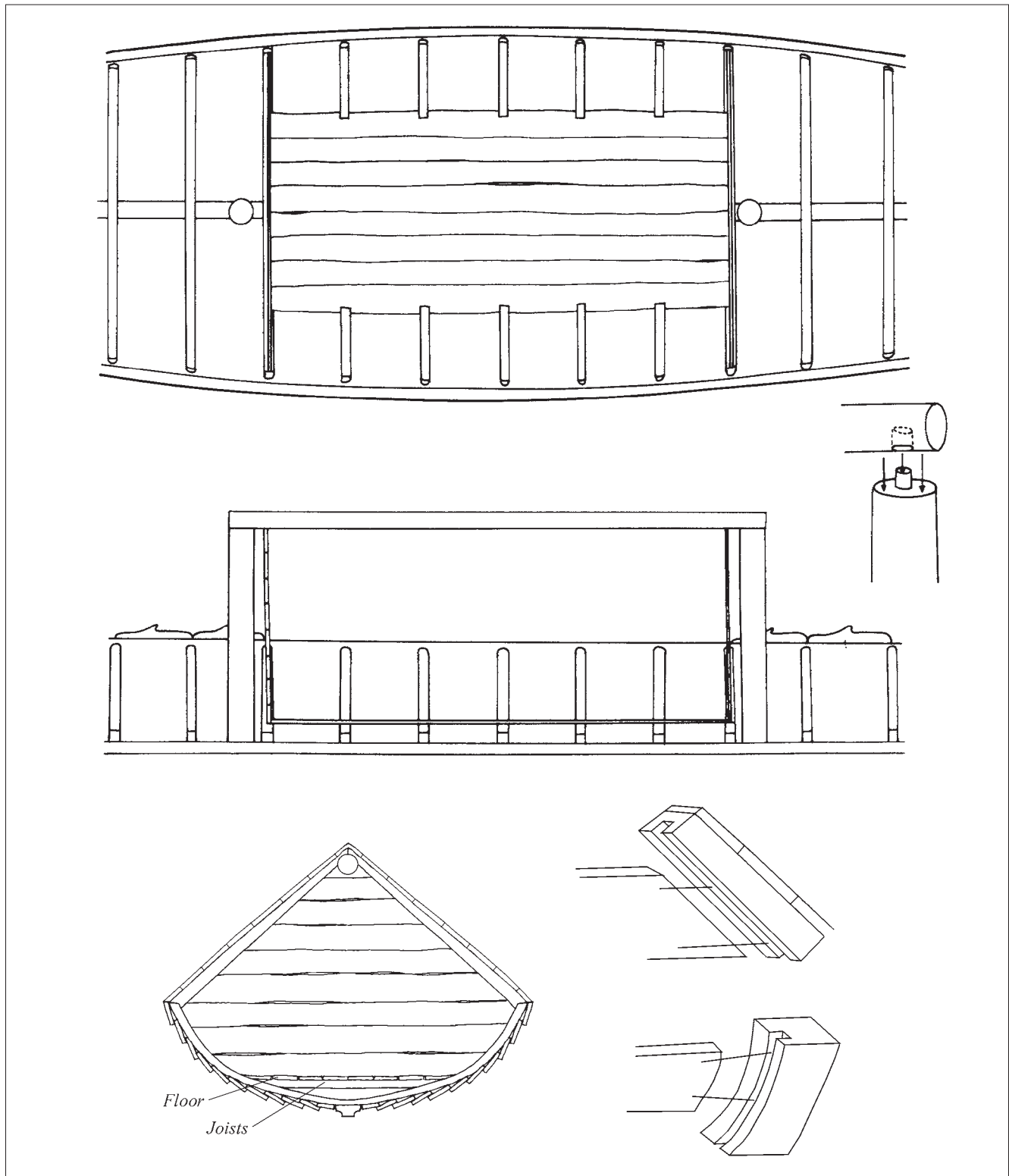


Figure 89 Reconstructions of the Mound 1 chamber.

at least three layers were distinguished. Layer 1, with the grain along the ship, east–west, ran from the west end to the chain-work of the cauldron, and was underneath all objects. Layer 2, with the grain north–south, across the ship, consisted of seven lines of planking seen at the west, centre and east. Layer 3, with the grain running east–west, along the ship, consists of a plank near the silver bowls and two planks at the east end, all overlying Layer 2. All these planks belong to some larger system, so it is reasonable to assume that not all the wood had survived or was recorded. In general, it can be supposed that Layer 1

belonged to a floor, Layer 2 to the rafters (or roof support) and Layer 3 to the planking of a roof.

Although Bruce-Mitford remarks (SHSB I: 179) that the chamber ‘must have had a floor’, he does not offer a reconstruction for it. A floor was later argued by Evans (1986: 32) from the position of Bucket 2, one of whose iron bands lay across the face of Strakes 5 and 6 on the starboard side. This suggested that the bucket had stood on a floor at the level of the top of Strake 4. The presence of a floor is endorsed by a number of observations within the chamber (FR 2/713.3). No trace of the



east and west walls remained at the level of the hull (SHSB I: 485), so they must have ended higher up, presumably at the level of a floor. Common sense suggests that items such as bowls and the pottery bottle would not have been balanced on wooden ribs. The excavation of the shield boss appeared to show that the boss and the two long ornamental grip extensions from the back of the shield 'had sunk into a cavity and had come to rest at a lower depth than the shield-board and its rim. Here is an indication that the shield stood on a floor, with a hollow space beneath.

The remains of planks with an east–west grain (Layer 1) ran beneath the shield and as far as the cauldron chain (Figure 88). If this is the floor itself, it would need to have been supported by joists running north–south across the hull, but joists were not specifically located. Phillips (1940: 13) mentions that 'a few vertically set iron spikes occurred along the bases of walls': these would be in a position to nail the walls to a floor, albeit at an angle to the vertical. Phillips also found an angle-iron, suitable for fastening a floor to the wall, which was described by him as being at the foot of the western wall. It was found early in the excavation sequence, and was thus presumably relatively high up (SHSB I: 176–8; the object has not survived). This in turn suggests that the floor and its load had subsided onto the hull, leaving the walls and the angle-iron at their original level.

Katherine East supposes that the cleats seen on either side of the central grave goods (Figure 88; Table 23) could have been used to join sections of floor, which were then attached by ironwork to the walls (East 1984: 81). However, although not necessarily detectable, a row of joists would be a more conventional and more robust method of suspending a floor over the hull. The ironwork would have then secured the walls to the floor, rather than the floor to the walls. However, it is not impossible that the cleats could have been used to secure the edge of the floor to the hull (see below).

Evidence for the roof comprises an irregular line of discoloured sand, similar to that attributed to the east and west walls, which was observed running along the south side of the excavation, well within the ship. It was found to run downwards and outwards towards the presumed position of the gunwale (SHSB I: 177). The relationship between this line and the gunwale was also seen in section in the block of soil amidships on the south side (SHSB I: fig. 109). Phillips supposed that 'the eaves of the roof rested on the upper part of the gunwale in the same way as in the Oseberg ship' (SHSB I: 176). On the basis of his observations (SHSB I: fig. 113), Phillips assumed a gabled roofline with its footings on, or oversailing, the gunwale and founded (presumably) on the sand of the ship trench. From the angle observed, he estimated its ridge at about 12 ft (3.7 m) above the keel. Phillips also distinguished a reddish wood over a darker wood above the burial (East 1984: 79).

In a photograph of the gunwale at Rib 17 (SHSB I: 405), Angela Evans noted the heads of horizontal iron spikes or rivets, which may have been used to secure the lower ends of rafters to the gunwale. These apparently only occurred in the burial chamber area (SHSB I: 405, fig. 287). The planks of the roof seem to have comprised two layers at right angles to each other (Layers 2 and 3), although this is based on only one place, namely between Ribs 10 and 11 (south side), where the timbers had survived in good condition. Here east–west planks (about 6 in. or 152 mm wide) lie over north–south planks of similar width,



**Plate 41** Mound 1: Grimes holds out the dish (Photograph: O. G. S. Crawford, Institute of Archaeology, Oxford).

and the lower planks overlie Cauldrons 2 and 3 (SHSB I: fig. 112, planks nos 26 and 27). On top of the roof planks, Phillips visualized a layer of turf, implied by the filling that was encountered during the lowering of the sand towards the chamber. He described this as 'rotted turf', perhaps 'a special layer of turf placed over the roof of the chamber' (SHSB I: 171).

The simplest form of roof would be to lay planks across, from gunwale to gunwale (Evans 1986: 32–3). At Högom 2, a double layer of planks was covered by two layers of birch bark, which had been gradually pressed downward through time (Ramqvist 1992: 46). When the soft roof reached the burial deposit it 'had formed itself so closely and flexibly to the contents of the grave that small distinct bulges, indicating the presence of grave contents below, were discernible in the covering wooden material in certain places' (Ramqvist 1992: 36). If used at Sutton Hoo, such a scheme might help to explain why there had been little movement in the chamber. However, the Högom grave was easily spanned by horizontal timbers, being only 2 m across; at Sutton Hoo the timbers would need to be at least 4.5 m long and very substantial, or they would not have had the strength to hold up the weight of the mound above the chamber, even briefly. The brittle state of the helmet, which had broken into iron 'sherds', and the sagging of the hull in the chamber area both imply that the chamber had held up as an open space for several years to allow the iron and wood to decay in the presence of damp air. This would require a more robust kind of roof than horizontal planking.

As Phillips noted, an example of the type of structure that might resist the weight of the mound is provided by the Oseberg burial chamber, which was sited within a Viking ship dating to the early ninth century. In this case the timbers of both chamber and ship were well preserved. The Oseberg chamber was built

Table 21

## Mound 1: summary of assemblage

(For descriptions see SHSB I, II and III; provenance and dating are from SHSB II and III.)

Location	Object no.	Object	Possible provenance	Date AD	References	BM inventory nos	
West wall	1	iron standard				161	
	2	support for 1?				210	
	3	shield, with metal fittings	Sweden?	sixth or seventh century	SHSB II: 1–137 and 299 (board)	94, 206 (ring), 197 (tape)	
	4	sceptre			SHSB II: 375	160 and 205 (stag)	
	5	iron-bound Bucket 3				119	
	6	Hanging-bowl 1	north Britain	sixth or seventh century	SHSB III: 202	110	
	7	nail, supporting 6			SHSB III: 204n.	222	
	8	lyre, in beaver-skin bag				203–4, 208 and 215 (bag)	
	9	Coptic bowl	east Mediterranean	after 550	SHSB III: 743	109	
	10	3 angons				99–100	
	11	5 spearheads and 3 ferrules				101–5, 106–8 and 271 (ferrules)	
Centre (on the coffin lid?)	12	helmet	east Scandinavian?		SHSB II: 205	93, 188 and 199 (cloth)	
	13	gaming pieces				172	
	14	bell				212	
	15	2 silver spoons	Byzantine			88–9	
	16	10 silver bowls	Byzantine		SHSB III: 115	78–87	
	17	Spear 6 (south of keel)			formerly thought to be a scramasax (SHSB I); later identified as a spear (SHSB II: 241 and 254)	97	
	18	possible Spear 7 (north of keel)			found in 1967, SHSB II: 268	211	
	19	great gold buckle	East Anglia	late sixth to early seventh century	SHSB II: 563	1	
	20	purse, with gold frame and gold and garnet plaques				2 and 3	
	21	2 gold and garnet shoulder-clasps	East Anglia	late sixth to early seventh century		4 and 5	
	22	baldric, with gold and garnet connectors and buckles	East Anglia	late sixth to early seventh century		6–18	
	23	37 gold coins, 3 blank flans and 2 small ingots (in purse)	Merovingian France	early seventh century		34–75	
	24	sword, with gold and garnet pommels and scabbard studs			SHSB II: 304	19–33 and 95 (bound with tape 191)	
	25	fine cloaks	east Mediterranean			SH10	
	26	6 maplewood bottles with silver-gilt mounts	insular	seventh century	SHSB III: 380	122–7 and 213	
	27	2 drinking horns (from aurochs), with silver-gilt mounts	Sweden?	seventh century	SHSB III: 379	120–1 and 218 (wrapped in cloth pads A–C)	
	28	(animal) bone				201 (wrapped in cloth SH26)	
	29	silver dish (Anastasius)	Byzantine	491–518	SHSB III: 32–45	76	
Centre (inside the coffin?) Heap 3	30	leather bag with escutcheons?				175 and 209a–f	
	31	fluted silver bowl		sixth century	SHSB III: 62 and 69	77 (containing cow hair 217)	
	32	otter fur cap				196 and 216	
	33	silver ladle and cup	Byzantine	sixth to seventh century	SHSB III: 156 and 163	90–1	
	34	7 burr-wood cups or small bottles	local		SHSB III: 380	128–34	
	35	4 knives with horn handles and leather sheaths				162–5	
	36	1 double-sided and 2 single-sided combs			SHSB III: 827	169–71	
	37	leather garment (or other objects) with silver and bronze buckles and catches				153 (double buckle), and buckles 137–51 and 153–9	
	Heap 2	38	pillow, filled with goose down				207 (in pillowcase 186–7) with ladybird 228
		39	2 pairs of shoes with laces (size 7/40)			SHSB III: 783	173–4, 181, 198 and 152 (buckle)
		40	wooden bowl				136
		41	Hanging-bowls 2 and 3	north Britain			111, 112 and 259 (solder)
		42	horn cup				135

Table 21 continued

Location	Object no.	Object	Possible provenance	Date AD	References	BM inventory nos
	43	leather garment				
	44	iron axe-hammer			SHSB III: 842	96
Heap 1	45	coils of tape				188
	46	mailcoat			SHSB II: 237	92 with flower (?) 229
	47	folded twill				
By east wall	48	wooden pegs				230a–c
	49	Cauldron 1				113
	50	Cauldron 2				114
	51	Cauldron 3				115
	52	nail supporting Cauldron 1				223
	53	chain for Cauldron 1 (at least 4.30 m long)	local		SHSB III: 546	167
	54	nail supporting Cauldron 3				225
	55	iron-bound tub (yew) – capacity 100 litres				116
	56	iron-bound Bucket 1	local		SHSB III: 594	117
	57	nail				221
On the floor	58	iron lamp		centred on early seventh century (C <sub>14</sub> )		166 with beeswax 305
	59	pottery bottle	north France?			168
	60	iron-bound Bucket 2				118
	61	Stockholm tar				250 and 251
	62	floor covers				193 and 194

1560 rivets (Inventory no. 202)

1600 samples from burial chamber for phosphate analysis (Inventory nos 248 and 262)

23 iron pieces (see Table 20)

when the ship was in position: ‘the carpentry was executed on the spot, some materials being left in and around the ship’ (Brøgger, Falk and Schetelig: 1917: 395). The roof was supported on two solid oak posts, placed at each end of the chamber, with a big oak beam serving as a ridge-pole and resting on the tops of these two posts, which were cut into u-shapes to cradle it (ibid.: 36, fig. 15). Using similar carpentry, a reconstruction can be offered for the Mound 1 chamber (Figure 89). This takes account of the curve of the ship, and supposes that the thrust bears on the hull, which in turn presses against the sides of the trench (FR 2/7132), and offers a structure which, like Oseberg, could be expected to support the weight of a mound. Such a roof requires two upright posts and a ridge-pole morticed onto them, so that rafters (of different lengths) can be laid north–south onto it. The bottom ends of the rafters can be notched (‘beaked’) so as to bear on the gunwale, which bears against the subsoil. A roof cover of east–west planks (held in place initially by turf) would complete the structure. This reconstruction does not require any ironwork, although it does suppose the disappearance of three large timbers. A ridge 1.95 m above the floor (FR 2/7161) also allows for more options in the way the chamber may have been furnished.

### Furnishing the chamber

The grave goods were found in three main areas (Figure 88 and Table 21). To the west (the river side) lay weapons (shield, spears and angons), regalia (standard and sceptre), a Coptic bowl with a lyre inside and a bucket (Bucket 3). To the east lay feasting equipment: three cauldrons, a tub and Bucket 1. In the centre, along a narrow strip measuring about 1 × 3 m, lay (from the west): ten silver bowls, upside down with two spoons beneath them, a helmet (in fragments), two pairs of gold and garnet shoulder-clasps, the great gold buckle, gold and garnet buckles from a leather baldric, a

sword, and a purse with gold coins. Beside these, to the east, were two drinking-horns and six maple-wood bottles, and then a great pile (the ‘Clothes Heap’) containing clothing, a pillow, shoes, combs and other personal items, topped by a large Byzantine silver dish (Plate 41), which probably carried burnt bone wrapped in a cloth (see below).

The objects are described in detail in SHSB I–III, and a summary list is given for quick reference in Table 21, which gives the BM inventory numbers (prefixed Inv.) and references to SHSB. The stratigraphic relationships between the objects were deduced from the excavators’ records, from the sequence in which the objects were discovered (Figure 88) and from the physical contacts noted during conservation (SHSB III: 853–6). Figure 90 is an attempt to present this information in the form of a stratification diagram. The plan (Figure 88), the inventory (Table 21) and the diagram (Figure 90) are summaries of the best information we have on what objects were in the chamber and where they were (for the primary evidence see SHSB I–III).

In an attempt to approach the original layout more closely, and thus also the burial rite, four areas of uncertainty are reviewed here: the role of textiles, the composition of the clothes heap, the presence and position of a body, and the question of what bore the body – platform, bier, bed, cart or coffin.

### The role of textiles

A list of the types of textile discovered in the chamber is given in SHSB I (445–51 and 458–61), and they are summarized in Table 22. Major concentrations had survived on the drinking-horns, maple-wood bottles (‘Pads A, B and C’) and mail coat (see Figure 88), and fragments of textile or replaced textile occurred on many of the iron objects. This represents a sample that is partial and random, but it suggests that the textiles would have made a

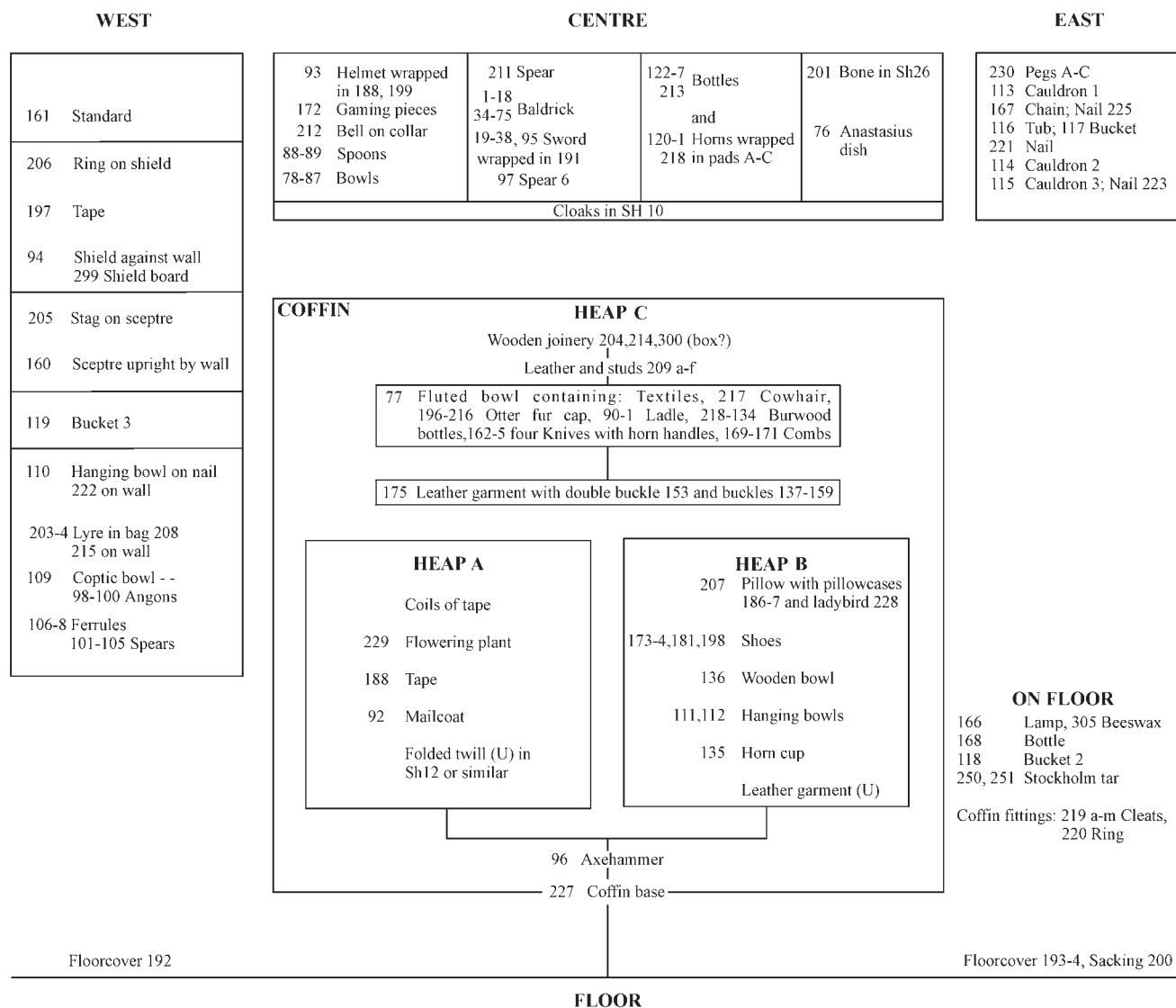


Figure 90 Stratification diagram of grave goods in order of deposition, based on diaries and assuming a coffin (Martin Carver).

visually powerful contribution to the original tableau. The interpretation of the role of the textiles in the chamber relies on their position and the likely function of each of the twenty-six fabrics identified (numbered ‘SH1–26’). The functions listed in the inventory (SHSB I: 445–51) have been combined here with the categories distinguished by Elizabeth Crowfoot in her report (SHSB III: 409–79) and are listed with their find-spots in Table 22. The textiles are reconsidered here under the functions identified for them in the report.

FLOOR COVERS

At the east end was the impression of sacking (SH25), which was found on the wood of Rib 10, or over an area of 230 × 240 mm of soil (SHSB III: 457). Still at the east end, fragments in SH18 and SH19 (Inv. 193 and 194) were supposed to have been rug or mat fragments under the cauldron chain. More SH18 was recorded on the lamp. However, Crowfoot (SHSB III: 461) includes SH18 among the possible hangings. Traces of weft threads of textile SH18 were identified on the upper surface of cleats (Inv. 219a, d and f). If these cleats belonged to a platform or coffin (see below), then SH18 must have belonged to a hanging rather than a rug.

At the west end, Inv. 192 (SH17) was rug or mat fabric found ‘adhering to the underside of the shield board beneath the flying dragon’ (SHSB I: 475). Also at the west end, fragments of SH10 were found to the east of the shield boss, in the helmet remains, and trapped between the two silver bowls that had slid off the pile of ten (SHSB I: 476, 478). SH10 was a fine glossy piled material suitable for making a cloak, perhaps imported from the Eastern Mediterranean and possibly originally dyed yellow (SHSB III: 457). Three cloaks were identified in the same (luxurious) material (SHSB I: 481). That at the west end, ‘Cloak 1’, may have been spread out on the floor, and perhaps the shield and helmet (to the north) and the bowls to the south lay on it. The other two lay in more appropriate positions, under the drinking-horns (‘Cloak 2’) and under the Anastasius dish (‘Cloak 3’). If there was a platform, Cloaks 1, 2 and 3 may have lain upon it. If there was a coffin, it is possible that Cloak 2 was thrown over the lid and Cloak 3 was inside.

HANGINGS

According to SHSB I (477, fig. 363), the materials most suitable for making hangings were SH5 and 7, and SH5 ‘may be the wool element of SH7 without its base’ (SHSB I: 480). SH7 (with SH8)

Table 22

## Mound 1: textiles in the chamber (source: SHSB I and III)

Textile	Floor cover	Hangings	Objects the cloth wrapped	Tape for fastening or edging	Clothes at feet
SH1 (Inv. 176), fine woollen broken-diamond twill			drinking horns, fluted silver bowl and silver bowls		in fluted silver bowl and with shoes
SH2 (Inv. 177), woollen broken-chevron twill		on cleats	scramasax and drinking horns	helmet	with mailcoat
SH3 (Inv. 178), diagonal twill, perhaps from a cap					with fluted silver bowl
SH4 (Inv. 179), coarse diagonal twill		on chain	sword and drinking horns		with mailcoat
SH5 (Inv. 180), soumak weave		on drinking horns			with fluted silver bowl
SH6 (Inv. 181), woollen tablet-woven braid					with shoes
SH7 (Inv. 182), twill with soumak pattern		on helmet, scramasax and sword	helmet, scramasax and sword		with mailcoat and axe-hammer
SH8 (Inv. 183), smooth linen (?)			helmet, scramasax sword		with iron and escutcheons (for bag?) and axe-hammer
SH9 (Inv. 184), woollen twill bag or cushion cover					with fluted silver bowl, pillow and shoes
SH10 (Inv. 185), fine glossy pile cloak, possibly dyed yellow	on shield, silver bowls and helmet ('Cloak 1'); under drinking horns ('Cloak 2')				with fluted silver bowl, on axe-hammer, and with pillow ('Cloak 3')
SH11 (Inv. 186), fine linen					with pillow
SH12 (Inv. 187), linen broken-diamond twill					with case
SH13 (Inv. 188), tape				helmet and mailcoat	
SH14 (Inv. 189), fine soumak and tapestry weave with plain bands and fringe			cushion for drinking horns?		with fluted silver bowl, and fringe for pillow
SH15 (Inv. 190), linen					with shoes
SH16 (Inv. 191), linen tape				with sword	
SH17 (Inv. 192), wool and flax rug	on shield				
SH18 (Inv. 193), probably same as SH17	on lamp and chain	on cleats			
SH19 (Inv. 194), tablet-woven border to SH18?	on chain				
SH20 (Inv. 195), plain wool weave (with SH14)					fringe for pillow
SH21 (Inv. 196), lining of otter-fur cap					with fluted silver bowl
SH22 (Inv. 197), linen tape	with cloak SH10			on shield	
SH23 (Inv. 198), tape					with mailcoat and with shoes
SH24 (Inv. 199), impression of coarse weave or mat	near helmet				
SH25 (Inv. 200), impression of sacking	east end				
SH26 (Inv. 201), plain weave			on top of Anastasius dish, wrapping bone?		

is also the material ‘found consistently with arms and armour’ (SHSB I: 461), and was recorded over the helmet, the sword, the spear, the mail coat and the axe-hammer. SH5 was found over the drinking-horns and over the fluted silver bowl. According to the specialist report (SHSB III: 409–79), the candidates for wall hangings are SH2, 4, 5, 7 and 18, but these textiles can have other uses too (SH2 and 4 as cloak or blanket, SH5 and 7 as cover). The top of the sequence in the principal pads of textile recovered with the drinking-horns (Pads A, B and C) was SH2–SH5–SH4 in each case. If SH5 is a hanging, therefore, then SH2 was behind it or above it. This would imply that the hanging, whether on ceiling or wall, was backed by a blanket type material.

In her report, Crowfoot proposes that SH2, SH4, SH5 and leather, as found alternately in the Pads A, B and C, could have represented a single very large hanging on the ceiling or walls, which had folded as it fell, as at Oseberg (SHSB III: 416). Note that this textile group does not include SH7.

Bruce-Mitford (SHSB I: 464) supposed that the sightings of SH7 on the drinking-horns, mail coat and axe implied a continuous cloth (which would preclude the mail coat and axe lying inside a coffin). But, in Pads A, B and C, SH5 was found under, as well as over, SH4 and leather deposits, so these fragments of SH5 are more difficult to assign to a hanging. This increases confidence that SH5 and 7 could be found in positions other than those of wall hangings. SH4, 5 and 7 are textiles also suitable for wrapping weapons (see below). This would leave SH2 and 18 on the cleats, and SH4 on the cauldron chain, as likely to derive from hangings.

#### TEXTILES FOR WRAPPING

It is common practice to wrap tools and weapons in cloth for storage over long periods, and this may provide an explanation for the occurrence of a number of textile fragments on metal: for example SH7 and 8 on the sword and Spear 6 (Inv. 97). SH2, 7 and 8 on the helmet might imply a lining as well as (or instead of) a wrapping. Crowfoot calls SH8 a ‘firm smooth fabric probably used for wrapping weapons and helmet’ (SHSB III: 459). SH1, 2 and 4, associated with the drinking-horns, may indicate cloth for wrapping or for wiping, while SH14 might imply that they were laid on a cushion.

#### TAPES AND LININGS

SH13 was tape found on the helmet and mail coat. SH16 was a linen tape used to bind the scabbard of the sword. SH22 was a linen tape, which occurred with the shield. SH15 occurred with the shoes and SH23 with both the mail coat and shoes. These tapes might be used to fasten, bind or edge the objects they were found on.

#### PILLOW

The position of the pillow was indicated by fragments of surviving goose down. Fragments of textile in the neighbourhood may have been directly associated with it: SH11 and 12 could be interpreted as the pillowcase (or sheets), SH9 (perhaps blue) as the cover, and SH14 and 20 as fringes or tassels for the cover.

#### CLOTHING

SH1 and 2 were fine twills suitable for clothing, and the position of fragments in this material under the Anastasius dish suggest

that they had here belonged to garments. SH10 was supposed to come from a shaggy pile cloak, which was found in the same area (‘Cloak 3’). SH15 was linen found with the shoes, which may be from a bag (to contain the shoes) or from some undergarment. SH21 may have been lining for a cap of otter fur (implied by hairs), and SH3 was a diagonal twill that would also have been suitable for making a cap.

#### *The composition of the clothes heap*

These identifications show that a mass of compressed material was under the Anastasius dish, some of which seems to have derived from clothing: ‘clothing and hangings being folded at the feet, while more clothing and small objects lay in a pile under the pillow’ (SHSB III: 890). The composition, of what must have originally been a sizeable heap, is itemized stratigraphically in Figure 90. The items seem to have been piled up as follows.

#### HEAP A

A ‘folded twill cloth’ like SH12 was laid nearest the feet (SHSB I: 472; SHSB III: 460), forming the base of Heap A, which mainly consisted of the folded mail coat (Inv. 92), which lay on a north–south axis. A flowering plant (Inv. 229) was placed on (or was already attached to) the mail coat. The mail coat corroded, without collapsing, in the presence of air, so that it had a brittle glassy appearance on discovery (SHSB II: 232). It had a sizeable patch (160 × 50 mm; SHSB III: 835) of textile described as occurring plentifully on the exposed western edge of the coat (SHSB III: 835, fig. 596; SHSB II: fig. 177; and see SHSB III: fig. 309, apparently an edge). These might derive from garments or (less probably) from a lining for the mail coat itself. There were also 10 m of tape (SH13), and a patch (110 × 35 mm) in a recess on the underside deriving from the ‘folded twill cloth’ in fabric SH12. The mail coat had also picked up a piece of fastening tape SH23, either from the mail coat’s own fastening or from the adjacent shoes. A fragment of SH10, the fine cloak material, occurred on the axe.

#### HEAP B

East of Heap A was laid a leather garment (SHSB I: 472), and on it was placed a horn cup (Inv. 135), two upside down hanging bowls (Inv. 111 and 112) and a wooden bowl (Inv. 136), which was perhaps for drinking. Above these was placed a pillow (Inv. 207) in a blue pillowcase (Inv. 186–7), in SH9, with a fringe (SH14 and 20). The fringe was 450 mm long, with its long axis running north–south. There were additional pillowcases or sheets in SH11 and 12. On either side, to north and south, were placed a pair of shoes (Inv. 173–4) with tapes (Inv. 181 in SH6 and Inv. 198 in SH 23). In the pillow was a ladybird (Inv. 228).

#### HEAP C

In the next ‘storey’ Heaps A and B were combined into a single heap, Heap C. A leather garment or complex of leather (Inv. 175), together with the double buckle (Inv. 153), textile (Inv. 190 in SH15) and bronze and silver buckles (Inv. 137–59), was placed over both heaps (SHSB I: 210–12; SHSB III: 759). On the leather garment was placed a silver fluted bowl in classical style (Inv. 77), which contained three combs (Inv. 169–71), four knives with horn handles (Inv. 162–5), seven burr-wood cups (Inv. 128–34), some on their sides (SHSB III: 363), a silver ladle (Inv. 90–1) and

Table 23

## Mound 1: record of iron fittings found in the burial chamber (source: SHSB III: 915–21)

Identification no. and type of object	Position	Profile (convex or flat)	Accretions on outer surface	Accretions on inner surface	Length (mm)	Width (mm)
219a ('B') cleat	most north-westerly (SHSB III: 915); or next one to the east (SHSB I: fig. 363)	convex	up; SH18	wood x	163	31
219b cleat	most south-east	convex	up?; wood =	wood x	115	31
219c cleat	south	flat		wood ob.	120	41
219d cleat			SH18		150	33
219e cleat		flat	wood =	wood x	103	35
219f cleat			SH18	wood x	60 (incomplete)	34
219g cleat		convex	SH2 wood ob.	wood x	172	32
219h cleat					54 (incomplete)	37
219i cleat		flat	wood =	wood x	139	36
219j cleat		convex	wood =?	wood x	116	31
219k cleat					65 (incomplete)	37
219l cleat			wood =	wood x	68 (incomplete)	33
219m ring and rod (eyelet)						
219.9 iron strip cleat?					63 (incomplete)	39
219.10 cleat			wood =	wood x	119	30
219.11 cleat			wood =	wood x	95	29
219.17 like 219m (eyelet)						
219.24 cleat					67	34
219.25 cleat		flat			56	29
219.26 cleat				wood x	35	31
219.27 cleat			wood =	wood x	42	35
cleats R and T	SHSB I: figs 112, 113 and 115					

Key: SHxx is textile; wood = indicates grain parallel with long axis of cleat; ob. indicates the grain is oblique; x indicates grain at right angles to long axis

a number of textiles (Inv. 195 in SH9–12, 14 and 20), including a fragment of cow hair (Inv. 217) and otter fur (Inv. 216) with linen (Inv. 196, in SH21), which Bruce-Mitford interpreted as an otter fur cap. Other textiles are reported as represented (SH1–4, 8–10 and 14; this includes SH3, another possible cap), but their relationship to the bowl (Inv. 77) is unclear. Also reported was a playing piece (Inv. 172), which Bruce-Mitford relocates to a set of playing pieces near the shield; if this piece (Inv. 172) was originally placed with the articles in the bowl (Inv. 77), it was the only such piece in that assemblage.

Stratigraphically in the highest reaches of the heap, were thin planks (Inv. 214), a triangular wooden wedge (Inv. 204) and a series of iron nail-heads or escutcheons (Inv. 209a–f; SHSB III: 899), a textile bag (?) in SH9 and a fragment of cloak in SH10. If this belonged to the same garment ('Cloak 3') as had left a fragment on the axe-hammer (above), it implies that it was thrown over the heap as a whole. If only a few of the textile fragments found here represent garments, then the 'Clothes Heap', with its pillow and bowls, would have been a substantial hump, perhaps half a metre or more in height. Such a heap, particularly with the Anastasius dish balanced on top, might have been unstable without some supporting container. This has contributed to the case for a coffin (see below).

### The presence and position of a body

A body was not seen during the excavation, but that did not surprise the most experienced of the excavators. Piggott put the

matter succinctly in his evidence to the inquest: 'A minutely careful removal of the wood remains [of the chamber roof] enabled us to lay bare *in situ* the personal trappings and belongings of the individual who had evidently, from the position of the objects, been buried at full length, lying on the bottom planks of the vessel, his head to the west. Owing to the acid nature of the sand however no visible trace of the skeleton remained – a condition which is however familiar to excavators in such soils' (SHSB I: 723). This argument convinced the coroner, at least, that human burial provided the context for the objects. Lethbridge, an experienced East Anglian excavator, also remarked (1948–9: 9) that the disappearance of the body was a frequent occurrence in similar sandy soils. He supposed that the bodies of 'horses, hounds, cattle and even thralls' would have also disappeared.

Bruce-Mitford rehearsed the arguments for a body on the basis of the evidence gathered by 1975 (SHSB I: ch. viii, fig. 384). Phosphate measurements were taken from the objects, at the site of each rivet and in the burial chamber, where the rivets were largely missing, on a 1 ft (300 mm) grid (SHSB I: 245). The measurements suggested that phosphate residues were concentrated around a 'body space', approximately in the area shown on the plan (SHSB I: fig. 396; Figure 91). The position of the shoulder clasps (if worn) and the helmet, and of the shoes in 'the Clothes Heap', suggested that the head would be at the west end of this space. In contrast, Vierck (1973; 1980) argued for a human cremation on the Anastasius dish, where residues of ferric phosphate implied the former presence of perhaps 1 kg or

**Table 24**  
**Body-bearer options in Mound 1**

	Floor	Platform	Bed	Cart	Coffin
What are cleats for?	(1) to join two floor planks; or (2) to join floor to hull	to join two planks edge to edge to make wall of platform	to join two planks edge to edge to make wall of bed	to join two planks of cart body	to attach coffin lid
Why are they curved?	?	?	?	cart body is curved	tree-trunk coffin
Identity of planks (east to west, under grave goods)	floor	platform floor	base of bed; floor underneath	cart body; floor underneath	coffin lid and base, with the body between them; floor underneath
Size proposed	3.4 × 1.6 m	3.4 × 1.6 m	3.4 × 1.6 m	3.4 × 1.6 m	3.27 × 1.21 m or 3.4 × 1 m
Body	laid out, if less than 1.8 m; otherwise flexed	laid out, if less than 1.8 m; otherwise flexed	laid out, if less than 1.8 m; otherwise flexed	laid out, if less than 1.8 m; otherwise flexed	laid out
Baldric	on body or draped over body	on body or draped over body	on body or draped over body	on body or draped over body	laid out on coffin lid
Drinking horns and bottles	at feet	at feet	on the bed	in the cart	on the coffin lid
Clothes (in heap)	in a heap at the feet	in a heap at the feet	in a heap on the bed	in a heap in the cart	inside the coffin, retained by its walls
Anastasius dish	balanced on the heap	balanced on the heap	balanced on the heap	balanced on the heap	on the coffin lid
What happened on collapse?	cleats stay put, point down	planks with cleats attached fall inwards (or outwards) and so cleats end up point down (or up)	planks with cleats attached fall inwards (or outwards) and so cleats end up point down (or up)	planks fall outwards and cleats end up point up	planks with cleats attached fall inwards (or outwards) and so cleats end up point down (or up)
Against	cleats not necessary clothes heap free-standing	use of cleats unclear clothes heap free-standing	no cross planks clothes heap balanced on a bed	too large cleats wrong way up clothes heap balanced on a curved surface	violent collapse implied body invisible
In favour	cleats do not have to move body visible	body visible	body visible	body visible	neat display on lid disappearance of bone explained

more of burnt bone (SHSB I: 528). This may equally have been a deposit of cooked animal bone, but the matter has been left open (SHSB I: 542).

In the 1983 campaign a project was initiated which had the aim of continuing the work done by the British Museum scientists and of improving understanding of the taphonomy of human bodies at Sutton Hoo. The rapid decay of organic matter was demonstrated, and a chemical signature was derived for human decay products (see Chapter 3, pp. 49–53). A human body could survive as a sand shape without any visible bone, and its visibility often decreased when the body was in contact with wood. In Mound 17 bone was partially visible against a coffin base, although it was not robust. The horse in an adjacent pit without timber was well preserved in both bone and body stain (see Chapter 5, p. 126). No good theorem for the taphonomic process was advanced – there were too many variables (see Chapter 3, pp. 58–64); but the possibility of a body in Mound 1, reduced to sand and indistinguishable from the floor of a chamber, or the hull of the ship, was greatly strengthened.

***The bearer of the body: platform, bier, bed, cart or coffin?***

Bruce-Mitford assumed that the body, if present, might have lain

on the floor, if there were one (SHSB I: 508). This, however, did not explain some evidence that seems to imply that there was a structure of some kind within the chamber. This evidence comprised two rows of iron cleats (or clamps), some lines of wood and the heaped-up position of some objects. In 1975 the matter was left open:

The function of the iron cleats is difficult to explain. Even allowing for some degree of displacement, they are not sited at rib positions, and so could not have held a floor fixed to the ribs by nails. Some seem flat, but others, particularly 219a and b, are slightly convex, the convex side carrying the heads of nails, the points of which emerge from the concave face. They must have been connected with some constructions in the burial chamber (SHSB I: 486).

Since 1975, cases have been argued both for a coffin (Evison 1979, 1980 and 1987) and against a coffin (East 1984). In 1983 the possibility of a coffin or bier was acknowledged (SHSB III: 923). Evans (1986: 33) proposed a raised dais (or platform), and Speake (1989: 111) proposed a cart-body. These are briefly reviewed below, together with the possibility of a bed.

The iron fittings found in the chamber are listed in Table 23 (source, SHSB III: 915–21). Eighteen of these fittings have been identified as cleats, strips of iron with an iron nail driven through each end. The most complete example (Inv. 219a) is 163



mm long and 31 mm wide, with nails 28 mm long. Four of the cleats are slightly bent, with the points of the nails on the concave side. Wood grain was observed on the nail-head side of the cleat in nine cases: it ran parallel to the axis of the cleat in eight cases and obliquely in one. Wood grain was observed on the inside (on the nail point side) in thirteen cases, in twelve cases it ran at right angles (transverse) to the axis of the cleat, and in one case it was oblique.

The positions of thirteen cleats are known, and they roughly lie in two rows, with a disturbed pattern towards the south-west corner (Figure 88). Assuming they served something approximately rectangular, the space marked out by the cleats is about 3.4 × 1.6 m; but the disturbed pattern implies there had been some movement. If all the cleats had moved, then those in rows must have remained attached to at least one piece of timber. In two cases (Inv. 219a–b) where the attitude of the cleats in the ground was observed directly (in photographs), the back or convex side lay uppermost, with the nail points down. Angela Evans argues (pers. comm.) that all were point down, on the grounds that the nail-head sides all carry the same glassy sheen from prolonged contact with sand. However, whichever way up they landed, the backs of the cleats would be exposed to the air before collapse and in contact with sand afterwards (and so acquire a glassy sheen, cf. the mail coat, above), so this may not be a decisive factor. The cleats cannot be attributed to a specific structure, but we can be reasonably sure that they were originally used to join two pieces of wood edge to edge. There were, in addition, two eyelets or staple loops (Inv. 219m and 219.17) and a strip (Inv. 219.9) that might have been a nineteenth cleat. These were not located on the plan.

None of the observed planks in the chamber (see above) could be directly attributable to a coffin, but the wood layers were thickest where a coffin might be expected to be, in a narrow band running north–south from the shoulder clasps to the Anastasius dish (SHSB I: fig. 114; Figure 88).

With such exiguous evidence, it is probably no longer possible to know whether there was a bearer for the body in the chamber and, if there was, what it was. Moreover, recent studies of bearers and grave furnishing show the wide range of funeral furniture that was possible (see Chapter 8, pp. 292–8). This makes it dangerous to appeal to cultural arguments. We consider five options, which are summarized in Table 24.

#### *The body lay on the floor*

Assuming the body was less than 1.8 m, and the (UK) size seven shoe implies that it was (SHSB III: 783), it could have been laid out with the head between the silver bowls and the helmet and the feet ending short of the drinking-horns. If the person was taller than 1.8 m, then the legs could be flexed to avoid the drinking-horns. However, grave goods have been found placed on the legs in Anglo-Saxon graves (Evison 1980: 358). The baldric in this case was either worn or draped over the body. There is no obvious use for the cleats. East (1984: 81) sees them as perhaps joining the three parts of a floor that had loose boards at the outer sides and a central portion lashed and treenailed together, and attached by cleats to underlying battens. The ends of this central flooring would have been attached to the end walls of the chamber by angle irons (ibid.: 82). A more specific role might be to join the edge of the floor to the hull, as the distance between the two rows of rivets, 1.60 m, is not too far off the width of the

ship at the top of Strake 4 (1.83 m, i.e. the width of the floor). In this case the cleats would simply have dropped directly downwards when floor and hull decayed. This use of the cleats does not explain why some were curved.

#### *The body lay on a platform*

In this model (Figure 91), a raised platform was constructed in the space marked by the cleats (SHSB I: 484; Vierck 1980: 349; Evans 1986: 33). The cleats might here be explained as joining two planks, set vertically edge-to-edge, on each side, thus raising a platform 3.4 × 1.6 m and about 0.3 m high. The layout is essentially the same as for a floor. The use of cleats to make a platform, dais or podium does not explain why some were curved. On collapse, the cleats would seemingly have stayed attached either to the upper or lower plank, which might have fallen outwards or inwards. If either plank fell outwards, the cleats attached to it would land point up; if inwards, the cleats would arrive point down. A bier this size (3.4 × 1.6 m) would be unmanageable.

#### *The body lay in a bed*

There are a number of examples of Early Medieval graves in which the deceased lay in a bed (see Chapter 8, p. 298). In the simplest case, the bed is simply a more comfortable version of the platform. So, although no bodies were actually located, it is assumed that the dead in Valsgårde 7 and 8 lay on ‘beds’ made of down and textiles, pillows and cushions. Drinking-horns or glass vessels, where present, are supposed to have lain on the bed or just beside it (Arwidsson 1977: 149; 1983: 73). More formal beds have been encountered in Early Medieval graves. Some are constructed only of timber, which is signalled by transverse planks or slats at the base, while others have metal fittings, which may include double cleats. The well-preserved all-timber bed at the Viking woman’s grave at Oseberg was 1.80 m<sup>2</sup> and had a decorated headboard and a vertical footboard, vertical plank sides and transverse planks, with a width of c.100 mm and a gap of 100 mm between them (Grieg 1928). At Högom (c.500 AD), the man’s bed was at least 2.5 m long and over 1 m wide (Ramqvist 1992: 47, pl. 13). Beds have been defined in the fifth- to sixth-century cemetery at Oberflacht, among which are simple chests (box-beds) with and without legs, and frame beds with side rails (Paulsen 1992: 41–57, Abb. 37). These ‘box-beds’ would be hard to distinguish from a lidless coffin, but the other examples should leave transverse linear timbers, or a lattice, beneath the body.

None of these examples required cleats, but in his study of the English material, in connection with the Swallowcliffe Down bed-burial, George Speake found a variety of metal fittings used in Early Medieval beds (1989: 83–115). The single cleats and eyelets used at Swallowcliffe Down (ibid.: fig. 76) are more delicate versions of the Mound 1 fittings, although double cleats (ibid.: fig. 75) were the main method of fastening the planks supposed to have formed the vertical sides of the bed. The bed at Shudy Camps, grave 29 (Lethbridge 1936) was a kind of box-bed with head and footboards that also employed double cleats.

Given the difficulty of distinguishing timbers in the Mound 1 chamber, especially at the levels beneath the objects, where the floor met the hull, an all-timber bed, or a bed making use of cleats to raise the plank sides should not be excluded. A construction using the cleats in Sutton Hoo Mound 1 would be up to 3.4 × 1.6 m

– constituting a truly king-size bed. However, it would not lie far outside the range of the (earlier) Högom and (later) Oseberg beds, though it would certainly be of generous proportions for a sailor's bunk. If there was a box-bed, then there would be a space to contain the heap of clothes (as in a coffin), but a number of objects (the drinking-horns, maple-wood bottles and the baldric) would have to be placed on the bed or the body. Such a bed should have left traces of transverse timbers, and this model does not explain why some of the cleats were curved.

As in the case of the platform, on collapse the cleats would lie in rows point up or point down, depending whether the plank they remained attached to fell inwards or outwards

#### *The body was placed in a cart*

Speake (1989: 11) raised the possibility of the body-bearer in Mound 1 being a cart-body similar to those found at Thumby-Bienebeck (Viking – Müller-Wille 1976: 13, Abb. 1) and in Valsgårde 7 (seventh-century ship-burial – Arwidsson 1977: 99–103, Abb. 101, Taf. 42). This might account for the curve seen on some cleats. A cart might more properly be held together with clench nails (like a ship) or with double cleats. If single cleats were used, then they should curve around the cart-body and have fallen point up. This creates difficulties if the cleats were mainly found point down.

#### *The body was placed in a coffin (FR2/7141)*

There are numerous examples of coffins being used for burial in the early Middle Ages, both with and without chambers, which makes this, *prima facie*, a likely option (Evison 1979; 1980; 1987; Carver 1998a: 93, n. 13; see also Chapter 8, p. 292). The excavators noted and recorded the persistent linear hump of wood in the area where a body would be expected (e.g. SHSB I: fig. 115). Cleats like those in the Mound 1 chamber were found at Dover, Taplow and Broomfield (Evison 1987: 100), and, nearer at hand, in Mound 17, where they were more certainly employed on a coffin (see Chapter 5, p. 134). The use of a coffin helps to explain how the heap of clothes might have been stabilized (by placing them inside it) and how other grave goods, such as the sword, baldric and helmet could be displayed on a flat surface by placing them on a lid. The curve of the cleats might be explained if the coffin was a dugout tree trunk, as has been noted in Mound 17 and elsewhere in East Anglia (see Chapter 8, p. 292). A tree trunk might also help to explain how the large silver dish (the Anastasius dish) came to be pressed down round its edges, as though bent over something solid (SHSB I: 206, fig. 140). The top of the lid could have been planed to allow the objects to be displayed on top of it. These should have included the silver bowls, helmet, sword and baldric, and maybe also the drinking horns and maplewood bottles. However, key relationships between wood traces and objects remain partial and equivocal (FR2/7141; SHSB I: fig. 112). A reconstruction of the chamber with a coffin, showing a possible layout for all the grave goods, is given in Figures 91 and 92.

As found, the cleats mark out a space (3.4 × 1.6 m) that is very large for a coffin, or any container, although not unusual for a section of a tree. Evison proposed that the coffin had collapsed outwards, so that the cleats (if still attached to the base) were some 340 mm further out than their original positions on the coffin wall. If the cleats remained attached to the base, then they would land point up, which runs against

some of the evidence (see above). But if the coffin lid were a construction with top and sides (which the use of cleats implies), then it might well collapse into a flat surface of three parts (i.e. the top and the two sides). Theoretically, if the lid was 1 m wide, with sides 300 mm deep, it could splay to a surface about 1.6 m across, and in this case the cleats still attached to it would fall point down. Thus the ultimate position of the cleats, and whether they lay point up or point down, is not decisive for the presence or absence of a coffin.

Other evidence does not support the coffin hypothesis. The east–west planking, as recorded, continued as far as the west chamber wall, and so is unlikely to have formed part of a coffin lid or base (East 1984: 81). There were traces of organic matter between the bottom of the Anastasius dish and the pile beneath it (Phillips 1940: 173), and there was some silky wood under the dish and over the heap (Inv. 204, 214 and 300), perhaps from a box (Evans: pers. comm.), but there was no planking. Katherine East emphasizes: 'Nor would one expect the impression made by the foot-ring of the dish in the leather, feathers and textile to have been so definite if wooden planks had lain between them for a considerable time. We must conclude that the Anastasius dish did not stand on a coffin lid' (1984: 81). If the coffin splayed on collapse (to account for the broad separation of the rows of cleats), this must have happened in an empty space, and any objects on the lid would have been thrown off or at least badly disturbed. There was some oblique evidence that objects had been dispersed, either through a coffin bursting or the roof falling onto it: for example the helmet, already brittle, had shattered, perhaps by being thrown aside and falling (SHSB II: 138). Bruce-Mitford argues from records made in 1939 and 1967 that gaming-pieces were 'scattered between the sceptre and the helmet' (SHSB I: 330, 336, 541 and 577). He would put their original position as 'near the shield', but the scattering can be explained more readily if a starting point for them can be found on the lid of a coffin. It should be said, however, that the results of decay and collapse in a chamber filled with diverse materials and crushed by hundreds of tons of sand is not easy to predict with any certainty (see also comment on 'Aftermath' below).

#### *Conclusion*

The evidence from the 1939 excavation is inadequate to support any of these options decisively, although perhaps the cart can be ruled out. Mound 1 is an exceptional burial, and it would be unwise to proceed on the basis of assumptions about cultural preference (that there should, or there should not be, a coffin in a chamber) or on the basis of modern common sense or a modern sense of occasion (that the coffin would be too big or that laying-out on the floor would be unworthy). The case for a coffin is strong, but with the variety of burial rites practised in the early Middle Ages, even within the Sutton Hoo cemetery (see Chapter 8), it would be best to leave the options open as unproven, and to some extent unprovable.

#### ***The construction of the mound***

##### *Filling in the trench*

The back-filling of the ship in the chamber area was reported by Phillips, on the basis of the 'large pillar of material' left standing on the south side of the excavation (SHSB I: fig. 109). The filling shown was a downward-slumping mass of rotting turf, some of which, at least, may have been specially laid over the chamber

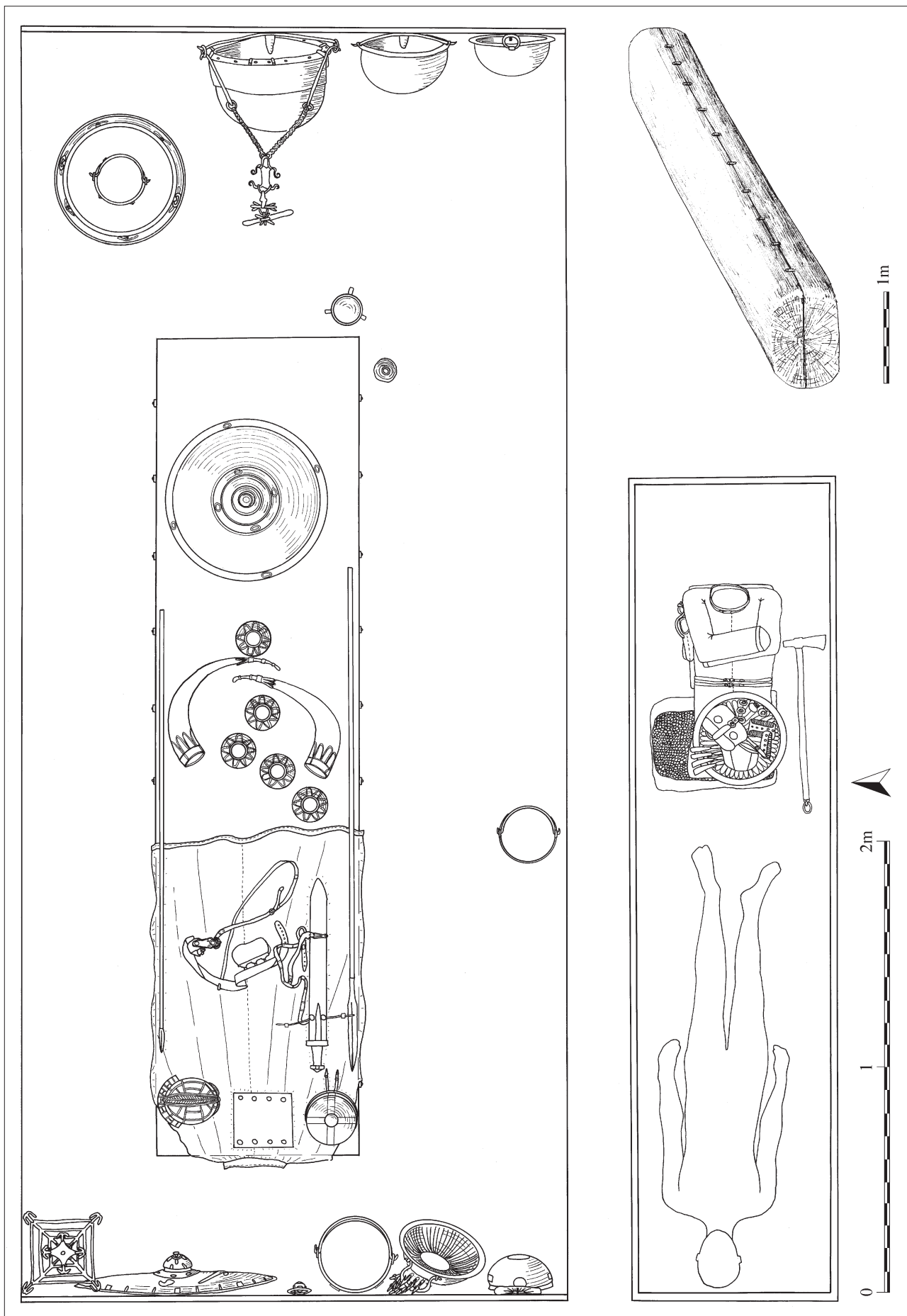


Figure 91 Plan of the Mound 1 burial chamber as originally furnished, assuming a coffin was present (Carver and Brennan); inset: possible reconstruction of coffin (Carver and O'Brien).

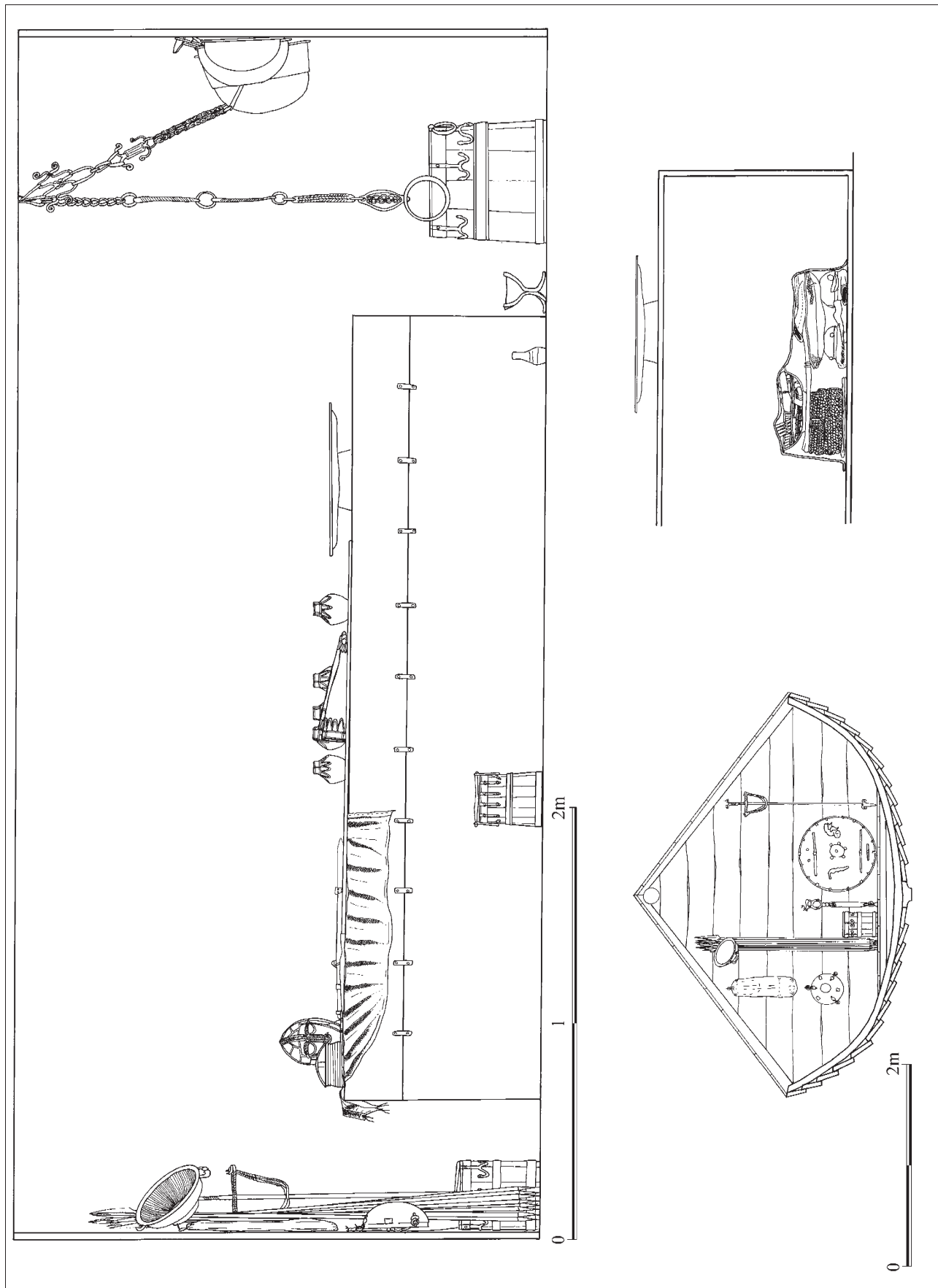


Figure 92 Profiles through the Mound 1 burial chamber, as originally furnished (Carver and Brennan).

roof (SHSB I: 171). The ‘pillar’ had been left to support a piece of carbonized oak plank, which was found a little way above the old ground surface (SHSB I: 171). Phillips commented that ‘a few pieces of carbonized oak plank occurred in an entirely haphazard way, probably refuse from the building of the burial chamber’ (SHSB I: 166). The mound make-up thus contained timbers, some of which may have been left over from the rolling of the ship from the river to the trench.

A lump of ‘clay pan’ was found above the roof of the burial chamber, and below the ship trench backfill: stratigraphically, it therefore belongs to a point after the construction of the chamber and apparently before or during the back-filling of the ship trench. As an archaeological deposit, the ‘clay pan’ defies convincing interpretation, but it may have formed *in situ* after, and because of, the construction of the mound: in this case it would more properly belong to the ‘aftermath’ phase (below), and could be identified as a concentration of iron pan. Limbrey (1975: 311–12) writes of ‘the very common occurrence of a concentric zone of iron pan beneath round barrows ... related to the depth of burial and the movement of water through the mound’. The ‘clay pan’ seems to have been more like a clay concretion, such as might have formed at the bottom of a deep shaft, but it was not in the same place as the robber shaft found by Brown (see below).

#### *The composition of the mound*

There was no record of the composition from Brown, who shovelled out most of the mound make-up as it remained in 1939. Ashbee’s records mainly relate to the lobes on the extremities. Maynard (FR 2/3.2) remarks blithely, ‘In clearing out the hull we worked forward section by section so as to preserve the character of the filling for recording purposes as long as possible’; but no measured records have survived, even to the standard set by Brown in Mounds 2, 3 and 4. Phillips was convinced that the mound was constructed mainly of turf: ‘The whole barrow was constructed of turf from the surrounding heath’ (Phillips 1956: 152). His turfs were dark sand in which ‘faintly defined outlines of individual turves could be seen in many places in the section’ (SHSB I: 166). Ashbee reported ‘grey, dusty and stone-free soil which is considered to have originated as turf stripped from an area within the vicinity’, and was able to recognize here and there individual turfs about 1 ft square and 3–5 in. thick (305 × 305 × 75–125 mm; SHSB I: 166; on p. 319 they are said to be 3–5 in. thick and 1 ft 3 in. square – 380 × 380 × 75–125 mm). Ashbee also reported ‘a mass of dark brown sandy soil in which were traces of sand and gravel, buff sand and quantities of hard [grey] clay and yellow sand’ (SHSB I: 319, fig. 230).

Ashbee concluded that the mound had been constructed in two phases: the filling in of the ship trench and raising of the initial mound with topsoil and sand; and then ‘the encasing of the whole in turf’ (SHSB I: 319). However, on analogy with the other mounds, Mound 1 had almost certainly been reduced by ploughing, and its original seventh-century top surface would not have been available for examination. The section through the relict Mound 1 (Plate 39) is similar to those through Mounds 2 and 6, showing a random loading of topsoil, sand and gravel, with few obvious candidates for ancient intact re-deposited turf. Dimpleby (SHSB I: 65) was unconvinced by the idea of turfs: he pointed out that the visible mound make-up was much more like the topsoil of an acid brown earth (his x–y–z layers), rather than

ericaceous or heathland turves which would have been easily visible. He concludes: ‘It is possible that both scraped up top-soil and cut turves may have been incorporated in the mound, coming from different types of soil surfaces in the neighbourhood’ (*ibid.*).

No ditch or other type of quarry has been found for Mound 1, either in the 1939 or 1965–71 excavations, or subsequently, during the excavation of Int. 55. The buried-soil platforms of Mounds 2, 5, 6 and 7 were of similar thickness to that under Mound 1 (see Chapter 10, p. 371), so these areas do not seem to have been quarried for mound-building (see Chapter 8, p. 309). Mound 1 was probably constructed from topsoil and subsoil exposed after stripping the turf off a broad local area, and finished with a turf capping that has since been completely ploughed away (see below).

#### *The size and appearance of the original mound*

Figure 86 shows the extent of Mound 1 in 1939, and versions of its recent and original peripheries as suggested by Phillips and Bruce-Mitford (SHSB I: 148, 153, 329). The mound would have had to be at least 30 m in diameter to have buried most of the ship, and in its original form was thus larger than Mounds 2, 3 or 4. The extant height in 1939 is deduced from photographs, and from the 1967 excavations, as 9 ft (2.74 m) or 10 ft 3 in. (3.80 m) on the north side and 10 ft 8 in. (3.25 m) or 10 ft 6 in. (3.20 m) on the south side (SHSB I: 153). It was not possible to estimate the original height, as there was no quarry ditch. If the proportions were similar to Mound 2 (see Chapter 10, p. 370), then the mound would have risen at least 4 m above the old ground surface.

#### **Aftermath**

##### *Inside the chamber*

Some of the processes of decay and collapse inside the underground chamber can be inferred from the position the objects and soil marks were found in. The west wall bowed inwards, probably as a result of the initial back-filling of the ship. At this point, any objects hanging on the wall (such as Hanging Bowl 1), or leaning against it (such as the shield, perhaps), would have fallen and been swept to the east. The brittle state of the helmet and the rust-mark on the sceptre imply that the burial chamber roof succeeded in supporting the mound for some years. After fungal softening, any platform or coffin would have collapsed, presumably resulting in the pattern of cleats as found. It can be assumed that the roof timbers began to rot and let in sand at a steady rate, rather than collapsing violently, to account for the lack of scattering among the grave goods. This sand built up the pressure on the grave goods, body and any structures that were present, compressing the tableau, perhaps in wet conditions. A few roof planks at the east end fell, intact, onto the cauldrons. The compressed furnishings continued to rot through bacterial action, except for isolated pads of textile, or where they were protected by metal, implying that the hull had rotted, exposing the sand beneath and allowing the deposit to drain and oxygen to enter.

##### *Ploughing*

Bruce-Mitford noticed a bank running north–south each side of Mound 1 as though to cross its west end (SHSB I: fig. 218). He associated this bank with the truncation of the western third of

Mound 1, and considered that this in turn had led the later diggers of a robber pit (see below) to mistake the mound's centre. Since the robber pit was seen as a sixteenth- to seventeenth-century adventure (by virtue of sherds of bellarmine found in the pit), the bank and the associated truncation were reckoned to be Medieval in date (SHSB I: 159–61).

Brown, however, notes the information (BBD: 29 June 1939) that a field to the west end of Mound 1 had been ploughed up to 1882, following which it became Top Hat Wood, and this is consistent with the evidence of maps (see Chapter 12, p. 460). A furrow had been ploughed right over the (west) end of the ship: this implies that the axis of the ploughing was north–south, but this may of course be where the plough turned. This is consistent with the formation of a lynchet (S32, Figure 19), as implied by the results of the investigations in Int. 48 (see Chapter 10, p. 371). A lynchet that was, therefore, in its latest phase at least, nineteenth-century rather than Medieval. It had a parallel ditch on its east side, which presumably had also once run over the mound.

Elsewhere on the site (e.g. Mound 7) mounds had been ploughed before 1601 and again, after robbing, in the nineteenth century. Three ploughings are therefore likely in the case of Mound 1: a Medieval ploughing from the east, which reduced it in height; a Medieval ploughing from the west, which removed soil on its west side, truncating the mound; and a nineteenth-century ploughing, which created the lynchet that remained as a bank. The profile of Mound 1, as recorded in 1939, is no more prominent than its companion mounds, all of which have since been shown to have been greatly reduced by ploughing (see Chapter 12, p. 371). The Gokstad mound was said to have been circular, but had become oval through ploughing (Nicolaysen 1882: 3). It is very likely that Mound 1, like all the other mounds at Sutton Hoo, had also been reduced by ploughing.

A few tons of soil had also been removed on the east side of Mound 1, apparently for a bunker in a private golf course constructed either by Mr Lomax or Lady D'Arcy (SHSB I: 145n.2).

#### *Robbing expeditions*

A single robber pit was discovered by Basil Brown on 30 May 1939 following a fall of sand during his trenching operation: 'I only escaped being buried by a large landslide of 10 tons or more missing me by a few minutes. Signs of Medieval disturbance found and sherds of jug (the treasure seekers' hearth).' This pit/hearth was not so much excavated as casually encountered over a number of days. On 3 June, he 'continued the widening and taking off the topsoil preparatory to excavating another section of the ship and other parts of the Medieval jug came to light.' On 7 June, he offers his first and only description: 'traces of attempts by treasure seekers were clearly shown by a filled-in hole which could be traced downwards 10 ft [3.05 m] or so from the apex or summit of the barrow. At the side of this was what was thought to be the base of a burnt-off post. It existed with a central core black matter surrounded by a red ash band. This material was kept and submitted to examination by Mr C. W. Phillips. The feature was then clearly proved to have been the remains of a hearth evidently that of a fire lighted by treasure seekers. This feature was allowed to remain and nicknamed "the lighthouse" by Jacobs, but it later collapsed, when the soil near it was being removed.' From this description it can be inferred that the hole, or its more colourful fill, was tall and narrow, like a lighthouse.

The position of the robber pit was recorded by Phillips (SHSB I: fig. 168A). It was dug in the then centre of the mound, and was attributed by Brown, Phillips and Bruce-Mitford to a failed robbing, in which a picnic – 'the lunch of the disappointed' (Phillips 1987: 73) had occurred. However, Phillips cannot have seen much of this feature since he arrived on 8 July, when the 'robber's pit' had long since disappeared. The pit (or shaft) reached down below the level of the subsoil, and at 10 ft (3.05 m) deep was already a perilous hole and hardly suitable for a picnic or a cooking operation.

A date in the sixteenth or seventeenth century for the robbing operation would be consistent with the sherds of pottery, which were bellarmine ware (SHSB I: 159–60).

#### *A second attempted robbing?*

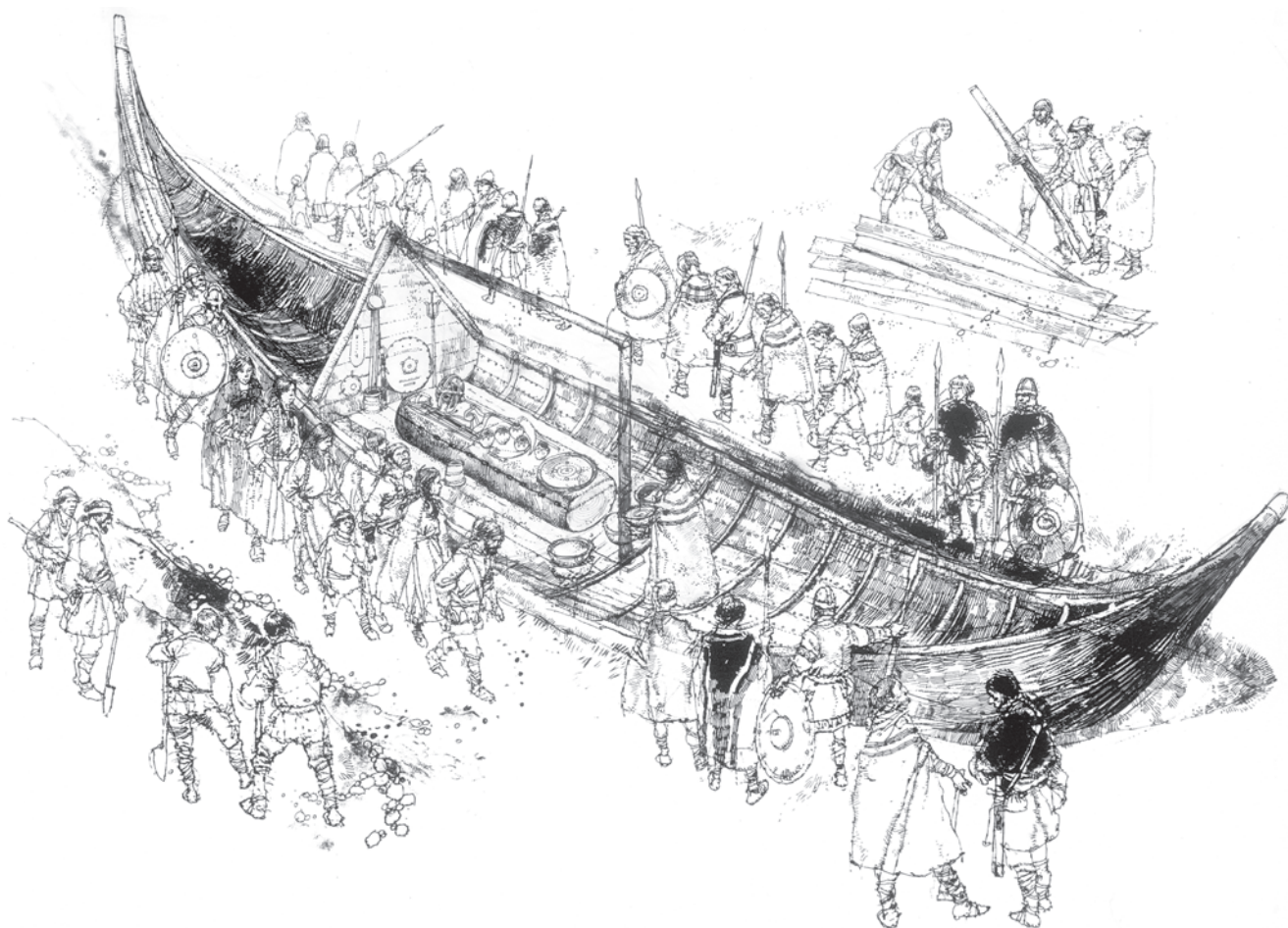
Bruce-Mitford was certain that Mound 1 had had a longitudinal depression along its long axis (east–west), 'indeed the logical interpolation and connection of the contours could give no other result' (Ashbee, SHSB I: 318). It would be tempting to deduce that this logic was fed by the persuasion, shared with Phillips, that these axial depressions were 'ship-dents', indicative of buried ships, and caused by the collapse of decks. No deck was found in the Mound 1 ship. Mounds 6 and 7, which also had such depressions, contained no ships, and in these cases it was shown that the depressions were the direct result of nineteenth-century excavations (see Chapter 4, pp. 95 and 101 and Chapter 12, p. 371).

Could Mound 1 have been subjected to excavation in the nineteenth-century campaign? On the basis of Mound 2, the excavators of the nineteenth-century campaign would have driven their trench into the mound east–west. This may well have happened, as, given the experience of excavating Mound 2, it seems unlikely that such a trench would have been seen in 1939. If such a trench existed, it may have passed right through the burial mound at the level of the old ground surface without finding a burial pit. Rivets would have been disturbed only on the east and west edges, where they had probably been already disturbed by ploughing.

Mound 1 could, therefore, have been ploughed from both east and west in the Middle Ages, suffered an attempted robbing by a shaft in the sixteenth or seventeenth century and then by a trench in the nineteenth century, and been ploughed again from the west thereafter.

#### ***Model for the burial rite enacted at Mound 1 and its aftermath***

- 1 The selected site for the burial is on a flat part of the plateau opposite a promontory. The area had been under the plough in the Iron Age, or later, and had then turfed over.
- 2 Turf is stripped off a wide area and stacked.
- 3 A trench, east–west, is dug, and the subsoil (sand) extracted from it cast up into two large spoil heaps 4 or 5 m away from the trench edge, to north and south.
- 4 A clinker-built ship, 27 m long, is brought up from the river on rollers, probably up one of the re-entrants to the west, or via the gentler route from Ferry Point to the south (see Figure 220, p. 495), and rolled into the trench from the west. The thwarts and sailing tackle are removed.
- 5 A burial chamber is constructed amidships, from timbers. It has a floor supported on joists, and horizontal planks forming the east and west walls; it has a gabled roof supported on a ridge-pole and braced against the gunwales.



**Figure 93** Mound 1: the day of burial (Victor Ambrus).

- The roof covering is on an east–west axis over north–south planking or rafters (Figure 89).
- 6 The chamber is carpeted with fabrics SH17–19, and furnished with hangings in fabrics SH2, 4, 5, 7 or 18.
  - 7 The body is placed on the floor or a platform or a bed, or in a plank or tree-trunk coffin. Fine accoutrements, and items of drinking and feasting equipment, are placed over or by the body, or on the coffin lid. A heap of mainly personal objects is placed at the feet or, if a coffin was used, the heap is placed inside the coffin (Figures 91 and 93).
  - 8 The ship trench is back-filled with soil that includes turf (stripped from a nearby area) and covers the walls and roof of the chamber. The jolt of earth against the east wall displaces the shield and the Coptic bowl, with its bundle of angons and spears, which slide together to the floor. The chamber roof and walls begin to bulge and rot and let in sand.
  - 9 At this stage, the stem and sternposts protrude from the ground. After a period of up to ten years, a mound c.4 m high is completed, with topsoil, turf and sand stripped from the surroundings.
  - 10 After 100–500 years, the burial chamber collapses: its walls buckle inwards dislodging the standard, shield, playing pieces, lyre and bowls on the west side, and cauldrons from the east wall. The Anastasius dish is bent into a concave shape around the coffin or pile of still coherent clothing, and other objects, at the foot of the deceased. Water collects underground, in the hull. By 500 years, all the timber has turned to sand, allowing water to drain freely through.
  - 11 In the later Middle Ages the mound is reduced in height by ploughing. Ploughing from the west truncates the west end.
  - 12 In the sixteenth or seventeenth century, a robber pit is dug through the then centre of the mound. It is abandoned at 3 m, and some surface debris is discarded into it.
  - 13 In the nineteenth century, a large trench is dug across the mound, from east to west, in an attempt to rob it. The excavators find neither a burial pit nor the previous robber pit, and abandon their attempt.
  - 14 Before 1882, the mound is ploughed again from the west, leaving the lynchet on the flank of the mound.





# Seventh-century assemblages

Angela Evans

(with contributions by Penelope Walton Rogers, Frances Lee, Julie Bond, Terry O'Connor and Keith Wade)

### Introduction

This chapter describes the finds recovered from furnished graves during the 1983–91 campaign, and presents studies that have been made of them. In the first part, Angela Evans describes the artefacts, and gives an assessment of the date, status and context accorded to each assemblage. Her assessments, which include the likely form of the numerous objects now only known from surviving fragments, are followed by detailed descriptions in catalogue form. The textiles are described by Penelope Walton Rogers. Keith Wade discusses the pottery from the graves. Artefacts are referred to by a catalogue number in bold; the inventory numbers of their components (as recorded on site) are given at the end of each catalogue entry. This chapter incorporates research on artefacts by the Department of Conservation, Documentation and Science in the British Museum, especially Fleur Shearman, Caroline Cartwright, Michael Cowell, Janet Lang, Susan LaNiece and Man Yee Liu.

In the second part, other specialists review the human and animal bone from the furnished graves. Cremated human bone from Mounds 5, 6, 7 and 18 is examined by Frances Lee, and the cremated animal bone from the same mounds is examined by Julie Bond. The poorly preserved human bone from the inhumations (Burials 9, 12, 15 and 16) is examined by Frances Lee. The horse skeleton from Mound 17 is reported and assessed by Terry O'Connor.

### Early Medieval artefacts

Angela Evans

### Introduction

Sutton Hoo is a high-status cemetery with an unusual array of objects, many of them precious or exotic. It is also a ruined cemetery in that the majority of its burials are robbed, assemblages are incomplete and once fine furnishings are represented only by fragments left behind from earlier

excavations. Because of the clear high status of some of its burials, the cemetery stands apart from other cemeteries in Anglo-Saxon England, although some attributes are shared with both other contemporary princely graves (e.g. Taplow, Bucks., Webster and East forthcoming) and with high-status graves throughout Anglo-Saxon England (e.g. Swallowcliffe Down, Speake 1989; Snape, Filmer-Sankey and Pestell 2001). In common are assemblages shared by the male graves – weapons, swords, drinking vessels (cf. Härke 1989: 49ff.), and the female graves – each with a *châtelaine*. The young child in Burial 12 (see Chapter 5, p. 138) was buried with a miniature spear or arrowhead and a buckle, signalling his future role in society (Crawford 1993: 85). The difficulty in interpreting the cemetery assemblages more precisely is that, for the most part, the objects from the recently excavated Mounds 2, 5, 6, 7 and 14 (the status of Mound 18 is uncertain) are so fragmentary that they can only be used with caution to date a whole assemblage or to draw wide-ranging comparisons from it. However, none of the fragmentary objects would be out of place in the first quarter of the seventh century.

The assemblages from the excavations by Basil Brown in 1938 (Mounds 2, 3 and 4) are fully published in SHSB I, chapter II, and the finds from Mound 1 are discussed in detail in SHSB II and III. Certain types of artefact represented by fragments in the following discussion – for example gaming-pieces, combs and lugged cauldrons – are given a fuller discussion in those volumes. The fragmentary finds from Mounds 5, 6 and 7, especially the bone finds, are more closely related to those of Mounds 3 and 4 than to finds from other cemeteries, although excavation reports (e.g. Spong Hill, Hills and Penn 1984; West Stow, West 1985) provide invaluable examples of local production groups. Key objects, of which there are few apart from the finds from Mound 17, are more fully discussed in individual sections below. Case studies for many of the object types (e.g. boxes, combs, knives, shears) are also presented by Geake in her recent study of conversion-period graves and their contents (Geake 1997).

The previous existence of objects can sometimes be inferred from the fragments that have survived – for example, from Mound 7, a single fragment of burnt silver fused to a fragment of melted gold is evidence of objects made of gold and silver, and two tiny dowels, together with two small rivets with mineral preserved bone on their shanks, suggest a bone box. In the same way, two silver fragments from Mound 2 are evidence of a lost silver bowl. Some of the key objects – the bead found on Mound 7 (see p. 208) and the pyramidal sword belt-fitting from Mound 6 (see p. 207) – did not necessarily originate in the burials beneath those mounds. Given the character of the two early excavation campaigns (see Chapter 12, p. 462), finds found on the surface may have derived from other rich, looted burials. Like the stray *cloisonné* mount found between Mound 4 and Mound 13 (see Chapter 5, p. 148), these displaced objects contribute only to a general overall picture of the cemetery's status and temporal span.

Apart from the impoverished assemblage in Mound 18 (see p. 210), the finds from the mounds and flat graves pose interesting questions of status and relative chronology. All the principal graves beneath Mounds 1–7 and 14 contained fragments from distinctive and exotic possessions with a high status connotation and belonging to a relatively narrow time-frame. Mounds 1 and 3, and perhaps 5 and 14, included objects of East Mediterranean manufacture; Mounds 7 and 14 may have contained boxes or caskets; Mounds 1, 4, 5, 6 and 7 contained gaming-pieces or counters; Mounds 1, 2, 5, 7 and 14 all contained drinking-cups and, in the case of Mounds 1 and 2, die-linked drinking-horns with identical Style II bird-headed terminals. Vendel-type shields and identical pattern-welded swords were buried in Mounds 1 and 2, underlining the similar status and date of these burials in their original form. This suggests that the graves cluster closely in time, spanning no more than a few generations.

Mound 17 stands apart from the other graves beneath mounds in the different bias of the accompanying grave goods. In common with the assemblages of two other high-status male inhumations in the cemetery (Mounds 1 and 2), were spears, a shield and a pattern-welded sword, a bronze bowl, a cauldron and a composite comb, but the grave goods do not include drinking-cups, gaming-pieces or boxes. Its status is conveyed in a different way – through its remarkable sword and scabbard belt-fittings and the horse's bridle. The decoration of the bridle fittings, with sophisticated but atypical peg-headed interlacing zoomorphs and extraordinary all-over garnet *cloisonné* on the sword belt and scabbard buckles (see p. 241), suggest a date that is stylistically earlier than material from its companion inhumations and the cremations (see below). Thus Mound 17 may be one of the earliest burials (but see also Chapter 8, p. 301, where a later position in the sequence is argued for the Mound 17 assemblage as a whole).

The artefacts from each burial are assessed below, in the order of cremations, inhumations and then Mound 2 ship-burial, following the scheme of Chapters 4–6. Each discussion is followed by a catalogue giving detailed dimensions and descriptions.

### Artefacts from cremations

The cremation burials beneath Mounds 5, 6, 7 and 18 were largely destroyed by earlier investigations, but the fragmentary assemblages share common features that link them to the

inhumations and cremations beneath Mounds 3 and 4 excavated by Basil Brown in 1938. The status of Mound 18 remains uncertain (below).

### Mound 5

Mound 5 (see Chapter 4, p. 71) was gutted by at least two robbing phases, and little survives of either the objects that were placed with the dead person or the style of burial, apart from the basic fact of cremation. Cremated human and animal bone was recovered, as were fragments of a copper-alloy container (2), some of which were associated with fragments of textile (6) – Walton Rogers, below. The copper-alloy bowl survived only as a mass of tiny and featureless fragments, on average 1 mm thick and less than 10 mm square. With one rim fragment and only a handful of larger scraps with a slight curve, it is only possible to assess the bowl, in very general terms, as having upright walls and a slightly expanded upright rim (Figure 94).

The remainder of the assemblage consists of fragments of a variety of possessions whose overall orientation is male. A group of silver fragments (3; Figure 94) comes from the rim-fittings of a small cup or container in walnut wood, similar in scale to those from other recorded high-status graves (e.g. East in SHSB III: 361ff., fig. 266). Such tiny containers are usually made of fine, even rare, wood and are delicately finished with silver or silver-gilt mounts. They may have been used for small tots of liquor, e.g. mead. Two fragments of a milled silver collar (17; Figure 95) were also found. The object to which this belonged is unidentifiable, but possible comparisons may be made, for example with the milled band separating the pedestal and the foot element of the iron ring supporting the stag on the sceptre from Mound 1 (SHSB II: figs 251 and 254). The burial contained fragments of at least twelve gaming-pieces (7a). All are made from the joint end of small long bones, carefully shaped and lidded (Figure 94 and Plate 42), and consistently show signs of burning. One small fragment of (unburned) bone may also be a gaming-piece, similar to the ivory gaming-pieces in Mound 1 (SHSB III: 856ff., figs 611 and 613). It is cylindrical with incised decoration on the outer face (7b; Figure 94), and is carved from a solid piece of bone. Gaming-pieces are found in other high-status graves, including Taplow, which shares the taste for composite pieces (Webster and East forthcoming). Gaming-counters (Mounds 6 and 7 below) occur widely in East Anglian cremation cemeteries (cf. Spong Hill, Hills and Penn 1981: 177ff.). Gaming-pieces in general are discussed by Youngs in relation to the whalebone ivory set in Mound 1 (SHSB III: 833ff.; see also Dickinson and Speake 1992: 109 and Geake 1997: 101–2). The grave also contains a remarkable piece of ivory (10; Figure 95), which is planed and polished smooth on all sides and is ornamented with a highly stylized zoomorphic head in high relief. It is broken across a large piercing. The fragment is unparalleled and its function is uncertain. Although rather thick, with un-bevelled edges, it could possibly be part of a lid from a narrow box similar in scale to the stylus-boxes of the later Anglo-Saxon period (Backhouse, Turner and Webster 1984, cat. no. 132). The presence of ivory – a rare commodity in Anglo-Saxon England (La Niece 1987; Huggett 1988: 63) – is in itself evidence of the grave's high status, which is also indicated by the fragmentary silver rim-mounts and swaged strips from one or more small wooden containers or cups (3). Three small rivets, one iron and two

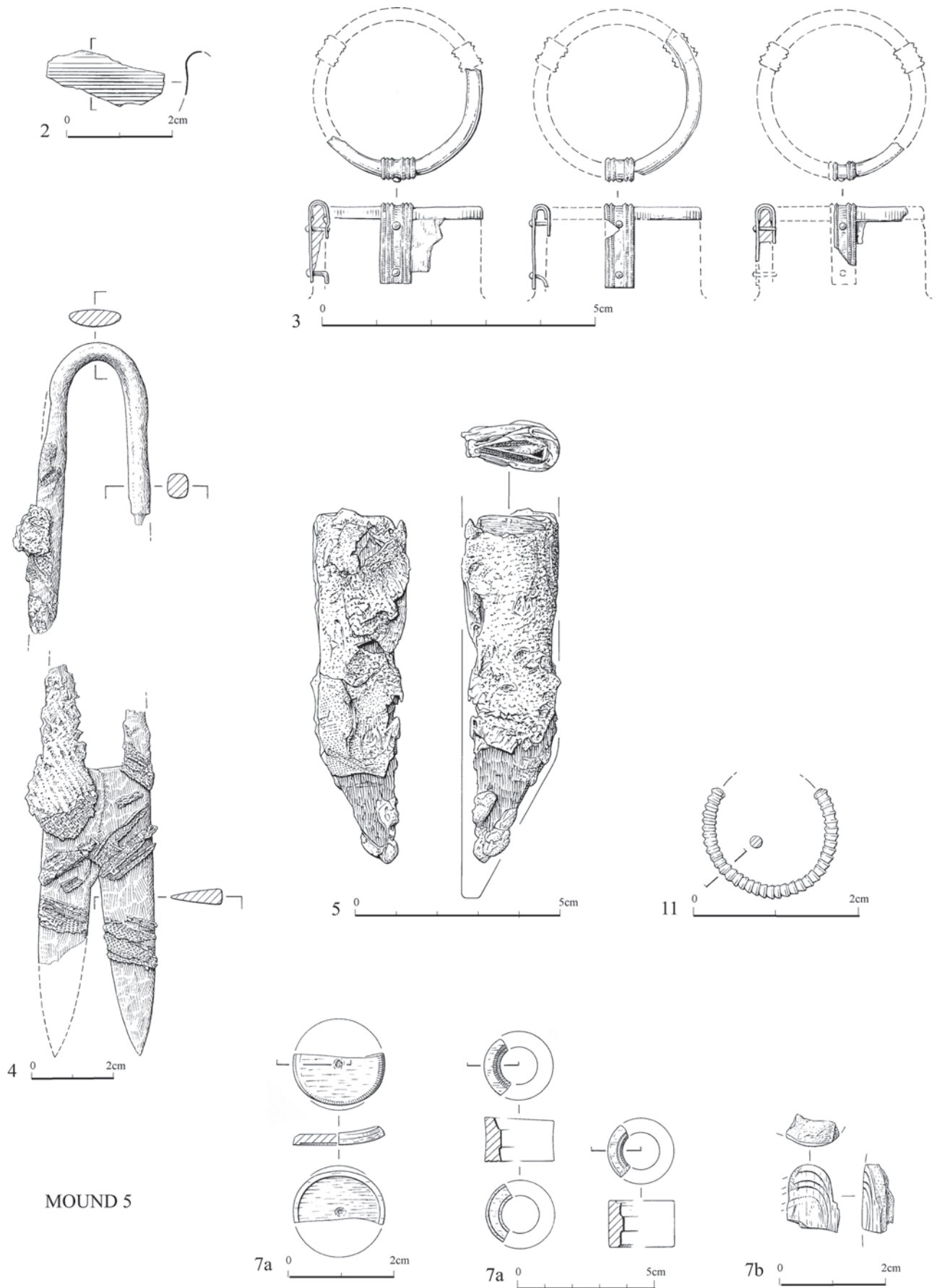
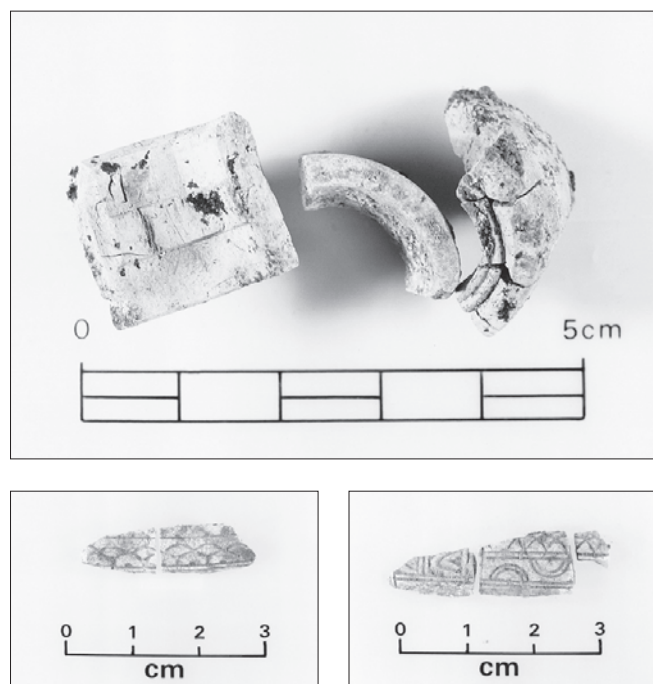


Figure 94 Mound 5: artefacts 2–5, 7 and 11.



**Plate 42** (a) Composite bone gaming-piece 7a from Mound 5; (b) decorated bone 5a (44/4166) from Mound 6; (c) decorated bone 5c (44/6240) from Mound 6.

copper-alloy, piercing two thicknesses of bone, and an associated fragment of thin copper-alloy sheet (9; Figure 95), may be all that remains of the fixings and facing of a bone box. One tiny piece of fused glass (1) can only be interpreted as evidence that something in this medium – whether a bead or a glass vessel – melted down on the funeral pyre and was scraped up with the bones for burial (but see details of the vitrified sand found with Mound 18, below).

Amongst the unburned grave goods were an iron knife (5, Figure 94) in a well-preserved leather sheath, and fragments of two composite combs (8, Figure 95), one (8a) with facings

decorated with ring-and-dot ornament. Knives are the most common implement found in Anglo-Saxon graves, occurring in the graves of men, women and children. In her study of the Dover Buckland Anglo-Saxon cemetery, Evison (1987: text fig. 22) presents a broad classificatory scheme. Critical to any classification is the survival of the blade back and this fragmentary example preserves enough of its original features to place it within Evison type 5 (angled back, straight cutting edge), which falls broadly within a seventh-century context (cf. Böhner's type C, Böhner 1958: 2, Taf. 60). Both comb fragments are from single-sided combs. The larger fragment consists of one end only, decorated with well-executed ring-and-dot ornament along the upper edge of the outer face. Only two iron rivets survive. Although fragmentary, this fragment can be compared, for example, to a comb in grave 13 at Castle Dyke, Barton-on-Humber (Drinkall and Foreman 1998: fig. 57.1). The assemblage also contains iron shears (4, Figure 94) covered with textile remains. The inclusion of a pair of shears in a high-status male inhumation is unusual, particularly in a conversion-period Anglo-Saxon context (Geake 1997: 96–7). However, shears do occasionally occur on the Continent in high-status male graves from the early seventh century; for example, grave 4 in the cemetery of Wallerstädten, Hesse, where shears are corroded to a comb similar in form to the comb in Mound 5 (Schnellenhamp 1932: 63ff. and Menghin 1983: 269, no. 125; cf. also Menghin 1983: 271, no. 128 and Niederstotzen grave 1, Paulsen 1967: 181).

The surviving assemblage can be identified as a cremation in which burnt bone from a young person of undetermined sex (see Lee, below) had been placed in a copper-alloy container, which was wrapped or covered by cloth. The character of the objects suggests a male grave with a date in the early seventh century. The few objects that can be recognized imply a burial equal in rank to the other cremations in the cemetery, and it is not unreasonable to suppose that every recognizable object of precious metal was removed during one or other of the later robbing phases.

## Catalogue: Mound 5

### 1

#### Fused glass

4I/41352

Dimensions: 5 × 4 mm

A tiny fragment of metal fused by the heat of cremation into a featureless globule. Found associated with a mass of cremated bone.

### 2

#### Copper-alloy bowl (Figure 94)

Dimensions: Large fragments:

4I/38928 (40 × 31 × 1 mm),  
4I/40971 (24 × 13 × 1 mm),  
4I/40836 (rim, 23 × 8 × 1 mm),  
4I/40772 (18 × 10 × 1 mm), 4I/40765  
(17 × 8 × 1 mm) and 4I/40224 (15 ×  
13 × 1 mm). Remaining fragments  
less than 10 mm<sup>2</sup> and 1 mm thick, on  
average: 4I/36936, 4I/37138,  
4I/37155, 4I/37161, 4I/37170,  
4I/37173, 4I/37187, 4I/37194,

4I/37201, 4I/37208, 4I/37233,  
4I/38928, 4I/38986, 4I/40224,  
4I/40668, 4I/40669, 4I/40742,  
4I/40745, 4I/40765, 4I/40772,  
4I/40783, 4I/40811, 4I/40815,  
4I/40832, 4I/40833, 4I/40836  
(rim), 4I/40881, 4I/40887,  
4I/40963, 4I/40971, 4I/40992,  
4I/41360 and 4I/41406.

Fragments of a shattered bowl,  
with attached textile. It was  
probably a shallow, thin-bodied  
bowl with upright walls and a  
slightly expanded upright rim.  
The fragments that survive are too  
small and featureless to attempt  
any reconstruction.

### 3

#### Silver vessel-mounts (Figure 94)

4I/40746, 4I/40883, 4I/41358 and  
4I/41407

Dimensions: rim diameter: 33 mm

(reconstructed); clips: 16 × 5.5 mm  
and 15 × 5 mm; rivets are spaced 9  
mm apart

Three fragments of rim binding,  
four rim clips and a sliver of wood  
from small cups or containers. The  
bindings are U-shaped and enclose  
rims 1.5 mm thick. The clips are cut  
from a strip of metal decorated  
with two (40883, 41407) and three  
(40746) raised mouldings to either  
side of a plain median band. The  
ends are clipped at right angles to  
the long axis. The clips are shaped  
around the rim binding and are  
secured through the wood by a  
pair of dome-headed silver pins,  
with ends bent over at right angles  
and hammered flush with the  
inner surface of the strip. A small  
fragment of wood is held by one  
clip, and although too small to be  
identified, on analogy with

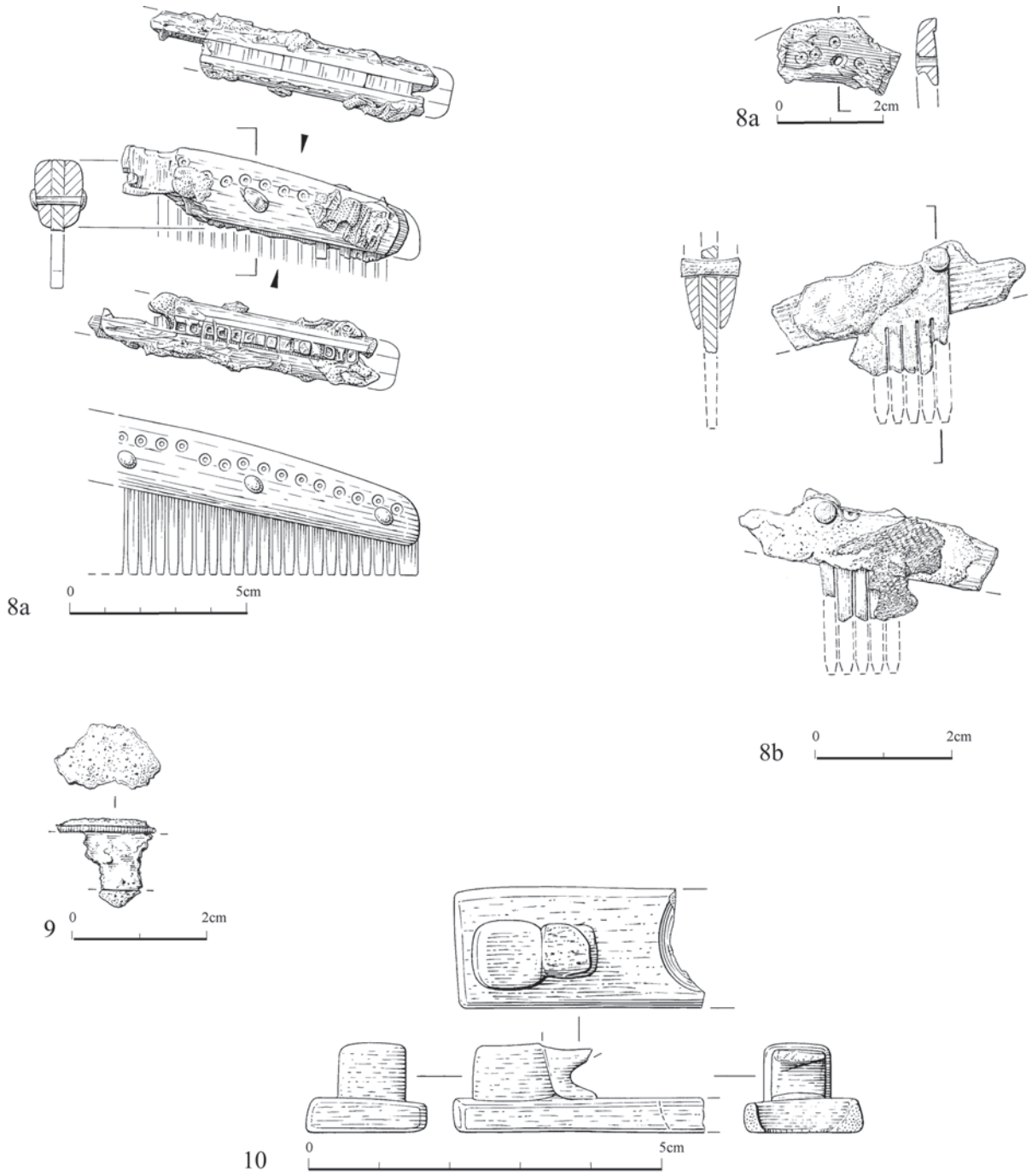
Mound 1 it may be walnut burr-  
wood (*Juglans regia*, cf. SHSB III:  
363).

### 4a

#### Iron shears (Figure 94)

4I/40601–3, 4I/40771, 4I/40773,  
4I/40784, 4I/40835 and 4I/40852  
Dimensions: length (overall) 162  
mm; (blades) 71 mm; depth of  
blades 14 mm

Shears covered on one face with  
layers of mineral-preserved  
textile. The blades are triangular  
and sharply pointed, with a well-  
defined right angle at the choil  
end of the cutting edge. The arms  
are rectangular close to the blade,  
changing through a rounded  
cross-section to splay out into the  
U-shaped strap spring.



MOUND 5

Figure 95 Mound 5: artefacts 7–10.

**4b**

**Textile associated with shears**

4I/40601-3, 4I/40773, 4I/40784, 4I/40787 and 4I/40852

- i Over much of one face of the shears, arranged in neat folds, and with at least one seam. Largest area: 20 × 12 mm; tabby weave: 26/Z × 16/Z per cm; fibre: flax/hemp. Seam is stitched with plied yarn, Z2S, 0.6 mm diameter, c.2 stitches per cm (Figure 94).
- ii In two layers above crossing point of blades: 35 × 18 mm, 2/2 diamond twill (Figure 123a), 24/Z × 14/Z per cm; fibre: flax/hemp.

**5**

**Iron knife (Figure 94)**

4I/38938 and 4I/38987

Dimensions: length (overall) 83 mm; depth of blade 14 mm

Part of a knife blade in a well-preserved leather scabbard, with patches of mineralized textile on one face. The blade is triangular in cross-section and has an angular taper towards the point. The scabbard is made from a single piece of leather, folded and stitched along the joining edge.

**6**

**Fragments of mineral-preserved textile, generally associated with artefacts**

4I/36936, 4I/38938, 4I/38982, 4I/39199, 4I/40219, 4I/40224, 4I/40597, 4I/40672, 4I/40747, 4I/40767-8, 4I/40770, 4I/40783, 4I/40803, 4I/40810-II, 4I/40815-16, 4I/40833, 4I/40886, 4I/40963, 4I/41111, 4I/41356, 4I/41402-3, 4I/41408 and 4I/41354-5

Approximately 30 fragments, each smaller than 10 × 10 mm, incorporating:

- i tabby weave 20-4/Z × 16/Z per cm; fibre: flax (from examination of 40672)
- ii 2/2 diamond twill (Figure 123:b-d), 24-6/Z × 14-16/Z threads per cm; fibre: flax/hemp
- iii tabby repp, 28/Z × 36-40/Z per cm; fibre: flax/hemp

**7a**

**Bone gaming-pieces (Figure 94, Plate 42)**

4I/38086, 4I/40228A-B, 4I/40596, 4I/40741, 4I/40774, 4I/40775, 4I/40819, 4I/40840, 4I/40895, 4I/41351 and 4I/41353  
Dimensions: various (40228, diameter 17 mm; 40596, 22 × 15 mm; 40774, 20 × 24 mm)

Twelve fragments of composite gaming-pieces, all made from a hollow cylinder of bone with integral base and walls, and a carefully shaped lid with a bevelled edge on the visible surface. On one fragment (40774) the interior has a well-defined median band forming a shallow ledge on which the lid may have rested. It is probable that a natural glue was used to stick the lid in place, and it has been suggested that the cylinder may have been filled (e.g. with resin) to weight the piece in play. Gaming-pieces and counters occur in several of the mounds and are discussed further below. The reconstruction drawing is based on the evidence of the larger of the fragments.

**7b**

**Bone gaming-piece (?) (Figure 94)**

4I/38912  
Dimensions: 12 × 10 × 6 mm

Fragment, apparently from a cylindrical object with a worked outer face, decorated with a series

of finely incised lines forming a semicircular motif. Insufficient remains to identify the object from which this fragment comes. It may be a gaming-piece, different in construction from the typical pieces from Mound 5 (7a above), but closer to those found in Mound 1 (SHSB III: 856ff., figs. 611 and 613).

**8a**

**Bone comb (Figure 95)**

4I/40857, 4I/41403, 4I/41404, 4I/41557 and 4I/38989

Dimensions: length 40 mm

Fragments from a humpbacked composite comb with facings decorated with ring and dot ornaments. They have associated textile (see report by Walton Rogers, below).

**8b**

**Bone comb (Figure 95)**

4I/40771

Dimensions: length 36 mm

Fragment of a single-sided bone comb with undecorated facings. It has associated textile.

**9**

**Copper-alloy and iron box (?) fittings (Figure 95)**

4I/40757-9

Dimensions: length of rivets: 12 mm (4I/40757) and 11 mm (4I/40758 and 4I/40759)

Two copper-alloy rivets (4I/40758-9) and one iron rivet with associated fragments of bone and copper-alloy sheet (4I/40757). Only two thicknesses of bone are visible on the rivet, and this suggests that this and the copper-alloy rivets may be from a box.

**10**

**Ivory lid (?) of box (Figure 95)**

4I/40839

Dimensions: 35 × 16 × 12 mm

The fragment is narrow and rectangular, with carefully finished edges. The surface is smooth, as though polished. The object is broken across a circular cut-out, which resembles a thumbhole. Behind this, towards the narrow end, is a small lug all of a piece with the 'lid', and in the form of a highly stylized small animal head.

**11**

**Silver collar (Figure 95)**

4I/116

Dimensions: thickness 2 mm; diameter (reconstructed) 18 mm

Two joining lengths survive, which together form two-thirds of the circumference. The cross-section of the collar is circular, and the entire surface of the metal is milled, which is presumably designed to disguise the join between two parts of a composite object.

**12**

**Iron concretions**

4I/39741, 4I/40802, 4I/40886, 4I/41357, 4I/41359, 4I/1405

**13**

**Mineralized sand**

4I/40747 and 4I/40768

**14**

**Organic material**

4I/38413, 4I/14657, 4I/19631 and 4I/19682

Brown waxy substance of natural origin.

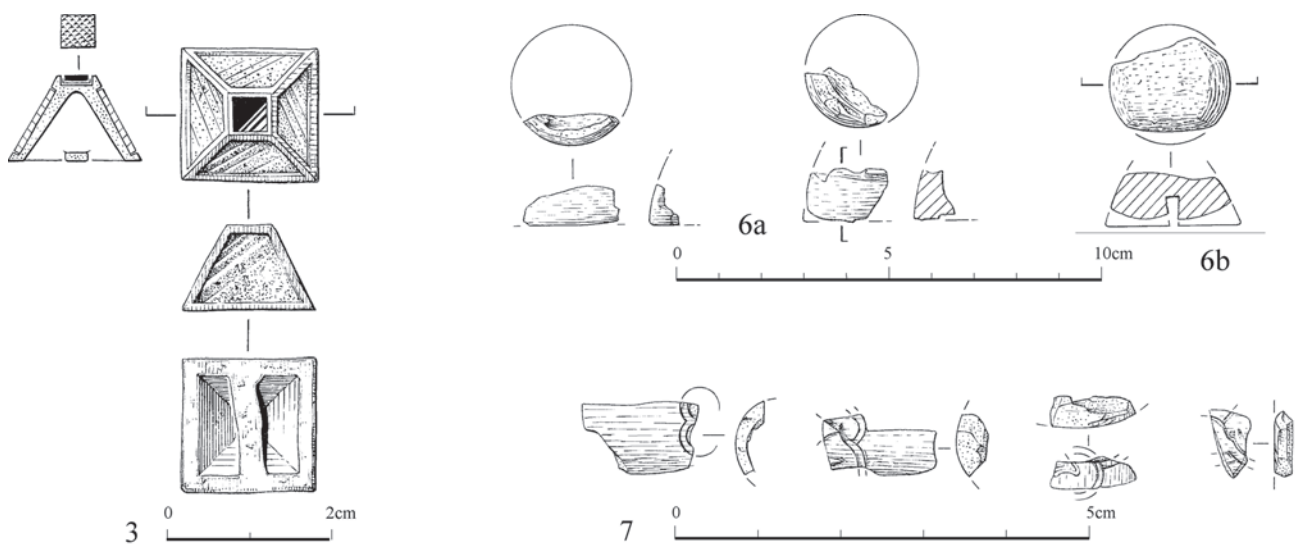
*Mound 6*

Mound 6 (see Chapter 4, p. 87), like its companion cremations, was emptied by grave robbers, and the surviving assemblage is consequently impoverished (Figure 96). The bronze bowl (2), in which the burned bones were placed, survives only as a mass of fragments from the body. No rim sections remain and few fragments show any curve, so that neither rim-form nor the shape of the bowl can be reconstructed. Traces of the planishing hammer used in the raising of the bowl are visible on some larger fragments. Some fragments are crushed, and others are folded, suggesting that the fabric of the bowl was still in good condition when the burial was robbed. Apart from the textile (4) used to cover the funerary container, and the tip of a copper-alloy pin (1), the only other finds to survive that are certainly from this grave are all bone. They include part of a single-sided comb (5b) and fragments of two groups of bone facings (5a, c and d). The facings are decorated with incised geometric motifs,

and the majority are probably from the outer faces of one or, perhaps, two composite combs (5a and c). The second set may be all that remains of a bone box (5d). Similar fragments of decorated bone facings were excavated by Basil Brown in the grave beneath Mound 3 in 1938, the same grave that also contained the remarkable winged victory plaque (SHSB I: 101, Inv. 7 and 8). While one Mound 3 fragment (Inv. 8) is clearly from a composite comb, the others, like the fragments from Mound 6, are thought to be the facings from a box or casket. The grave also contained burned and unburned composite gaming-pieces (6a; Figure 96), similar in construction to those from Mound 5 (see above), and one fragment of a planoconvex gaming-counter (6b; Figure 96). Gaming-counters, as opposed to gaming-pieces, occur only in Mounds 6 and 7. Fragments of a third bone object (7; Figure 96) may be part of a decorated, pencil-thin rod, similar in dimensions to the 'wand' in Mound 1 (SHSB II: 397 and fig. 286).

The burial in Mound 6 was originally a cremation, in which the burnt bone was placed in a copper-alloy container covered or wrapped with a cloth. The fragments of the grave assemblage are similar, in both content and status, to the surviving finds in both Mounds 5 and 7 and also to some of the objects in Mound 2 (e.g. the bone facings), suggesting that the cremations and the inhumations may be of equivalent rank. A further indication that the Mound 6 grave was of broadly equal status to its companions is given by a single copper-alloy pyramidal strap-mount from a sword suspension system (3, Figure 96). The pyramid has cloudy greenish glass inlays on each of its four faces, and a single, square-cut, polished plate garnet on the top, and can be compared to a stray find from Milton Keynes (for a discussion of the function and distribution of sword pyramids see Mound 17 below, p. 242). The Mound 6 sword pyramid came from the

disturbed make-up of the mound north of the robber trench (see Chapter 4 and Figure 34). If accepted as part of the assemblage, it would imply that the grave contained a sword and, at the very least, a belt buckle, which was probably of copper alloy, matching the pyramidal fitting. It probably originally contained a second pyramid as, although sword suspension systems occur with a singleton pyramid or scabbard boss (particularly on the Continent), they are more commonly found in pairs in Early Anglo-Saxon England (Menghin 1983: 363ff.). The two sets of sword gear in Mounds 1 and 17 at Sutton Hoo both favour a pair of pyramidal fittings attached to the scabbard loop (see Mound 17 below, p. 215 and Mound 1, SHSB II: 568ff.). Their currency dates from the late sixth/early seventh century and extends into the eighth century. The character of the objects suggests a male grave, dated to the early seventh century.



MOUND 6

Figure 96 Mound 6: artefacts 3, 6 and 7.

## Catalogue: Mound 6

**1**  
**Copper-alloy pin (not illustrated)**  
44/2301  
Dimensions: 1 × 2 mm  
Fragment from the tip of a pin (?).

**2**  
**Copper-alloy bowl (not illustrated)**  
Dimensions: over 30 mm<sup>2</sup>:  
44/5848, 44/5876, 44/5892-4,  
44/5897, 44/6006 and 44/6196;  
20-29 mm<sup>2</sup>: 44/2256, 44/5831,  
44/5887, 44/5906, 44/6010,  
44/6013 and 44/6058; 10-19 mm<sup>2</sup>:  
44/5830, 44/5833, 44/5840,  
44/5843, 44/5845, 44/5873,  
44/5912, 44/6036, 44/6043,  
44/6051, 44/6064, 44/6154,  
44/6199, 44/6219, 44/6411 and  
44/6417; less than 10 mm<sup>2</sup>:

44/2301-4, 44/2306-10, 44/2312,  
44/2314-17, 44/2325, 44/2329,  
44/2333, 44/2334, 44/2339,  
44/2343, 44/2344, 44/2386,  
44/2394, 44/4096, 44/4097,  
44/4099, 44/4107, 44/4113,  
44/4119, 44/4145, 44/4148,  
44/4157, 44/4161, 44/4163,  
44/4164, 44/4175, 44/4176,  
44/4178, 44/4180, 44/4193,  
44/4194, 44/4196, 44/4197,  
44/4580, 44/4614, 44/4615,  
44/4634, 44/4646, 44/4651-3,  
44/4657, 44/5870, 44/6019,  
44/6044, 44/6050, 44/6055,  
44/6056, 44/6065, 44/6176,  
44/6191, 44/6192 and 44/6243

Fragments of copper-alloy sheet  
from a bowl. Traces of the  
planishing hammer are visible on  
the surface of some fragments.

**3**  
**Copper-alloy, garnet and glass  
strap-mount (Figure 96)**  
44/483  
Dimensions: base 16 mm<sup>2</sup>; height  
12 mm

Pyramidal mount from a scabbard  
loop, inlaid on each face with a  
single setting of dull, pale green  
glass, and on the top with a single,  
small square-cut garnet. On the  
undersurface is a crossbar for the  
strap.

**4**  
**Organic material**  
44/2306, 44/2308, 44/2312,  
44/2325, 44/4107, 44/4163,  
44/4164, 44/4180, 44/4193,  
44/4194, 44/4196, 44/4197,  
44/4580, 44/5845 and 44/6411

Fragments of unidentifiable  
mineral-preserved organic  
material, possibly textile,  
associated with copper-alloy bowl  
(2), mostly highly degraded.

**5**  
**Bone facings from one or two  
combs and a box (?) (Plate 42:b  
and c)**

**a Two small fragments from one  
of the outer faces of a  
composite (?) bone comb**  
44/4602 and 44/4166  
Dimensions: 25 × 8 × 3.5 mm and  
10.5 × 8 × 5 mm

Both are decorated with an incised  
motif of joined lozenges between  
paired parallel lines and  
(44/4602) running scallops  
against the upper edge. Rivet holes  
survive on both fragments.

**b Fragment of a single-sided (?) bone comb**

44/6090

Dimensions: 24 × 21 × 4 mm

In poor condition, with traces of a finished surface on one side and cancellous tissue on the other. The teeth survive only as stumps.

**c Three fragments from the face of a possible composite bone comb**

44/6240

Dimensions: 28 × 8 × 4 mm

With incised zonal decoration as follows:

- i boxed triangle within a triangle
- ii offset half-ring and dot, resting on the inner of a pair of parallel lines

iii intersecting semicircles resting on the inner of a pair of parallel lines

**d Eleven fragments from a (calcined) possible composite bone comb and a second bone-faced object, possibly a box**

44/6419

Dimensions: 8 × 6 × 4 mm (largest)

Of the fragments, eight are decorated with incised motifs that fall into two groups:

- i linked soft triangles, cf. 44/4602
- ii ring and dot, parallel lines and cross hatching

**6****Bone gaming pieces and counters (Figure 96)****a Fragments of two bone composite gaming pieces**

44/2361 and 44/2398

Dimensions: 22 × 19 mm (44/2361) and 11.5 × 9.5 mm (44/2398)

Both are badly scorched from the cremation fire, and are from the base of examples identical in structure to those from Mound 5 (above).

**b Part of a large and very worn bone gaming counter**

44/6214

Dimensions: 27 × 16 × 10 mm

With a convex upper surface and a single hole (3 mm diameter) drilled in the base.

**7****Bone (possibly ivory) rod or wand (?) (Figure 96)**

44/2387

Dimensions: 17 mm × 11 mm (largest)

Twelve very small fragments, all burned and most with a curved outer face. Two show simple incised decoration in the form of double arcading. From a cylindrical object with a reconstructed diameter of only 9 mm.

**8****Pottery (not illustrated)**

44/7484

One burnt (?) Medieval flat base sherd in sandy fabric (description by Keith Wade), found at site grid 115.27/126.40/32.17.

*Mound 7*

The burial in Mound 7 was virtually destroyed by grave robbers (see Chapter 4, p. 96), and little remained of the grave pit or the cremation assemblage. The few fragmentary finds that were recovered in the robber trench fill, and at the very lowest levels of the robbing pit, suggest a burial of similar status to others in the cemetery. The assemblage is similar to those of the other cremations, but the finds are so fragmentary that in this mound the identification of the parent objects is particularly difficult. A copper-alloy container, possibly for the cremated bone, is represented by only two fragments of a thin-walled bowl (1). One of these has a short length of finished edge and presumably comes from the rim, but insufficient survives to make any assessment of its form. The circular depression in the floor of the burial pit, where the bowl might have stood (Context 1407, Figure 40), measured 250 mm in diameter.

Several pieces of mineral-replaced textile (the remains of the cloth that covered the bowl) survive (5, see p. 262). Three heavier fragments of copper alloy, including one distorted by burning, suggest that a lugged cauldron (3) was burned on the pyre. Two fragments of a copper-alloy pin (9) also survive (cf. Mound 6, above), as does the tip of a knife-blade (10). Amongst the cremated bone were three planoconvex bone gaming-counters (7a–c; one charred), and two small iron rivets, with associated bone, one fragment of bone facing with incised trellis decoration (5d; cf. Mound 6, above) and two tiny bone dowels (8) – a disparate group that suggests that a bone-faced box was amongst the buried objects. One fragment of partly melted silver with traces of decoration, and fused to a fragment of gold (2; Figure 97), is the only evidence of precious metal from the grave. A fragment of iron strip (4; Figure 97) could be part of a decorative strip from an iron-bound tub (cf. East in SHSB III: 561).

One half of a large biconical reticella glass bead (6; Figure 97) was found in association with a rabbit hole on the north-west shoulder of the mound, and thus does not belong with certainty to the Mound 7 burial (see Chapter 4, p. 99). It is made with a core of translucent pale greenish-blue glass, wrapped with rods of opaque yellow, red and black glass, which are twisted into an exceptionally well executed herringbone pattern. It is split across its perforation. A smaller, globular bead made

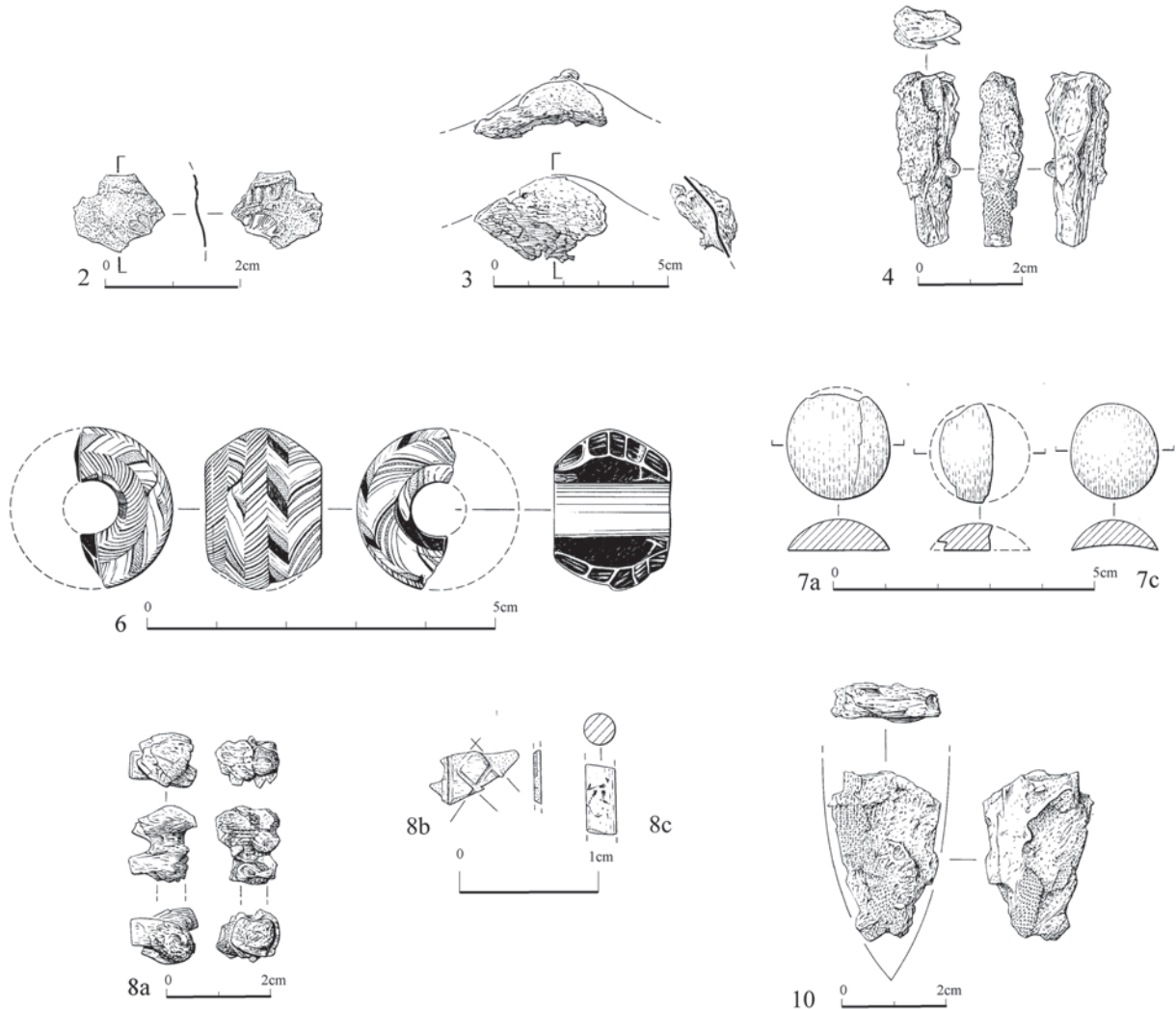
using rods of the same colours twisted into a herringbone pattern was found in grave 98 at Hadleigh Road, Ipswich, Suffolk (Layard 1907: pl. xxxii, string 5; West 1998, fig. 87: group 16, no. 46). This was found in a female grave which contained 108 (93, according to West) beads, a square-headed brooch (Hines unclassified sub-group VI; brooches in this group fall into Hines phase 3, with a manufacturing end date of c.570, see Hines 1997: 196, 230–4 and pl. 99c), two knives and a pothook. A second barrel-shaped reticella bead, made using rods of yellow and red glass, was also found during Nina Layard's excavations in Ipswich, but its grave associations are no longer known (Layard 1907: pl. xxxii, string 2; West 1998: fig. 85, group 11). A similar barrel-shaped reticella bead comes from grave 44, in the cemetery at Portway, Andover (Cook and Dacre 1985: 82, fig. 59, no. 30). This has zigzag decoration in black/dark blue, white and yellow, and is compared to similar beads in the cemetery of Schretzheim, where this type is dated to the second half of the sixth century (cf. drum-shaped beads in graves 502 and 587, Koch group 48.12, Koch 1977). Other drum-shaped reticella beads have also been found in grave 134 at Castledyke, Barton-on-Humber (Drinkall and Foreman 1998: 262 and fig. 95), Bifrons 74 (Brugmann 1999: 41), Mill Hill I, grave 102 (Brugmann 1999: 58) and Dover Buckland (Evison 1987: 65). The latter was found in a man's grave, and is thought to be a sword bead. If the Mound 7 bead is accepted as being from Mound 7, and not as a stray from another grave (e.g. Mound 14), then its size and broad perforation could suggest that it, like the Dover Buckland bead, came from a sword. The biconical shape, however, is rare amongst sword beads, although one is known from Hammelburg, in a grave dated by two silver coins of Theodosius I (AD 379–95) or Theodosius II (AD 402–50). The latter bead is made of rock crystal with a well-defined biconical profile (Koch 1977: 123ff., Taf. 25:1–17; also Werner 1956: 49, 125, Taf. 57). Sword beads and their function have been discussed at length by Werner (ibid.: 26–37, esp. 34), Evison (1967: 63ff. and 1976: 303ff.) and Menghin (1983: 142–4, 355–7 and map 19), who regard their currency as predominantly sixth century.

The assemblage in Mound 7 is so fragmentary that it is difficult to draw any firm conclusions from it. The burial rite is that of cremation, in which the burnt bone was placed in a



copper-alloy container which was covered or wrapped in a cloth. The late sixth-century affinities of the bead (above) may suggest that the grave's date lies early in the cemetery sequence, possibly even in the late sixth century; but the bead may have migrated from another mound during the excavation campaign of the sixteenth century (see Chapter 4, p. 100). Accepting it is

from the burial, the bead would imply a male grave that included a sword. Other finds implied by the fragments suggest objects from a high-status burial: the fused fragment of silver and gold, a bronze bowl, a cauldron, a tub, gaming-counters and a bone-faced box. All would all be equally at home in the late sixth or early seventh centuries.



MOUND 7

Figure 97 Mound 7: artefacts 2–4, 6–8 and 10.

## Catalogue: Mound 7

### Copper-alloy bowl (not illustrated)

44/4615 and 44/13778  
Dimensions: 16 mm × 11 mm (largest)

Two fragments from a thin-walled bowl: one body fragment and one, burnt and distorted, with a single finished edge, from the rim.

### 2

#### Fused silver and gold (Figure 97)

44/16559

A fragment of burnt silver fused to a fragment of melted gold. On one face it has traces of billeting. The

fragment is too small to reconstruct its parent objects.

### 3

#### Copper-alloy cauldron (Figure 97)

44/16462, 44/16463, 44/16553 and 44/16571

Dimensions: 24 mm × 10 mm (largest)

Three small fragments of metal, which are heavier in weight than they would be if part of the shallow vessels used to hold cremations (as in 1 above). Two can tentatively be identified as part of a lug (illustrated) and a

piece from the shoulder of a lugged cauldron. Five smaller fragments of distorted sheet might be from the same vessel.

### 4

#### Iron strip (Figure 97)

44/16543

Dimensions: 33 × 11 mm

A fragment of narrow iron strip with mineral-replaced textile on its surface. It is possibly from part of a decorative strip from an iron-bound bucket.

### 5

#### Textile

44/16547, 44/16550, 44/16552, 44/16555 and 44/16558

Dimensions: all less than 10 × 10 mm

Fragments of mineral-preserved textile: probably the cloth used to wrap the funerary vessel. There are approximately twenty fragments, all the same. They are 2/1 twill, 26–30/Z × 20–25/Z per cm; fibre: flax/hemp.

- 6**  
**Glass bead (Figure 97; Colour Plate 11:b)**  
 44/1547  
 Dimensions: max. diameter 24 mm; perforation diameter 8 mm  
 One half of a biconical 'reticella' glass bead with a large perforation. The core is made of translucent pale greenish-blue metal wrapped with alternate S- and Z-twisted composite rods of opaque yellow, opaque red and 'black' glass, to give a well-defined herringbone pattern.
- 7**  
**Bone gaming-counters (Figure 97)**  
**a Bone gaming-counter with convex upper surface**  
 44/16461  
 Dimensions: 18 mm diameter  
 No markings.

- b Part of a bone-gaming counter**  
 44/16551  
 Dimensions: 19 mm diameter  
 Similar to (7a) 16461, but crushed and fire scorched.
- c Fragments of a convex bone gaming-counter**  
 44/16556  
 Dimensions: 16 mm diameter
- 8**  
**Bone box (?) fragments (Figure 97)**  
**a Two small iron rivets with two layers of adhering bone**  
 44/16549 and 44/16557  
 Dimensions: 14 mm and 17 mm overall; adhering bone is approximately 5 mm thick  
 Both are smaller in scale than those used to fasten the three layers of a composite comb, and

may be associated with the fragmentary bone facings and bone dowel (8b and c) as part of the fastenings of a casket.

- b Fragment of thin bone sheet with incised trellis decoration**  
 44/16561  
 Dimensions: 6 mm × 4 mm  
 A sliver from a thicker piece, this is perhaps a fragment of decorative facing from a bone casket.
- c Bone dowel**  
 44/16562  
 Dimensions: length 5 mm, diameter 1.5 mm  
 Perhaps a fastening from a bone casket.

- 9**  
**Copper-alloy pin (not illustrated)**  
 44/15526  
 Dimensions: 10 × 2.5 mm overall  
 Two joining fragments from the pin of a brooch (?).
- 10**  
**Iron knife (Figure 97)**  
 44/16464  
 Dimensions: length 30 mm, width 15 mm at break  
 Tip of a knife-blade, with degraded mineral-replaced textile on both faces.

### Mound 18

The burial in Mound 18 was almost entirely destroyed (see Chapter 4, p. 101). All that survived were a scatter of tiny fragments of cremated bone and copper-alloy fragments from the funerary vessel (1), too small and featureless for any assessment of its form to be made, and part of one of the central elements of a composite comb (2) with the stumps of three teeth. It is impossible to make any assessment of the burial's status from such an impoverished assemblage, but the original

burial rite is likely to have been cremation, with the burnt bone placed in a copper-alloy container covered or wrapped in textile, of which only a couple of abraded threads remain attached to the copper alloy. An early seventh-century date might be assumed from its context within the cemetery. Material originally thought to be glass was analysed and found to be vitrified sand, which was however not untypical of a cremation (Henderson, Janaway and Richards 1987).

## Catalogue: Mound 18

- 1**  
**Copper-alloy bowl (not illustrated)**  
 48/500-3, 48/517, 48/564, 48/569-72, 48/910, 48/921, 48/926, 48/952, 48/1684, 48/3216  
 Dimensions: 10 × 15 mm (largest fragment); thickness: less than 1 mm  
 These are fragments from a copper-alloy funerary vessel. Although no diagnostic pieces survive, on the analogies of other cremation mounds at Sutton Hoo, it was probably a thin-walled shallow bowl.

- 2**  
**Bone comb (not illustrated)**  
 48/3214  
 Dimensions: 11 × 7 mm  
 The calcined fragment of a composite comb. What remains is part of one of the central elements, with the stumps of three teeth.

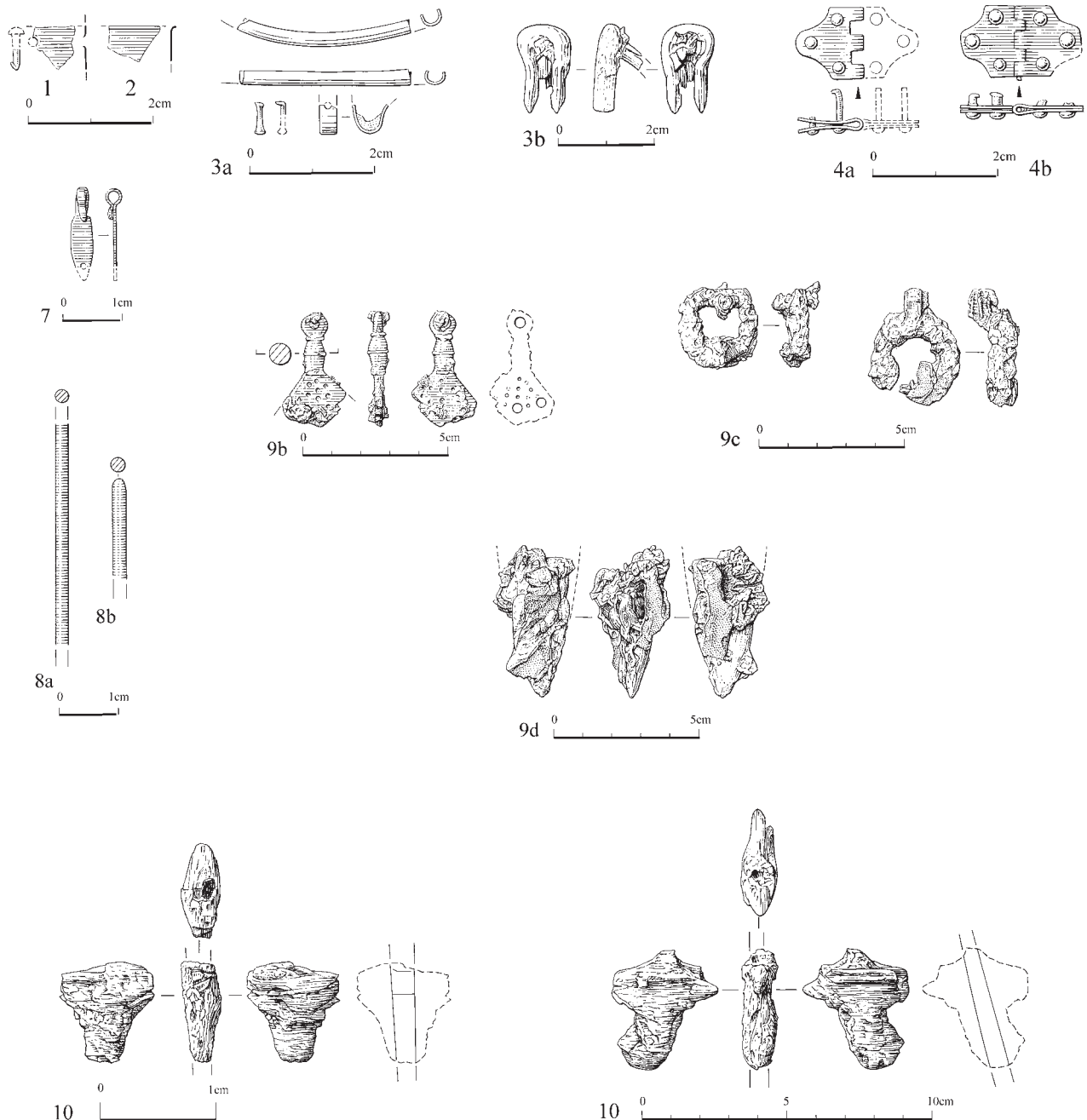
- 3**  
**Unidentifiable mineral-preserved organic material**  
 48/564 and 48/952

**Artefacts from inhumations***Mound 14*

The inhumation in Mound 14 was almost completely destroyed by grave robbers (see Chapter 5, p. 107), and only tiny fragments of the once rich objects that had accompanied a high-status woman remained in the burial chamber fill. These included a châtelaine (9) and a purse or small satchel (3; Figure 98). Both are incomplete and badly damaged, and survive only as complexes of iron and iron corrosion products, bonded with sand, together with mineral-replaced textile (associated with 9a, 14 is unassociated; Figure 99) and leather, which is often degraded beyond identification. The complexes fall into two groups, one containing iron and copper-alloy rods, links and rings from the châtelaine (9a, b, d and e), the other containing

the remains of silver rings, which are probably from the purse or satchel complex (3c). Associated with these complexes are copper-alloy and iron fittings, both decorative and functional, that can be ascribed to the châtelaine or its belt (9c, and f–h), and fragments of silver that originate from the purse (3a and b).

Both the châtelaine and the purse are so fragmentary that they cannot be reconstructed. Their general style, however, can be suggested from the larger fragments and from the evidence of other similar finds within the cemetery. The châtelaine consists of at least one strand of metal links that was folded for burial – or perhaps placed in the purse or satchel. Like the example from Burial 16, it was probably worn hanging from a waist belt of leather or textile. The links include copper-alloy rods with double-looped ends (9a) and copper-alloy figure-of-eight links (9b), fragments of



MOUND 14

Figure 98 Mound 14: artefacts 1–4 and 7–10.

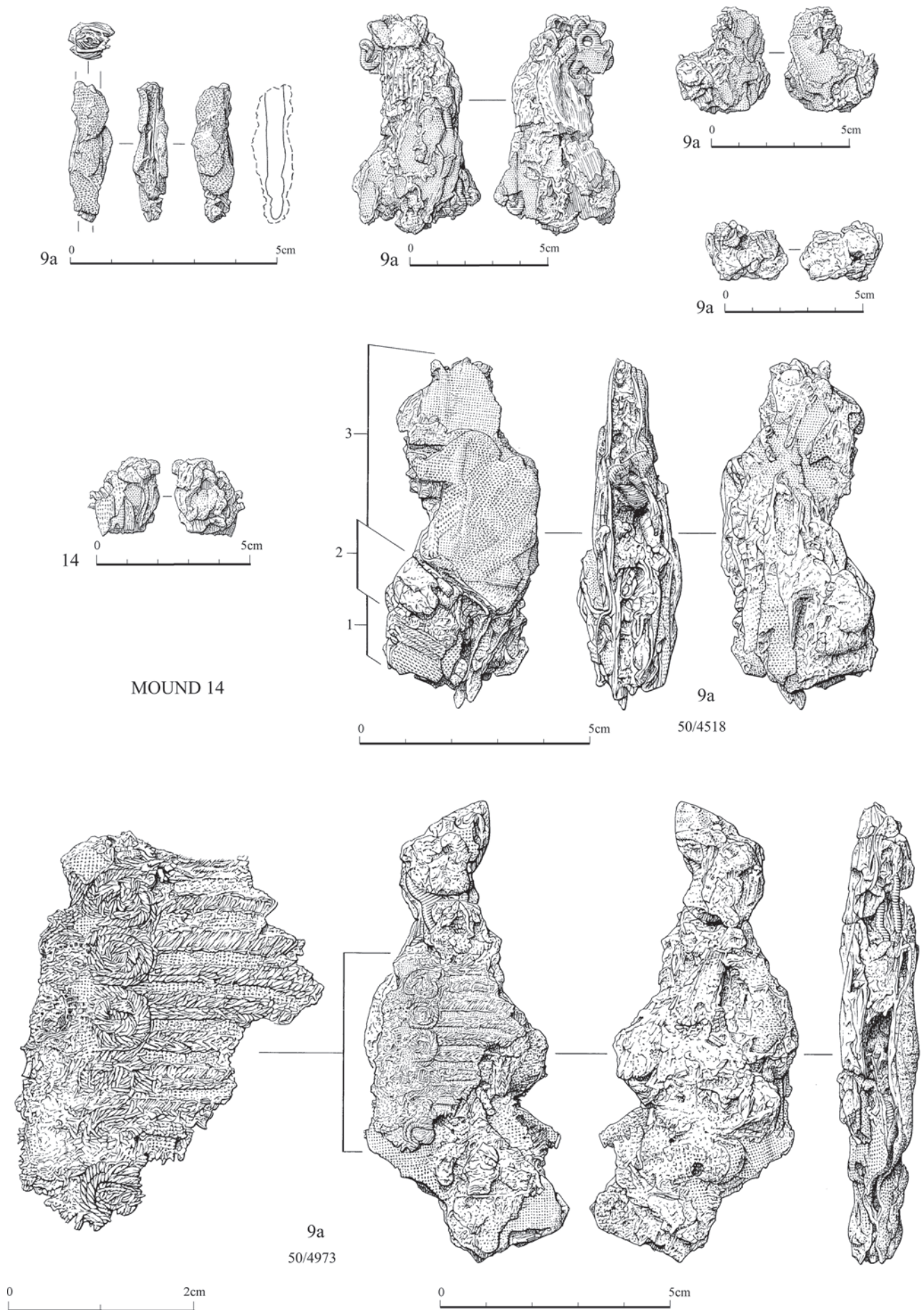


Figure 99 Mound 14 textile: tabby weave 14; and tablet-woven bands 50/4518 (c) and embroidered fine tabby 50/4973 (b), both associated with châteline 9a.

several iron rods with looped ends (9d), and a group of linked iron rings (9e). Few associations between the copper-alloy and iron elements survive, although two of the copper-alloy figure-of-eight links (Inv. 6246) are clearly attached at both ends to iron rods, implying some alternation between elements of different metals. The close association of copper-alloy and iron rods in a single complex (e.g. Inv. 4518) also suggests the combination of elements made from the two metals on a single strand. With its mixture of bronze and iron connecting rods and rings, together with the unusual pierced pendant (below), this *châtelaine* is similar to one from a grave at the sixth-century cemetery at Boss Hall, Ipswich (C. Scull: pers. comm.). It may originally have been as ornate as a remarkable example from the cemetery of Wettolsheim, Alsace (Schnitzler 1997: 28–9).

Only one fitting can be directly associated with the *châtelaine* – a remarkable copper-alloy pendant (9b) ornamented with drilled holes. Other objects associated with the *châtelaine* complexes include silver rings (3c), perhaps associated with the purse/satchel, the tip of a knife in a scabbard of stitched leather (9d), the impression in mineralized textile of part of the blade of a second knife or set of shears (9e), and an iron pin (?) or fitting (9f). It is not clear whether all these hung from the *châtelaine*, or whether the purse/satchel and the knives (or knife and shears) hung independently from the waist belt, but finds of similar *châtelaines* suggest that a wide variety of objects could hang from them (see Geake 1997: 57ff. for a general discussion of *châtelaines* in post-conversion Anglo-Saxon contexts).

Preserved in the corrosion of one of the complexes is a fragment of embroidered cloth (9a), one of the earliest examples of Anglo-Saxon embroidery from an excavated context (see Walton Rogers, below; and cf. Budney and Tweddle 1985). Textile of two weights (one coarse, the other of a finer weave) and a fragment of tablet weave also survive (p. 263). These give a glimpse of the richness of textiles available to a high-status woman in the early seventh century, and can be compared with the many textiles found in Mound 1 (SHSB III: ch. IV, 409ff.). It is interesting that in the Sutton Hoo cemetery there is no evidence for gold thread, which enriched the textiles found in the princely burial at Taplow and in other high-status women's graves (Crowfoot and Hawkes 1967; see also a find of gold thread from recent excavations at St Mary's Stadium, Southampton; Evans 2002: 54–5).

Associated with two of the complexes are fragments of decayed silver rings (3c). These may be associated with a textile-lined leather purse or pouch, with a light, silver-framed lid (3). Evidence for a purse with a framed lid survives only as two short lengths of silver edge-binding (3a) and in scraps of leather associated with the *châtelaine*. One of the lengths of silver is curved in a plane that makes it impossible for it to be associated with a drinking cup (for example), but which would be acceptable on a kidney-shaped lid (cf. Mound 1 purse-lid, SHSB II: 497ff. and fig. 367) or the edge-binding of a pouch (cf. the remains of a leather satchel at Swallowcliffe Down, Speake 1989: 58ff.; also the pouch edged in copper-alloy found associated with an iron strike-a-light in grave 63 in the Chessell Down cemetery, Isle of Wight, excavated in 1855 by George Hillier, see Arnold 1982: 33 and fig. 20). Degraded leather and textile found on the *châtelaine* may be the remains of a leather pouch associated with the purse lid. A small silver link with flattened plates pierced by two rivets (3b) may also belong to the purse, as might the fragment of embroidered textile. Three tiny fragments of unworked yellow quartz (13) were also found in the grave, and may well have been

kept in the pouch (cf. the garnets in Mound 17, see p. 215). Whether these had any personal or amuletic significance is difficult to assess (see Meaney 1981: 75ff. for a discussion of quartz, particularly amethyst and rock crystal, in graves).

Luxury possessions other than the silver-framed purse lid are represented by a small number of fragments of curved silver sheet found together with a silver rivet (1). One fragment is pierced by a rivet hole, suggesting that these may be from a repaired silver bowl. The grave also contained other high-status finds of silver, or objects mounted with silver. A drinking cup with silver rim mounts and facings (2) is represented by a single small fragment of U-channelled rim binding. Two silver hinges, similar in shape to those from the purse lid in Mound 1 (SHSB II: 487 and fig. 385) may originally have come from a casket (4a and b; Figure 98; cf. the reconstruction of a small casket from Finglesham, Speake 1989: 24ff., figs 25 and 26). The hinge remains from grave 95 at Finglesham are not dissimilar in scale to those from Mound 14. No wood remains were associated with the Mound 14 hinges, although recent work on wood from Finglesham showed that the majority were of beech (*ibid.*: 30). Two small iron nails (11) associated with slivers of a finely grained wood (too small for the species to be identified) may also belong to this.

Fragments of two, perhaps three, silver buckles (6), a delicate looped silver dress-fastener (?) (7), several tiny lengths of silver wire (5), probably from a fox-tail chain, are all that remain of personal ornaments, apart from fragments of two copper-alloy pins (8a and b). The dress-fastener is an anomalous find in this once rich grave. Tiny and flimsy, it is cut and shaped from thin silver sheet. It is atypical, but can be broadly compared to Hines form B1, which he illustrates with a sheet-metal hooked tag from Roligheden, Hedrum, Netherlands (Hines 1984: fig. 2.6). The fastener is too light to have been used in any context where pressure would have been brought to bear on it, and its rather crude manufacture may suggest that it was used to fasten an under- rather than an overgarment.

A curious feature of the grave is the large number of nails that were found scattered throughout the trench fill (10), some of which were associated with wholly decayed, mineral-replaced textile (?). The wood-grain implies that most of the shanks penetrated single thicknesses of timber. These seem too small to be structural nails from the burial chamber walls, but they could be the decorative studding of a coffin or a chest, or fittings from a bed (see Chapter 5, pp. 112–13), or possibly the fastenings for lightweight screening covering the rough planking of the burial chamber walls. The associated textile remains could be interpreted as either the covering of a chest or coffin, or as hangings from the walls of the burial chamber.

The shattered possessions in this chamber grave suggest a burial of equivalent status, at least, to the Swallowcliffe Down burial (Speake 1989), which, although partially robbed, is arguably one of the richest women's graves in Anglo-Saxon England. Mound 14 also has finds unparalleled in Early Anglo-Saxon contexts: the embroidered textile, for example, which predates other embroidered finds (below; see also Webster and Backhouse 1991: cat. nos 100 and 142), and the *châtelaine*. None of the finds survive in a complete enough form to suggest a firm date, but, equally, none would be out of place in the early seventh century. The burial may have been amongst the richest in the cemetery, and, despite the loss of all major objects, is one of the more interesting female graves in Early Anglo-Saxon England.

## Catalogue: Mound 14

- 1**  
**Silver bowl (?) (Figure 98)**  
50/4492  
Dimensions: 12 mm (largest) × 0.3 mm  
Seven tiny fragments of undecorated silver sheet and a rivet. One fragment appears to have a rivet hole. Perhaps it is from a repaired silver bowl?
- 2**  
**Silver fittings, possibly from a drinking cup (not illustrated)**  
50/4969  
Dimensions: 8 × 4 mm  
Fragment of channelled binding, perhaps from the rim of a drinking cup.
- 3**  
**Silver purse (?) fittings (Figure 98)**  
**a Two fragments of U-shaped rim binding and a fragment of curved strip with two rivets**  
50/4952  
Dimensions: 25 × 2 mm, 26 × 2 mm; thickness: 0.5 mm  
These are associated with detached fragments of mineralized textile.  
**b Strap-link**  
50/4950  
Dimensions: 18 mm overall length; diameter of loop 10 mm; length of plate 8 mm; thickness of strap 6 mm  
A loop with flattened plates pierced by two rivets, with the remains of leather between. Possibly a fastening from the leather pouch or purse.  
**c Silver rings**  
50/4973 and 50/4518  
Dimensions: diameter 2 mm  
Visible only within châtelaïne complexes.
- 4**  
**Silver box (?) fittings (Figure 98)**  
**a One half of a hinge with three dome-headed rivets**  
50/4965  
Dimensions: width 12 mm, height 11 mm; length of rivet 4 mm  
**b Complete hinge with three dome-headed rivets on either side**  
50/6247  
Dimensions: width 12 mm, height 22 mm; length of rivet 4 mm
- 5**  
**Silver wire (not illustrated)**  
50/4947  
Dimensions: 3 × 0.3 mm (largest)  
Five tiny fragments of curved wire, probably from a fox-tail chain.
- 6**  
**Silver buckle loops (not illustrated)**  
50/6470  
Dimensions: 1 mm wide × 6 mm long (largest)  
Twenty assorted, and very degraded, tiny fragments, including bits that may be parts of two or three buckles.
- 7**  
**Silver dress-fastener (Figure 98)**  
50/6253  
Dimensions: length 13 mm (overall); thickness 0.5 mm  
Thin sheet, hammered over at one end to form a loop, and expanding into a narrow rectangular plate with a single rivet or stitch hole. It is thought to come from the neck or sleeve of a dress.
- 8**  
**Two copper-alloy pins (Figure 98)**  
**a Pin fragments with a flattened cross-section (cf. Mound 7, pin 9)**  
50/4956  
Dimensions: lengths 20 mm and 18 mm; diameter 1.9 mm  
**b Two joining pin fragments**  
50/5610  
Dimensions: length 18 mm; diameter 2 mm
- 9**  
**Copper-alloy and iron châtelaïne (Figures 98 and 99)**  
**a Complex of figure-of-eight links and rods (copper-alloy) and fused rods (iron)**  
50/4495, 50/4507, 50/4518, 50/4523, 50/4973, 50/4979, 50/4980, 50/5556, 50/5561, 50/6246, 50/6248b, 50/6249, 50/6251, 50/6256–8, 50/6264, 50/6265, 50/6477 and 50/6548  
From the châtelaïne, and associated with layers of mineral-preserved textile on 4495.  
*Textile associated with 50/4495*  
1 Mineralized textile (70 × 40 mm) on one face of 50/4495, consisting of folds of fine tabby weave, 28/Z × 24/Z per cm. The fibre is not identified.  
2 Textile interleaved with layers of (1), and also appearing on back of object, consisting of a second tabby weave, 16–18/Z × 16–18/Z per cm. The fibre is flax/hemp.  
3 On top of (1) and (2), these traces of a coarser textile were possibly spun Z × S. The weave was not identified; the fibre is wool.
- Textile associated with 50/4518*  
Iron-preserved textile over an area 70 × 35 × 20 mm, and in association with copper-alloy chain links. The two bottom layers are fine tabby, as in 9a(1), above. The top layer seems to be continuous, and made up of three panels, from left to right:  
1 Tablet weave, 10 mm wide, with cords twisted ZZSZZZZ, followed by a broken area, and then SZSZ. The warp yarn is S-ply; the fibre is wool.  
2 Weft-faced weave, 15 mm wide, similar to (3), but only the brickwork effect of the pattern weft is visible. The weft is S-ply; the fibre is not identified.  
3 Tablet weave, 35 mm wide, with a tabby-effect ground weave and a supplementary weft worked in a brickwork pattern to build up a design of repeating saltires and diamonds (Figure 124:a and b). There are 16 cords per cm; the warp yarn is S-ply, the ground weft is S (?) -spun and the supplementary weft is S-ply (Z2S); there is a border of three tablet cords twisted ZZZ. All the fibres are wool, except for the pattern weft, which is possibly a robust plant fibre (for further details see text).  
*Textile associated with corroded iron plate (50/4523)*  
On one face, over an area 25 × 12 mm, in tight folds and medium tabby weave, as in 4495(2). There are also traces of the coarsest wool textile 9a(3).  
*Textile associated with 50/4973 (Figure 99, Plate 43)*  
There are several layers of textile and other materials, around the chain links and rods. These are, from the top down:  
1 Medium tabby, 12 × 10 mm, of 14/Z × 18/Z per cm, as in 50/4495(2). The fibre is flax/hemp.  
2 Fine tabby, 50 × 32 mm, of 30/Z × 28/Z per cm, probably as 50/4495(1). The fibre is flax/hemp. It is embroidered in stem stitch with yarn Z2S, 0.5–0.7 mm. The fibre of the yarn is wool (for details of embroidery, see textile report below).  
3 A second layer of fine tabby, as in (2), with a floating end of embroidery yarn on the surface. It is probably the back of embroidery (2).  
4 Five parallel cords, area 5 × 15 mm, twisted SZSZZ, almost certainly representing a tablet-woven band with c.12 cords per
- cm. The warp yarn is S-ply; the fibre is wool (?).  
5 Fine tabby, probably as in 50/4495(1).  
6 The metal objects.  
7 Another layer of the fine tabby.  
8 A layer of the medium tabby.  
9 Human skin.  
*Textile associated with 50/4980*  
In folds, 40 × 10 mm of fine tabby weave, as in 9a(1), overlying medium tabby weave, 9a(2).  
*Textile associated with 50/6246*  
Tabby weave, over areas of 8 × 7 mm and 6 × 4 mm, of 28/Z × 20/Z per cm. Probably the same as 4495(1).  
*Textile associated with 50/6256*  
Several layers of tabby weave textile, 20/Z × 16/Z per cm – the same as 9a(2).  
**b Copper-alloy diamond-shaped fitting**  
50/4497  
Dimensions: length 40 mm; width 20 mm  
A pendant from the châtelaïne (9a). At one end is a shank, perforated for suspension.  
*Associated fragments of mineralized leather and textile*  
There is textile on one face and edge, the largest area being 10 × 10 mm. A fine Z × Z tabby, as in 9a(1). On one edge are wool fibres, possibly as in 9a(3).  
**c Iron suspension (?) rings**  
50/4525, 50/4679, 50/4959, 50/4960 and 50/4962  
Two sets of interlocking rings, and a single ring with the remains of rod fragments corroded to the surface, with associated mineralized textile. They are probably the suspension rings of the châtelaïne elements.  
*Textile associated with 50/4525*  
Medium tabby weave, as 9a(2), on both sides of a leather knife-sheath (9d), 30 × 8 mm and 30 × 10 mm.  
*Textile associated with 50/4959*  
Across one side, towards middle, is 7 × 4 mm of fine tabby weave, as in 9a(1).  
*Textile associated with 50/4960*  
On one face are traces of folds of medium tabby textile, as in 4495, 9a(2), with remains of a coarser textile, possibly as in 50/4495, 9a(3).  
*Textile associated with 50/4962*  
In folds across the outer face, and falling onto inner surface, of the ring is 12 × 7 mm of medium tabby, as in 9a(2).

**d Iron knife**

50/4525  
Dimensions: length 35 mm, width 20 mm

The tip of a knife in a stitched leather sheath associated with the remains of the châteline.

**e Iron**

50/4523  
Dimensions: length 26 mm, width 16 mm (max.)

Corrosion products with the impression, in mineralized textile, of a second knife blade or a set of shears.

**10****Iron nails from coffin or chamber (Figure 98)**

50/3592-4, 50/3919, 50/4145, 50/4146, 50/4148, 50/4438, 50/4465, 50/4483-91, 50/4493, 50/4494, 50/4496, 50/4498-506, 50/4509-17, 50/4520, 50/4522, 50/4524, 50/4877, 50/4949, 50/4953-5, 50/4562-4, 50/4656,

50/4657, 50/4659, 50/4660, 50/4951, 50/4957, 50/4958, 50/4964, 50/4971, 50/4972, 50/4974, 50/4981, 50/5000, 50/5242, 50/5255, 50/5256, 50/5272, 50/5555, 50/5562, 50/6248a, 50/6252, 50/6254, 50/6255, 50/6259-63, 50/6424-9, 50/6431, 50/6433-6, 50/6473, 50/6474, 50/6479, 50/6480, 50/6482, 50/6483, 50/6524, 50/6528, 50/6534, 50/6544-7 and 50/6549

*Textile associated with 50/4496b*

This has a total area 25 × 20 × 12 mm, and is two textiles, interfolded. These are the same as in 9a(1) and (2).

**11****Iron nails, possibly from a wooden box (not illustrated)**

50/5246 and 50/5247  
Dimensions: 20 × 7 mm  
Fragments of two nails associated with slivers of finely grained wood

(too small for identification), perhaps from a box.

**12****Ferrous concretions and ferrified wood (not illustrated)**

50/4508, 50/4519, 50/4654, 50/4655, 50/4658, 50/4661, 50/4948, 50/4961, 50/4963, 50/4975, 50/4978, 50/5243, 50/5245, 50/5267, 50/5273, 50/5560, 50/6250, 50/6254, 50/6255, 50/6261, 50/6263, 50/6437, 50/6471, 50/6472, 50/6481 and 50/6484

**13****Quartz fragments (not illustrated)**

50/4946  
Dimensions: all less than 1 mm square  
Three unworked fragments of yellow quartz, from (?) a purse/pouch.

**14****Unassociated mineral preserved textile (Figure 99)**

50/4521  
Folds of iron-preserved textile, measuring 25 × 20 × 12 mm, representing the medium tabby weave, as in 9a(2), interfolded with the fine tabby weave, as in 9a(1).

**15****Wood (not illustrated)**

50/6471 and 50/6478  
Fragments of mineralized wood, one with impression of a squared nail shank.

**16****Organic residue**

50/5774  
Organic residue, associated (?) with purse/pouch (3).

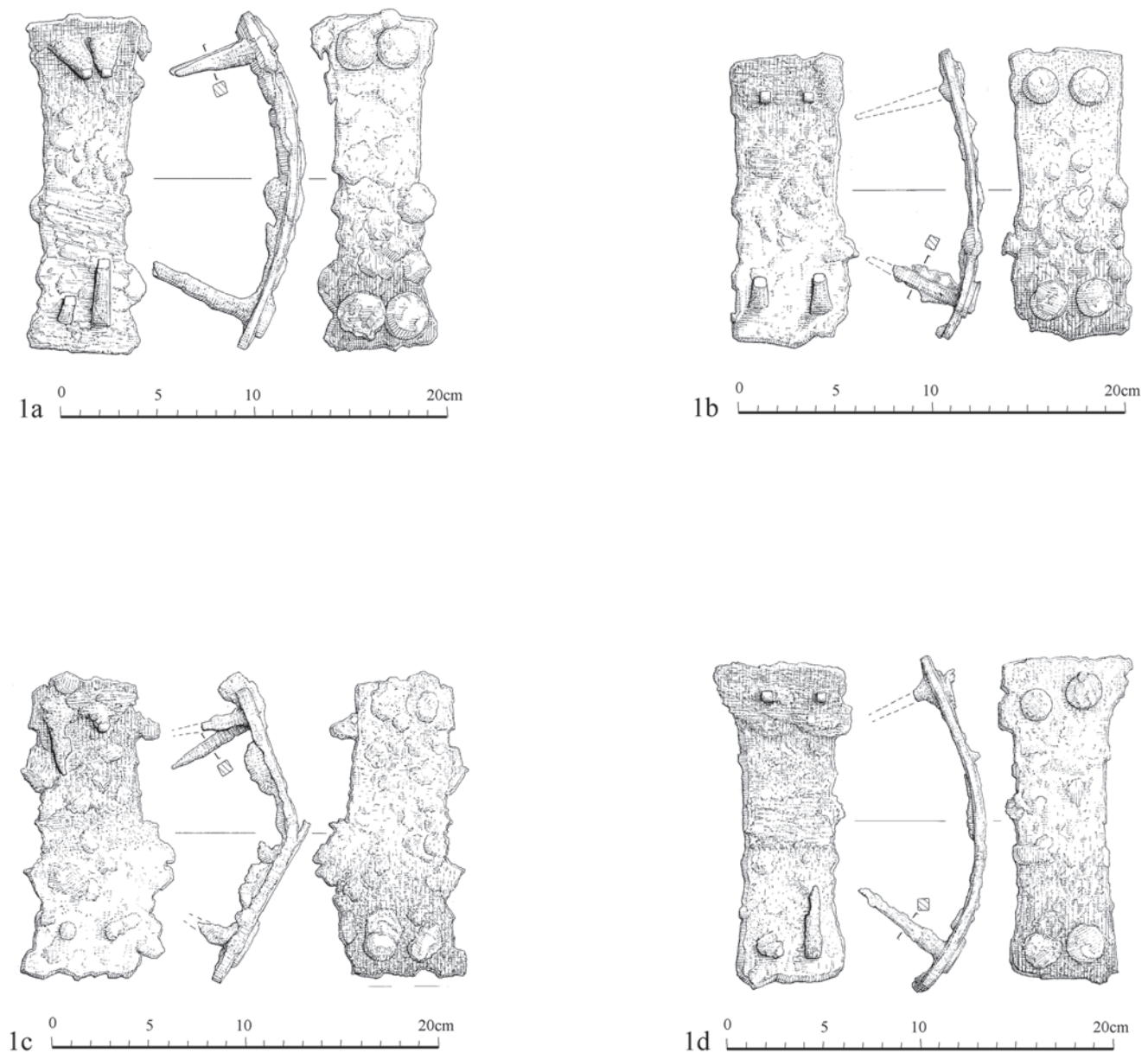
**Mound 17**

The mound, barely surviving in the twentieth century, covered the graves of a young man and a horse (see Chapter 5, p. 115). The man was buried in a coffin, which was fastened with four iron cleats (1; Figure 100). Grave goods were placed at the west end and along the northern edge of the grave pit. Some objects were also placed inside the coffin, which was relatively large (see Koch 1996: 723ff., esp. 731, for a discussion of the rite of placing grave goods inside a large or over-large coffin).

Inside the coffin, alongside the right shoulder of the dead man, lay an iron purse-mount (2a) with stylized animal head terminals (Figure 101). Wrapped around the mount were the folded remains of a cloth-lined leather pouch. Associated with the pouch were a small copper-alloy buckle (2b), a parcel of seven rough cut garnets (3a-g), a single cut garnet in the form of a bird's beak (3h) and a fragment of red and blue chequer-board millefiore glass (3i; cf. the quartz fragments from Mound 14, above). An unstruck flint was lifted with the complex, but no striking-flint or tinder was identified (cf. the flintstone in Krefeld Gellep, grave 43, Pirling 1966: 184ff.). At his right side, the hilt at shoulder level, was a sword (4) with a simple pattern-welded blade and pommel, guards and grip of horn (Figure 101). The blade was buried in its scabbard (5f), which was made of wood (*salix* or *populus*) and lined with sheep wool. The wood may have been covered with leather, but no positive identification was made. Traces of a cord binding survive at the scabbard opening (see Walton Rogers, below; Cameron 2000: 96, cat. 84). On the scabbard, and wrapped around the blade for burial, were traces of the three-point leather suspension system. This is associated with a triangular shield-on-tongue belt buckle (6), a curved scabbard buckle (5c) and two pyramidal strap-mounts (5a and b; Figures 101 and 102). The fittings are a set, and are made en suite of copper alloy, and inlaid with *cloisonné* garnet, blue glass and ivory. The gilded loop of the scabbard slide lay facing

a silver buckle (5d). Alongside the sword lay an iron knife (7) in a stitched leather scabbard.

Outside the coffin, a range of grave goods was laid out along the north wall of the grave pit. These were grouped by function: one set relating to the dead man's arms-bearing status, the other to provisioning after death. The northern group consisted of weapons, armour and his horse gear. In the north-west corner lay the horse's saddle and bridle. A persistent circular stain traced in the soil above the bridle complex was interpreted as a wooden tub (9) for feeding or watering the horse, standing upright against the grave wall, but no wood remains or metal fittings were recovered from it. Its structure is uncertain (see Chapter 5, p. 130), but the lack of metal fittings suggest that it could either have been made from a single block of wood or have been stave built and bound with, for example, withies. Lying parallel with the coffin, and corroded to each other, were two spears (10 and 11; Figure 104). The smaller of the spears (10), with its short slightly angular blade and long split socket, belongs to Swanton type F1 (Swanton 1974: 14-5, fig. 5). The larger spear, Swanton D2 (ibid.: 11, fig. 3), can be compared to Spear 2 in Mound 1 and the spear from grave 41 at Bergh Apton (SHSB II: 248, fig. 188; Green and Rogerson 1978: 31, fig. 87). Traces of willow or poplar shafts remain in the split sockets. Over the spear shafts lay a shield. This survived as an iron boss and handgrip (12a and b), and two pairs of flat-headed rivets (12c-f) from the board. Fragments show that the board was made of lime wood. The boss (Figure 104) is made from a single billet of iron, and is conical, with a short, upright collar and a narrow, slightly angled flange. It is of Dickinson and Härke type 6, with a date range of 580-600 (Dickinson and Härke 1992: 20, figs. 14 and 16). Corroded to it is a narrow handgrip, whose rivets, together with three others, attach the boss to the shield-board. Preserved in the iron corrosion are traces of leather and wood, the remains of the shield-board, which was 12 mm thick beneath the boss - the length of the rivets attaching the boss to



MOUND 17

Figure 100 Mound 17: iron cleats (1a–d) from a coffin.

the board. Associated with the decayed shield-board are two pairs of iron rivets with flat heads and a shank length of 15 mm. The mineral-preserved grain on their shanks shows that they pierced two equal thicknesses of wood, indicating that the shield was made of two planks joined by a halved scarf, probably glued before the wood was covered by leather and then clamped by the pairs of rivets.

On the eastern perimeter of the shield lay a small iron-bound yew-wood tub (13), raised off the ground on three small feet (Figure 105). It has a bucket-style bailed handle attached by two simple escutcheons with stylized zoomorphic terminals. Alongside the tub was a lugged cauldron (14) with flaring shoulders, a sharply rounded girth and a gently curving base (Figure 106). Its rim is flat and out-turned, with two opposed triangular lugs supporting an iron handle with a yew-wood

sleeve (for a discussion of lugged cauldrons see Evans in SHSB III: 507ff.; also MacGregor and Bolick 1993: 256). Inside was a reddish-buff, grass-tempered pot (15) with a simple out-curving rim and an upright neck. Equally spaced on the shoulder are seven narrow, vertical bosses (Figure 104; see Wade, below). Well to the east of the tub and cauldron was a small copper-alloy bowl (18) with a flat out-turned rim and a smoothly curving profile falling to a deep rounded base (Figure 107), with traces of grass and sphagnum moss on the underside. This was placed over a dark-stained patch (16) containing animal bones (17a and b). No evidence for the origin of the patch was recovered, but its association with animal bones has led to the suggestion (see Chapter 5, p. 129) that it could be the remains of a leather bag containing food. If so, it may reflect a similar ritual recorded by Mortimer in grave 10 at Garton Slack, East Yorkshire (Mortimer



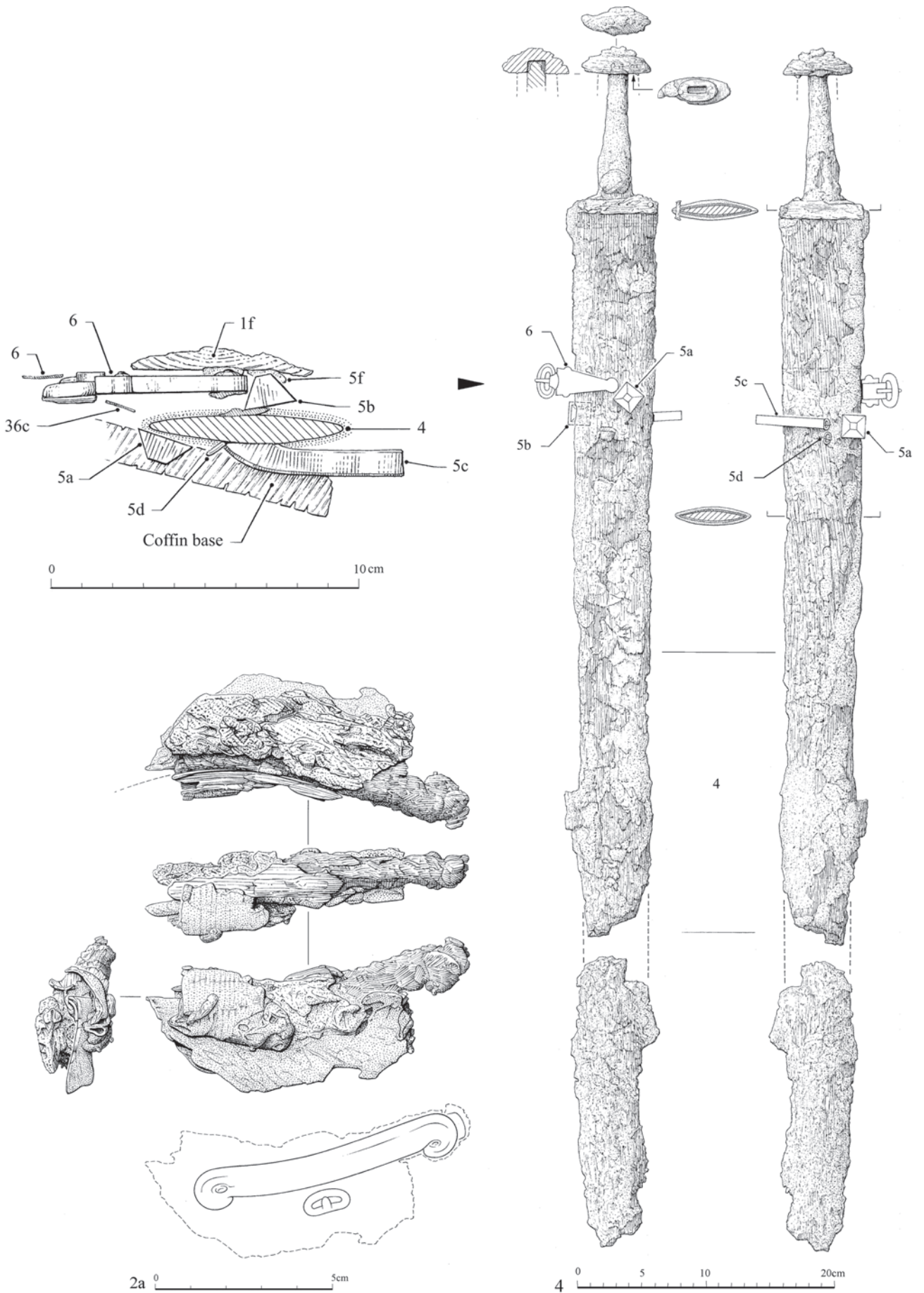
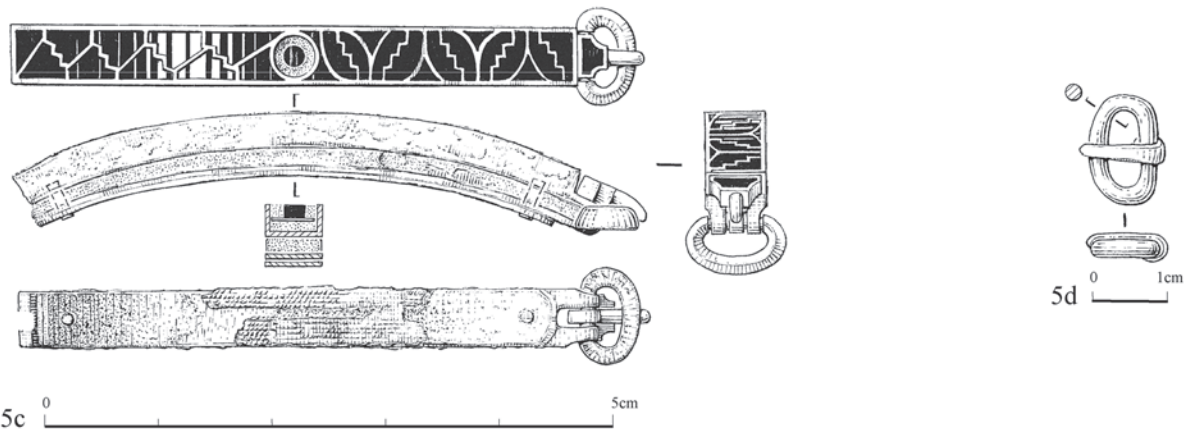
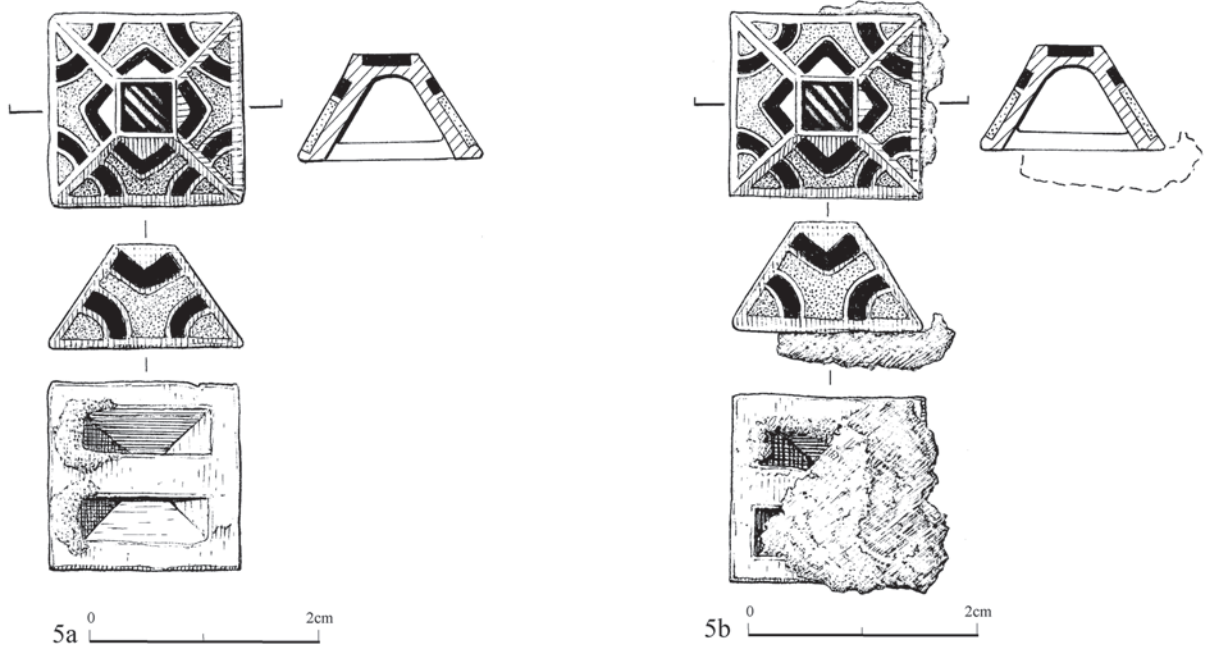


Figure 101 Mound 17: coffin wood 1f, purse 2, sword and associated fittings 4–6.



MOUND 17

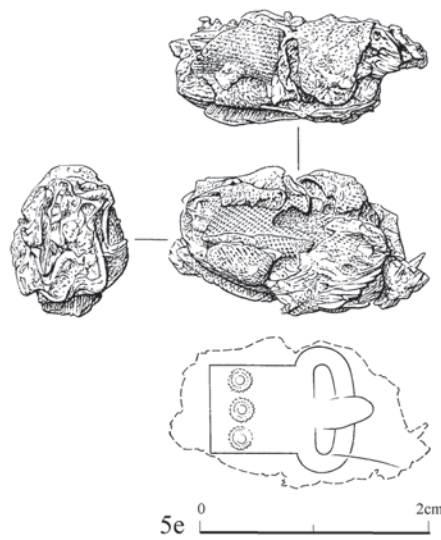
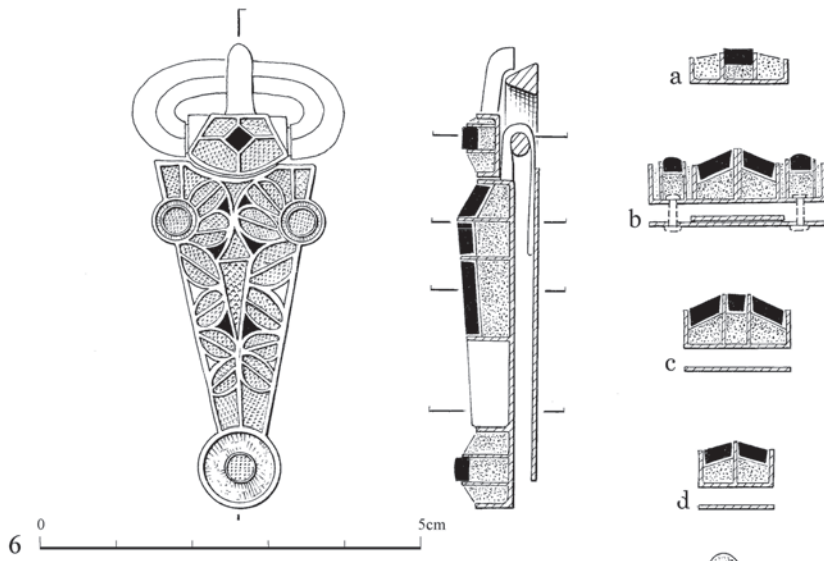
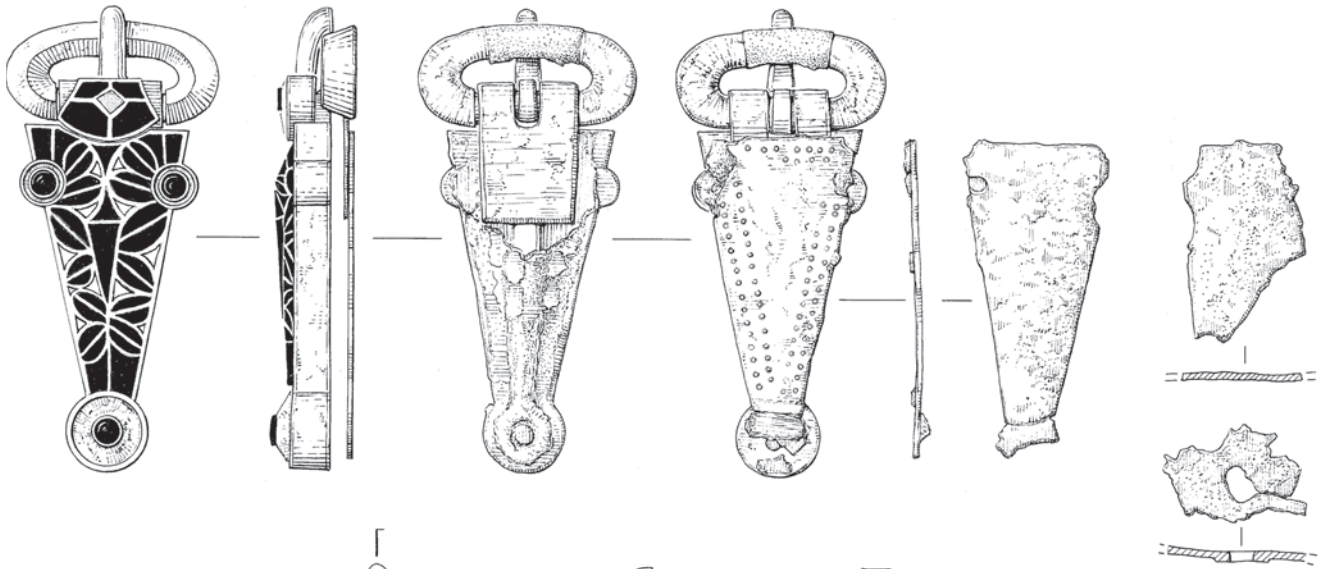


Figure 102 Mound 17: sword fittings 5.



MOUND 17

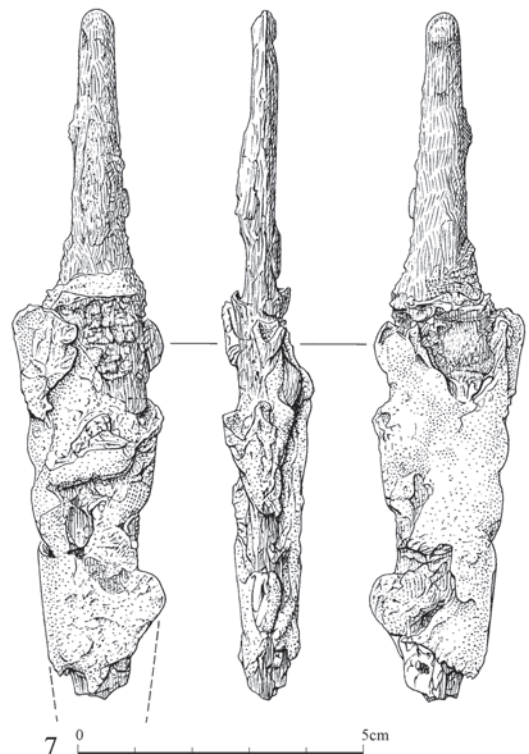


Figure 103 Mound 17: buckle 6 and knife 7.

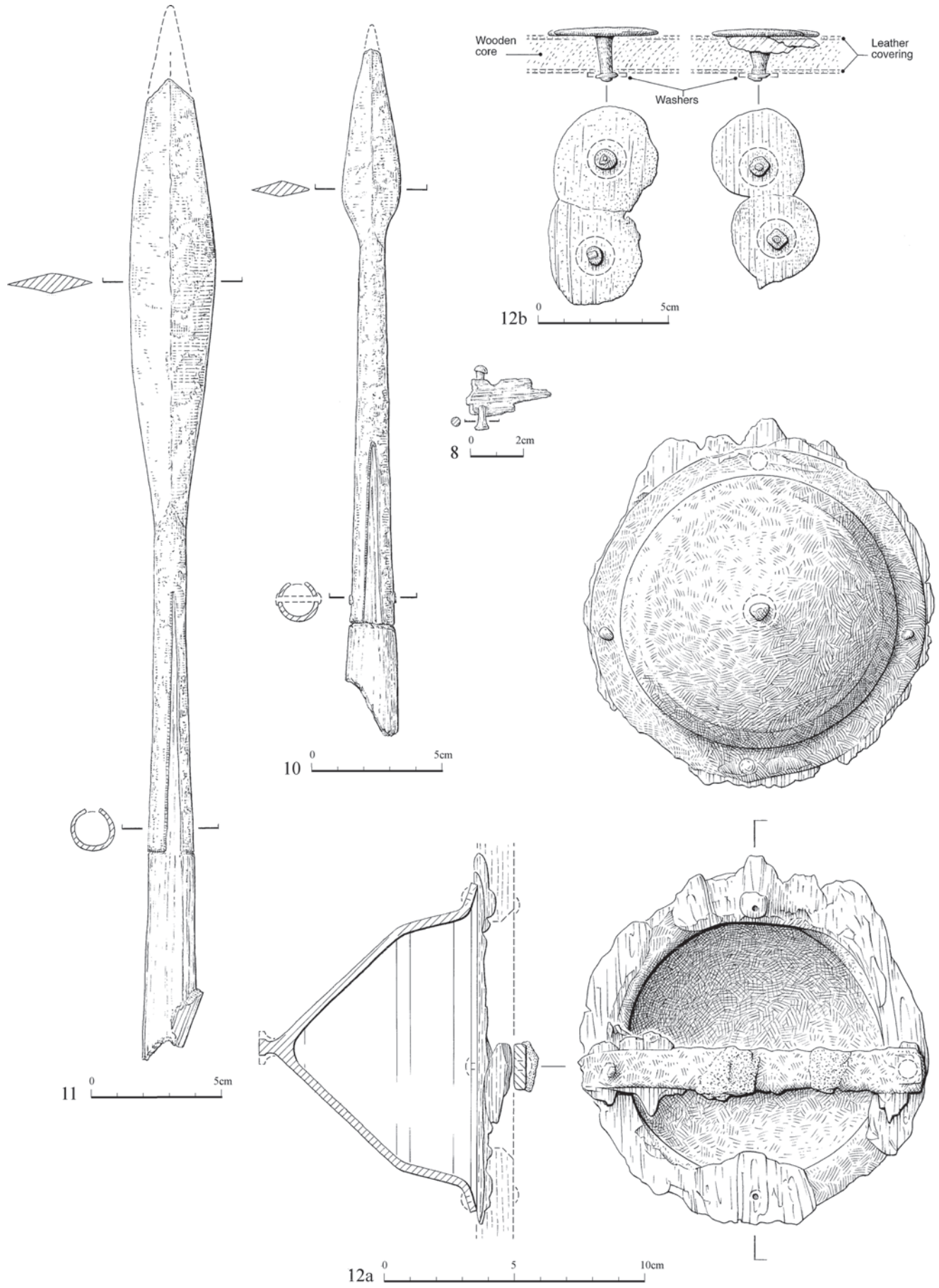


Figure 104 Mound 17: artefacts 8, 10, 11 and 12.

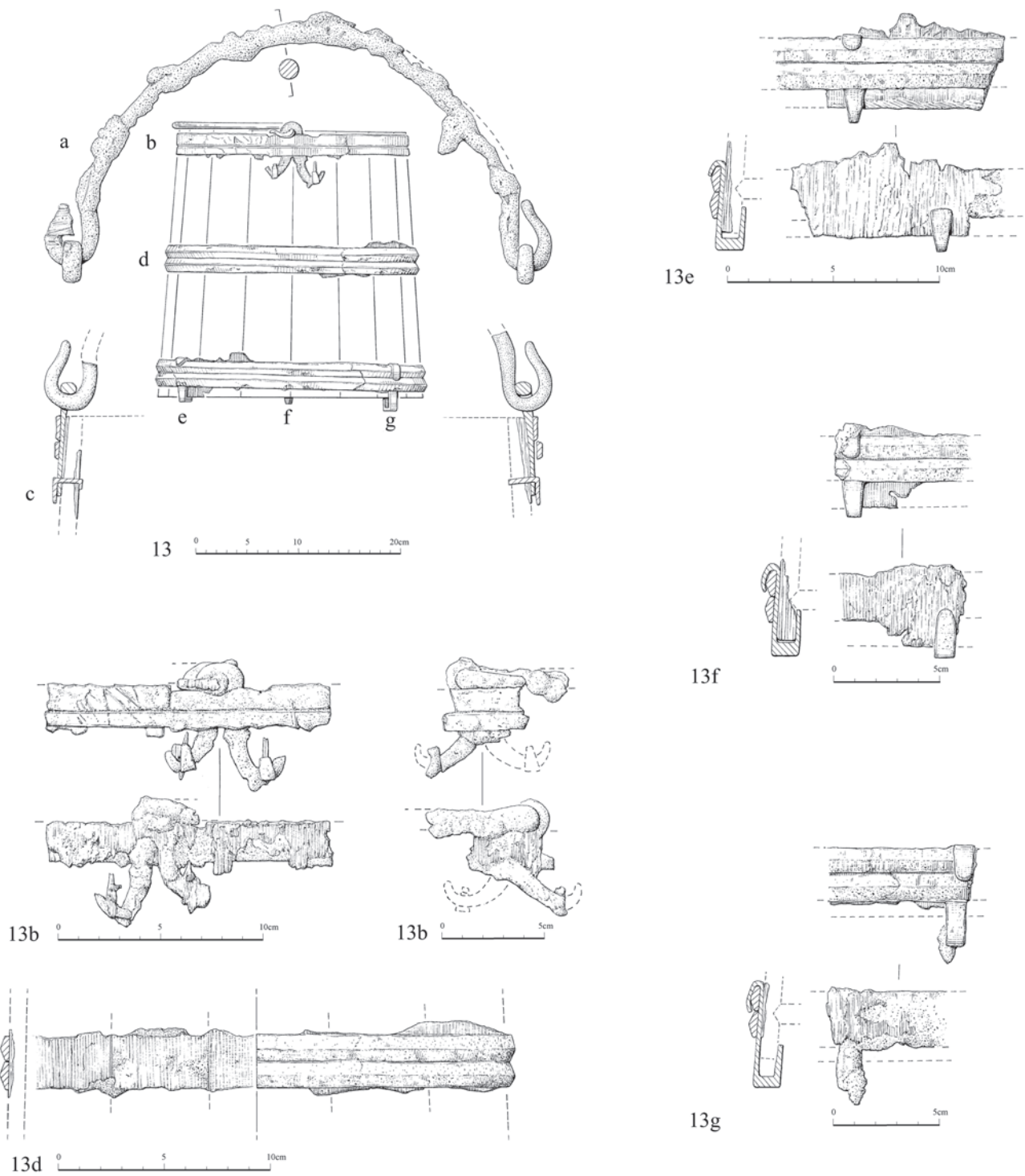


Figure 105 Mound 17: iron-bound tub with fittings, 13.

1905: 25off.). Alternatively, the soil mark could be discoloration from the decaying meat. A small copper-alloy strip (19), folded over a sliver of wood, was found inside the bowl. It may be a repair patch from a small wooden bowl or cup (Figure 107; cf. the wooden bowl found in Mound 1, SHSB III: 877ff., fig. 629). In the fill, above the shield, lay the remains of a double-sided bone comb (20), whose remaining teeth are still sharp, with little or no signs of wear (Figure 107).

At the west end of the grave was a complex of metal objects (21–30) that were assigned to a bridle and saddle. They are presented here under the collective heading of the harness (Figure 108).

THE HARNESS (FIGURES 108–15; COLOUR PLATES II AND 12)

The bridle survived in the ground as a broadly linear deposit of iron and bronze fittings running south-west/north-east, and was associated with a spread of metal and organic fragments that are probably parts of a saddle (Figure 108). The leather appeared here and there as dark rooty strips in the sand, but it survived in measurable form only where it had been in immediate contact with metal. There, the strap remains provided useful information on relative widths and thicknesses (Table 25), as well as leather type (identified by Roy Thompson as being from a young animal under one year old). The bridle consists of a snaffle bit with an assembly of straps (cheek pieces,

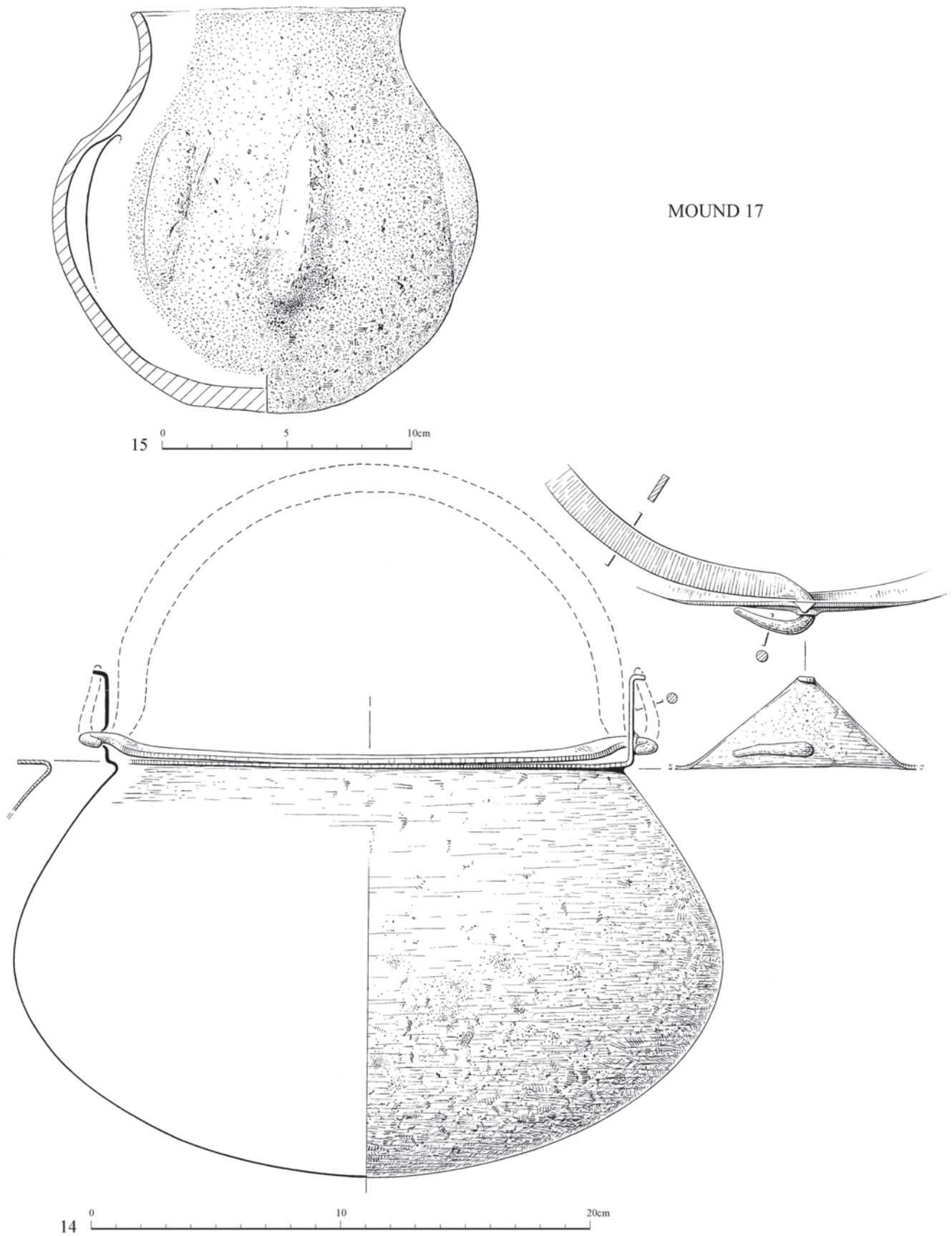


Figure 106 Mound 17: cauldron and pot 14–15.

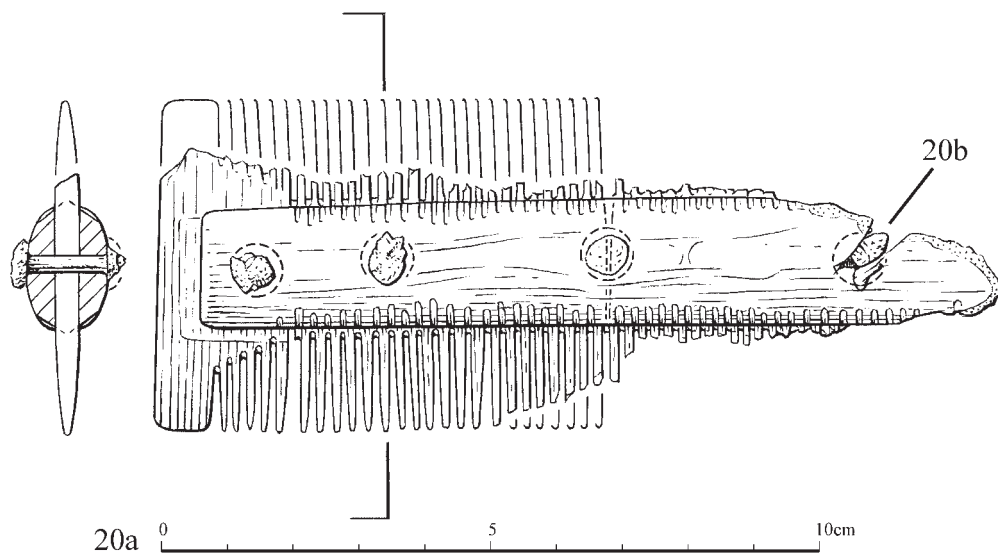
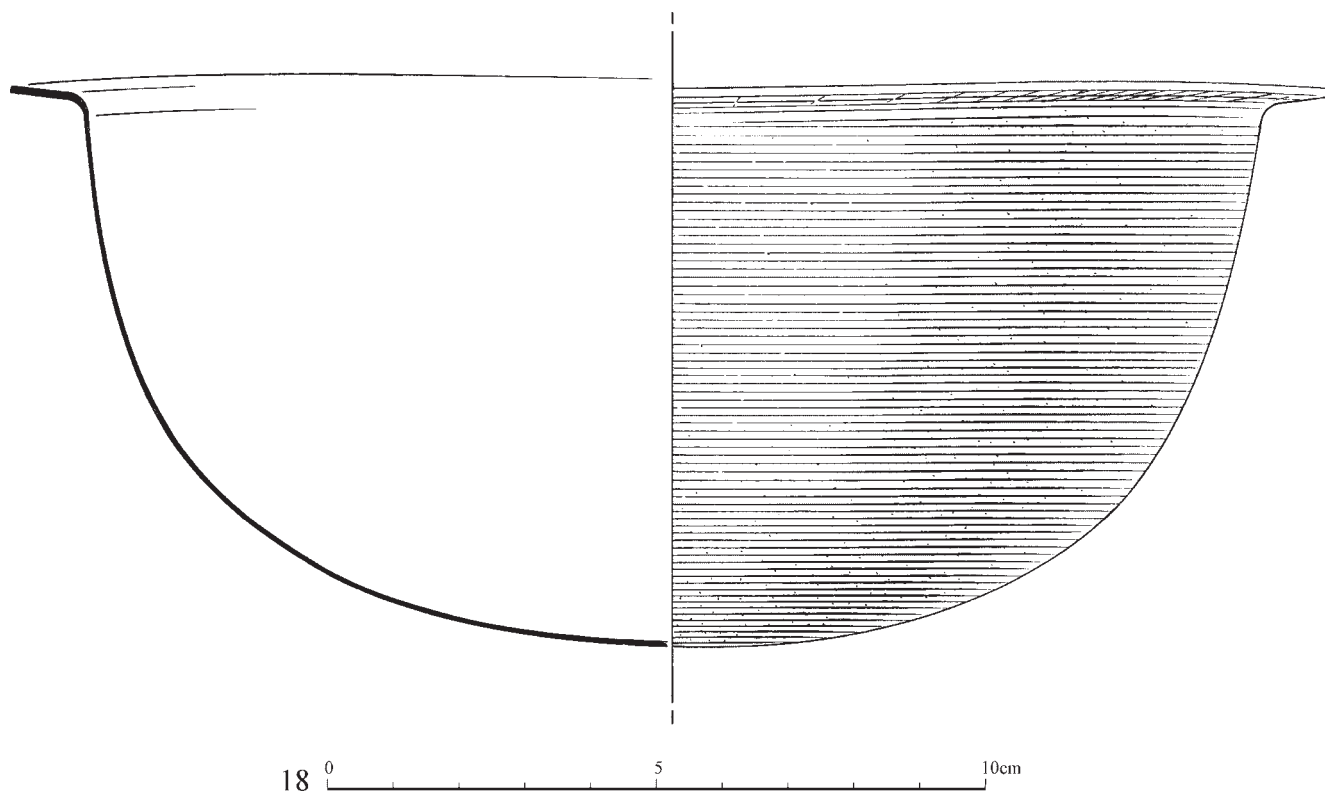


Figure 107 Mound 17: copper-alloy bowl 18 and comb 20.

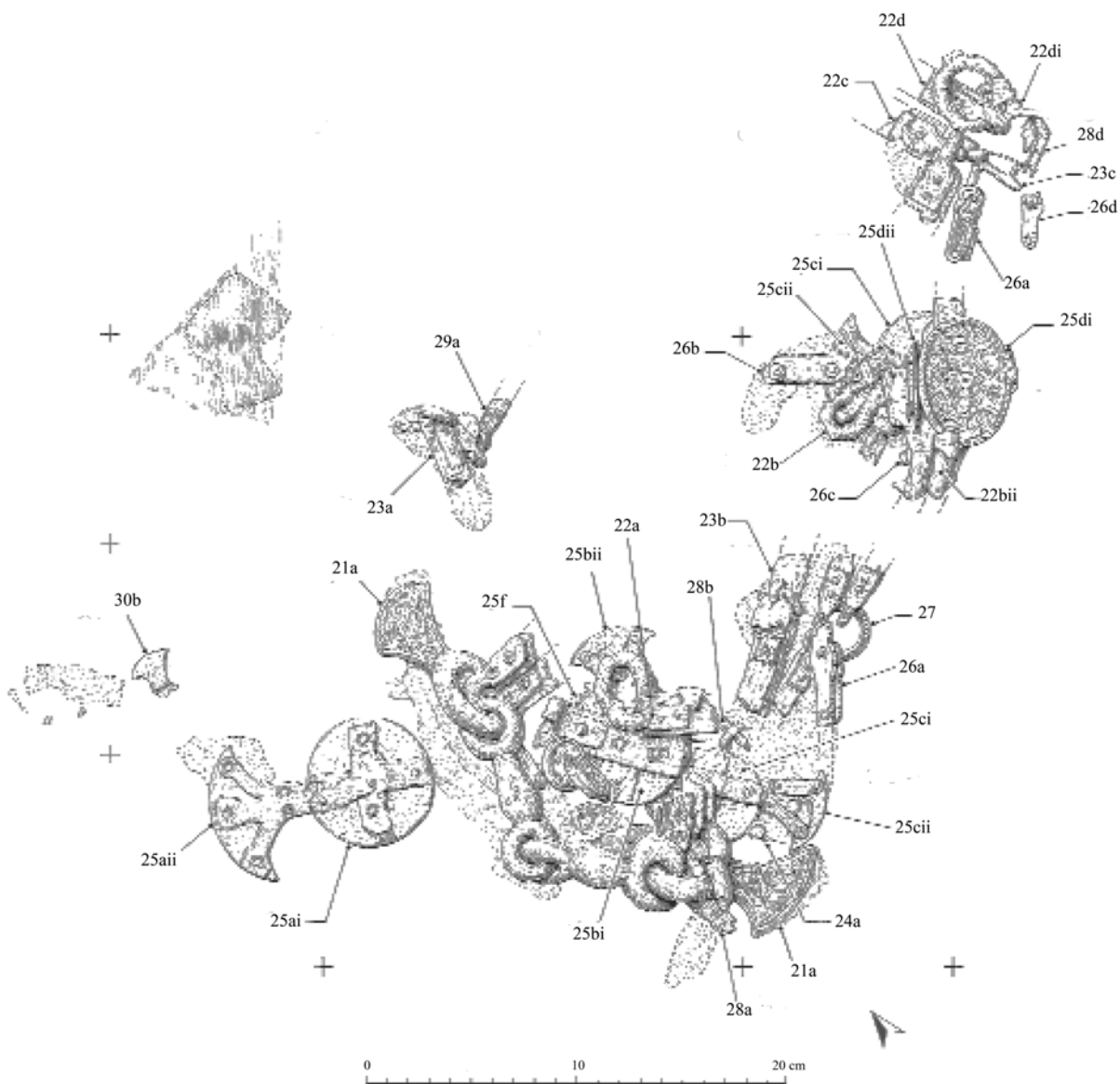


Figure 108 Mound 17: the harness fittings as planned in the soil block in the British Museum.

noseband, brow-band, head piece, throat latch and reins) decorated with a set of five roundels and axe-shaped pendants (Figure 115). The small space that the assemblage occupied suggests that the longer straps were pulled together and possibly folded, while the torque of the bit in relation to the adjacent fittings and the position of the rein and cheek-piece fixings (below) implies that the bridle was twisted or inverted as it was placed in the ground, or that it was placed over the saddle bow. Either would lead to a distortion of the spatial relationships between the metal fittings, as the organic materials of the tack decayed. The shovelling of sand into the deep grave pit might also have shifted the relationship of the straps and their metal fixings, as with the horse-and-rider grave at Lakenheath, Suffolk (for fittings see Evans 2001: 27ff.), where the bridle and its

decorative fittings had been forced out of position on the head as the horse was lowered into the grave.

The starting point for reading the assemblage is the iron bit (21) and its associated metal fittings. These fittings consist of bit rings, each with an attached disc and axe-shaped pendant together forming a vertical bar (here termed bit-ring bar), which prevents the bit pulling through the mouth (Figure 109). The bit lay flexed and twisted, with the bit-ring bars folded so that the small roundels, with applied gilt-bronze plates, lay almost touching, above the bit. The axe-shaped terminals of the bit-ring bars, also decorated with applied gilt-bronze plates, lay pointing outwards. Within the arc made by the bit, two gilt-bronze roundels (25b and c; Figure 112 and Colour Plate 12:a) lay face down, with their edges overlapping and their axe-pendants



**Table 25**  
**Straps from the Mound 17 harness**

Catalogue no.	Find no.	Type	Width (mm)	Thickness (mm)	Single or double
21	8173/8183	bit	21	5.2	double and folded
22a	8175	link	21 and 21	6 and 6.4	double and folded
22b	8177	link	22	6.8	double and folded
22c	8178	link	22 and 18	8.8 and 6	double and folded
22d	8344/8180	link	22 and 21	7.4 and 6.5	double and folded
23a	8176B	buckle	22	6	double and folded
23b	8205	buckle	20		double and folded
23c	8355	buckle	20	6.3	
25a	8182	roundel	12	3.6	double and folded
25a	8168	axe-pendant	12		strap
25b	8199	roundel	20	4	double and folded
25b	8203	axe-pendant			single
25c	8208	roundel	20	4	double and folded
25c	8207	axe-pendant			single
25d	8186	roundel	15	3 and 1.5	double, folded and single
25d	8185	axe-pendant			strap and cord
25e	8356	roundel	15	1.5	double and folded
25e	8188	axe-pendant			strap
25f	8202	axe-pendant	10.7		
26a	8111	pendant	13	3.4	double, folded and cord
26b	8187	pendant	13	3.5	double, folded and cord
26c	8204	pendant	13	5	double, folded and cord
26d	8354	pendant	6?	5	double and folded?
26e	8358	pendant	12		
27	8206	distributor	10	4	cord
28a	8110	buckle	11 (plate)	5 (rivet)	cord
28b	8210	buckle	14	4	
28c	8341	buckle	15.5 (plate)	4	double and folded
28d	8357	buckle	14	4.5	double, folded and cord
29a	8071	link	13	6.2	double and folded
29b	8176A	link	13	6.2	double and folded
30a	8069	axe-pendant		3 (rivet)	cord
30b	8212	axe-pendant	7 (scar)	3.5	
31a	8108	buckle	26	3	S
31b	8318	buckle	32	5	S

facing outwards. The roundels were attached to the cheek-piece fixing on the bit ring by an extension of the inner plate on each fixing that is riveted to the back of the roundel. The way the bit lay in the ground, together with the overlapping of the roundels, suggests that when the bridle was put into the grave it was held above the bit so that the straps of the cheek pieces were pulled together. The fixings for the reins, corroded parallel with the cheek piece fixings, suggest that the reins were also held together with the bridle cheek pieces. Lying on top of the uppermost roundel was an iron strap-fixing (22a; Figure 110) with a ring terminal, through which a length of rein runs. At the lowest level in this group, lie a singleton gilt-bronze axe-pendant (25f) and two of a set of four iron and copper-alloy buckles with long plates that are attributed to the saddle (28a and b).

Immediately to the west of the bit complex lay a single gilt-bronze roundel and axe-pendant (25a; Figure 111), made en suite with the other four roundels, but decorated with a more elaborate Style II interlace (see p.231). Immediately north of the

bit complex lay one of three iron buckles (23b), decorated en suite with the bit-ring fixings alongside a copper-alloy three-way strap distributor (27). Over the latter lay one of three gilt-bronze anthropomorphic pendant fixings (26c).

North-east of the bit and its associated fittings lay two further gilt-bronze roundels and axe-pendants (25d and e; Figure 113) over an iron figure-of-eight strap-link (22b). The roundels lay back-to-back, with the axe fitting of the lower lying face down with one of the three anthropomorphic pendant fixings lying over it. Sandwiched between the two roundels was a fragment of a set of narrow crossing straps, still fastened at the crossovers by one of two gilt-bronze guilloche fittings (26e) and a flat gilt rivet head (24c).

Immediately to the north-east lay two further iron strap-links, one with two interlocking rings (22c), the other with strap-fixings attached to a large iron ring (perhaps a hitch, 22d). At a slightly lower level lay two buckles, one belonging to the set of three belonging to the bridle (23c), the other part of a set of

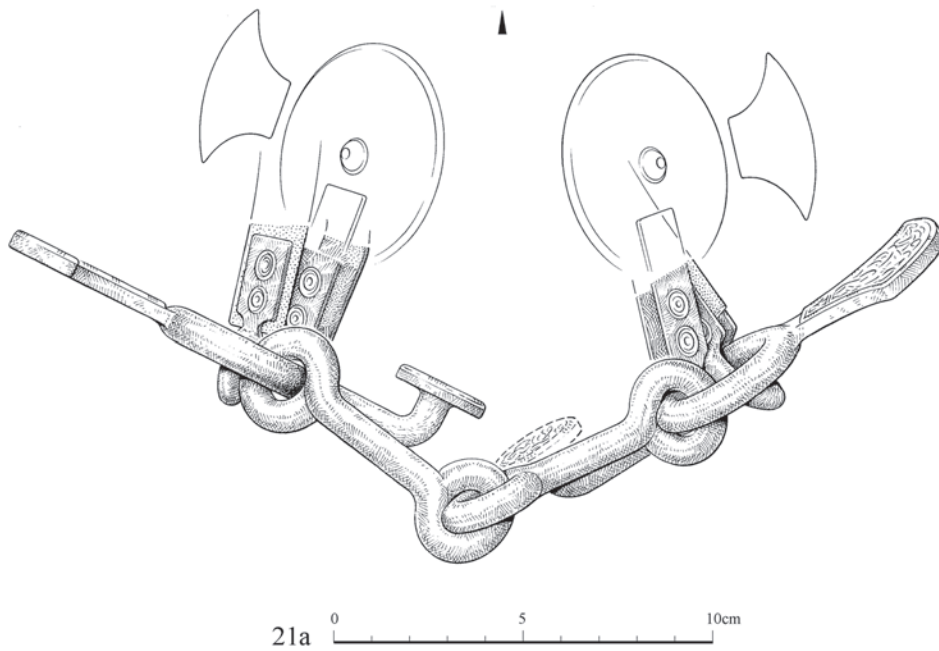
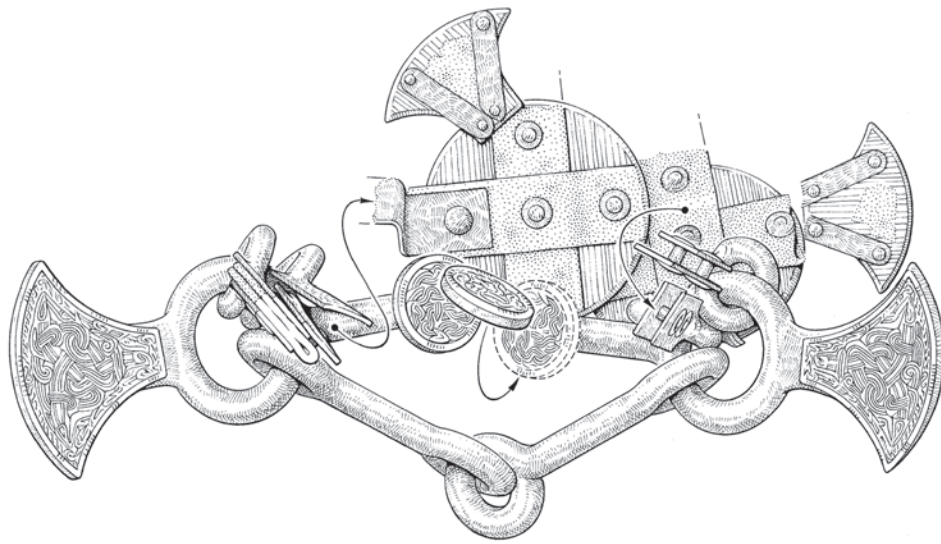


Figure 109 Mound 17 harness: snaffle bit 21a-d.

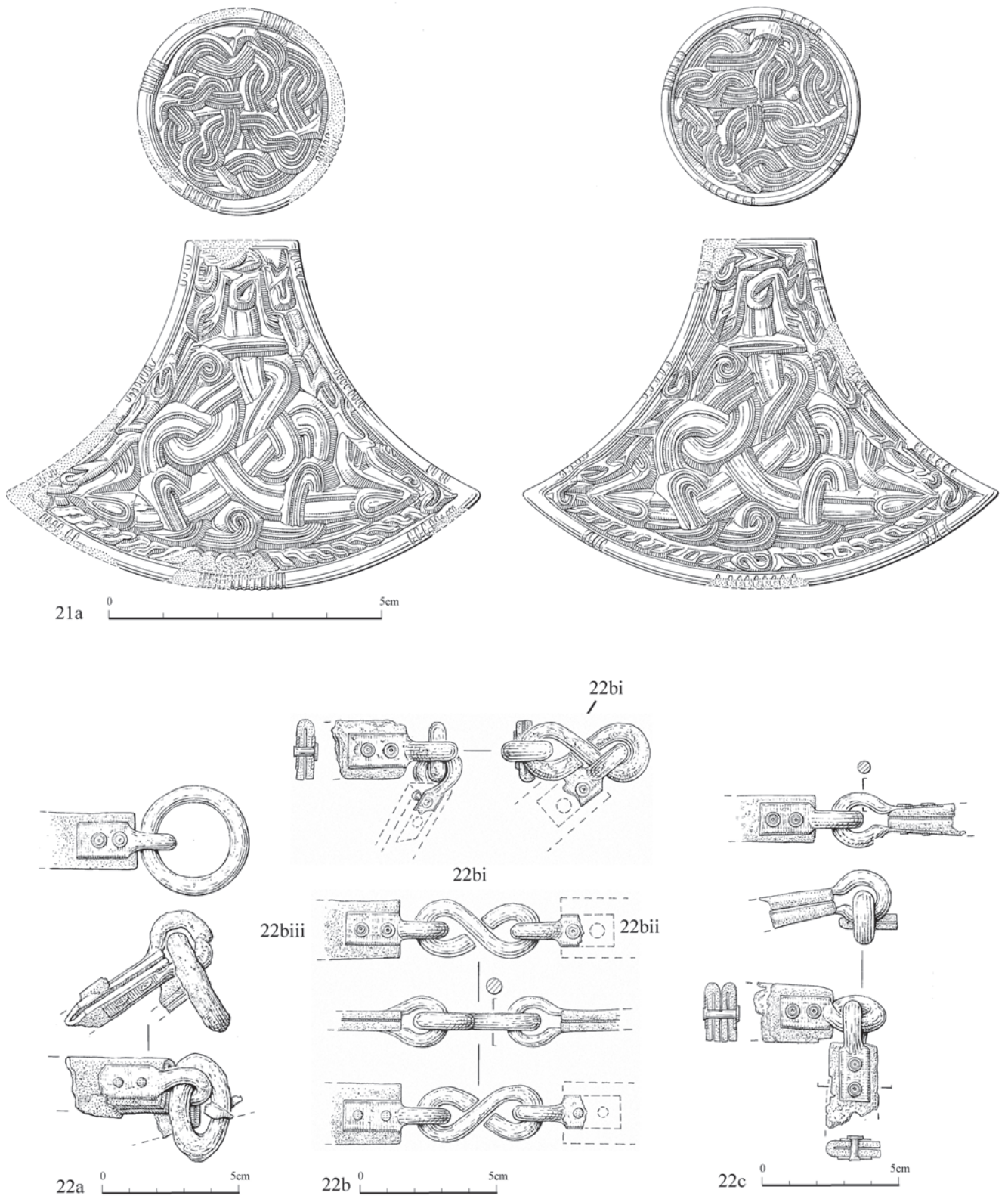


Figure 110 Mound 17 harness: fittings 21a and 22a–c.

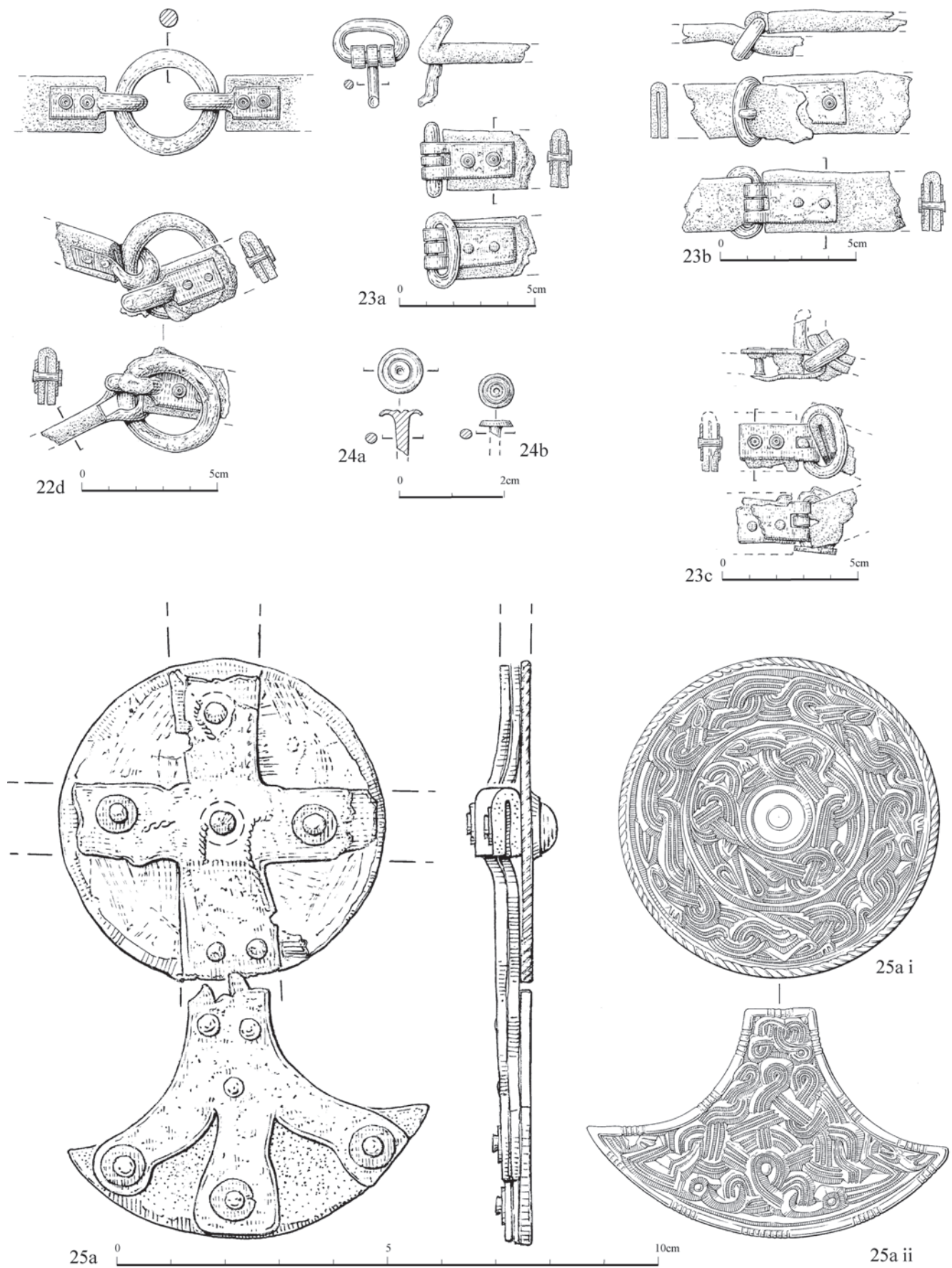


Figure 111 Mound 17 harness: fittings 22d, 23a–b, 24a–b and 25a.

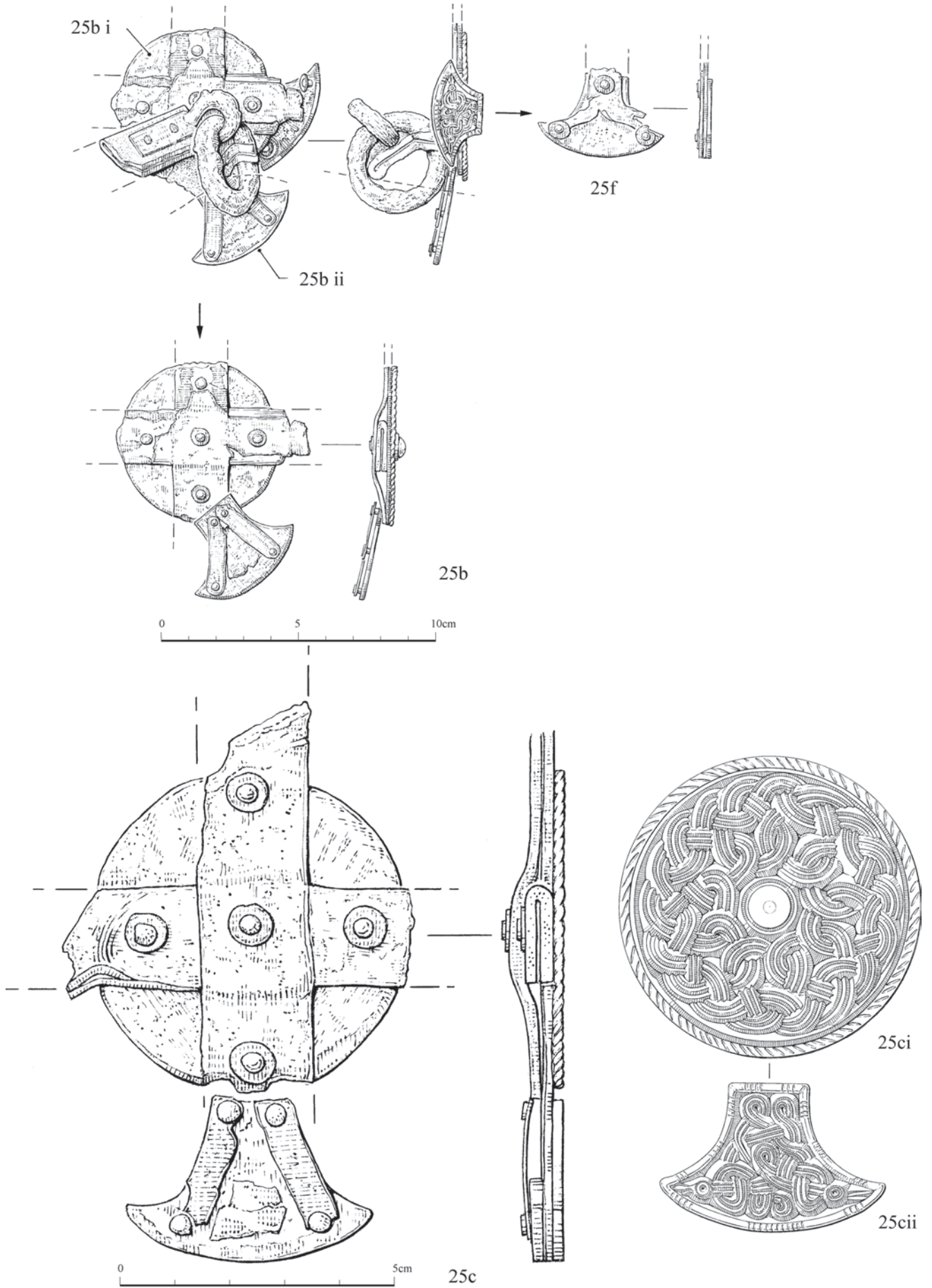


Figure 112 Mound 17 harness: fittings 25b–c and 25f.

four associated with the saddle (**28d**; Figure 114). Lying in the angle formed by the strap-link (**22c**) and the buckle (**23c**) is a third copper-alloy anthropomorphic pendant (**26a**) and, face down, a second strap fitting decorated with a guilloche design (**26d**; Figure 113 and Colour Plate 12:b). A third iron buckle (**23a**), open at the time of burial, lies slightly apart from the main group, next to one of two delicate silver, copper-alloy and iron strap-links ornamented with birds' heads (**29b**; Figure 114).

#### DESCRIPTION OF THE COMPONENTS – BRIDLE

The bridle consists of various elements that are linked, both functionally and stylistically (the terminology used is an adaptation of Bishop 1988, see Figure 115). It has a snaffle bit (**21a**; Figure 109) with fixed bars on the bit rings, with terminals of gilded bronze decorated in Style II zoomorphic ornament (Figure 110). The bit measures approximately 12 cm in width, only just large enough for a fourteen-hand pony (Clarke 1995: 28; see also Hyland 1990: 140, where a bit of this width would be considered tight for a modern northern-type pony of this size). Running loose on the bit rings between the terminals are fixings for the cheek pieces and the left and right reins (**21b** and **c**). These are simple iron plates hammered from a single rod of metal and clenched by a pair of bronze rivets with flat, heavily gilded heads decorated with recessed concentric circles. The fixings on the bit are made en suite with a group of four strap-links, each of different design (**22a–d**), and three buckles (**23a–c**), whose placing on the bridle is ambiguous (Figure 110, Figure 111). All the fixings and links are associated with folded straps that are 20/21 mm wide and 5/6 mm thick (Table 25). Their position and relationship with the bit suggests a function on the reins (see below). Three individual rivets (**24a–c**) with flat gilded heads link this group with a set of fixings mounted on narrow straps (Figure 111).

Associated with the straps of the headset are five gilt-bronze roundels with axe-shaped pendants (**25a–e**; Figures 111–113). The roundels are all made in a similar fashion, with a small plate garnet in a shell surround at the centre surrounded by Style II interlace and enclosed by a rope border. Rivets, cast with the roundels and axe-shaped pendants, clench the straps of the bridle with thin copper-alloy washers. On the back of each roundel are the remains of straps made of folded and stitched leather. On each, one strap is split to allow the second strap to pass through it. Roundel **25a** is a singleton, decorated with two zones of zoomorphic interlace separated by a narrow fillet and an associated axe-pendant covered with asymmetric Style II interlace. On the back of the roundel are the remains of two straps, 12 mm broad by 4 mm thick. The pendant strap divides into three narrow strips which are riveted to the axe-pendant. The four remaining roundels and axe-pendants (**25b–e**) are decorated with identical Style II ornament: the roundels with triple-strand interlace and the axe-pendants with interlacing peg-headed zoomorphs. Although all four belong on the headset, and their positions are known, they do not share the same strap widths, but divide into two distinct pairs. The pair holding the overlap of the cheek pieces with the noseband (**25b** and **25c**) are riveted to straps 20/21 mm wide and 4 mm thick, and their pendants are attached by leather tabs clenched with narrow bronze strips with a rivet at either end. The second pair, from the overlap of the cheek pieces with the brow-band (**25d** and **e**), are attached to straps 15 × 3 mm and 22 × 6.8 mm,

respectively, and their pendants are riveted to the pendent strap, which splits into two. An extra layer of single thickness leather (1.5 mm thick) on each roundel may be the remains of the throat-latch. Also belonging, stylistically, to this group, is a singleton axe-pendant (**25f**), which, although associated in the ground with the first roundel/axe set (**25a**), is attached to a strap 10.7 mm wide and bifurcated in the same way as axe-pendants **25d** and **25e**. It is also bent slightly out of shape.

The singleton roundel and axe-pendant (**25a**), although physically separated on the ground from the brow-band by the bit, must originally have belonged on the brow. Its separation from the brow-band complex, together with the sweep of anthropomorphic fixings from the level of the brow to the bit, and the position and damage to the axe-pendant **25f**, suggests that the bridle may not have been intact when it was buried. Straps on the brow may have been damaged by the poleaxing of the horse, as was the case with the bridle from grave 105 at Lakenheath (discussed below).

Also associated with the headset in the ground are a group of five gilt-bronze pendants, or pendant fixings, attached to straps of 13 × 5 mm (**26**; Figure 113). Three (**26a–c**) are decorated with a human mask above a zoomorph, and two (**26d** and **e**) with a simple interlace twist. One (**26e**) is placed at a crossover of a set of narrow straps, which lay sandwiched between roundels **25d** and **25e**. Fastening a second crossing is one of three rivets (**24c**) that are decorated en suite with the rivets of the buckles, links and fixings associated with the bit and reins.

#### ORNAMENT ON THE BRIDLE

##### *The bit (21; Figure 110)*

On the upper bar of each bit ring is a small roundel with an applied gilt-bronze panel decorated with a simple border divided into four by short lengths of raised moulding. The small field is filled with four serpents, with triple-strand bodies, arranged in a symmetrical interlace, with a head at each cardinal point broadly associated with the moulded panels on the rim. Each pair of jaws is wide open and bites across its own body and the writhing body of the snake behind it, from which it is separated by a body-strand of the snake placed opposite it. At the centre the coils of the four bodies meet in a complex knot, and the interstices between them are filled by the snakes' pointed tails.

The lower bar of the bit ring is an axe-shaped 'pendant' that is attached to its lower arc. The field of the axe carries an applied gilt-bronze panel decorated with a complex and exceptionally well-executed design containing three interlacing zoomorphs within a border of discrete paired quadrupeds and linked snakes. The top of the field is filled with a single beast with a long snout and a lappet running from the back of the head, horizontally, across the field separating the upper body from the lower. The sinuous, moulded body falls from the head to coil around the necks of paired zoomorphs that fill the lower field. These are elegantly drawn, with simple ring heads facing towards the curving edge of the bottom of the pendant. Their jaws bite across the bodies, just above each pear-shaped hip, which together with a sharply defined three-toed foot fill the corner. Their upper jaws are long and curl into a tight, shared loop, which links the zoomorphs into a single unit. The three zoomorphs seem to writhe in battle. The margins of this exceptional Style II design are also filled with animal life. Each

convex side carries a pair of quadrupeds: the upper with its feet inwards, as though the beast is pawing at the body of the upper zoomorph; the lower races with feet braced against the slashed frame. These animals are carefully defined, with slinky bodies and stylized heads with open jaws that snatch at the tail of the animal in front. They resemble hunting dogs seen in the classical world, and indeed this scene may be a Germanic adaptation of a classical hunting scene where lion, leopard and hare are portrayed pursued by dogs, which are here transformed into beasts of the Germanic world. The convex lower margin is filled with two pairs of interlaced snakes, each pair writhing head to tail, with the inner heads forming a figure-of-eight linking the four bodies, the outer heads facing into the corners of the fields and biting the tails of the lowest quadrupeds.

*Brow roundel and axe-pendant (25a; Figure 111)*

The roundel is separated into two concentric fields within a twisted rope border. The inner zone around the central setting is filled with a tightly composed frieze containing three zoomorphs with heads turned back to bite across their bodies. Two face in opposite directions and are linked at the backward curve of the neck/body. The third crouches against their back legs. Each zoomorph is characterized by an angular eye cere around triple-strand jaws, which bite across the body. The upper jaw is short and forward pointing, the lower is elongated and runs under the body and over the lower jaw, to curl under the body again, whipping back to fill the void at the top of the frame. The sinuous triple-strand body ends in a pear-shaped hip with a slender lower leg and a three-toed foot that rests against the upper jaw.

The outer zone is filled with a chain of discrete zoomorphs, each of whose lower jaw wraps around the neck of the beast in front. As in the inner frieze, the animals are extraordinarily well composed and entirely fill the field. In essence they are the same as the zoomorphs of the inner zone, looking backwards over their bodies with short upper and elongated lower jaw, and differ only in the twist of the hip which places the three-toed foot against the outer frame of the roundel, and in the extension of the lower jaw well beyond the hip to enable it to curl around the neck of the zoomorph in front and back on itself, to lie against its own hip.

The composition of the roundel ornament is rhythmic and satisfying and executed with total confidence. The use of triple-strand interlace in deep relief is reminiscent of chip carving, and is perhaps used deliberately on the bridle to create strong patterns. The zoomorphs are close relations of those seen on the panels filling out the body of the shield dragon from Mound 1, whose peer group is found in Vendel Style II (SHSB II: fig. 50).

In contrast to the rhythmic flow of the roundel, the axe-pendant is a wild virtuoso presentation of a scene that is not without ambiguity. Crouched in the lower corners of the mount are tightly designed quadrupeds, each placed with their back against the slashed frame. These creatures face inwards with a well-defined, beady eye and a forward thrusting beak-like jaw that hooks onto the jaws of a centrally placed serpentine creature. Each quadruped's front leg folds backwards over and under strands of the serpent-like creature, to run beneath its own three-toed back foot, and to end in a larger three-toed curving foot (rather reminiscent of a claw) in the extreme corner of the mount. Curiously, the animals have no hips and

the back leg is presented, unusually, in triple-banded form. The centrally placed serpentine creature can best be identified by its eye, which is surrounded by a ring head that moves into interlacing jaws. From either side of the head, spring triple-stranded body skeins that interlace across the panel with themselves and with three other skeins that fall from twists towards the top of the panel. These butt against the head and body of the serpent, and they may, in fact, be strands of it, making a unique creature. The top of the panel is filled with two twisting links of triple-strand interlace which are cryptic discrete serpents with well-defined pointy tails and 'tongues' slashing across the void between their heads to form a thin saltire cross. Although the quadrupeds filling the corners of the panel are recognizably related to other examples, in particular the quadrupeds on the Caenby disc (Speake 1980: pl. 15k), the remaining multi-skeined serpent is unparalleled and is a brilliant creation.

*Roundels and axe fittings on the bridle cheek piece and nose- and brow-bands (25b-c; 25d-e; Figure 112, Colour Plate 12:a)*

Each of the four strap junctions joining the cheek piece to the noseband and brow-band is reinforced by a single roundel from which hangs a disproportionately small axe-shaped pendant. All four roundels share the same motif within a slashed border that imitates a rope twist. They are die-linked, and any small differences that occur are part of the finishing process. Each roundel is entirely filled by a single triple-strand ribbon, which like the other fittings is executed in high relief in a chip-carving technique. The ribbon makes its way around the roundel twice; coiling from the rim to the central setting, without a beginning or an end, in a complex looping interlace sequence that is flawlessly executed.

In contrast, the axe-pendants return to familiar ground, with details of the design linking them to the axe-pendant on the brow. Within a border that, like the other axe-shaped fittings, is decorated with grouped slashes, two serpents coil and writhe across the field, their bodies interlacing and rising to two twists against the straight edge at the top of the pendant. The design is asymmetric, although the placing of strategic elements, like the heads and the body twists, conveys a sense of symmetry. Each serpent is carefully designed, with a dominant eye in a rounded head that faces into the lower corners of the mount. Their jaws are straight and open, and from them protrude clearly drawn tongues. The bodies are triple stranded, like every other interlace element on the bridle with the notable exception of the axe-shaped panels on the bit-ring bars, where the zoomorphs have broad ribbon bodies within a single border. Both bodies run backwards from the head, to cross over on the centre line of the panel. Above this crossover, the right hand body loops over itself to form a dominant element that is centrally placed in the design, and which then runs back to curl beneath the back of the head in a large loop, before running up the panel to form a twist in the opposite corner to its head. Its tail drops, with a single kink, to end touching the centrally placed body knot. In contrast, the body of the left-hand serpent runs up the panel to form a twist alongside the twist of its pair, and then rather awkwardly runs in a straight line across the panel (similar in its awkwardness to the almost identical straight length of body on the brow axe-pendant), before dropping down to make a loop around its body, balancing the same loop of the other serpent.

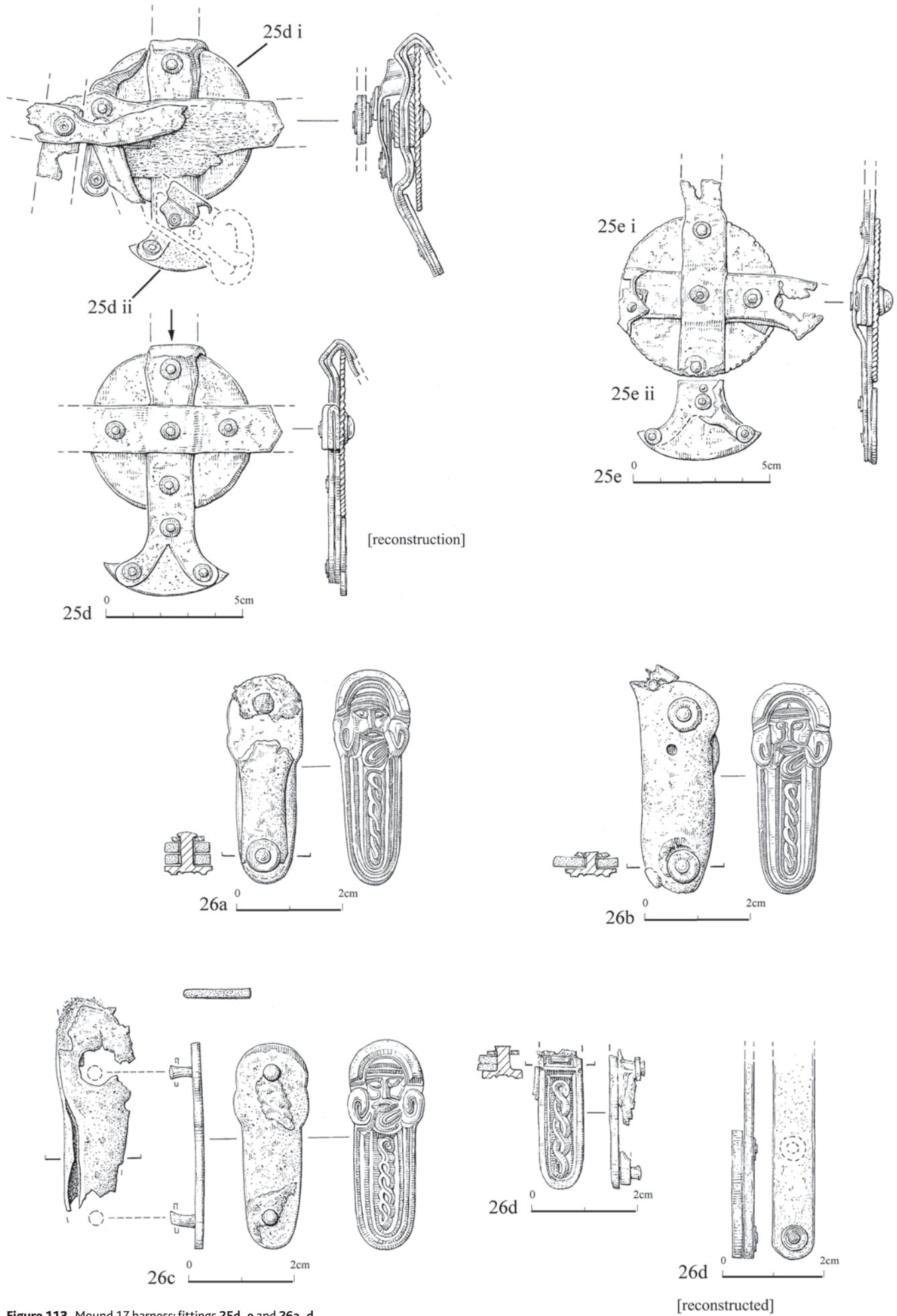


Figure 113 Mound 17 harness: fittings 25d–e and 26a–d.



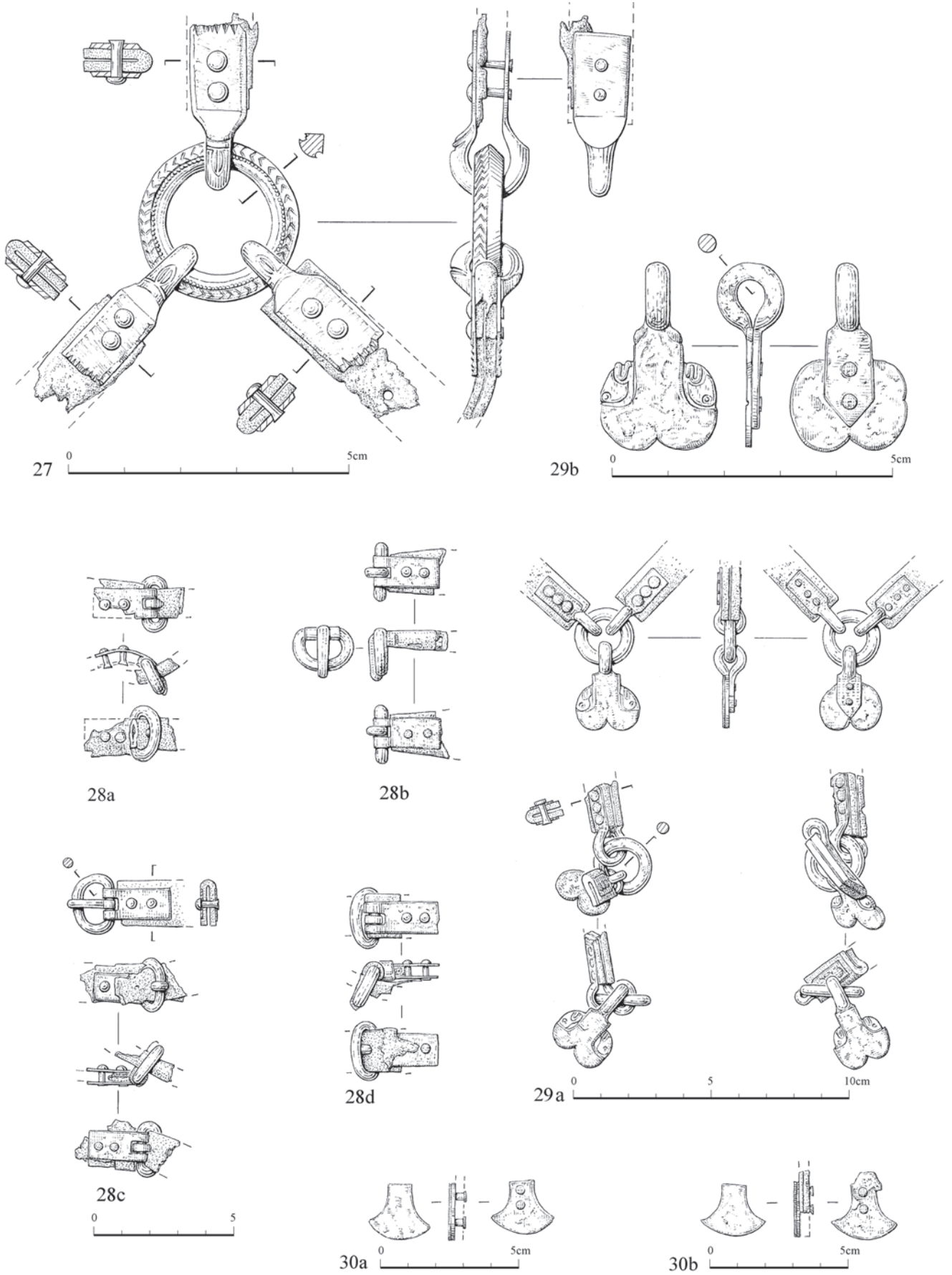


Figure 114 Mound 17: harness and saddle fittings 27–30.

Then, in true serpent-like manner, it ends in two coils at the bottom of the panel, which reflect the two placed against the straight edge at the top.

#### *Discussion of the ornament*

The ornament on the roundels and axe-shaped fittings provides a powerful indicator of the extraordinary level of design and execution that can be found in high-status workshops in the second half of the sixth and early seventh centuries. The tradition of fine casting in the Early Anglo-Saxon period has a long history, with intricate and high-quality work most clearly seen in the great square-headed brooch series and in the family of silver-gilt belt mounts decorated with Style I ornament. Style I, a collection of often cryptic body parts, *trompe l'œil* and discrete animals, while challenging the top craftsmen to produce ever more complex designs, never allowed them fluidity of movement across a broad field. It is, therefore, not surprising that, with the exception of the saucer brooches, Style I is at its most exuberant on brooches and fittings with tightly controlled fields, where a mass of component parts can best be seen. Style II, in contrast, allows, indeed demands, fluidity of movement, and it is this freedom to create complex interlace that is the trademark of the best workshops. Each design, while sharing similar elements (especially heads, hips and feet, see Høilund-Nielsen 1999: fig. 1), is transformed into an individual image by the treatment of the interlacing body. Like Style I, there is a wide gulf between the best and the worst, and much of the very best – and often the earliest – interlace is concentrated in the kingdom of the East Angles, where a taste for triple-band bodies predominates (for a matrix analysis and discussion of Anglo-Saxon Style II, see Høilund-Nielsen 1999: 187ff., esp. 194ff.; for Style II, in general, see Speake 1980).

Individual elements of the interlace on the bridle correspond well with Høilund-Nielsen's Scandinavian and Early Anglian phases, which she dates to the third and fourth quarters of the sixth century (Høilund-Nielsen 1999: 194). This dating uses the triangular buckle from Mound 17 as a criterion, which underlines one of the fundamental problems for dating Style II: the finest – and indeed most – of the East Anglian examples actually come from the workshops associated with the people buried at Sutton Hoo. Thus the dates of Mound 1 and Mound 17 are integral to any dating scheme, which perhaps produces a skewed temporal framework, albeit one that fits in well with the current interpretation of the establishment of the East Anglian kingdom in the second half of the sixth century. The importance of the Mound 17 interlace to the corpus of Anglo-Saxon Style II lies not so much in its contribution to the chronology of Style II in general, but in its reiteration of the exuberant creativity that the craftsmen working in the royal workshops brought to their metalwork. This is a workshop that is identifiable as much by its exceptional quality of metal casting and finishing, as by its capacity for innovative design, particularly in the use of subtle asymmetry. This is as true for the design on the mouthpiece pendants from the Mound 17 bridle as for the gold buckle in Mound 1 (Evans 1986: 91).

#### RECONSTRUCTION OF THE BRIDLE

Because the bridle lay loose in the ground, rather than on a horse, it has to be an assumption that all the metal fittings

were once part of a set of functioning harness. The re-assembly of the bridle makes use of the strap widths, the ornament and the association of the pieces as they lay in the ground (Figure 61). It posed few problems apart from the interpretation of the lattice of narrow straps with its pendant fixings. There is, however, a discordance in the strap widths of the cheek pieces, as preserved on the roundels. The decayed straps must represent primary function (i.e. the metal fittings are secondary to the straps that connect them, as a bridle can be functional with no metal other than the bit); and, following from this, the strap remains provide details about the structure of the tack that must be reflected in any proposed sequence.

The dimensions of the straps can be broadly re-established. Their thickness is determined by the rivets that secure them to individual metal fittings, and by the mineralized remains of individual straps. Their width is less easy to determine, as allowance must be made for differential distortion by corrosion products and by the clenching of strap-ends between fixing plates, which squeezes the leather beyond the limits of the plate. The leather remains do not give any indication of the length or articulation of the straps or, with one or two exceptions, of any particular relationship of one strap to another.

In the broadest terms, there are two strap sets based on widths of 20/22 mm and 12/15 mm. The heavier set is consistently associated with iron strap-fixings of regular widths and thicknesses, which are all clenched by two rivets with distinctive flat, circular heads that are decorated with an incised ring-and-dot motif and are heavily gilded. Central to this set is the iron snaffle bit (21), with two fixings on each bit ring to hold the lower ends of the cheek pieces and the reins. Lying immediately adjacent to the bit, face down in the ground and originally attached to the bridle cheek piece fixings by an extension of the inner plate, is the roundel pair (25b and 25c). On the back of each roundel are the remains of the bridle cheek pieces and the noseband. There was no trace of leather to suggest a chin-strap. The ends of the noseband expand into tabs that are used to anchor the pendants. Made en suite with the rein and cheek piece fixings are four links (22a–d), which are all different and which, on the basis of comparative material (below), can be interpreted as links on the reins. Link 22a is a link running on the left rein, which could be used for leading or hitching the horse safely, in the absence of its rider. This and the left rein run to a connecting link (22c), one end of which clenches the two straps. The rein runs onto a ring-hitch (22d) at the saddle end, and then to a figure-of-eight link on the right rein (22b).

Three buckles (23a–c) also belong, stylistically, to this group. On modern analogies, these would be placed on the head to adjust the two cheek pieces and the throat-latch. However, the buckles are large, and while two could adjust the cheek pieces, incidentally solving the problem of disparate strap widths at either end, the third is too heavy to fasten the narrow strap of the throat-latch, which is only 15 mm wide and 1.5 mm thick. On early bridles, however, buckles are rarely found in positions that suggest an adjustable headpiece, and bridles were probably tailored to an individual horse. The horse bridle in grave 33 at Basel-Bernerring, which included an iron *Knebeltrense* and a rein slide, also featured a

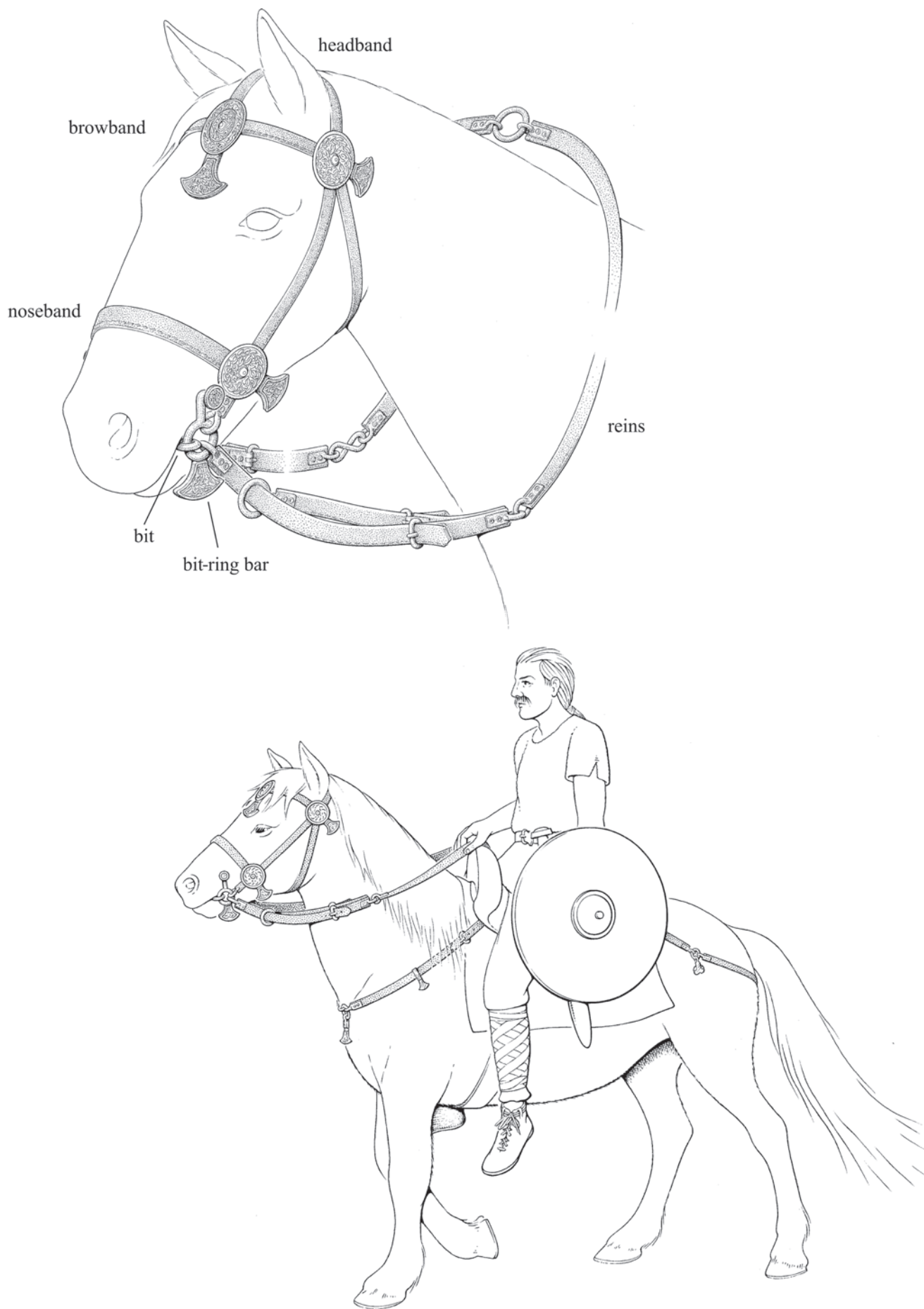


Figure 115 Reconstruction of the Mound 17 bridle, with saddle and body-harness (not to scale).

small buckle for a throat-latch (M. Martin 1975: 58). In the case of the Sutton Hoo bridle, the buckles must fasten three other straps and could be assigned to the three reins, which are the only other straps of equivalent width and thickness. This would enable the bridle to be adjusted between a two and a three rein system, reflecting perhaps the difference between everyday riding and parade riding, with spear and shield (cf. Evans 1994: fig. 28).

Lying amongst the fittings, with 21 × 6 mm straps, is a second group with markedly narrower and lighter straps, measuring, on average, 15/18 × 3 mm. This lighter group of straps includes the roundel set (25d and e) and the three pendants with human masks (26a–c). The roundel pair (25d and e) must be associated with their siblings (25b and c), and logically they belong at either end of the brow-band. Roundel sets such as these can only be placed at the crossover of straps meeting at right-angles; they cannot be allocated to the body, as straps that drop from the saddle to the breast and crupper bands naturally fall at an angle of 30°, and phalerae placed on these straps generally have fixings that take this angle into account (Bishop 1988: fig. 41). On a bridle, right-angled crossovers occur only at the meeting of the noseband and brow-band with the cheek pieces, and it is abundantly clear from high-status bridles in Anglo-Saxon England, Scandinavia and the near Continent that the Sutton Hoo roundel sets should cover these crossovers. In practical terms, however, the fact that the four roundels do not share matching straps poses a problem, if, as it would be logical to assume, the cheek pieces were made from a single length of leather between the noseband and the brow-band, rather than (as in a modern bridle) from two straps joined by a buckle. A further difference between the roundel pairs is that they use different methods to attach their pendants (above). This could reflect two different hands at work in assembling the bridle, or perhaps a repair or refurbishment of the bridle, involving replacement of part of the cheek pieces. Buckles could have been used, but the relationship of the buckles made en suite with the bit (23a–c) with the lie of the cheek piece fittings makes this unlikely, as does the weight of the straps preserved in two of the loops.

Crushed between the roundels, and possibly associated with them, is a fragment of a criss-cross lattice constructed of 10 mm wide straps. It consists of one articulated fragment lying against the lower part of the headband. On it are mounted one of the two guilloche ornamented pendants (26e) and a single rivet with a flat gilded head (24c), made en suite with the rivets associated with the bit and rein fixings. Both clench the crossover of two narrow straps. A further rivet hole survives at the very edge of the fragment, but no trace of a second cross strap survives. A second gilt-bronze pendant (26d) and two rivet heads (24a and b) can also be assigned to this suite of straps, and it is possible that the three anthropomorphic pendants (26a–c) that sweep down towards the bit should also be associated with this complex. How these narrow straps functioned is unclear, and their association with the roundel set on the brow-band may be purely fortuitous. They may perhaps be from a neckband, a feature common on late Roman harness (Bishop 1988: figs 1 and 8), or from a strap running vertically between the brow and the nosebands (cf. the reconstruction of the bridle from Apahida II – Musée des Antiquités Nationales, St-Germain-en-Laye 2000: 63). There seems little doubt that,

despite being found to the south of the bit, the magnificent singleton roundel with its large flaring pendant (25a) would have been centrally placed on the brow-band, where its position is supported by late Roman parallels (Bishop 1988) and, in an Early Anglo-Saxon context, by the Lakenheath bridle, where both brow and nosebands supported ornaments.

The reconstruction (Figure 115) is a best fit, guided by the strap widths and the symmetry of the fittings. The anomalous strap widths of the bridle have not been resolved, and the reconstructions of the saddle and body harness are tentative. This reconstruction modifies that of Carver (1998a: fig. 68), which included a martingale and supposed that the figure-of-eight and ring connectors belonged to the body harness rather than the reins. However, the present reconstruction is itself a temporary model to be improved upon as more horse equipment is unearthed from Anglo-Saxon England.

#### POSSIBLE FITTINGS FROM A SADDLE AND ITS ASSOCIATED STRAPS

The remaining fittings form an anomalous group attributed to a saddle and its associated straps and fittings. They include a copper-alloy strap distributor (27; Figure 114), almost certainly from a breast band, which linked straps measuring 10 × 4 mm; two bird-headed links (29a and b; Figure 114 and Colour Plate 11:g) joining straps 13 mm wide and 6 mm thick; and two silver axe-shaped mounts (30a and b; Figure 114). The principal fittings attributed to the saddle consist of two large iron buckles (31a and b; Figure 116), possibly for girth straps, and four iron and copper-alloy buckles made as a set (28a–d; Figure 114) attached to straps which have average dimensions of 11 × 4 mm. Also attributed to the saddle are a miscellaneous group of iron strips associated with mineral-preserved oak (*Quercus* sp.; 32a–d; Figure 116), copper-alloy nails associated with wood (33), copper-alloy tacks associated with leather (34a–e) and the remains of extremely degraded straps (35a–e). These, together with the survival of fibres of sheep's wool on the bit, imply that a saddle was placed in the grave with the bridle, providing a full set of tack for the horse.

#### RECONSTRUCTION OF THE SADDLE

There are not enough recognizable fragments to attempt a reconstruction of the saddle, but the presence of oak with iron strips suggests a wooden frame with iron fixings. The survival of sheep-wool fibres on the bit suggests that felted (?) wool may have been used to pad it, while the copper-alloy tacks associated with both wood and leather provide evidence for a traditional leather seat attached to the padded frame by copper-alloy tacks. No metal edge-binding was found to suggest a high bow in the style of some contemporary saddles on the Continent, for example the gold facings from the grave (706) of a mounted warrior at Mundolsheim, Alsace (Schnitzler 1997: cat. 85, p. 86 and fig. p. 87). However, as one of the rein links may have been a hitch, it is possible that the saddle may have had small horns in the Roman style (Bishop 1988: fig. 25; cf. the Late Antique wall painting from Bruckendorf, Burgenland – Daim 1996: cat. no. 3.58 and Farbtafel S131).

The two large iron buckles (31a and b) show that the saddle had at least one leather girth 32 mm wide and 5 mm thick (31b). This would provide a girth that is considerably narrower than the Roman norm of between 50 and 60 mm (Bishop 1988: 105). The second iron buckle (31a) fastened a strap only a little

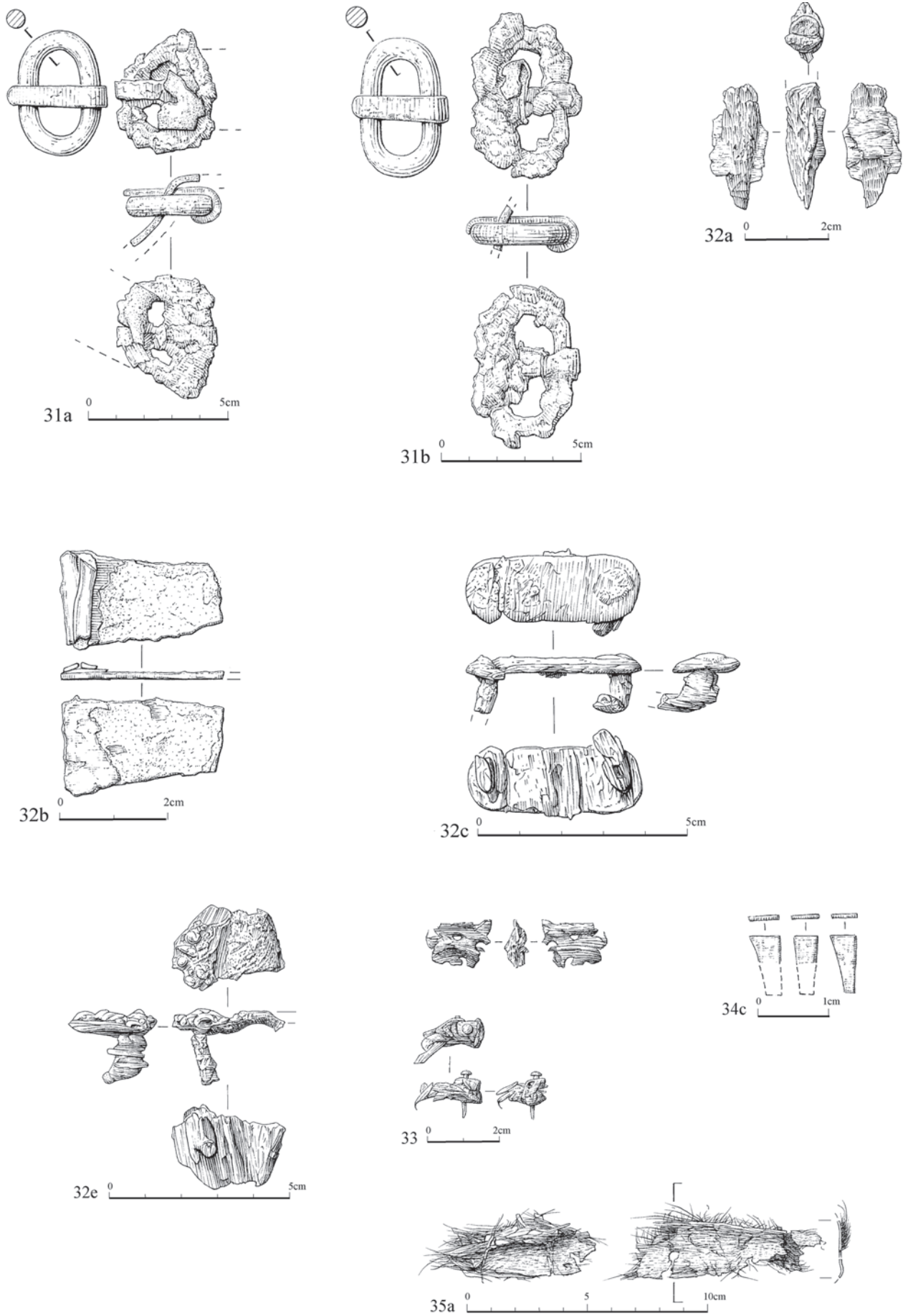


Figure 116 Mound 17: saddle fittings 31a–35a.

smaller, with a width of 26 mm and a thickness of 3 mm, perhaps for a second girth. Attached to the saddle, probably as fixings for breast and breeching bands, were four iron buckles with long bronze plates (28a–d). Leather remains associated with these buckles are from straps of 11–15 mm wide and 4–5 mm thick, and are all of folded skin. Two buckles (28a and d) have stitching cord associated with the leather remains caught between the buckle plates, and can probably be placed towards the front edge of the saddle, securing the straps that run across the horse's shoulders to the three-way distributor (27) on the horse's chest, which shares similar straps and also has cord associated with one fixing plate. This remarkable piece, so far unique in Early Anglo-Saxon England, has rivets with fine gilded domed heads. The distributor shares the same strap dimensions as the singleton axe-pendant (25f), and lies close enough to it to suggest that the decorated pendant might have hung from one of the three straps of the distributor. This would probably be a preferable interpretation to that of a martingale running from the breast junction to the girth in Roman style (Bishop 1988: fig. 25) as suggested in Carver (1998a: fig. 68). The remaining two buckles would have been placed towards the back of the saddle, fastening breeching straps. Also possibly associated with the saddle are two strap-links with delicate bird-headed pendants (29a and b) and two small axe fittings (30a and b) that are decorated with silver sheet, and which do not belong stylistically with the head fittings. The links join straps of folded leather 13 mm wide by 6 mm thick, and could best be designated as two-way fixings for the breeching straps. The axe-shaped fittings were riveted to straps 7 mm wide but only 3 mm thick. Although one (30b) was associated in the ground with leather and tacks from the saddle (34c–e), it is not clear whether they were actually attached to the saddle or its breast and breeching straps. Their style, and indeed their small scale, suggests another possibility – that they and the strap-links, which both seem more suitable for lighter weight harness, should perhaps be thought of as belonging to dog harness or hawking gear, though there is no evidence for a dog or hawk in Mound 17 (cf. the rich skeletal evidence for dogs and birds of prey from graves in the Vendel cemetery, Uppland – Öhmann 1983: 170–1; and Rikeby, Vallentuna – Vretemar in Sjösvärd *et al.* 1983: 139ff.).

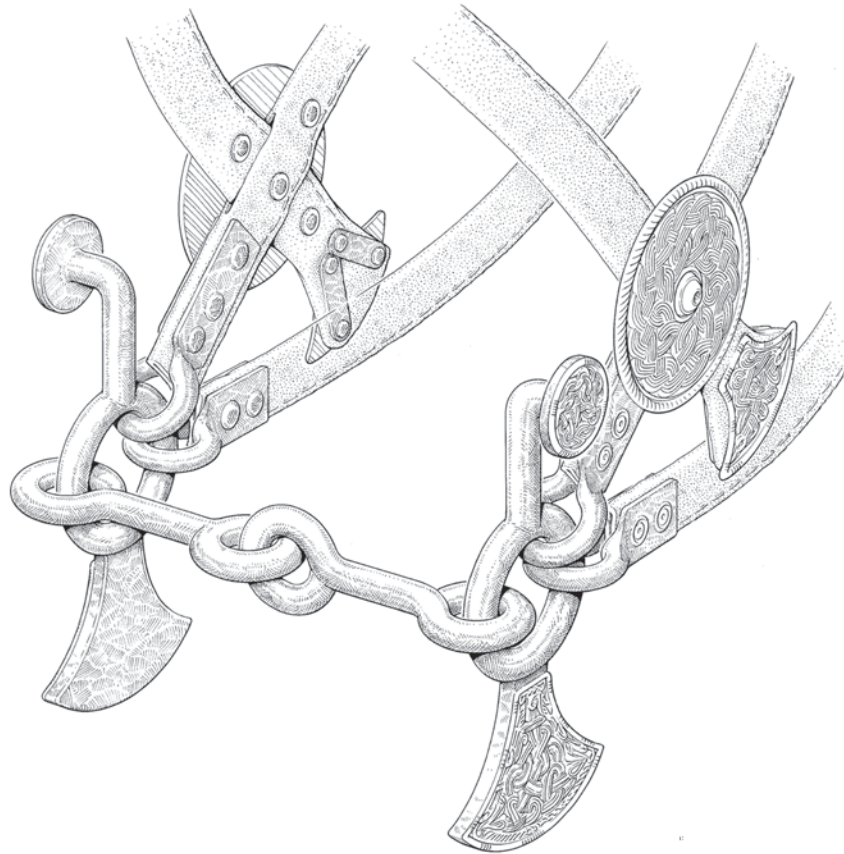
#### THE SUTTON HOO HARNESS – FORM, AFFILIATION AND DATING

There are still unresolved details concerning the Sutton Hoo bridle and saddle and the reconstruction of their original form. Most of the proposals put forward here are, however, readily paralleled in Roman, Germanic or modern horse gear. From a technical point of view, the bit on the Sutton Hoo bridle is a snaffle, with a jointed bit that attaches, at each end, to a substantial ring (Figure 117). This carries a barred bit ring, which prevents the horse from mouthing the bit out of its jaws sideways. The immediate ancestry of the Early Anglo-Saxon and contemporary European bits is to be found in the bits of the Roman period (e.g. first-century bits from Cirencester, Tuke 1969: frontispiece and fig. 20), although the history of the snaffle bit is long – fully developed examples dating from the first millennium BC, with barred bit rings in the form of finely modelled duck heads, were found at Pazyryk, tomb 3 (McBane 1988: fig. 2). In Merovingian contexts snaffle bits are defined as *Ring-* or *Knebeltrensen* (gag-bits) by Oexle (Oexle 1992: text

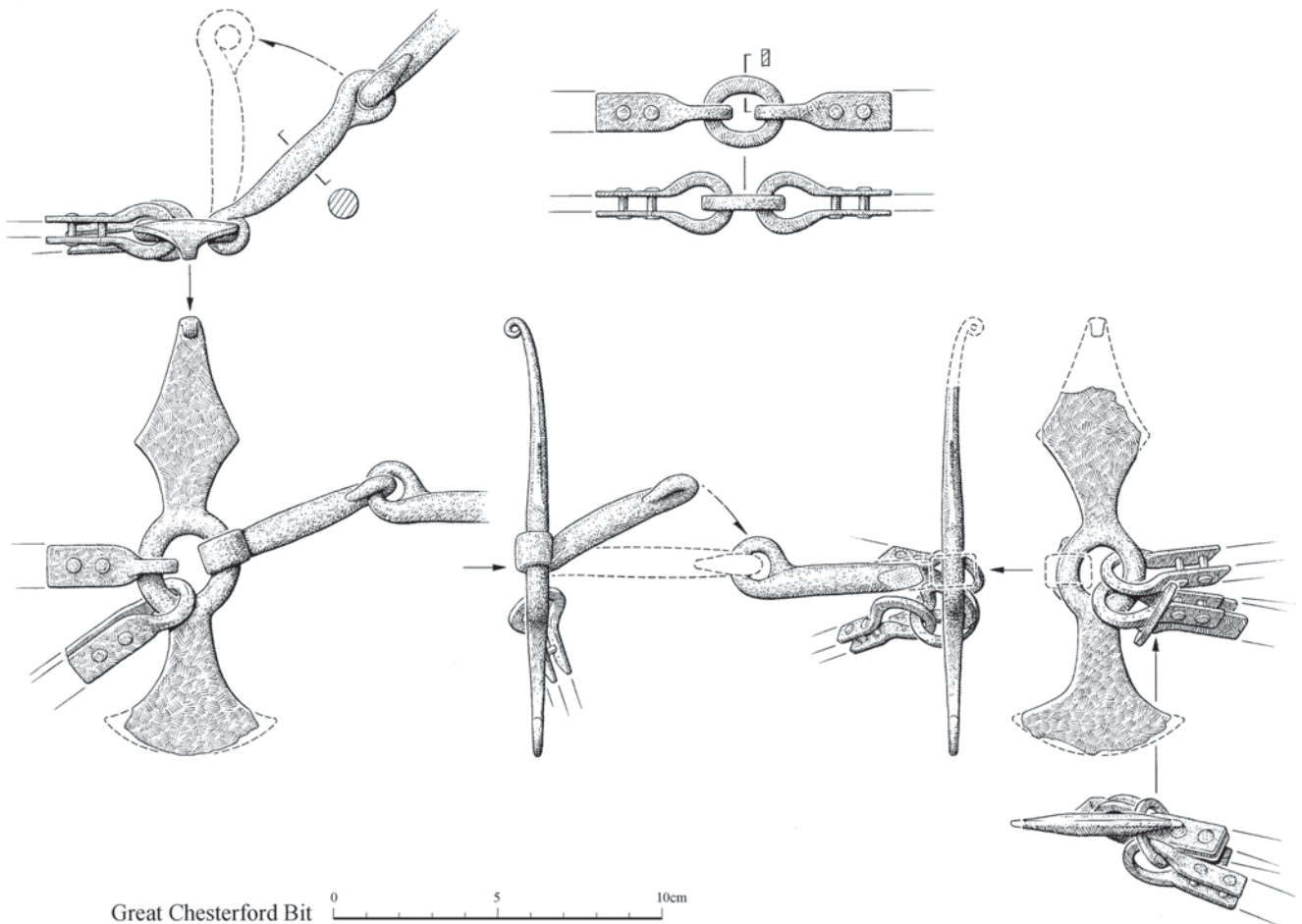
17ff.). These are bits consisting of a jointed mouthpiece attached at each end to simple rings or to narrow cheek pieces fitted with a side loop, or other loops of varying forms (*ibid.*: Abb. 2), and are effectively equivalent to a modern loose-ring snaffle and a ball-cheek snaffle (McBane 1988: fig. 26; Tuke 1969: fig. 42). The Sutton Hoo bit, with fixed bars on a loose ring at either end of the jointed bit, conforms to neither of Oexle's basic types. It is, however, similar to the bit from Orsoy, grave 8 (Oexle 1992: cat. 414), which Oexle describes as unclassifiable but broadly analogous to her group 1 and similar to a bit from Loveden Hill, grave HB2 (*ibid.*: text 39). Given the fact that several bits of the Sutton Hoo type are now extant from Early Anglo-Saxon England, it may be that we are dealing with an insular type, with the Orsoy bit reflecting English rather than Continental traditions (see also Chapter 8, p. 301).

The positioning of the links and buckles on the reins may seem novel, but the concept is securely underwritten by examples from several Anglo-Saxon graves and, more significantly, by two recently excavated horse burials which have had a major impact on the interpretation of the Sutton Hoo harness. The first, an articulated bridle worn by the cobby horse in grave 105 in the cemetery at Lakenheath, Suffolk, was excavated in the autumn of 1997 (Evans 2001: 27–9). The bridle is of similar status to the Sutton Hoo bridle, and is a couple of generations older, dating from the first half of the sixth century. At the junction of the noseband and cheek pieces, and the head/brow-band and cheek pieces, are matching gilt-bronze cruciform mounts and pendants decorated with Style I ornament and thick silver sheet. The placing of the cruciform mounts on the bridle crossovers is clear evidence that Early Anglo-Saxon bridles share the styles of the Continental peer group which ultimately derive from Roman harness. The bridle also had a narrow buckled (?) throat-latch, but no chin-strap. The conformation of a snaffle bit with fixed mouthpieces is functionally the same as those from Sutton Hoo and Great Chesterford (Evison 1994: 112, fig. 54; Figure 117). The Lakenheath bridle also has matching links on both reins. The rein links on the Sutton Hoo and Lakenheath bridles are also paralleled by the bridle found in 1991 associated with grave 47 in the Anglo-Saxon cemetery at Snape, only a few miles from Sutton Hoo. There, a horse's head was found buried alongside a well-furnished inhumation in a small, canoe-like boat (Filmer-Sankey and Pestell 2001: 111, 152). The horse was equipped with a simple snaffle bit and an articulated set of iron links that are almost identical to those in Mound 17. The links were found running down into the grave, as if the reins were placed in the dead man's hands, and associate the horse's head with the boat-burial (Filmer-Sankey and Pestell 2001: 102).

Other evidence also supports the placing of the links on the reins, even if their function is not easy to determine. Similar links were found at Marston St Lawrence, Northamptonshire (Vierck 1970–1: Abb. 58), Broughton Lodge (Kinsley 1993: 54 and fig. 28), Whithorn (Nicholson and Hill 1997: 421, fig. 10.101, nos 49.1–7) and Great Chesterford, Essex (Evison 1994: fig. 54). The latter was also associated with a snaffle bit that has similar bars to the Sutton Hoo bit, and also has well-preserved fixings for the cheek pieces and reins. A running ring identical to the Sutton Hoo example lay corroded to the rein fixing, with the left rein running through it. In a later context, the main panel on the St Andrews sarcophagus displays a horse-



Mound 17 Bit



Great Chesterford Bit 0 5 10cm

Figure 117 Reconstruction of the Mound 17 bit (not to scale) and the Great Chesterford bit

and-rider scene with a link on the left rein (Henderson 1998: 24ff., fig. 2, pl. 9; Webster and Brown 1997: cat. no. 69, fig. 100), while the mounted warrior stone from Repton (*ibid.*: cat. 63, fig. 99) shows a ring element at the head of the reins. Parallels for these links are largely unknown outside the British Isles. In grave 9 at Niederstotzingen a man aged between forty and fifty was buried with a bridle near to his head. On the left rein is an oval shaped iron loop: the only evidence in the Merovingian corpus of a bridle that has a running rein similar to Sutton Hoo. The grave also contains three identical buckles that could fasten three reins (Oexle 1992: 150–1, cat. 102, Tafs 47.1 and 48.13–15). Earlier iconographic sources (e.g. Bishop 1988: figs 1–21) offer no parallels. This suggests that the use of rein links is more prevalent in Anglo-Saxon riding equipment, although their origins are obscure. The function of rein links is uncertain. One interpretation would be that, like the weights on Oriental bridles (Pamela Crossley: pers. comm.; Clutton-Brock 1992: 74, fig. 5.11), they serve to hold the reins down on the horse's neck when the reins are dropped: in Oriental contexts to use a bow and arrow, in Anglo-Saxon contexts, perhaps, to ride parading a raised spear and shield (cf. the fallen warrior panel on the Sutton Hoo helmet SHSB II: fig. 143; see also Hyland 1990: fig. 7). The function of the running rein on the left rein is unclear.

The Sutton Hoo bridle is remarkable for the variety and decoration of its metal fittings. All the roundels have a central garnet in a shell collar and, together with their pendant axe fittings, are decorated with early Style II ornament, which is found in contexts other than horse equipment. The brow disc, with two bands of ornament within a twisted border, is linked to similar discs from Allington Hill, Cambridge and Spelsbury, Oxford (Speake 1980: pl. 15b and i; MacGregor and Bolick 1993: 238–9, cat. nos 47.1 and 47.3; see also cat. no. 47.2, a roundel from Gilton Ash), while the four matching discs with their complex triple-band interlace most closely resemble the box or saddle mounts from Caenby, Lincolnshire (Speake 1980: pl. 15j). Axe-shaped fittings are, like pyramidal sword fittings (above), part of a growing family of casual finds which have been recorded most significantly in East Anglia (e.g. West 1998: fig. 21.9 from Coddanham and others, and many metal-detector finds, recorded in the regional Sites and Monument Records), although, in the discussion of the later foil panels on the Swallowcliffe Down satchel, Speake refers to their rarity (Speake 1989: 76ff. and figs 68–9). Other finds of axe-shaped mounts of a similar date to the Mound 17 examples come from Caenby (Speake 1980: pl. 15l) and from Barham, near Ipswich, Suffolk (Webster and Backhouse 1991: 56, cat. no. 39), although in both cases the interlace style is different and the mounts are additionally decorated with stylized bird heads (cf. the anthropomorphic pendent fixings, 26a–c). The dating of all the interlace-decorated fittings is consistent with the late sixth/early seventh centuries (see Høiland-Nielsen 1999: 185ff. for a recent discussion of the dating of Style II in Anglo-Saxon England). The strap distributor is not paralleled in Anglo-Saxon England, although finely cast rings are occasionally found in graves – for example, one inlaid with niello found in grave 153 at Morningthorpe (Green, Rogerson and White 1987: 78, figs 110 and 347A) – and, were it not for its gilded rivet heads, it would probably be assigned to the late Roman period or the immediately post-Roman period (cf. Junkelmann 1992: Abb. 2–3 and Bishop 1988: fig. 26.3). However, a similar three-way

distributor was found amongst the horse burials at Niederstotzingen in grave 11 (Oexle 1992: 152, cat. 103, Taf. 48, 103). Other three-way distributors were found in Niederstotzingen graves 6 and 12a, showing their different, but more contemporary, styles. The Mound 17 bridle is also linked to Niederstotzingen 6 by the use of a running rein on the left rein. The anthropomorphic pendants are paralleled almost exactly by a singleton mount with rivet holes for its attachment – a stray find from Norfolk (Cathy Haith: pers. comm.; Gaimster 1998: 81ff.). Functional parallels for the pendants on the strap-links (29a and b) are difficult to find, but the generic bird type is amply provided for in the late sixth and early seventh centuries (for example, in grander form, from Barham, Suffolk, BM 1984, 0103.1; Webster and Backhouse 1991: cat. no. 39).

Insufficient evidence survives for an assessment of the saddle type to be made, although the lack of decorative mounts suggests that it was not as high fronted as some of the eastern Continental examples (Junkelmann 1992: 72, Abb. 79). The fragments that survive suggest a padded leather saddle with a wooden tree, possibly similar in its basic form to the reconstructed saddle from Oberflacht grave 211 (Quast 1993: 437ff; Figure 115). Some form of parade ritual may be implied by the links, and the saddle may have had a pommel or small horns (cf. Connolly 1987: 7–27; Junkelmann 1992: 72ff., Abb. 81) to secure the reins when riding with spear and shield (Hyland 1990: fig. 7), with the additional possibility of leading the horse on the third rein. The horse at Lakenheath was buried with a saddle that left even less trace in the ground than the Sutton Hoo saddle: only a girth buckle was found, together with fragments of wood, leather and a few scraps of metal. It is clear from this evidence that the Anglo-Saxons were used to riding with a simple wooden-framed saddle, but whether or not it had horns as an inheritance from the Roman period is uncertain (Hyland 1990: pls 5, 6 and 8).

The Sutton Hoo harness can be matched to the rare iconographic sources. In Anglo-Saxon England these generally present a highly stylized view of the horse and rider that is ultimately derived from late Roman sources, and show primarily the potent theme of an armed rider trampling a fallen warrior, as, for example, in the Flavian tombstone of T. Flavius Bassus in Cologne (Bishop 1988: fig. 1) or, closer to hand, the first-century tombstone of Genialis from Cirencester (Hyland 1993: fig. p.103). The image of the rider and fallen warrior is seen in fragmentary form on the Sutton Hoo helmet and the helmet from Valsgärde 7 (SHSB II: figs 143 and 164a–b), which show certain closely shared details, particularly in the roundels placed on the bridle on the overlap of the brow-band and noseband with the cheek pieces, in the girth and in the style of the breeching strap. The Sutton Hoo scene is incomplete and shows no throat-latch, but the equivalent panel on the contemporary helmet from Valsgärde 7 clearly shows a throat-latch (the reconstructed panel on the Sutton Hoo helmet replica uses the Valsgärde scene to fill in gaps on the original helmet – Hyland 1994: fig. p.70). Later Anglo-Saxon sources move away from the fallen warrior scene and present interesting details of harness that show possible continuity between the mid sixth century and the ninth. On the reverse of the Aberlemno cross-slab (Aberlemno 1) dating from the eighth century (Hyland 1993: fig. p. 68) is a scene showing a confrontation between Pictish and mounted warriors interpreted as Anglian – the English riders



wearing helmets and carrying shields in the tradition of their seventh-century forbears. The eighth-century cross shaft from Repton (Webster and Brown 1997: fig. 99) shows a mounted warrior armed in Germanic style, with a link at the head of the reins. This, together with the figure-of-eight link depicted on the left rein of the horse on the St Andrews sarcophagus (which is eighth century – Henderson 1998: 24, fig. 2, pl. 9; Webster and Brown 1997: fig. 100), suggest that the links first seen in an Early Anglo-Saxon context at Lakenheath (early sixth century) and Sutton Hoo (Mound 17) continued as a primarily insular phenomenon for at least another century.

Horse-and-rider burials in Early Anglo-Saxon England are rare and reflect status in the broadest sense. The burial beneath Mound 17 can usefully be compared to the horse burials at Snape and Lakenheath. All three are broadly contemporary examples of the early sixth to early seventh centuries. The harness from Sutton Hoo, and the assemblage in general, share striking similarities with them. It is clear that these three dead men shared a common arm-bearing status – all were buried with shield, knife and one, two or three spears. In all three burials the rituals surrounding the burial of the horse are different – at Sutton Hoo the horse was in a separate grave, at Snape a head only seems to have been buried above and to one side of a small boat and at Lakenheath the horse lay in the grave alongside the coffin of the dead man (for a discussion of the ritual surrounding horse burial see Chapter 8, p. 301). The bridles share common features, particularly the matching set of links at Sutton Hoo and Snape, while the Lakenheath bridle has two links. Most striking is the design of the barred bit rings shared by the Lakenheath and Sutton Hoo bridles, the bit found at Whithorn (Nicholson and Hill 1997: 41 (IN49), figs 10.101 and 49.1–7) and the Great Chesterford bit (Evison 1994: 112 and fig. 54), the latter also shares a link on the left rein. The newly excavated examples suggest a common and strongly felt style at this period (c.525–600), which is not visible outside Anglo-Saxon England (see above and Oexle 1992).

#### AFFILIATIONS OF THE OTHER OBJECTS IN THE GRAVE

The Mound 17 grave is clearly high-status, with contents that are equivalent in rank to the 'Fürstengrab' at Beckum or grave 9 at Niederstotzingen. Both are horse-and-rider graves, the former coin-dated to 565–78 (Winkelmann 1962; Paulsen 1967: 188ff.; Menghin 1983: 103, 104). The sequence of deposition of the grave goods was unusually clear (see Chapter 5, p. 136), with the harness being placed in the grave after the shield and spears and before the coffin. The close association of the horse gear with the two spears and the shield could suggest that these weapons were, on occasion, carried and perhaps even paraded on horseback (cf. the use in early Germanic iconography of the horse-and-rider motif ultimately derived from Roman prototypes, SHSB II: 190ff.).

However, the assemblage poses problems of status in relation to the other Sutton Hoo burials beneath mounds, and in the three flat graves (Burials 12, 15 and 16). It does not, for example, contain gaming-pieces or counters, or any evidence of small boxes or caskets common to the burials beneath Mounds 5, 6 and 7 (above), yet its *cloisonné* assemblage, although in copper alloy rather than gold, relates it to other mounds, in particular Mound 1, and to the hypothetical sword-belt assemblages in Mounds 6 and 7. The buckles from the sword

belt and the scabbard are decorated all over with well cut, large garnets, and the cell-work in them is well executed, although there is an inevitable loss of clarity with the collapse of the copper-alloy cell walls. The straight-edged, triangular belt buckle (6) belongs to a type common from the second half of the sixth century (Moosbrugger-Leu 1971: 119 and 131–3, Abb. 47; Siegmund 1996: Abb. 570; Siegmund 1999: fig. 1.9; and cf. Speake 1980: pls 6–8; for a useful discussion of buckles see MacGregor and Bolick 1993: 191ff.; see also Høilund-Nielsen 1999: 194). It is decorated, in a wholly individual way, with insects and flowers, built up from large, simply shaped plate garnets with flat and curved edges, mounted in pairs, flat edge to flat edge. Small insets of blue glass and ivory are used to separate and point up the individual elements of the design. This creates a subdued polychrome effect very different from the vibrant use of colour on other examples of high-status Early Anglo-Saxon work, for example the composite brooch from Kingston, Kent (Webster and Backhouse 1991: cat. no. 32a). The use of petal-shaped garnets around the shoulder cabochons to create the effect of a multi-petalled flower is unparalleled in both Anglo-Saxon and Continental material. The upper dominant insect more closely resembles a butterfly or moth (the former a symbol of eternity in Oriental contexts) than the cicada or bee favoured on the Continent. The insect motif can be seen in both naturalistic and cryptic form in both Scandinavian and Frankish contexts (Arrhenius 1985: figs 136–9; see also Kidd 1988: 81ff.), but it is virtually unknown in Early Anglo-Saxon imagery (Evans in Webster and Backhouse 1991: cat. no. 11). The rare use of garnets to create a figural design can also be seen at Sutton Hoo in the bearded human face, enclosed in the oval hip of the bird of prey, on the front of the shield from Mound 1 (SHSB II: fig. 44).

The curved scabbard buckle (5c) is made en suite with the belt buckle (6) and the two pyramidal mounts (5a, b). Its long, narrow form and small size are unparalleled amongst Germanic and Anglo-Saxon sword harness fittings. On a different scale, the form can be seen in a small group of large and abnormally long buckles, also with a slight curve. One of these, 17.5 cm long, was found in grave 41 at Alton, Hampshire, attached to a backing of horn (Evison 1988: 20, figs 6 and 34). This and related buckles were worn at the waist, and are clearly different in function to the scabbard buckle from Mound 17. Both it and the tiny silver buckle it faces (5d) seem too light to function as part of a harness securing a full-sized pattern-welded sword, yet they clearly did. In contrast to the belt buckle, the decoration of the scabbard buckle is restrained and is executed in interlocking step-cut garnets whose shapes are readily paralleled on other equivalent Anglo-Saxon and near Continental pieces. A centrally placed garnet in an ivory collar equally divides the length of the buckle, and the fields to either side are decorated with interlocking garnets in quite different styles (cf. the garnet *cloisonné* fitting from the Mound 13 area, below, p. 254). The field towards the end of the buckle is filled with triangular garnets with a single triple-stepped face (Arrhenius 1985: fig. 71, cell type TfSt3), similar to those on, for example, the composite brooch from Sarre or the buckle from Gilton Ash (Webster and Backhouse 1991: cat. no. 31a; Speake 1980: pl. 99). The panel next to the buckle is filled with a rhythmic pairing of stepped garnets (Arrhenius CaSt5) cut with curved backs, a pairing paralleled by the borders of the Tongres buckle, a piece arguably

from an Anglo-Saxon workshop (Bruce-Mitford 1974: 273ff., pls. 90–1). While the stepped garnets towards the end of the buckle appear on a wide range of objects from both insular and Continental contexts, the pairs of curved backed garnets may be more significant, linking the buckle with a select group of *cloisonné* pieces (Arrhenius 1985: 72ff.). The scabbard buckle, as part of the sword suspension system, is unusual, and the two examples from the Sutton Hoo cemetery are unmatched by others in Anglo-Saxon England. On the Continent the use of slides or buckles on the lower half of the scabbard is equally rare (SHSB II: 572ff., fig. 421).

The pyramidal strap-mounts (5a and b) belong to an increasingly large family, which has a distribution in Anglo-Saxon England that is predominantly north of the Thames, clustering in East Anglia with outliers in the Midlands and north of the Humber (Menghin 1983: Karte 22; Adams and Evans forthcoming). On the Continent such fittings cluster along the Rhine and between the Rhine and the Danube, although many of these are arguably of lesser status than the Anglo-Saxon finds. Many, particularly those of high status inlaid with garnet (and in this case, ivory), are decorated in distinctive styles, and this is true of the pair from Mound 17, whose decorative form is closely paralleled by a singleton find from Tuddenham St Mary (West 1998: 100, fig. 131.1) and a pair of copper-alloy, garnet-inlaid pyramids from Coombe Bissett, Wiltshire (Cunningham 1896: cat. no. 221, Salisbury Racecourse Barrow; Noël Adams: pers. comm.). Recent finds of high-status pyramidal mounts suggest a late sixth/early seventh century popularity, although the use of these mounts continues into the eighth century (for instance, an example in silver inlaid with niello from Bawtry, South Yorkshire, BM MME 2000, 0102.1).

Apart from the sword belt and scabbard fittings, and the bridle, the assemblage in general conforms well to the high-ranking norm (Härke 1989: 49ff.). The remaining grave goods divide into those reflecting the dead man's status – the sword, his shield and the two spears – and a set of containers that were presumably for food and drink. The sword (4), with its horn fittings and simple pattern-welded blade, survives in poor condition. Horn fittings are also identified on the sword from grave 47 at Snape (Cameron and Filmer-Sankey 1993: 103ff.), where the grip is compared to one from Cumberland (BM 1876,0717.1). The blade is a simple pattern-welded form (cf. Lang and Ager 1989: 95ff.). The two spears, together with the shield boss and short handgrip (Dickinson and Härke 1992: 20, fig. 16, group 6), are typical of the late sixth/early seventh centuries – sword, spear and shield are characteristic of the equipment of high ranking males (Härke 1989). A personal possession buried with the dead man is the leather pouch (2). This has an iron mount with simple stylized bird or animal heads (cf. Brown 1977: 451–77). Its small parcel of garnets (3a–h) and millefiore glass (3i) can be compared to the far larger group buried in grave 071 at Lechlade, a woman's grave, where the garnets are also in a rough state (Adams pers. comm.). A third, and even larger group, also in the grave of a woman, was recently found in the Kentish cemetery of Dover Buckland 2 (BM).

The grave was also furnished with a set of containers that, like the weapon set, are clearly essential in this level of burial. Similar sets can be seen in other horse-and-rider graves, particularly on the Continent. Snape boat grave 47 – the burial of a small boat associated with the burial of a horse (Filmer-

Sankey and Pestell 2001: 102) – contained a weapon set of sword, ferruled spear and shield, an iron bound bucket and a box or casket. The bridle, while having the same type of rein links as the Sutton Hoo bridle (above), is undecorated. In contrast, the horse-and-rider grave at Lakenheath (Evans 2001) contained only a single bucket, and this was associated with the horse. Yet the bridle is equivalent in its ornamental fittings to the Mound 17 bridle. The presence of a lugged cauldron (14) reflects the assemblages in Mounds 1, 2 and 7 (SHSB III: 499 and 507ff.). The bronze bowl (18), although small, can be compared generically with, for example, the bowl from a Snape cremation, grave 68 (West and Owles 1973: 47–57; Filmer-Sankey and Pestell 2001: 157). These and imported cast copper-alloy bowls are often used as food containers – the Sarre Coptic bowl (BM MME 1860, 1024.3) contained hazelnuts, as did a bowl from Faversham (BM MME 1293'70), while a bowl from Broadstairs (BM) contained apples. The iron-bound yew-wood bucket (13) with its stylized bird-headed terminals relates to the three buckets in Mound 1, and can be compared to Bucket 3 (SHSB III: 585ff., fig. 406). The double-sided comb (20) links the assemblage to the other male graves in the cemetery and, although not as ornate, particularly to Comb 1 in Mound 1 (SHSB III: 585 ff.; see also Hills and Penn 1981: 170, fig. 173).

#### CONCLUSION: STATUS AND DATING OF THE MOUND 17 ASSEMBLAGE AS A WHOLE

Mound 17 is an intriguing grave in terms of its status and its temporal relationship to the other male burials in the cemetery. Its status is well above Burial 15 (below), with its simple knife and buckles, but significantly below the remaining male graves, all of which have status signalled by gaming-pieces, silver drinking cups or boxes/caskets. These objects perhaps distinguish graves belonging to a ruling elite. In contrast, the burial below Mound 17 belongs more typically within the range of warrior burials that are a feature of the late sixth and early seventh centuries, both in England and more notably in Continental Europe. The assemblage of containers, specific weapons, a comb and ornamented bridle is paralleled at this exact level by Niederstotzingen grave 9. It is, in the strictest sense, a grave belonging to a member of a warrior elite, but not necessarily one belonging to the ruling elite at Sutton Hoo.

The date of the assemblage is unambiguous, with the majority of key objects having a horizon in the late sixth century. Work by Dickinson and Härke (1992) has established a chronological framework for Early Anglo-Saxon shield bosses, in which Type VI, to which the boss in Mound 17 belongs, is dated to 580–600. The ornament on the bridle belongs to the first phase of Style II in Early Anglo-Saxon England, considered to represent styles directly influenced by developments in Scandinavia – perhaps even by the seminal Vendel style ornament on the shield in Mound 1. Given Arrhenius' dating of Vendel xiv (with which the Mound 1 shield shares close parallels) of around 560 (see Chapter 8, p. 304, Table 44), the ornament on the bridle, particularly on the mouthpiece pendant fittings, can be placed in the third quarter of the sixth century. Other elements of the harness, particularly the bird-headed strap-links (29a and b) and the pendent axe-fittings (30a and b), enhanced with silver sheet, look back to earlier sixth-century metalworking techniques. Equally, the anthropomorphic fittings (26a–c) belong to the traditions of Style I that are seen on

floriolate cruciform brooches in East Anglia. The decoration of the bridle clearly belongs within the traditions of the second half of the sixth century and, while it shows some signs of repair (such as the re-attached straps on fittings 21 and 22), it seems unlikely that its deposition is significantly later than its manufacture. The sword belt buckle belongs to a series that has a horizon on the Continent c.580, although the type runs through the seventh century. Its surface enrichment of all-over *cloisonné* garnet in copper-alloy cell-work reflects Continental taste, where all-over garnet inlay is seen in the rather uniform series of rosette brooches in Frankish contexts and in simple cell-work on Visigothic objects, particularly the series of buckles with square buckle plates. The use of opaque blue glass is also paralleled on the Continent, and is seen in the early seventh-century disc brooches, which have a predominantly Kentish distribution (Avent 1975), but the decorative motifs of petals and insects are

so far unparalleled. The fact that it is made en suite with a scabbard buckle and two pyramidal strap mounts, both arguably an Early Anglo-Saxon fashion, suggests that the buckle may be a product of a local workshop – albeit one reflecting current Continental fashions. The lack of stepped cell-work on the buckle, however, suggests that it falls earlier rather than later in the series, particularly given the taste for stepped cell-work seen in the Mound 1 assemblage, made in the first decades of the seventh century. Other objects in the assemblage, such as the containers or the pouch, are not capable of close dating, but are types found in equivalent graves of both the late sixth and early seventh centuries.

The majority of the dateable objects from the Mound 17 assemblage clearly suggest a male grave of the late sixth century, perhaps even the third quarter. (A date for the grave itself in the early seventh century is argued in Chapter 8, p. 301.)

## Catalogue: Mound 17

### 1a–d

#### Four iron cleats (Figure 100)

In size and shape, the cleats fall into two types. Two, 1a and d, are longer and are distinctly waisted in plan. The curve on all four is substantial, suggesting that the cleats were attached to a coffin with a domed lid. Their position, towards the edge of the coffin stain and high in the fill of the grave pit, suggests that their function was to secure the lid to the coffin base. The coffin is considerably larger than the body, with a large gap at the head and feet.

Dimensions for cleats given below include three plan measurements – the top and bottom edges and the mid-point.

#### a Iron, curved cleat

48/7560

Dimensions: 174 × (60 × 67 × 40) × 6.2 mm

From the north-west corner of the coffin lid.

#### b Iron, curved cleat

48/7561

Dimensions: 145 × (57 × 59 × 55) × 3.25 mm

From the south-west corner of the coffin lid. See also 8022, a nail from this cleat.

#### c Iron, curved cleat

48/7562

Dimensions: 150 × (55 × 65 × 55) × 4.9 mm

From the south-east corner of the coffin lid.

#### d Iron, curved cleat

48/7563

Dimensions: 165 × (56 × 60 × 49) × 5.9 mm

From the north-east corner of the coffin lid.

#### e Iron nail with a domed head

48/8022

Dimensions: length 42.25 mm; head: diameter 91.33 mm, depth 6.96 mm; shank: diameter 7.16 mm at junction with head

Found next to 7561, but not part of it.

#### f Organic: wood

48/8262

Oak (*Quercus robur*) from the coffin.

### 2

#### Leather purse or pouch, possibly with a wooden frame, and with iron and copper-alloy fittings (Figure 101)

48/8265

#### a Iron purse-mount

48/8257A

Dimensions: bar 78 mm (overall); strap associated with the pouch, 24 mm wide

A purse-mount completely enclosed in mineralized leather and textile, with associated wood. The mount is lightly hogged, and narrows towards either end before curling down and back on itself to form stylized bird heads. Towards one end, running over the top of the purse/pouch, is a broad strap, perhaps the remains of the belt from which the pouch hung, and sandwiched between the two layers of leather are fragments of mineralized wood (*Salix/Populus* sp.). Beneath the leather are extensive traces of textile, 13 mm folded thickness, which suggest that the pouch was lined with cloth or, given the very large quantity of textile, contained a cloth bag (perhaps itself containing the collection of garnets (3). One small fragment of leather is pierced by three stitching holes, which are spaced 4

and 3 mm apart. No trace of the stitching thread remains. The mineralized leather has been identified as calf – the same material as the harness. The fragments of mineralized wood associated with the bar may be part of the pouch frame. Visible on radiographs, within the corrosion and folded leather and textile, is a small copper-alloy (?) buckle with a flattened oval loop (Figure 101), probably the buckle that secured the purse. Associated with the pouch complex, but not necessarily with the strap that runs over the top of the bar, is a small but fine copper-alloy buckle (2b; not illustrated). Close to this buckle, and stained with copper salts from it, lay seven loose garnets (3a–g), an eighth small garnet (3h) and a small piece of red and blue chequer-board millefiore glass (3i, also stained with copper salts) were recovered from the area around the pouch.

#### Textile associated with 2a

(48/8257A)

- 1 In folds running parallel to the bar, over an area 50 × 10 mm, is tabby repp, 26/Z × 12/Z per cm, cf 48/8291.
- 2 Interfolded with this, another textile, tabby weave, 14/Z × 12/Z per cm. The fibre is flax/hemp.
- 3 On the opposite face of the object, on the skin face of the leather, are traces of open-weave textile similar to 48/8291(2).

#### b Copper-alloy buckle

48/8257B

Dimensions: loop 12.08 mm wide; plates: 10.23 × 7.80 × 0.61 mm

Associated with the leather pouch 2a, the buckle has a smooth oval loop and small rectangular plates,

which are made from a single folded sheet of thin bronze and clenched by two rivets.

### 3a–g

#### Collection of garnets (not illustrated)

48/8257C

Dimensions and weights: a: 11 × 9 × 1.5 mm, 0.476 g; b: 11 × 8 × 1.5 mm, 0.431 g; c: 9 × 9 × 1.5 mm, 0.431 g; d: 8 × 7 × 1.5 mm, 0.204 g; e: 9.5 × 5 × 1.5 mm, 0.199 g; f: 8 × 5 × 1 mm, 0.144 g; g: 7.5 × 5 × 0.6 mm, 0.57 g. Total weight of parcel within pouch: 1.918 g. Total weight including associated finds 3h and 3i: 2.168 g.

Seven garnets found inside the pouch and presumably buried as a parcel of value. Of the seven, all are roughly polished on both faces and five are exceptionally thick. None are trimmed for setting, although garnet g approaches the correct thickness.

### 3h

#### Shaped garnet (not illustrated)

48/8256

Dimensions and weight: 10 × 5 × 1 mm, 0.195 g

Roughly shaped in the form of a bird head with a curving beak. Found associated with, and probably originally contained within, purse (2).

### 3i

#### Glass inlay (not illustrated)

48/8266

Dimensions and weight: 5 × 5 × 0.8 mm, 0.057 g

Chequer-board millefiore inlay, made from red and blue rods, and trimmed roughly square. Found associated with, and probably originally contained within, purse (2).

4

**Iron and horn sword and fitting (Figure 101)**

48/8264

Dimensions: overall length 915 mm, max. breadth 70 mm at scabbard opening

Sword blade with pommel, guards and grip of horn. The pommel is made of a single piece of shaped horn and is pierced by the grip, which protrudes beyond it. Traces of mineralized leather (8264F and H) and wood (*Salix* or *Populus* sp., 8163) from the scabbard survived in the corrosion, as did evidence for a fleece (sheep's wool, 8264D) lining. In one area, the thickness of the wood used in the scabbard was visible, showing that wood, at least 2 mm thick, was used. A single iron rivet with a copper-alloy head survives on one shoulder of the blade; no rivet was found in the heavy corrosion on the opposite side of the blade. Traces of unwoven binding threads (8264E) were found on the upper face of the blade, just below the scabbard opening, and may be the remains of a scabbard binding. They are similar and may relate to the unwoven threads found on the back and edge of the scabbard buckle (5c). The blade is pattern welded. It was also found with 8264A–J, some miscellaneous fragments.

**5a and b****Copper-alloy (copper, lead, tin and zinc), garnet, ivory and gold foil sword mounts (Figure 102; Colour Plate 11:f)**

48/8166 and 48/8197

Dimensions: 19 mm<sup>2</sup>

A pair of pyramidal mounts from the sword harness. Each of the four faces are inlaid with a central setting of ivory flanked by *cloisonné* garnets, set over pointillé (?) gold foil over a calcite (CaCO<sub>3</sub>) backing paste. A single square-cut garnet fills the top cell of the truncated pyramid. The pyramid is hollow-cast; the base of the fitting is open and bisected by a narrow bar under which a narrow leather strap would have been threaded. The garnet cell shapes are simple geometric units based on a semicircle. The decorative schemes on the four faces are identical, with a single garnet-filled cell placed across each corner to create a dominant central field with small fields within the arc of each garnet. All of these were filled with ivory. Mineralized wood (from the scabbard) covers the strap bar of 5b, its pyramid lay in the ground on the upper surface of the sword, together with the belt buckle (6).

5c

**Copper-alloy (copper, lead, tin and zinc), gilded copper-alloy, garnet and ivory curved scabbard buckle (Figure 102; Colour Plate 11:c)**

48/8263

Dimensions: length 56 mm

The buckle was found lying across the scabbard on the underside of the sword, facing the small silver buckle (5d), with which it appears to be associated. The buckle is made of a copper, lead, tin and zinc alloy (BM Research Laboratory) akin to modern gunmetal, which gives it a pewter-like sheen. It is curved in profile, reflecting the curve of the scabbard on which it lay, and against which it would have been secured by a narrow leather strap – traces of this survive on the loop and between the plates.

Fragments of binding threads from the scabbard were found attached to the underside and edge of the buckle. The buckle is composed of two elements: the long narrow body, which is decorated with all-over *cloisonné* garnet cell-work; and the loop and tongue, which are gilded. At the base of the tongue is a single large-shouldered garnet in a gilded cell, which creates a shield-on-tongue effect. The buckle's long narrow body is divided into two individually distinct panels by a centrally placed circular plate garnet in an ivory collar. To either side are panels of equal length. The panel nearest the loop contains five pairs of interlocking, stepped semicircular garnets placed at a slight angle to the vertical axis of the panel. Small triangular garnets fill the gaps between the matched pairs. The panel farthest from the loop contains four pairs of arrow-shaped garnets, placed so that their stepped bases and points interlock across the width of the panel, again at a slight angle to the vertical. The spaces left to either end of the panel are filled with triangular garnets, one of which is cut to accommodate the curve of the central setting. The garnets are set over (pointillé) gold foil on a calcitic backing paste. A fragment of binding weave from the scabbard was found attached to the underside and edge of the buckle.

5d

**Silver buckle (Figure 102)**

48/8171

Dimensions: width (of loop) 10 mm

A small buckle with an oval loop. The buckle lay on the upper surface

of the sword blade, and is closely associated with the scabbard buckle (5c). Both would have been attached to a similarly narrow strap. It is from the sword harness.

5e

**Iron buckle (Figure 102)**

48/8291

Dimensions: 22 mm overall

A buckle with a flattened oval loop and small rectangular plates carrying three rivets, enclosed in corrosion and mineral-replaced textile. It was found close to the sword hilt. There is textile of two different sorts, a weft faced tabby and a more open weave.

*Textile associated with 5e*

48/8291

Irregular folds of iron-preserved textile, 40 × 20 × 15 mm, with a narrow leather (?) strap emerging from the complex.

- 1 Mostly tabby repp, with 26/Z × 12/Z per cm. The fibre is flax/hemp (probably flax).
- 2 In patches over (1), is a more open-weave tabby, 20/Z × 16-18/Z per cm. The fibre was not identified.

5f

**Organic remains (not illustrated)**

48/8198

A tape-like cylinder of a smooth, silky calcitic (?) deposit, buff in colour and less than 1 mm thick, found crushed onto the underside of (1f), wood from the coffin, which lies over the buckle (6) and pyramid (5b) on the upper side of the sword.

6

**Copper-alloy (copper, lead, tin and zinc), garnet, blue glass, ivory and gold foil belt buckle (Figure 103, Colour Plate 11:d and e)**

48/8196

Dimensions: overall length 61 mm, width 23 mm; width of loop 28 mm

A triangular shield-on-tongue buckle from the sword belt, with all-over *cloisonné* decoration in garnet, opaque blue glass and ivory. The garnets are backed with pointillé gold foils on a backing paste of calcite and beeswax. The loop is a flattened oval with an angular cross-section, and the well-shaped tongue hooks over it. The hinge is concealed by a shield-shaped panel at the base of the tongue. This is filled with four shaped garnets enclosing a central setting of blue glass. The thin backplate is secured by three rivets, which are concealed on the face of the buckle by a flattened cabochon garnet within an ivory collar. The back plate is thin (0.94

mm) and the margins are decorated with a double band of punched circular impressions. The buckle was closed on the leather strap of the sword belt at the time of burial, and leather remains are associated with it.

The body of the buckle is decorated with a remarkable series of motifs: on the shoulders matched, but irregularly shaped, garnets flank the circular garnets as if they are petals; below, forming a central motif, are ten garnets set in the form of a butterfly or moth with the head, thorax and two pairs of wings carefully defined. Below this are eight garnets set in pairs in a wing-like design, and these rest against a pair of garnets that fill the bottom of the field. The rather large circular toe of the buckle contains a third plate garnet, which is larger than the upper pair and is surrounded by a substantial collar of ivory. The small fields between the motifs are carefully filled with either blue glass or ivory, and are used to point up the three motifs. Several tiny fragments of leather and mineral-replaced textile were found on the side of buckle (8264b).

7

**Iron knife (Figure 103)**

48/8259

Dimensions: length 122 mm (overall)

A knife with a horn handle, and with traces of mineralized leather from the scabbard on the blade. The blade is straight backed and is missing its end. It was found lying parallel to the sword hilt (4).

*Textile associated with 7*

48/8259

Along the cutting edge, on the outer face of the leather, were traces (10 × 5 mm) of open-weave textile, perhaps same as 8291(2).

8

**Copper-alloy rivet with associated mineralized wood (Figure 104)**

48/8260

Dimensions: rivet length 10.45 mm; curved fragment 9 × 5.5 mm

Wood (*Quercus* sp.) impregnated with copper salts and pierced by a copper-alloy rivet with a domed head and splayed shank end. Associated with this fragment is a slightly curved fragment of leather, heavily impregnated with copper-alloy salts. A depression in it matches the rivet head. From the skull context in the coffin.

9

**Soil mark**

See Chapter 5, pp. 130 and 132, for interpretation as tub.

10

**Iron spearhead (Figure 104)**

48/8191

Dimensions: overall length 270 mm; blade is 60 mm to shoulders; socket diameter 15 mm

The smaller of two spears lying corroded together. The blade is leaf-shaped, elegant and narrow, with distinct shoulders. The socket is long and split, and contains traces of mineralized wood (willow or poplar, cf. its companion, 11). Organic remains on the complex show that the spears lay beneath the shield and the horse harness. Its type is Swanton D3.

11

**Iron spearhead (Figure 104)**

48/8261

Dimensions: length overall 368 mm

The larger of the two spearheads, it was found corroded into a single mass. The spear has a leaf-shaped blade, 150 mm long, that narrows smoothly into a split socket. This contains traces of mineralized wood (willow or poplar). A white calcitic deposit forms a distinct band, 75 mm wide, on the socket, running from the mouth of the socket to end, perhaps coincidentally, at an ancient fracture. This may have been deliberately applied, and is possibly the remains of painted decoration. Mineralized wood (*Tilia* sp.) from the shield-board and leather from the horse harness, on the upper surface of the socket and on the tip of the blade, show that the two spears were placed in the grave before either the shield or the harness. Its type is Swanton D2.

12a

**Iron shield boss (Figure 104)**

48/8277

Dimensions: boss: diameter 130 mm, flange width 14 mm, collar length 20 mm; handgrip 132 × 14 × 2.5 mm; thickness of board beneath boss is 12 mm

A boss and handgrip with associated mineralized leather and wood (*Tilia* sp.) from the shield-board. The boss is made from a single billet of iron and is conical with a short, upright collar and a narrow, slightly angled flange. Corroded to the underside of the flange is a narrow handgrip, whose rivets, together with two others, attach the boss at the cardinal points to the shield-

board. All four have flat heads and a shank length of 12 mm, the thickness of the shield-board beneath the boss. Two, possibly three, further rivets (or nails, the evidence is not clear because of corrosion) are positioned at irregular intervals on the flange. These are presumably secondary, additional fixings to hold the boss to the board more securely. Traces of mineralized leather remain on the back of the boss and handgrip. These show that the lime-wood shield-board was leather covered. Remains of mineralized wood on the underside of the flange run east-west, that is, horizontally across the shield. The handgrip is a simple strip of metal, set off-centre across the open mouth of the boss, and attached at each end by a single rivet. See Dickinson and Härke 1992: type 6.

12b

**Iron rivets (Figure 104)**

48/8308–9

These are two pairs of rivets with traces of mineralized leather and wood from the decayed shield-board. Each rivet has a flat, round head, 15 mm in diameter, a shank diameter of 5 mm, and a length of 15 mm to a thin washer over which the shank is clenched. The washers have a diameter of 10 mm. Leather, less than 1 mm thick, survives to either side of the wood, showing that the shield was covered front and back with leather, and that its thickness, where pierced by these four rivets, was 15 mm. Two of the rivets (8308a and b) are joined by corrosion, and lie with their heads virtually touching, that is 36 mm centre to centre. Three of the four rivets preserve excellent wood-grain. This runs parallel to the axis of the paired heads, and on each shank there is a distinctive break in the grain, showing that the rivets pierced two equal layers of wood. This could suggest either that the shield-board was laminated and made of two bonded thicknesses of wood, or, more probably, that two planks, 13 mm+, were used. These would have been joined by a halved scarf, clenched out on the board by the pairs of rivets at the centre by the boss. There is also some associated organic material: bracken roots with three featureless scraps of degraded leather (?), the largest is 18 × 8 mm (8195).

12c

**Iron buckle (not illustrated)**

48/8190

Dimensions: width of loop 23 mm

A small buckle with an open oval loop. On the pin hoop are traces of

mineralized leather, probably from the buckle strap. Other traces of mineralized leather and wood are perhaps from the shield-board. The buckle lay close to the shield, and was initially thought to be a rivet from the boss. Its association with the shield suggests that it may have belonged to a carrying strap.

13

**Iron-bound wooden tub (Figure 105)**

48/8070

Dimensions: height of the collapsed tub 193 mm; reconstructed height 272 mm, diameter at rim 224 mm, at base 260 mm

Iron and ferrified wood, comprising the remains of a (small) iron-bound yew-wood tub, raised off the ground by three small 'feet' and carried by a bailed handle. The staves, identified as yew (*Taxus* sp.), survive in mineralized form on the backs of the iron bands. They range in width between 45 mm and 62 mm, with the most common width between them being 50 and 60 mm. They were bound by three iron bands, which were found spaced approximately 45 mm apart. The top hoop is placed at the rim and is approximately 20 mm deep, and is made of two unequal bands, the upper twice as broad as the lower. The hoop is shrunk onto the staves over an opposed pair of handle escutcheons, pinching them against the rim. These escutcheons are formed from flattened iron rod shaped into an eye-loop, which rises just above the rim to engage the end of the bailed handle. The ends of the escutcheons are expanded, giving the impression of highly stylized heads, and are pierced by a nail, which acts as an additional fixing for the unit. The median and basal hoops are approximately 20 mm deep, and are formed of two equal bands. The lower hoop supports three small bracket-like feet that are formed from a strip of iron bent into an angular S-shape. Each strip lies behind the base hoop, with its upper end hooked over it; the lower end extends 7 mm beyond the staves before bending back and running up behind them, lifting the wood off the floor. A fragment of mineralized wood (8254) from the tub complex was found on the handle. One of the feet carries traces of mineralized fibre, possibly grass, and this, together with the traces of couch grass and sphagnum moss (17c, below), suggests that the grave pit

may have been strewn with grass and moss before the burial was laid out.

14

**Copper-alloy (copper, tin and zinc) cauldron (Figure 106)**

48/8253

Dimensions: extant height 160 mm, diameter at girth (?) 213 mm, width of rim 9.5 mm, height of lugs 28.7 mm, width of handle 12.45 mm, thickness 3 mm, original height 272 mm (estimated)

A lugged cauldron raised from a single sheet of bronze. The body has flaring shoulders, a sharply rounded girth and a gently curving base. The rim is flat and out-turned, and develops into two opposed triangular lugs with out-turned tips. Each lug is pierced. The iron handle is made from a rod, hammered flat into an arc that matches the rim and twisted so that it can lie parallel to it; the tapering ends pierce the lugs and curve back to prevent slippage. Traces of charring on the outer surface are evidence of its use over a fire.

15

**Chaff tempered pot (Figure 106)**

48/8317

Dimensions: height 160 mm; diameter at rim 109 mm, at belly 157 mm, at base 60 mm; thickness at rim 5.39 mm

The urn has a simple everted rim, a globular body and a flattened base, which is heavily stained with copper-alloy salts (see report p. 268, below). It is decorated with seven narrow, equally spaced, vertical bosses. The fabric is chaff-tempered, with voids visible on the surfaces and with sand and occasional chalk or shell inclusions. The outer surface is smoothed. The fabric colour is dark grey-brown (the core and inner surface), with a brown to orange brown outer surface. Found inside cauldron 14.

16

**Soil mark**

See above, Chapter 5, pp. 129–30, for interpretation as bag.

17

**Animal bone (not illustrated)****a Ribs of lamb or young sheep/goat**

48/8072

Found beneath copper-alloy bowl (18), and associated with sphagnum moss and couch grass (8068), and sheep bone (17b).

**b Lamb or sheep/goat rib**

48/8251

With 17a and c.

**c Organic material (not illustrated)**

48/8068

Fragments of sphagnum moss and couch grass found with sheep ribs (17a) beneath copper-alloy bowl (18).

**18****Copper-alloy bowl (Figure 107)**

48/8030

Dimensions and weight: diameter 210 mm, height 85 mm, rim width 11 mm; 278.78 g

A deep bowl with a flat, out-turned rim and a smoothly curving profile, which falls to a rounded base. On the base are traces of couch grass (8068). The metal is in exceptionally good condition and is well finished, with no manufacturing marks.

**19****Copper-alloy rim repair (not illustrated)**

48/8070B

Dimensions: 7 mm (height) × 10 mm

A small strip folded over wood (?); possibly a repair patch from the rim of a wooden bowl or cup.

**20a****Bone comb (Figure 107)**

48/8252

Dimensions: length overall 129 mm, thickness 12 mm

A double-sided composite comb, with one end missing, held together with small iron rivets (see 20b). The comb is simple, with straight-sided ends to the central element. The teeth are well graded and sharp, as though little used. The back and front plates are rectangular and undecorated, and are deeply cut by file marks. Three iron rivets remain *in situ*, a fourth has been reattached. One end of the comb is missing.

**20b****Iron rivet**

48/8090

A loose rivet from composite comb (20a).

**21****Iron and gilded copper-alloy jointed snaffle bit with associated fittings (Figures 108–10, Colour Plate 12:c)****a Iron bit**

48/8173–4 and 48/8181

Dimensions: overall width 242 mm

Each end of the bit runs free on an iron ring between two fixed elements that form the bit ring bars. Rising from each ring is a thin iron rod that, at the top, turns through 90° to develop into a small roundel. This carries a gilt panel,

which is riveted in position and decorated with balanced interlace. On the opposing side of the ring is a fixed pendant, with an axe-shaped fitting carrying a gilded panel that is also riveted into position. This is decorated with Style II zoomorphic interlace. Running free between these two elements, and opposite the bit, are two rectangular strap-fixings, one holding the end of the cheek-strap, the other securing the end of the rein. The strap-fixings are made from a single rod of iron with ends flattened into rectangular plates. The central section, left circular, is bent over, so that the plates lie parallel to each other. They are clenched by two rivets, each with a heavily gilded head, and are made en suite with other fittings from the bridle (see 22a–d and 23a–c). The inner plate of each cheek-piece fixing is extended to the roundel pair (25b and c). Mineralized leather remains associated with the strap-fixings, and shows that the cheek pieces and reins were made from a double thickness of folded leather, stitched edge to edge. The straps are 21 mm wide and 5.2 mm thick. Sheep's wool fibres and scraps of oak bark were found associated with the bit. It is from the horse harness.

**b Iron, copper-alloy and gilded copper-alloy strap-fixings**

48/8183

A pair of strap-fixings attaching the cheek piece and the rein to the ring on the right side of the bit. It is from the horse harness, and has been reattached.

**c Iron, copper-alloy and gilded copper-alloy strap-fixing**

48/8201

Rectangular plates of one of the strap holders, attached to the rein ring on the right side of the bit. It is from the horse harness, and has been reattached.

**d Iron, copper-alloy and gilded copper-alloy strap-fixing**

48/8200

Rectangular plates of the strap-fixing, attached to the rein ring on the left side of the bit. It is from the horse harness, and has been reattached.

**22****Iron, copper-alloy and gilded copper-alloy strap fittings**

Four strap-fittings from the reins, made en suite with the strap-fixings from the bit (Figure 110 and Figure 111).

**a Iron, copper-alloy and gilded copper-alloy strap fitting**

48/8175

Dimensions: length 66 mm; diameter of ring 41 mm

From the horse harness, this fitting consists of an iron ring and a strap-fixing. A strap of folded leather (a fragment of the left rein) runs freely through the ring. The element is made up of an iron ring that articulates with the strap-fixing. This is made in the same way as the strap-fixings on the bit, and like them it is clenched by two copper-alloy rivets with flat gilt heads decorated with recessed ring-and-dot motif. The dimensions of the straps are as follows: free running strap, 21 mm wide and 6.4 mm thick; strap-holder, 21 mm wide by 6 mm thick. Fibres of wool were associated with the ring (from a saddle pad or a noseband?) The spatial relationship, in the ground, of this fitting with the bit and fittings from the junction of the noseband and cheek pieces, suggests that it can be interpreted as belonging to a free running strap on the left rein. As such, it is paralleled on the bit from horse-grave 2 at Great Chesterford (Figure 117), where the ring is corroded around the fixing for the left rein.

**b Iron, copper-alloy and gilded copper-alloy strap-link****i Iron figure-of-eight link**

48/8177

**ii Part of strap-fixing attached to (i)**

48/8189

**iii Strap-fixing attached to (i)**

48/8184

Dimensions: link 44.58 mm (overall length); width 20.63 mm; strap holder: attachment rings diameter 19.79 mm; attachment plates 19.29 (length) × 11.67 × 7.83 mm; rivet heads diameter 5.55 mm

The iron figure-of-eight link (22bi) was attached to iron strap-fixings 22bii and iii. The strap-fixings are made from a single rod of iron with ends flattened into rectangular plates. These are clenched over the strap by a pair of copper-alloy rivets with flat gilded heads decorated with recessed ring-and-dot ornament. The central section of the rod on each fixing remains circular and articulates with the figure-of-eight link. Folded, mineralized leather straps, 22 mm wide and 6.8 mm thick, remain associated with the fitting. The link lay in close association with the group of fittings (25d–e, 26b, 22bii–iii and 26e). All are from the horse harness, and both 22bii and iii were reattached (for 22biii, cf. 21d).

**c Iron, copper-alloy and gilded copper-alloy strap-link (Figure 110)**

48/8178

Dimensions: ring diameter 20.7 mm; attachment plates 19.1 × 12.9 mm

A strap-link consisting of two articulating strap-fixings clenched over the strap by two copper-alloy rivets with flat gilded heads (cf. 22a). One of the rivet heads may be a replacement as it has a slightly larger diameter (6.51 mm) and the ring-and-dot ornament is cleaner and less pronounced. Mineralized leather survives from two straps, both made of folded skin, one 22 mm wide and 8.8 mm thick, the other 18 mm wide and 6 mm thick. It is from the horse harness.

**d Iron, copper-alloy and gilded copper-alloy strap-link (Figure 111)****i Strap-link**

48/8344/8180

**ii Plates of one of the two strap-fixings of (i)**

48/8179

Dimensions: iron ring diameter 39.38 mm, strap holder ring diameter 19.24 mm, attachment plates 19.27 × 12.25 mm

The strap-link consists of a ring that articulates with two strap-fixings (cf. 22a), with the remains of two mineralized leather straps. These are of folded leather and are 22 and 21 mm wide and 7.4 and 6.5 mm thick. The link and plates are from the horse harness.

**23****Three iron, copper-alloy and gilded copper-alloy buckles (Figure 111)****a Iron, copper-alloy and gilded copper-alloy buckle**

48/8176B

A buckle with an oval loop, with rectangular plates pierced by two copper-alloy rivets with gilded heads (cf. 22a). Part of a folded, mineralized leather strap, 22 mm wide and 6 mm thick, remains associated with the buckle. The buckle was unfastened when buried. It is from the horse harness.

**b Iron, copper-alloy and gilded copper-alloy buckle**

48/8205

A buckle (cf. 23a) with the remains of a leather strap running through the loop. The strap is of folded leather. The buckle was fastened at the time of burial. It is from the horse harness.

**c Iron, copper-alloy and gilded copper-alloy buckle**

48/8355

A buckle (cf. 23a) with the remains of a leather strap running

through the loop. The buckle was fastened at the time of burial. The strap was made of folded leather and is 20 mm wide and 6.3 mm thick. It is from the horse harness.

## 24

### Three gilded copper nails or rivets, one associated with a set of narrow straps (Figure 111)

#### a Gilded copper-alloy decorative nail or rivet

48/8209

Dimensions: rivet head diameter 7.5 mm; shank 3 mm, tapering to 2 mm over a length of 4.75 mm

The head is slightly domed, and is decorated with worn ring-and-dot ornament. The shank tapers, suggesting that this is either a replacement or a fixing other than the standard ones from the harness.

#### b Gilded copper-alloy rivet head

48/8211

Dimensions: head 6 mm, shank 2.5 mm, surviving length 4.75 mm

A decorative rivet head with ring-and-dot ornament.

#### c Gilded copper-alloy rivet head

48/8359

Dimensions: unknown

A decorative rivet head with ring-and-dot ornament. It is still embedded in a leather matrix.

## 25

### Set of five gilded copper-alloy roundels and axe-shaped pendants from the bridle (Figures 111–13; Colour Plate 12:a)

#### a Gilded copper-alloy roundel with associated axe-shaped pendant

##### i Large roundel

48/8182

Dimensions: diameter 60 mm

This is decorated with two zones of triple-strand zoomorphic interlace within a raised twisted border. At the centre, raised above the surface of the disc, is a gold cell containing a small, round plate garnet, set within a shell collar. On the back are the remains of two straps, folded along their length, and running at right angles to each other. At the point of crossing, one strap is pierced to allow the second strap to pass through it. Both straps are 12 mm wide and 4 mm thick, with a double row of stitching. They are held by one central rivet and one rivet placed towards the edge of the roundel, with the exception of a pair of rivets securing the strap that connects with 25a<sup>ii</sup> (below). The roundel, together with its axe-shaped pendant (25a<sup>ii</sup>), may have been suspended from the brow-band, to lie between the eyes. The

set 25a<sup>i</sup>–ii is decorated with distinctive Style II interlace. It is from the horse harness.

#### ii Axe-shaped pendant

48/8168

Dimensions: height 43 mm, width 62 mm

This is decorated with zoomorphic interlace within a raised, slashed border. On the back are the remains of a trifurcated strap, made of a double thickness of leather and secured towards the top by three rivets and, additionally, by a single rivet in each of the three extensions. A companion to the large roundel (25a<sup>i</sup>), it was probably suspended with it from the brow-strap to lie on the horse's frontal bone. The strap is 12 mm wide at its point of attachment to 25a<sup>i</sup>, and is 3.6 mm thick. It is from the horse harness.

#### b Gilded copper-alloy roundel and axe-shaped pendant

##### i Roundel

48/8199

Dimensions: diameter 57 mm

This is decorated with triple-strand interlace within a twisted border. At the centre is a small, round plate garnet setting in a shell collar. On the back are the remains of two straps running at right angles to each other, which are held by one central rivet and a single rivet placed towards the edge of the roundel. The straps are made of folded leather and are 20 mm wide and 4 mm thick. At the point of crossing, one strap is pierced to allow the second strap to pass through it. The roundel was associated, in the ground, with two axe-shaped mounts (25b<sup>ii</sup> and 25f) and a strap fitting (22a), the unit consisting of an iron ring with an attached strap holder and a free-running strap. It is from the horse harness.

#### ii Axe-shaped pendant

48/8203

Dimensions: height 32 mm, width 44 mm

This is decorated with triple-strand interlace within a raised, slashed border. On the back is a tab of leather, shaped to the mount and secured by two thin bronze strips clenched by terminal rivets. Originally attached to roundel 25b<sup>i</sup>, and also associated, in the ground, with the singleton axe-shaped pendant 25f. It is from the horse harness.

#### c Gilded copper-alloy roundel and axe-shaped pendant

##### i Roundel

48/8208

Dimensions: diameter 56 mm

This is decorated with triple-strand interlace within a twisted border. At the centre is a small,

round plate garnet within a shell collar. On the back are the remains of two straps, folded along their length and crossing at right angles. At the point of crossing, one strap is pierced to allow the second strap to pass through it. It is from the horse harness.

#### ii Axe-shaped fitting (small)

48/8207

Dimensions: height 22.5 mm, width 45.5 mm

This is decorated with triple-strand interlace within a raised, slashed border. On the back is a tab of leather secured by two narrow copper-alloy strips that are clenched by terminal rivets (cf. 25b<sup>ii</sup>). It was originally attached to roundel 25c<sup>i</sup>, and is from the horse harness.

#### d Gilded copper-alloy roundel and axe-shaped pendant.

##### i Roundel

48/8186

Dimensions: diameter 62 mm

This is decorated with triple-strand interlace within a raised, slashed border. At the centre is a cell containing a small, round plate garnet within a shell collar. On the back are remains of folded mineralized leather straps crossing at right angles, plus a third strap beneath the lower part of the vertical strap. At the point of crossing, one strap is pierced to allow the second strap to pass through it. The straps are 15 mm wide and 3 mm thick. A third, single, layer, 15 mm wide and 1.5 mm thick, is probably the remains of the throat-latch. It is from the horse harness.

#### ii Axe-shaped pendant

48/8185

Dimensions: height: 30mm; width: 46.5 mm

This is decorated with triple-strand zoomorphic interlace within raised, slashed borders and was originally attached to 25d<sup>i</sup>. On the back is a bifurcated strap (cf. 25f), but with a second, extra long, rivet against the straight edge. Cord remains associated with one rivet.

#### e Gilded copper-alloy roundel and axe-shaped pendant

##### i Roundel

48/8356

Dimensions: diameter 60 mm

This is decorated with triple-strand interlace within a raised, twisted border. At the centre is a small, round plate garnet within a shell collar. On the back is extensive mineralized leather, and a third, single, layer, 15 mm wide and 1.5 mm thick, lying beneath the lower end of the vertical strap. This is probably the remains of the throat-latch. It is from the horse harness.

#### ii Axe-shaped pendant

48/8188

Dimensions: height 30 mm, width 45.5 mm

This was originally attached to 25e<sup>i</sup>, and is decorated with triple-strand interlace within raised, slashed borders. On the back is a bifurcated strap (cf. 25b<sup>ii</sup> and iii). It is from the horse harness.

#### f Gilded copper-alloy fitting (Figure 112)

48/8202

Dimensions: height 31 mm, width 41.5 mm

A small axe-shaped fitting, decorated with triple-strand interlace within a raised, slashed border. On the back is a bifurcated strap of folded leather held by one centrally placed rivet close to the straight upper edge and a single rivet in each of the corners. All of the rivets are clenched over thin washers. Remains of cord still adhere to this mount. Associated in the ground with roundel and axe-shaped pendant 25b. It is from the horse harness.

## 26

### Five gilded copper-alloy fittings (Figure 113, Colour Plate 12:b)

#### a Pendant or strap-end

48/8111

Dimensions: height 37 mm, width 19 mm

Decorated with a human mask between stylized bird heads above a bird-headed guilloche. The back is plain and carried two rivets clenched over thin washers. Two layers of leather, shaped to the strap-end and with a total thickness of 3.4 mm, survive. Thread wound round one rivet shank.

#### b Pendant or strap end

48/8187

Dimensions: height 38 mm, width 19 mm

Decorated with a human mask between stylized bird heads above a bird-headed guilloche panel (identical to 26a and c). Remains of cord are visible around the foot of the fitting. It is from the horse harness.

#### c Strap-end or pendant

48/8204

Dimensions: height 39 mm, width 19 mm

Decorated with a human mask between stylized bird heads above a bird-head guilloche. Identical to 26a and 26b. Traces of cord and a fragment of folded leather remain associated with this mount. It is from the horse harness.

**d Strap-end or pendant**

48/8354

Dimensions: height 19 mm, width 8.5 mm

Decorated with a simple guilloché beneath a rectangular panel. On the back are a pair of rivets, but no washers. It is from the horse harness.

**e Strap-end or pendant**

Dimensions: Unknown, because still contained within leather complex, but similar to 26d (8358)

Decorated with a simple guilloché beneath a rectangular panel. On the back are a pair of rivets. It is from the horse harness.

**27****Copper-alloy and gilded copper-alloy strap fitting (Figure 114)**

48/8206

Dimensions: diameter of ring 29 mm, average length of strap-fixings 29.5 mm, rivet length 4 mm

A three-way strap distributor, consisting of a finely cast ring and three strap-fixings. The upper surface of the ring is ridged and decorated with a pattern of inverted Vs, stamped in a running-chevron pattern. Each strap-fixing consists of two thin rectangular plates, clenched by a pair of rivets with domed and gilded heads. The short edge of the upper plate is ribbed, and the junction with the attachment ring carries a collared oval moulding. Traces of folded leather survive between the plates, giving a strap width of 10 mm wide. It is from the horse harness.

**28****Four iron and copper-alloy buckles (Figure 114)****a Small buckle**

48/8110

Dimensions: loop width 10.5 mm, plates 24.5 × 11.0 × 0.9 mm; rivets length 4–5 mm, shank diameters 2.5 mm, head diameter 4 mm

A buckle with iron loop and copper-alloy plates, pierced by two dome-headed rivets (also copper-alloy). The remains of a mineralized strap of thin folded leather (11.0 × 3.4 mm) survive between the plates. Leather on the buckle-tongue shows that the buckle (companion to 28b–d below) was closed on a strap at the time of burial. Traces of cord survive between the plates towards the loop. The shanks are burred over the backplate with no washer. This is from the horse harness.

**b Buckle**

48/8210

Dimensions: loop width 19.5 mm; plates 20 × 11 mm, tapering to 9 ×

<1 mm thick; gap between plates 3.5 mm; strap width 14 mm (in loop) × 4 mm (a double thickness?)

A buckle with an oval iron loop, a long tongue and long, rectangular copper-alloy plates, which are clenched by two copper-alloy rivets with domed heads. The plates are made from a single sheet of metal bent over the base of the loop, with a cut-out for the tongue. Folded leather remains caught in the buckle loop. Unlike its companions, the plates taper away from the loop. A companion to 28a, c and d. It is from the horse harness and was found close to roundel 25ci.

**c Buckle**

48/8341

Dimensions: loop width 21.5 mm; plates 23.5 × 10 × &lt;1 mm; gap between plates c.3 mm, holding a folded strap 15.5 mm wide

A buckle with an oval iron loop, a long tongue and long rectangular copper-alloy plates, clenched by two copper-alloy rivets with domed heads. A companion to 28a, b and d, it is from the horse harness.

**d Buckle**

48/8357

Dimensions: loop width 18.5 mm, cross-section 2.5 mm; plates 26 × 4.5 × &lt;1 mm; strap width 14 mm (in loop) × 4.5 mm thick

A buckle with an oval iron loop, a long tongue and rectangular copper-alloy plates, clenched by two rivets. It is similar to 28a–c, but with the addition of thin copper-alloy washers. Leather covers the tongue, showing that the buckle was engaged on a strap at the time of burial. Two-strand cord survives between the plates, running around the rivets. It is from the horse harness.

**29****Pair of identical silver, copper-alloy and iron strap-links (Figure 114, Colour Plate 11:g)****a Strap-link**

48/8071

Dimensions: ring diameter 23 mm; pendant length 33 mm, width 21 mm; strap-fixing length 32 mm

An iron ring to which are attached a pair of strap-fixings and a pendant mount, in the form of a conjoined neck or bird-tailed tab of copper-alloy overlaid with a similarly shaped sheet of silver that is soldered in position. The ends of the tab develop into highly stylized bird heads, which are mercury gilded. The back is plain. The strap holders consist of thin rectangular iron plates, clenched

by three rivets with domed heads covered with silver sheet, also soldered in place; a small attachment ring rises from the plates. The mineralized remains of a folded strap, 13 mm wide and 6.2 mm thick, survive between the plates. It is from the horse harness.

**b Strap-link**

48/8176A

Dimensions: ring diameter 21 mm; pendant length 32 mm, width 22 mm; strap-fixing length 28 mm

With a pendant mount in the form of a bird tail or conjoined bird necks, with gilded, stylized bird heads. It is identical to 29a and from the horse harness.

**30****Pair of matching silver and copper-alloy axe-shaped mounts (Figure 114)****a Axe-shaped copper-alloy mount overlaid with silver sheet**

48/8069

Dimensions: height 20.5 mm, width 23 mm

On the back are two rivets, placed vertically towards the straight edge. There is no associated leather, but cord fibres remain wrapped around one rivet shank. It is from the horse harness.

**b Axe-shaped mount of copper alloy overlaid with silver sheet**

48/8212

Dimensions: height 19 mm, width 24 mm

This is identical to 30a, but with remains of thin washer on the upper rivet and associated leather. The corrosion pattern suggests that the leather reached only as far as the lower of the two washers and was trimmed with a semicircular edge. It is associated with organic finds 34c–e, and is from the horse harness.

**31****Two iron buckles (Figure 116)****a Iron buckle**

48/8108

Dimensions: width of loop 41 mm; strap width 26 mm (in loop) × 3 mm thick

This has an oval loop, but no plates, and is associated with mineralized leather. The position of the tongue and the remains of leather show that the buckle was closed on a strap when placed in the grave. The surviving strap is a single thickness. It is from the horse harness.

**b Large iron buckle**

48/8318

Dimensions: width of loop 54 mm; strap width 32 mm (in loop) × 5 mm thick

This has an oval loop, but no plates. The remains of leather on the tongue suggest that the buckle was engaged in its strap at the time of burial. The buckle is the largest in the harness complex and may be the girth buckle. The strap is made of a single thickness of leather. It is from the horse harness.

**32****Iron fragments associated (?) with saddle (Figure 116)****a Fragment of iron rod**

48/8071B

Dimensions: length 28.86 mm, diameter 7.24 mm

This has wood-grain running at right angles over and against it. Found associated with 29a, and perhaps belonged to a saddle rather than the bridle.

**b Two rectangular iron strips**

48/8109

Dimensions: 55 × 30 mm

These enclose wood (*Quercus* sp.) and associated leather. The fitting is pierced by five rivet holes: three at the broad end and two at the narrower. Corroded traces of the rivets remain *in situ*. Compacted soil containing wood indicates that it was originally attached to an object not less than 5 mm thick. On the back are the remains of two leather straps, 5 mm in thickness, running across the broad end. There are further remains of leather underneath (see also 32a, c–e). They are from the area of the horse harness and are perhaps fittings from a saddle.

**c Flat iron strip with curved ends**

48/8347–8

Dimensions: length 39.74 mm, width 14.93 mm, thickness 2.9 mm

Both strips are pierced by a rivet or nail, and both are broken. Mineralized wood, identified as oak (*Quercus* sp.), runs across the fitting at right angles. It was found in two fragments. See also 32b, d–e, all of which are perhaps fittings from a saddle.

**d Iron fragment**

48/8349

Dimensions: 26.6 × 15 × 2.6 mm

This was with associated mineralized wood (*Quercus* sp.), and is possibly associated with 32b, c and e.

**e Thin iron strip**

48/8351–2

Dimensions: extant length 28.17 mm, width 15 mm, thickness 2.24 mm; extant nail length 14 mm

This is curved at one end and has a single nail at the other (a bracket?). Associated mineralized wood (*Quercus* sp.) runs across the strip at right angles. It was found in three pieces, together with a



detached nail and was associated with 32b–d.

**33****Copper-alloy nails (Figure 116)**

48/8107

Dimensions: length 12.29 mm

Two dome-headed nails, with associated wood (*Quercus* sp.), from the area containing the horse harness. They were found beneath the 'tub'.

**34****Copper-alloy pins/tacks and leather from the saddle****a Fragmentary copper-alloy pins and leather from the saddle (not illustrated)**

48/8213

**i Degraded leather**

Dimensions: width c.19.5 mm, thickness 5 mm; two rivet holes diameter 3 mm, spaced c.9 mm (centre to centre)

With bracken roots.

**ii Degraded leather pierced by a copper-alloy tack**

Dimensions: tack diameter at the head 2.5 mm, thickness 1 mm

The length of the tack is buried in the leather.

**iii Remains of two tacks**

Dimensions: head diameters 2.50 and 2.67 mm, thickness 1 mm

Although found in the north-west corner of the soil block, this group is probably associated with 34c–e, found next to 30b.

**b Copper-alloy tack and leather (not illustrated)**

48/8343

**i A long strip with one straight edge**

Dimensions: length 82 mm, width 20 mm (max.)

This consists of fibres – bracken (?) roots – and degraded leather, with copper-alloy staining. It is possibly the remains of a heavy strap.

**ii Two small pieces of degraded leather**

Dimensions: 18 × 14 mm (largest)

Each has a finished edge, and one has a pin hole (diameter 1.1 mm) and one copper-alloy tack (8 mm long).

**c Copper-alloy tacks and leather (Figure 116)**

48/8345

Dimensions: head 8 × 3.5 mm, tapering to 1.5 mm; width of leather 19.5 mm

Scraps of degraded leather and bracken roots, pierced by two copper-alloy tacks, with a third, loose, tack. Two further rivet/tack holes, spaced 11 mm apart, can be seen along the edge of the fragment. The tacks are snipped out of a sheet of metal 1 mm thick. Associated finds are 34a, d–e and 30b.

**d Copper-alloy tack and leather (not illustrated)**

48/8346A

Dimensions: 8 × 4.5 mm, tapering to 1 × 1 mm

Degraded leather and bracken roots pierced by a single copper-alloy tack. Associated finds are 34a, c and 30b.

**e Copper-alloy tack and leather (not illustrated)**

48/8346B

Dimensions: tack 13 × 3.5 mm, tapering to 1.5 × 1 mm

Degraded leather pierced by a copper-alloy tack. The leather has no distinct edge, but survives to a width of approximately 18 mm. Found associated with silver axe-shaped mount 30b.

**35a****Organic material (Figure 116)**

48/8214

Dimensions: length 125 mm; width 15.75 mm

Bracken roots and degraded leather: the remains of a strap.

**35b****Organic (not illustrated)**

48/8170

A fragment of mineralized leather

**36****Textile (not illustrated)****a Textile fragment**

48/8264B

Dimension: 15 × 6 mm

Iron-replaced textile worked into a wedge-shaped cross-section, with a row of stitch-holes passing through part of the wedge. Possibly the same textile as 36d. There are four stitch-holes over a length of 5 mm, and then a gap before the row continues.

**b Textile from underside of sword (joined to blade)**

48/8264J

Dimensions: 50 × 20 mm

Poorly preserved remains of diamond twill, as in 36d, arranged in lengthways folds.

**c Textile B5-6 associated with sword**

48/8194

1 Several fragments, largest 7 × 6 mm, of same wool diamond twill as in 36d.

2 Some poor calcified (?) remains with a corded effect, perhaps part of 36i.

**d Textile separated from sword/scabbard**

48/8192

Dimensions: 24 × 22 mm and 15 × 14 mm

Two fragments of textile woven in 2/2 diamond twill, 18/Z × 16/S per cm. The fibre is wool, and includes black and white fibres (that is, from a grey fleece). The reverses in the warp (Z) are irregular, between three and ten threads. Only one weft (S) reverse has been preserved, nine threads.

**e Textile associated with sword**

48/8193

Dimensions: 6 × 5 mm (largest)

Several fragments of calcified (?) textile woven in tabby weave, 15 × 15 threads per cm. The spin and fibre are not identifiable.

**f Loose featureless mass of mineral preserved fibres**

48/8172

Mostly bracken roots. From the area of the horse harness.

**g Mineral preserved fibres**

48/8165

Dimensions: 22 × 17 mm

From the horse harness.

**h Mineral preserved fibres**

48/8164

Dimensions: 40 × 28 mm

From the horse harness, and featureless.

**i Textile from scabbard underside, mid blade**

48/8264A

Dimensions: 12 × 7 mm

A calcified (?) textile with corded effect, possibly tablet-woven. The cords are arranged in pairs, four paired cords per cm, both S-twist, with crossways thread visible between cords. No further details are visible.

**j Organic matter**

48/8264C

Several small crushed fragments of textile, enveloped in calcitic deposit. There is evidence of two, if not three, different weaves.

**k Threads from scabbard binding**

48/8264E

Dimensions: 10 × 2.5 mm

This consists of five or six fine parallel cords, each plied Z2S. The fibre is flax/hemp, which seems to have been exposed to wear by rubbing.

**Burials 12, 15 and 16**

Three furnished inhumation burials without surviving mounds were excavated to the east of Mound 5 (see Chapter 5, p. 137; Figure 118). In Burial 12 a child was buried with a weapon, a belt and a dress-pin (Figure 118; for a recent discussion of child-burial see Vallet 1996: 712ff.). The weapon (Burial 12: 1) was a small, metal point, and its identification – whether spearhead or arrowhead – is ambiguous. Finds of archery equipment are rare in Early Anglo-Saxon England (Härke 1989). At Chessell Down, grave 26, there were fragments of ten arrowheads, and a barbed arrowhead came from Bowcombe Down, grave 20 (Arnold 1982: 24–5, 66, 93). Examples of arrowheads from the Continent may be seen in Reuden, grave 4; Krefeld Gellep, grave 2091; and Freilaubersheim, grave 3 (Menghin 1983: 82, 87 and 97). A quiverful of arrows were found in a grave recently excavated at

Lakenheath, Suffolk (see Chapter 8, p. 300). The point in Burial 12 has a small, triangular head with a well-defined lozengic section. However, unlike many contemporary arrowheads, whose blades are roughly equal in length to the shafts, it has an unusually long split socket, and its overall proportions are similar to some spears (for example, Spear 2, Mound 17). It is also a singleton, whereas usually several arrowheads are found in a grave (cf. the Chessell Down and Lakenheath examples above). Thus its interpretation as a miniature spear is perhaps more acceptable, particularly as it was found in the grave of a child within a royal cemetery, its size perhaps reflecting the child's age (Härke 1992a: 158). However, as Härke points out (ibid.: 156 and table 4), spears are rarely found with children under seven, whereas arrowheads seem to only occur with males between the ages of two and fourteen. Whether a miniature spear or

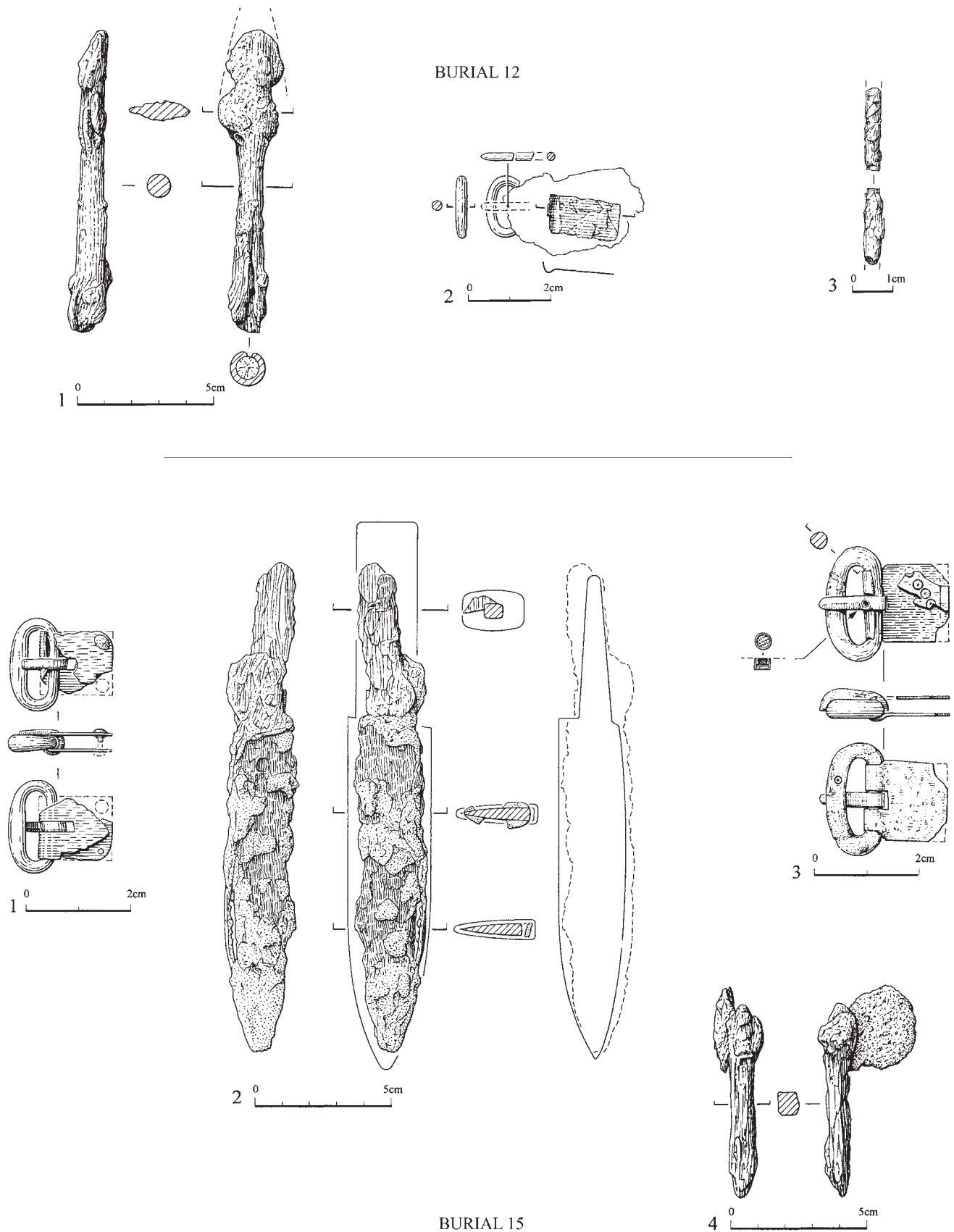


Figure 118 Burials 12 and 15: artefacts.

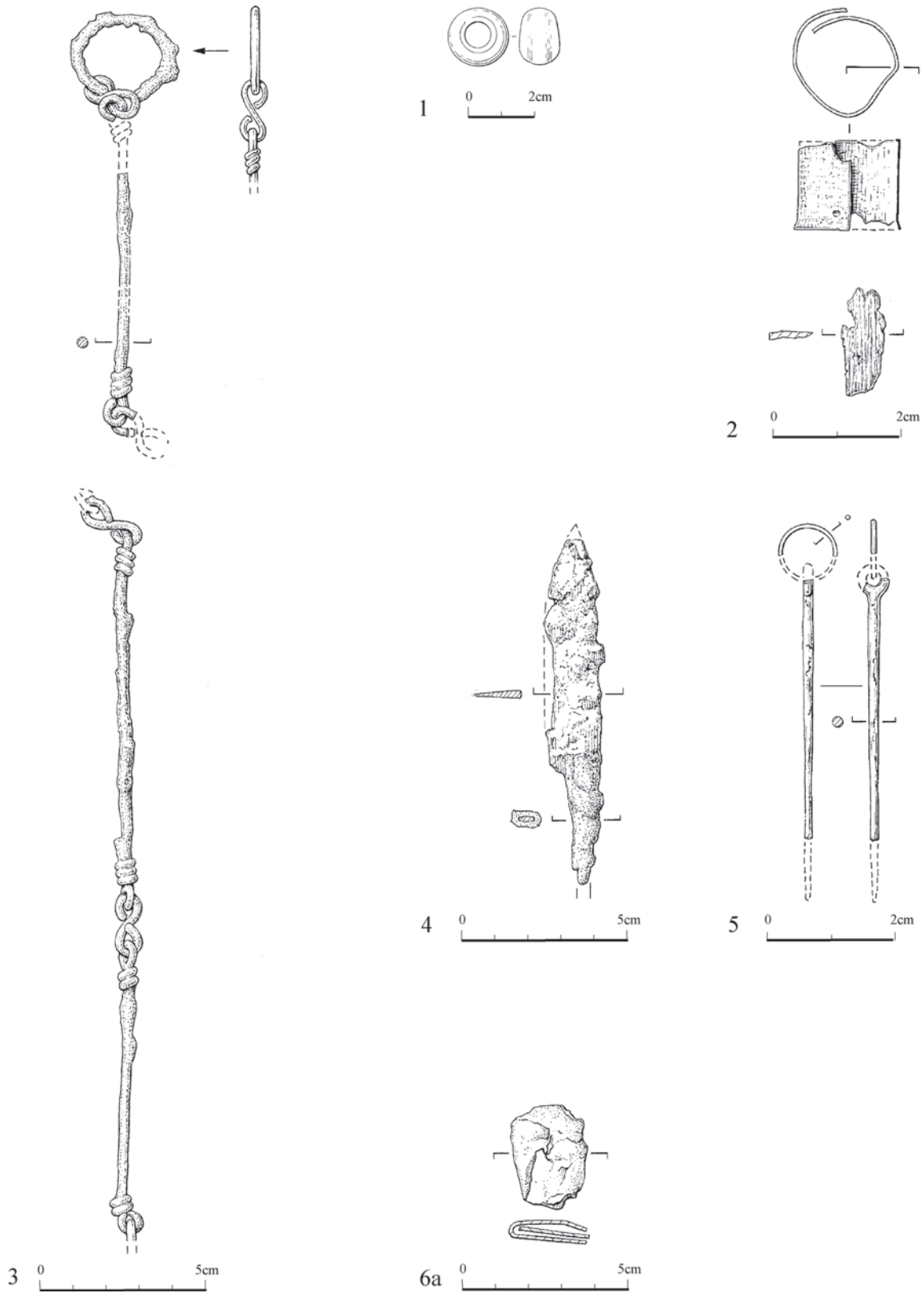


Figure 119 Burial 16: artefacts.

arrowhead, it anticipates the child's future arms-bearing status. The child's buckle (Burial 12: 2) is made from a high-tin alloy, which would have given it a silvery appearance, thus enhancing its status (cf. the gunmetal sword fittings in Mound 17, p. 244, 5c). Its fragile, rectangular tin-oxide plate has decayed to almost nothing, and survives only as a translucent sheet. The pin (Burial 12: 3, Figure 118) was also fragmentary, and its position with respect to the body is uncertain (see Chapter 5, p. 140; Figure 120).

The person in Burial 15 (see Chapter 5, p. 140) was buried with a knife in a leather scabbard (Burial 15: 2) and with two copper-alloy buckles, one with a flattened oval loop and part of a rectangular plate (Burial 15: 1; Figure 118). The second buckle (Burial 15: 3) also has a flattened oval loop, decorated on the underside with a ring-and-dot motif and inlaid with a tiny cabochon garnet at the base of the tongue. It originally had a rectangular plate set with a sheet of bone with ring-and-dot decoration. It belongs to a small family of similar examples, which are best summarized by Speake (1980: 59, pl. 9). Although none share the embellishment of the tongue with a garnet, one, from grave 21, Alfriston, Sussex, is ornamented with a basic ring-and-dot motif. Only the second belt buckle suggests status.

The furnishing of Burial 16 (see Chapter 5, p. 143) was also simple (Figure 119). A châtelaine (Burial 16: 3) suggests this was the grave of a woman, and confers status. It is made up of delicate iron rods with looped ends, joined by figure-of-eight links and would have hung from a leather or textile belt. A small knife (Burial 16: 4) was found associated with the châtelaine, and may have hung from it, together with a pouch (?) secured

by drawstrings with folded leather toggles (Burial 16: 6). Also in this grave was a copper-alloy, ring-headed pin (Burial 16: 5) and a small cylindrical, copper-alloy fitting (Burial 16: 2), the binding of some small wooden object. Similar bindings are recorded from Icklingham and Radley, Oxfordshire (MacGregor and Bolick 1993: 265, cat. nos 56.17–18). The binding was found associated with a scrap of leather and slivers of wood; it may be the remains of a needle case (for example) and may also have hung from the châtelaine. Also in the grave, positioned near the head, was an annular white bead (Burial 16: 1).

Fragments of a châtelaine similar to Burial 16: 3, also in iron, were found in grave 101 at Castledyke, in a grave containing an annular brooch, a single bead, a knife and a copper-alloy strip (Drinkall and Foreman 1998: 64, fig. 84). It was also proposed that two beads found in grave 29 at Castledyke may have been toggles associated with a châtelaine (*ibid.*: 285). This would offer a different interpretation for the toggles in Burial 16. The ring-headed pin (Burial 16: 5) is damaged and missing its end. It may be compared to similar pins recorded from Standlake Down and Stanton Harcourt, Oxfordshire, both of which are of similar length to the Burial 16 fragment and share with it a small, circular ring head (MacGregor and Bolick 1993: cat. nos 31.33–34; for pins in general see *ibid.*: introductory note to section 31). The shank is damaged, but it is possible that it may have been a cosmetic implement rather than a ring-headed pin (cf. *ibid.*: cat. no. 37.5, from Fairford, Gloucestershire). If so, it could also have been an attribute of the châtelaine; however, its position in the grave (Figure 119) suggests that this is unlikely (see Chapter 5, p. 142 for an interpretation as a hair-tie).

## Catalogue of Burial 12

**1**  
**Iron spearhead (Figure 118)**  
41/36522  
Dimensions: 110 mm overall; blade 39 mm, socket 72 mm  
A miniature spearhead with a small oval leaf-shaped blade and a long narrow split socket; traces of degraded wood remain in the socket.

**2**  
**Copper-alloy buckle (Figure 118)**  
41/36523  
Dimensions: loop width 15 mm, plate length 18 mm  
A high-tin bronze fragmentary buckle with an oval loop and a rectangular backplate. No traces of the frontplate or rivets remain.

**3**  
**Copper-alloy pin (Figure 118)**  
41/36524  
Dimensions: 20 × 4 mm; 19 × 4 mm  
Two fragments from the shank of a pin.

## Catalogue of Burial 15

**1**  
**Copper-alloy buckle and plate (Figure 118)**  
50/2262  
Dimensions: loop width 16 mm  
A flattened oval buckle-loop with a round-sectioned tongue (tip missing). The front and backplates are fragmentary and in poor condition, with few undamaged edges. One copper-alloy rivet with a domed head remains *in situ*. Traces of a much degraded textile (?) remains on the upper surface of the loop.

**2**  
**Iron knife (Figure 118)**  
50/2263  
Dimensions: overall length 178 mm, blade length 120 mm  
An iron knife with a straight cutting edge and a lightly curved back (cf. Evison type 4, see Evison 1987: 113, text figure 22). The hilt is tapering and is horn covered. The blade is enclosed within a leather scabbard, which is sewn along one edge with a puckered seam. Traces of wood or plant fibre stiffener for the scabbard remain in the corrosion.

**3**  
**Copper-alloy, garnet and gold-sheet buckle and plate (Figure 118)**  
50/2264  
Dimensions: width of loop 21 mm, garnet diameter 1 mm, backplate width 14.25 mm, inlay length 9 mm, rivet length 2 mm  
A flattened oval loop, with remains of a straight-sided rectangular (?) backplate still attached. On the underside of the loop are traces of ring-and-dot ornament. The tongue is carefully shaped over the loop and is of broadly triangular cross-section, flattening towards its junction with the lower circuit of the loop.

Set centrally into the base of the tongue is a tiny gold cell containing a flat, circular garnet. The front plate is entirely missing, but a fragment of thin bone or ivory sheet, decorated with ring-and-dot ornament, suggests that it was originally a shallow tray with bronze borders enclosing an inlaid central field. One copper-alloy rivet survives from the front plate.

**4**  
**Iron nail (Figure 118)**  
50/2265  
Dimensions: length 100 mm  
An iron nail with attached mineralized wood.

## Catalogue of Burial 16

1

**Glass bead (Figure 119)**

50/2827

Dimensions and weight: diameter 9 mm; 0.6 g

An annular white glass bead.

2

**Copper-alloy cylinder (Figure 119)**

50/2821

Dimensions and weight: diameter 16 mm, depth of band 12 mm; 2.5 g

A cylindrical fitting in the form of a simple band, undecorated and fastened at the overlap with two rivets (missing). A crushed fragment of leather and several tiny slivers of wood were found in association with it.

3

**Iron châtelaïne (Figure 119)**

50/2822A

Dimensions: overall length 340 mm, rod lengths 80, 110 and 80 mm, diameter 4 mm; link length 20 mm, ring diameter 30 mm

A châtelaïne complex now consisting of three lengths of thin iron rod, joined by figure-of-eight links and terminating in an iron slip-knot ring.

4

**Iron knife (Figure 119)**

50/2822B

Dimensions: overall length 104 mm, blade length 65 mm

A small knife with a straight cutting-edge and a lightly curved back (cf. Burial 15, Evison type 4, above). The tang is tapered and covered in corrosion products. The

knife was found in association with the châtelaïne.

5

**Copper-alloy pin (Figure 119)**

50/2824

Dimensions and weight: length 40 mm, thickness 2 mm (max.), head diameter 5 mm, ring diameter 9 mm; ring thickness 1 mm; 0.6 g

A small pin, which terminates in a flattened circular head. This is pierced for a slip-knot ring, of which only a short length survives.

6

**Fragments of leather, part of a drawstring bag (not illustrated)****a Fragment of a single thickness of folded leather**

50/2832

Dimensions and weight: length 32 mm, thickness 1.5 mm; 3.0 g

With one original edge showing a shallow curve. Perhaps from a bag.

**b Crushed and featureless globule of leather**

50/2829

Dimensions and weight: diameter 12 mm, thickness 8 mm; 0.8 g

**c Crushed and featureless globule of folded leather**

50/2833

Dimensions weight: diameter 12 mm; 1.9 g

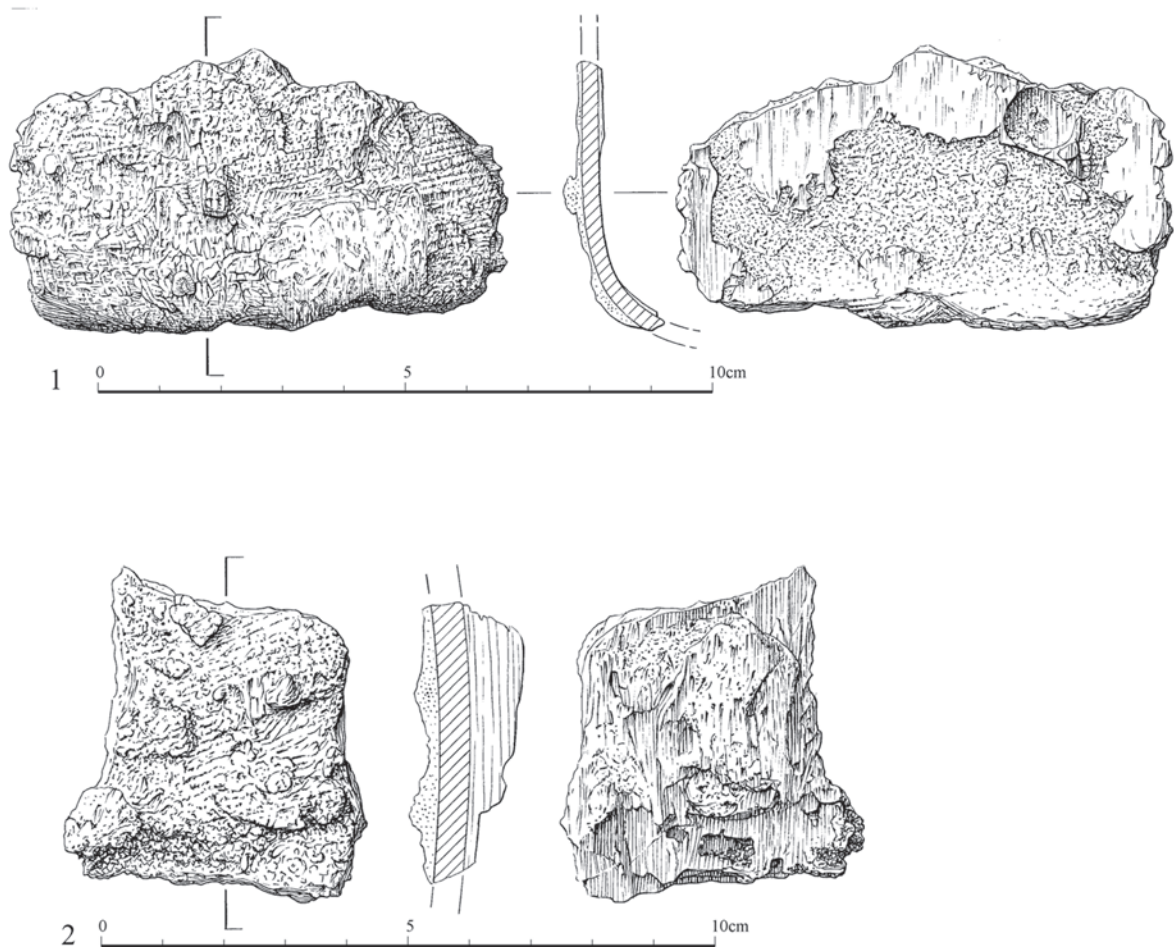
A toggle, perhaps of a drawstring.

7

**Narrow curved leather (?) strip (not recovered)**

50/2830

Dimensions (in ground): length 10–20 mm, width 5–10 mm



## MOUND 13

Figure 120 Mound 13: artefacts 1 and 2.

## Mound 13

The excavation of the western part of Mound 13 suggested that it had probably contained a, now robbed, inhumation (see Chapter 5, p. 147). Of the two iron fragments found in the excavation, the curved piece of iron sheet (1; Figure 120) could be a fragment of an iron cauldron (cf. Broomfield, Essex, BM 1894, 1216.16; Webster and East forthcoming).

## Catalogue: Mound 13

<p><b>1</b> <b>Iron cauldron (?) (Figure 120)</b> 44/16484 Dimensions: 75 × 45 × 4 mm</p> <p>A sheet with wood-grain running across the long axis on the inner surface. The outer surface is encrusted with degraded mineral-replaced textile and decayed bone material. It was possibly part of the base of an iron cauldron.</p>	<p><b>2</b> <b>Iron fragment (Figure 120)</b> 44/16483 Dimensions: 50 × 40 mm (max.)</p> <p>An iron fragment with a slight curve. One face is covered in much abraded mineral-replaced textile. It is possibly associated with 1, as part of an iron cauldron.</p>
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## Gold and cloisonné garnet fitting 55/65

Find 65 from Int. 55 was recovered from beneath the turf between Mounds 13 and 4, and its context is interpreted as a loss from one of the early excavation campaigns (see Chapter 5, p. 148). The form of this tiny fitting is unparalleled in Anglo-Saxon archaeology, but its conception and its well engineered finish, with an asymmetric engaging cup at one end, set it within the family of *cloisonné* pieces from Mound 1 – particularly the strap distributor and the shoulder-clasps. It may be the terminal of a necklace, although there are no parallels for such a fitting (Figure 121; Colour Plate 11:a). Stylistically, the piece belongs within the overall *cloisonné* tradition of early seventh-century England, which is seen at its best in the assemblage from Mound 1. It shares a characteristic, arrow-shaped cell with, for example, the Gilton disc brooch (Bruce-Mitford 1974: pls 10a and 85e) and the Faversham composite brooch (Bruce-Mitford 1974: pl. 10a), and also, in split form, with the seax pommel from Maxstoke

Priory, Warwickshire (BM MME 1995, 0501.1). The use of square/lozengic settings as a dominant feature can be seen in a range of high-quality pieces of early seventh-century date, including the Tongres mount, the Reinstrup buckle (Bruce-Mitford 1974: pl. 91; Arrhenius 1985: fig. 221) and the sword pommels from Store Sandviken, Stürkö and Skrävsta (Bruce-Mitford 1974: pl. 11d and g), and also the sword pommel and pyramidal mounts (using millefiore glass) from Sutton Hoo Mound 1 (SHSB II: figs 220 and 227). Cell combinations, particularly the stepped cell enclosing a central square or lozenge, occur in a number of major pieces from the early seventh century, including the Sutton Hoo shoulder clasps (SHSB II: fig. 386), the Stürkö pommel (above) and the scabbard mouth fitting from Eich, Kr. Worms (Menghin 1983: 335, no. 4, group D, Karte 11). This functional piece of gold and garnet *cloisonné* can be dated to the first quarter of the seventh century.

## Catalogue

## Gold and garnet fitting (Figure 121; Colour Plate 11:a)

55/65  
Dimensions: length 13 mm, width 8 mm

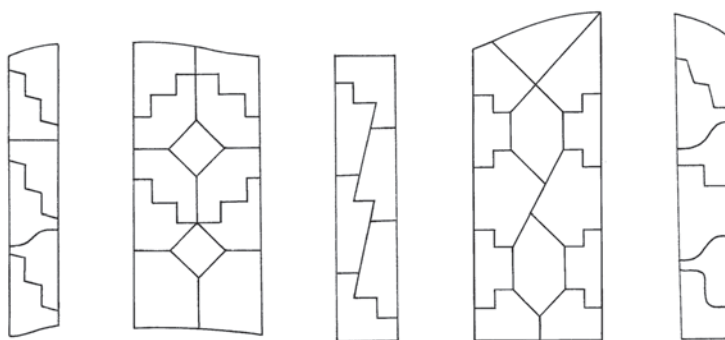
A cylindrical fitting, hollow and D-shaped in cross-section, with sealed ends, both pierced by a thin internal gold tube. The curved face is divided into five zones filled with *cloisonné* garnet inlays set over pointillé (?) gold foil. The outer end of the fitting is sealed by a flat, undecorated cover, pierced off-centre and soldered in place. The back is constructed from two gold sheets that are pleated longitudinally and off-centre, to seal the join. The inner end is

curved asymmetrically, as though designed to articulate with a round element (in the form, roughly, of a ball and socket). It is centrally pierced at the end of the internal tube, which is snipped at irregular intervals and splayed around the piercing to hold the tube in place. The tube is marginally wider at the inner end.

The curved surface is divided into five fields, each filled with poorly constructed *cloisonné* and separated by fillets of gold of varying widths. The decorative scheme consists of broad zones flanked by narrow ones, and both are filled with a variety of cell shapes. The overall impression is

that the jeweller had only a limited number of cut garnets at his disposal (cf. the late seventh-century composite brooch from grave 98 at Bosshall, Ipswich, Evans 1991: 51–3 and Scull forthcoming). Zone 1 contains six inlays of crudely shaped, notionally stepped, garnets, arranged in interlocking pairs. It is balanced on the opposite side of the mount by a narrow zone that also contains six stepped garnets, cut with greater skill, and also arranged in interlocking pairs. The central zone, also narrow, contains six garnets arranged in two interlocking pairs flanked at either end by a single triple-

stepped stone that binds the panel together. Zone 2, a broad field, contains thirteen T- and mushroom-shaped cells springing from the dividing walls and separated by cloisons in the shape of elongated hexagons. Two large mushroom panels are concealed in the layout. The dominant field contains a coherent geometric pattern based on a field of six squares, with diamond pattern cloisons at the grid crossovers. Within this grid, the pattern is developed at one end only, with the use of interlocking stepped cloisons enclosing the central diamond-shaped cell.



FIND 55/65

Figure 121 Find 65 from Int. 55: a gold and garnet fitting.

*Mound 2*

Mound 2 is likely to have contained the inhumation of a high-status man who lay in a chamber sealed beneath a ship – a ritual paralleled only in an early tenth-century context at Haithabu (see Chapter 6, p. 164 and Chapter 8, p. 306). Mound 2 had, however, been comprehensively robbed on at least two occasions (see Chapter 6, p. 171 and Chapter 12, p. 468), and its original wealth and status must be inferred from the fragments that were found in the chamber and the trenches of the previous excavators. Two groups of fragments survive: those found by Basil Brown in 1938 and those found during the 1983 campaign. The sixteen finds from the 1938 excavations are fully illustrated and discussed by Bruce-Mitford (SHSB I: 100ff., see summary in Chapter 6, p. 153), while the additional twenty-two fragmentary finds retrieved during the 1983 campaign are described here (see Catalogue, below, and Figure 122, Plate 33). In this surviving assemblage, two of the most important finds are the tip of a sword blade and a silver-gilt bird-headed terminal and fragments of silver-gilt foil from a drinking-horn. These were both made in the same workshops that produced the sword and drinking-horns in the Mound 1 burial. Together with the use of a ship in the burial rite (described below), these finds suggest that Mound 2 was close to Mound 1 in both status and date.

The burial contained high-status arms and armour – part of a weapon set that would certainly have included spears and may have included a helmet. Of the weapon set, only the tip of a sword (8) and a fragment of a possible scramasax (11; SHSB I: figs 78 and 61d) survive. The scramasax was typically buried in its scabbard, and a silver buckle (6; SHSB I: fig. 61i) may have belonged to a secondary belt from which it hung. The sword-blade fragment is one of the strongest links between Mound 2 and Mound 1 and, although slightly narrower, is made to the same pattern as the blade from Mound 1, with a laminated cutting-edge forged onto a core that is made up of eight bundles of seven rods (Evans in SHSB II: 307; also Evans 1986: 44). Like the sword in Mound 1, each bundle of rods forming one face of the core is twisted to form a herringbone pattern, while the bundles of rods forming the other face of the core are untwisted. This was a prestige blade. Like the swords in both Mounds 1 and 17 (above, p. 215), it was buried in its scabbard, of which only slivers of wood and traces of degraded textile remain (SHSB I: 106, 119; also Cameron 2000: 121, cat. 263). Nothing survives of the sword fittings, the sword belt or scabbard fittings, but a blade of this quality may well have been fitted with a gold pommel and guards and, given the taste for garnets at Sutton Hoo, the pommel, the sword and scabbard fittings may have been inlaid with *cloisonné* garnet cell-work.

Traces of a shield survive only in a couple of fragments that may have decorated the board or formed part of the handgrip. The largest of these was found in 1938, and is part of a gilt-bronze appliqué in the form of a dragon-head with gaping jaws (5; SHSB I: 106 and 118, figs 60 and 71). Two silver rivets, 7 mm long, remain associated with it. The dragon may be an ornament from the front of a missing shield-board. It can best be compared with an openwork iron dragon-headed appliqué on shield III from Valsgärde 7 (Arwidsson 1977: 36–8, Abb. 45 and 48), a grave that is considered to be contemporary with that from Sutton Hoo Mound 1. A second fragment (26) is part of a profile Style II head, cast in bronze, gilded and finely stamped. It most closely resembles the lower set of heads on the handgrip

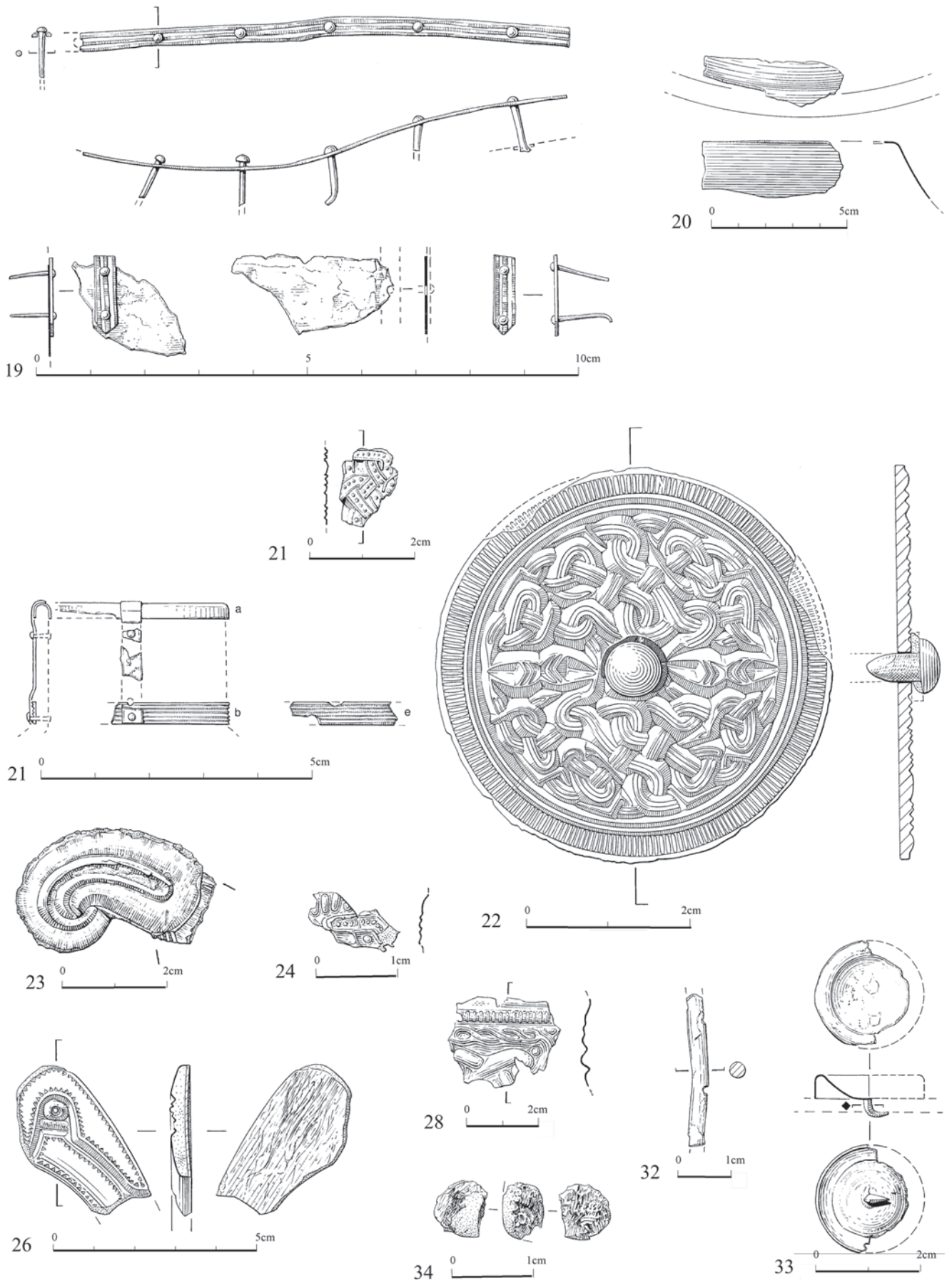
extensions on the back of the shield in Mound 1 (SHSB II: fig. 43; see also Evans 1986: fig. 37), but lacking their plate garnet eyes. Although smaller, it is also remarkably similar to a fragment of one of the dragon's heads from the front of the shield from Vendel 1 (Stolpe and Arne 1927: 10ff., pl. 4, fig. 6). Although no boss survives, these two fragments alone suggest that the shield in Mound 2 may have been similar to the Vendel style shield in Mound 1, and, like the Mound 1 shield, both are equally close in style to mounts on shields from burials at Vendel and Valsgärde which date to the early seventh century (Arrhenius 1983: fig. 6).

The chamber contains objects, other than weapons and armour, that link it to the assemblages in both Mounds 1 and 17. Curved and flat iron bands, decorative strips and a single foot are all from a yew-wood tub (17; SHSB I: 121–3) with a diameter of 51 cm. This is smaller and less elaborate than the tub in Mound 1 (SHSB III: 554–63), but shares details of its construction, particularly in the small feet (13) that raise it off the ground. Fragments of thin copper-alloy sheet of differing weights suggest that at least two cauldrons may have been in the burial. Four fragments (29), including one with a carinated profile, may be from a large, straight-sided cauldron similar to Mound 1, Cauldron 1 (SHSB III: 488ff., fig. 347) and can perhaps be associated with the ghost of an ornamental chain that survived only as an object stance (see Chapter 6, p. 165). These two cauldrons are linked by their rims, necks and carinated profiles to a similar cauldron in the princely burial at Taplow (BM, M&ME 1883, 12–14, 9; SHSB III: 507 and fig. 362), which suggests that certain workshops – or indeed highly skilled peripatetic metalsmiths – were providing status objects for 'royal' courts. A second group of fragments, characterized by their heavier weight (30), may be the remains of a lugged cauldron, a type of vessel that occurs in both Mounds 1 and 17.

A single fragment of copper-alloy sheet (31), of a different weight to the fragments above, suggests that the grave contained a copper-alloy bowl with an upright neck and out-turned rim (cf. the bowl in Mound 17). Fragments of two unsheathed knives (9 and 10; SHSB I: 119, fig. 61) are similar to a set of four horn-handled knives found in the fluted silver bowl in Mound 1 (SHSB III: 883–7). Like them, the unsheathed knives in this burial may have been designed for use in a domestic environment. The grave also contained part of a sheath containing two blades (12).

It has been known since 1938 that Mound 2 contained luxury items: Mound 2 is the only excavated grave in the cemetery that certainly contained glass. Two fragments of blue glass were found in 1938 (2). These are distinctive and belong to a squat blue glass jar, a type probably made in Kentish workshops, perhaps around Faversham. It links the cemetery to yet another of the richest (but robbed) burials in Early Anglo-Saxon England, the princely burial at Broomfield, Essex, where an almost identical jar was excavated (for a brief discussion of these fragments see SHSB I: 117, 132 and catalogue p.134; see also Koch 1996: 612ff. and Abb. 465 for Continental types, where squat bowls are dated to the last quarter of the sixth century). Evidence for at least one drinking-horn survived in four fragments of heavily gilded silver foil (4; SHSB I: 117–18, figs 71 and 74), which are die-linked to the drinking-horn foils from Mound 1 (SHSB III: fig. 242a). Two finds from the recent excavations – a fragment of foil (28) and an almost complete silver-gilt bird-headed terminal (23) – are further evidence of this horn. The tiny fragment can be placed





MOUND 2

Figure 122 Mound 2: artefacts 19–24, 26, 28 and 32–34.

quite precisely at the top of a vandyke. The foils found in 1938 and 1939 can be reconstructed to show a well-executed design of four pairs of legless zoomorphs with billeted bodies that link above pointed tails to form loose knots. The heads of the four central zoomorphs are round with long open jaws that bite across the bodies of the zoomorphs above. They have elongated lappets that run forward, up the margins of the die. In contrast to these round-headed zoomorphs, the upper pair have angular eye-surrounds that run in an interlinked twist parallel with the upper edge of the vandyke – the fragment (27) shows this twist, and the eye and part of the jaws of the zoomorph, in the top right of the panel. Recent matrix analysis of Early Anglo-Saxon Style II (Høilund-Nielsen 1999: 185ff.) suggest that these foils, which combine Scandinavian and Anglian I traits (*ibid.*: 194 and fig. 11), were made in the second half of the sixth century (a date that fits in well, for example, with Arrhenius' dating of mound xiv in the cemetery at Vendel, Uppland; Arrhenius 1983: 39ff., fig. 6). The cast gilt-bronze bird head is identical to the terminal on one of the Mound 1 drinking-horns (SHSB III: 345 and fig. 250).

Other luxury items can be seen in fragments of silver, apparently from the rim of a small bowl (20), which again provides a cross-link to the assemblage in Mound 1, and in lengths of swaged silver strip, sheet silver and silky wood that may be decorative fittings from a box (19). A mixed group of silver-gilt rim fittings and fragments of heavily gilded bronze foil are all that remains of one or more small cups or drinking-vessels (21a–h). The rim fittings consist of fragments of the U-channelled rim-binding of a vessel with a rim diameter of c.42 mm, and fragments of the swaged strips that held the binding to the rim. The rim bindings are similar to the larger of the burr-wood cups found in Mound 1 (32 mm rim diameter, SHSB III: 364–8). They are, however, from a larger cup and the scale of the interlace on the fragments of gilt-bronze foil (21a) suggests that they are from a cup or bottle equivalent to the maple-wood bottles in Mound 1 (diameter 58 mm, SHSB III: 356). The fragments are stamped with a zoomorphic interlace that is too fragmentary to reconstruct, although they show part of a Style II head with an angular eye-surround and a set of tightly interlacing bodies. Both head and bodies are similarly executed, with fine beading between simple raised margins. This style of interlace can be compared to, for example, an early seventh-century die from Barton-on-Humber (Speake 1980: pl. 13) and fragmentary copper-alloy foils from the princely burial beneath Asthall Barrow, also from the early seventh century (Dickinson and Speake 1992: 104, fig. 18c). It is also similar to the interlace of the panels at the mouths of the drinking-horns from Sutton Hoo Mound 1 (SHSB III: fig. 237).

Two identical finds, from 1938 and the recent excavations, are a pair of heavily gilded copper-alloy roundels (1 and 22) which were attached to a wooden base by a single rivet. The interlace that decorates the roundels is deep and sharp, with a clarity that is familiar from the roundels on the bridle in Mound 17 (above). It consists of eight tightly packed quadrupeds that are grouped in interlacing pairs, with their feet touching on the horizontal axis of the roundel to either side of the central rivet. The ornament is intense and, while it shares common features with other Early Anglo-Saxon roundels (cf. Speake 1980: fig. 10), it is closest in both style and inspiration to the triple-banded zoomorphs on a roundel from Caenby (*ibid.*: fig. 10g). The Caenby fittings, which include axe-shaped mounts associated in pairs with the roundels, are set into thick wood, and are thought to have been the

ornamental fittings of a box or chest. The function of the Mound 2 roundels is uncertain. Impressions of fine-grained wood remain on the backs of both roundels, and this suggests that they were not originally associated with a leather covered shield. They are unlikely to be saddle ornaments as there is no suggestion of any horse equipment in the assemblage and, like the Caenby roundels, they may well be box fittings.

Although robbed of most of its assemblage, it is clear that beneath Mound 2 was a burial that is broadly comparable in status and date to Mound 1. Objects from the two mounds were made in the same workshops at the same time and share links with other princely burials of the early seventh century. The close similarity of certain objects, the carinated bronze cauldrons for example, also suggests that certain workshops in Anglo-Saxon England were providing high-status objects for royal and princely courts. The frustratingly partial assemblage, combined with the extraordinary rite of ship-burial over a substantial wooden chamber, reinstates this mound as one of the most interesting in the cemetery.

#### *The Mound 2 ship*

Ultimately, the only tangible remains of the Mound 2 ship was a thin scatter of less than five hundred rivets across the surface of the mound, to the east and west of the robber trench. These imply a clinker-built vessel in which planks are joined by iron rivets or clench nails, as in the Mound 1 ship and others known from the North Sea region in the early Middle Ages (SHSB I: 345–435). The size of the ship was less certain. Using a rough rule of thumb that rivets are spaced 6 in. (150 mm) apart, a ship with ten rows of rivets per side (twenty rows) measuring 100 ft (30.5 m) long would require 4,000 rivets. The Mound 1 ship had approximately 3,000. A boat 20 ft (6.1 m) long with eight rows of rivets would require only 640. The 500 or so rivets from Mound 2 would suggest a ship at least 6 m long, but there is some evidence that the collection of rivets was originally larger, suggesting a more imposing vessel (see Chapter 6, p. 166).

#### THE RIVETS

Martin Carver, based on research by Gillian Hutchinson and Catherine Royle.

Of a total of 496 rivets, 192 were complete, and of these 79 were identified as straight rivets, 113 as angled rivets, 10 as gunwale spikes and 3 as rib-bolts (see Chapter 6, p. 166, Table 18). Complete rivets, or clench nails, consist of a head and shank forged from the same piece of iron, and a rove cut from an iron strip or sheet. The nail is hammered through the two planks to be fastened, passed through a hole in the centre of the rove, and the tip of the nail is then hammered over the rove to make the join permanent (see SHSB I: 361–410). Wood-grain observable in the corrosion products around some of the shanks of standard length show that they were fastening planks of equal thickness with parallel grain.

The heads of the Mound 2 rivets are generally circular and slightly domed, with an average diameter of 25–35 mm in the corroded state. The shanks are subcircular in cross-section, and have a diameter of 15 mm in the corroded state. The shanks do not taper except at the tip. The roves are rhomboid rather than square, with sides in the order of 30–5 mm long. The length of the shank between head and rove is 35–45 mm in the majority of examples. Very few rivets seem to have shanks shorter than

35 mm. However, Find 13538 measured only 20 mm between its head and rove, which were both otherwise of standard dimension. This suggests that it was not used to fasten strakes of full thickness, but was a scarf rivet used to join two planks in the same strake, end to end. The plank ends are feathered, so that where they overlap in the scarf their combined thickness does not exceed that of the strake as a whole.

A number of rivets had roves that were set at an angle to the shank, showing that the outside surfaces of the two pieces of timber to be fastened were not parallel. In clinker-built vessels this tends to occur where the planking joins the keel or, progressively, towards the stem and stern posts (SHSB I: 377 and 390). Of the Mound 2 examples, 113 were angled, outnumbering the conventional rivets (where the rove and head were set parallel), and suggesting that the majority of surviving rivets came from the two ends of the ship.

Other types of iron object connected with the construction of a ship were identified in the Mound 2 assemblage. There were three examples of rib-bolts, used to secure a rib to the top strake, and recognizable from their long shank (SHSB I: 364). Find 15603 has a head and rove of standard size but a shank 110 mm long. Another rib-bolt, Find 14626, has a shank length of 70 mm and the third, Find 15158, has a shank length of 60 mm. Ten objects were identified as gunwale spikes, used to nail the gunwale, with or without tholes, to the top strake (SHSB I: 403). An example is Find 14646, which had a shank 85 mm long; there was no indication that it ever had a rove.

#### STRUCTURE OF THE SHIP

The Mound 2 rivets are identical to those from the ship in Mound 1 (Evans in SHSB I: 353–413) and to those from the broadly contemporary Snape boat (Davidson 1863: 177–82). Two of the three burial ships (Snape and Sutton Hoo Mound 1) survived only as imprints in the damp sand of the burial trenches, their lines of corroded iron rivets intact. The ship in Mound 2, placed on the Anglo-Saxon ground surface and perhaps only partially covered by a mound (see Chapter 6, p. 169), may have decayed differently. Common to all three, however, is the fact that as the iron rivets corrode, the wood that they fasten is preserved by migrating iron oxides. These preserve details of carpentry so that the skeletal details of the boats can be fleshed out. The overall similarity of the rivets from the three ships implies that, whatever their length, their basic structure is the same. Thus, although we have no direct evidence for the length of the Mound 2 ship, it is possible to say that structurally she is indistinguishable from the ship in Mound 1.

The hull was constructed of oak planking approximately 2 cm thick at the overlap of the strakes, where the planks were fastened with iron rivets. These, following the structure of the ship in Mound 1, would have been spaced, on average, 15 cm apart. The strakes would have been composite and fastened end to end with small plank join rivets, 2 cm long. The oblique run of the wood-grain across the rivet shank shows that the ends of the planks were chamfered to form a simple scarf. No evidence survives for the frames, but on Mound 1 analogies they would have been formed from squared, naturally grown timbers shaped flush to the inner surface of the planking, fastened by one iron bolt through the top strake and treenails elsewhere. The few surviving gunwale spikes show that rowlocks were attached to the gunwale, although it is not known how many rowing positions there were.

Nothing survives from the steering system, but it may have been similar to the Mound 1 ship, with a large paddle slung to port, fixed by heavy bolts to the reinforced heads of frames high in the stern. The rivets with sharply angled roves indicate that the bow and stern were similar in construction and that the boat was double ended. Whether the boat was used under sail is as uncertain as for the Mound 1 ship. No evidence for sailing tackle was recovered in the 1939 excavations, but computer-generated data (Peter Marsden: pers. comm.; SHSB I: fig. 324) suggest that the hull of the Mound 1 ship was certainly capable of being used under sail. This being so, there is no inherent reason why the ship in Mound 2 should not also have been a sailing hull (for recent successful trials on a half-sized replica of the ship in Mound 1, see Gifford and Gifford 1996).

#### CONTEXT OF THE SHIP

Remarkably little is known about the use of boats in the Early Anglo-Saxon period. The overall picture is summarized by Bruce-Mitford (SHSB I: 424ff.) and while both archaeological and documentary sources imply contact across the North Sea basin and the English Channel on a regular basis, and simple logic suggests that coastal movement in Anglo-Saxon England would be economical and swift, the use of water transport is barely indicated in the archaeological record (Evans 1985: 63ff.). Most of the contemporary evidence is contained in the Sandlings province of East Anglia, focusing on the two high-status cemeteries of Snape and Sutton Hoo. Despite fundamental differences in the structure of the two cemeteries (Filmer-Sankey and Pestell 2001), it seems inherently unlikely that the three high-status ship-burials are not connected. From this an assumption can be made that a sophisticated boat-building industry existed within the kingdom of East Anglia, probably under the patronage of the royal court, and capable of constructing exceptionally large clinker-built sailing vessels. The ship in Mound 1, for example, was a little over 27 m in length, with a maximum beam of 4.8 m, the largest open clinker-built boat yet discovered in the North Sea area. The building of such a massive vessel implies not only master shipwrights to select the wood and direct the building of the hull, but an industrial infrastructure to manufacture the several thousand iron rivets needed to fasten the planking. If the ship were sailed, then sails and cordage were probably also produced locally. It could be argued that the three clinker-built boats buried in these two cemeteries are atypical, especially in terms of their size. However, it is also clear from the patches and repaired strakes on the Mound 1 hull (SHSB I: 412–13) that this ship was not built for burial, and it is probable that her companion boats were similarly used.

Little else survives, apart from segments of boats of Middle Saxon date placed over twelve graves in the cemetery at Caistor-by-Yarmouth (Green 1963: 48ff.; Hurst 1976: 241), and stray timbers, mostly from the City of London reaches of the Thames. The only other extant hull, from a late Anglo-Saxon context, is the Graveney boat (Evans and Fenwick 1971): the remains of a small trader whose estimated length is 14 m, with a beam of 3.9 m. Dendrochronological dating has shown that the boat was built c. AD 927 and abandoned twenty years later in a creek on the Graveney marshes, Kent (Fenwick 1978: xix, 105–10). There is, of course, no evidence that she was built by Anglo-Saxon shipwrights but, with a capacity of seven tons, she is seen as a typical early trader. She was built with a flat-bottomed hull designed for easy beaching at emporia like Hamwic or Dorestad

(Hodges 1982: 53), and she would have been capable of plying across the Channel or around the southern reaches of the North Sea, sailing day by day along the coast in the way described in the *Voyages of Othere and Wulfstan* (Lund 1984: e.g. 18–19, 21 and map p. 34). The three East Anglian ships, particularly the ship in Mound 2, may have served as 'royal' vessels, but they may

equally well have been used as merchantmen, sailing out of Ipswich, whose foundations as a town begin in the early seventh century, certainly to Kent, perhaps north to Northumbria and across the southern reaches of the North Sea to the trading centres of the Rhineland and Scandinavia.

## Catalogue: Mound 2

Items 1–18 comprise a summary of artefacts recovered in 1938 (SHSB I: 115–23); items 19 onwards are from the 1984–91 excavation of Mound 2.

- 1 Gilt-bronze roundel
- 2 Blue glass squat jar
- 3 Gilt-bronze hemispherical stud
- 4 Fragments of silver-gilt foil with zoomorphic design (drinking-horn mount)
- 5 Fragment of cast gilt-bronze strip
- 6 Small silver buckle
- 7 Bronze ring
- 8 Tip of sword blade
- 8a Mineral-replaced textile
- 9 Iron knife
- 10 Iron knife
- 11 Iron blade
- 12 Double sheath containing two knife-blades
- 13 Objects of wood and iron
- 14 Iron nail
- 15 Ship-rivets
- 16 Iron ring and attached rod
- 17 Lengths of iron bands
- 18 Segmented bead of blue faience

### 19

#### Silver fittings and wood from a box (?) (Figure 122)

41/14160

The fragments consist of lengths of swaged strip, silver sheet and slivers of wood as follows:

##### a Swaged strip

Dimensions: strip 91 × 4.1 mm, pins 9–10 × 1.6 mm thick, towards head

One end of this is cut, the other is broken across a rivet hole. The length is pierced by four pins and one rivet (?), all with domed heads, and spaced, on average, 16 mm apart. The shanks vary between those that taper, that is, the pins, and one – lying adjacent to the cut end – that is straight-sided with a slight expansion at the inner end suggesting that it may have been burred over a washer, that is, a rivet. Some of the pins are bent almost at right angles towards the pointed end, suggesting that they were hammered flat over the back of the wood they pierced.

##### b Sandwich of swaged strip

Dimensions: strip length 15 mm, pin spacing 8.5 mm; silver sheet thickness 0.25 mm

This contains:

- 1 A short length of swaged strip, which is pierced by two pins with hooked-over ends. The swaged strip is similar to 19a above, although marginally wider. One end is finished by being cut to a neat point, the other is broken across its width. Two pins remain *in situ*. These have domed heads and fine tapering shanks. One is bent over, 6 mm along its length, which corresponds with the shanks of 19a above. The length is also similar.
- 2 A fragment of silver sheet: flat and featureless with no finished edge.
- 3 A fragment of wood, with the grain apparently running at right angles to the swaged strip.

##### c Two joining pieces of strip

Dimensions: strip 15 × 15 mm; pin spacing 11 mm, length 10 mm

Similar to 19b above, with one mitred and one cut end. Two dome-headed pins remain *in situ*: one is straight shanked, the other is bent at right angles, 8 mm along its length.

### 20

#### Silver bowl (Figure 122)

41/14620

Dimensions: 52 × 30 mm deep

Two joining fragments from the rim of a shallow (?) bowl with near vertical walls. The fragments show very little curvature. The rim is simple, barely expanded in the finishing process and slightly everted. On one fragment, the smooth line of the rim is distorted, as though torn while the metal was still uncorroded, suggesting that it may have been placed in the grave in a damaged condition.

### 21

#### Silver and gilt-bronze fittings (Figure 122)

41/14975

A mixed group of fragments, probably from a small cup similar

in scale to the burr-wood cups from Sutton Hoo Mound 1 (SHSB III: 364ff., fig. 266). The group consists of a single fragment of gilt-bronze foil; several short lengths of a silver-gilt rim-binding; two short lengths of curved, swaged silver strip; one fragment of a narrow, flat swaged silver strip; one fragment of flat, silver strip with two closely spaced punched holes; five shapeless silver fragments containing tiny silver rivets; one tightly curved length of silver strip; and one folded length of silver strip. Of these, both the fragment of gilt-bronze foil a and the folded silver strip h may be fortuitously associated with the cup fragments.

##### a Gilt-bronze fragment of foil

Dimensions: 19 × 14 mm

This is stamped with a carefully executed interlace pattern, now too fragmentary to interpret, but containing snake-like bodies, 3 mm wide, made up of finely shaped beads within single raised borders. Both workmanship and design are of high quality and can be compared to, for example, the Barton-on-Humber die (Speake 1980: 13), the panels at the mouth of the drinking-horns from Sutton Hoo Mound 1 (BM 1939, 1010.120–1, SHSB III: 375, fig. 238), or the panels on the drinking cups from Taplow (SHSB III: 387, fig. 281a–b). This fragment is the only one of the group that is not silver. It may not, therefore, belong to the small cup whose scale is equivalent to the burr-wood cups (Inv. 128–134) from Sutton Hoo Mound 1, but to something more akin to the maple-wood bottles (Inv. 122–7; Mound 1).

##### b Silver-gilt rim-binding

Nine short lengths of U-channelled rim-binding in very poor condition. The better preserved lengths suggest a mouth diameter of c. 42 mm. The binding enclosed a lip of 2 mm thickness to a depth of 3 mm. One small patch of gilding survives.

##### c Silver-gilt swaged strip

Dimensions: 5 mm wide

Three short curved lengths of strip, carrying six carefully executed ridges. Two join to form a section 33 mm long, and are pierced by two tiny silver rivets, spaced 24 mm apart. Specks of gilding survive rarely on the surface. The curvature of the fragments suggests a diameter equivalent to that of the rim-binding above, that is, 42 mm.

##### d Silver swaged strip

As 21c above, but with no trace of gilding or curvature.

##### e Silver-gilt swaged strip

Dimensions: width 3 mm, length 6 mm

This has four well-executed ridges. The fragment is broken at both ends and it shows no curvature.

##### f Silver, curved strip

Dimensions: width 4 mm

This is perhaps part of a rim clip. The fragment is broken at both ends and is in poor condition. It is plain, with no evidence of swaging or traces of gilding.

##### g Silver strips

Dimensions: width 4 mm; rivet shank length 3.75 mm

Three short lengths of badly corroded strip, each pierced by a pair of tiny silver rivets found associated with slivers of wood. The width coincides with 21f above, and these may be the ends of the three clips that originally held the rim-binding to the cup. The fragments are plain with no evidence of swaging or traces of gilding.

##### h Silver strip fragment

Dimensions: width 5 mm; diameter of piercings 0.75 mm

This is now in three pieces, with three finished edges. At one end are two piercings, which have been punched with a fine awl. The holes appear too fine for either pins or rivets, and this fragment may have been stitched onto leather, for example. Its association with the cup fragments may be fortuitous.

22

**Gilded copper-alloy roundel, from a shield, box or saddle (Figure 122)**

41/4534

Dimensions: disc diameter 49 mm, thickness 1.5 mm; rivet head diameter 7 mm, shank length 4 mm

The disc is cast, and is pierced by a single, centrally placed dome-headed rivet which is clenched on the display surface over a thin, unglilded (?) copper-alloy washer. The edge and back of the mount are unglilded. The back is flat and featureless, apart from patches of a cream coloured organic (?) deposit. The shank of the rivet is broken and now projects 4 mm beyond the surface. The disc is decorated with a complex and symmetrical design in zoomorphic interlace contained within a raised double border, which is itself enclosed by a finely billeted outer frame. The design, cast with the mount and worked by hand, consists of two semicircular fields, each filled with two matching but mirror-imaged interlocked pairs of intricately interlaced asymmetric Style II animals. The horizontal axis of the design is formed by their eight touching feet. Each animal is made up of an angled head surround, from which a pair of simple jaws projects, and a triple-banded body with a simple back leg ending in a triple-toed foot. The design is presented in a style akin to chip-carving and, within the overall symmetry of the panel, is fluid and asymmetric in the most subtle way. It shows a mastery of zoomorphic interlace and an originality of design within the repertoire of Style II. The disc is identical to one found by Basil Brown in his excavation of Mound 2 in 1938 (SHSB I: ch. 2, 115–17 and 128–9). The significance of their ornament within the development of Style II is fully discussed by Speake (1980: 63ff., fig. 10h).

23

**Silver-gilt drinking-horn terminal (Figure 122; Plate 33:b)**

41/11262

Dimensions: 37 mm long

A terminal in the form of a simplified Style II bird-head, identical with one found in the excavation of Mound 1 in 1939 (BM 1940, 1010.120 and 121). The head is smoothly convex, with the brow running in a full curve to form an arc with the rounded jaw; the beak is curved in a reflection of this. A deep furrow, possibly inlaid, runs forward from the back of the head to make the separation of the jaws. The terminal is broken

immediately behind the head, but evidence of thin grooved borders suggests an immediate continuation of the design in a style similar to that of the bird-headed escutcheons on the musical instrument (SHSB III: fig. 447).

24

**Gilded copper-alloy foil (Figure 122)**

41/14624

Dimensions: 15 × 6 mm

A fragment from the edge of a decorative foil, showing one finished (cut) edge, a short length of a milled border, and the eye and angular eye-surround of a Style II bird or zoomorph. The eye-surround is composed of beads within single raised borders. The quality of the gilding is excellent. The scale of the motif is large, suggesting that the foil may have originally been part of the decorative scheme of a shield, for example.

25

**Gilding from a foil (not illustrated)**

41/14624A

Dimensions: 2 × 3 mm

A tiny fragment found and packed together with 22, but a different corrosion pattern on the back suggests association with a silver, rather than a bronze, matrix. It appears to be part of the eye of a bird or zoomorph.

26

**Gilt-bronze fitting (Figure 122)**

41/17950

Dimensions: length 16 mm

Part of a Style II head seen in profile, looking right. The fragment is dominated by a beady eye, set within a circular surround that, behind the eye, drops towards the point of the jaw (missing). The brow is gently convex and falls towards the snout or jaws (missing). In front of the eye, a channel, reflecting the curve of the outer edges of the mount, runs forward towards the mouth. The margins of the head, and the edges of the channel, are emphasized by delicate punch marks in the form of an open triangle containing a slash or a dot. The head, though damaged, most closely resembles the lower heads on the handgrip extension from the shield in Sutton Hoo Mound 1 (SHSB II: fig. 43).

27

**Copper-alloy sheet or foil (not illustrated)**

41/16381B

Dimensions: 9 × 5 mm

A fragment of sheet or foil, subtriangular in shape, with two

nibbled edges and one finished edge. The surface is badly corroded, but beneath the corrosion are traces of decoration in the form of shallow flutings. The back is covered with a dark deposit and concreted sand.

28

**Silver-gilt foil (Figure 122)**

41/17967

Dimensions: 12 × 11 mm

A fragment of foil from the edge of a decorative panel. It is composed of a short length of cut edge, a stretch of finely billeted border and part of a zoomorphic interlace pattern. Too little of the motif survives to identify with any certainty, but elements suggest the head, neck and shoulders of a quadruped with twisted horns. This, if correctly interpreted, has no parallels amongst the seventh-century Anglo-Saxon foil repertoire, but may thematically be linked with the appearance of a stag with a full set of antlers in the Mound 1 assemblage. Three further scraps of foil were found associated with this find. The largest of these, 5 × 4 mm, also carries a finely billeted border. The quality of all these fragments is good and of a weight associated with the decorative foils from a drinking-horn or cup. None of the fragments shows any pinholes, and none were found in association with wood.

29

**Copper-alloy cauldron (?) fragments (not illustrated)**

41/14990, 41/16703 and 41/14576

Dimensions: 37 × 26 × 2 mm (largest fragment, 16703)

Four fragments of which two are featureless, with broken edges. All are flat; one shows traces of a possible carination and one a finished edge. These two details suggest that the fragments, which are made in a heavier gauge than other small copper-alloy fragments from the burial, may come from the rim and body of a large straight-walled cauldron (cf. Cauldron 1, Sutton Hoo Mound 1) rather than a lugged cauldron (cf. Sutton Hoo Mound 17) or a shallow, open bowl.

30

**Copper-alloy cauldron fragments (not illustrated)**

41/14575, 41/14577, 41/14621–3,

41/16706, 41/16807 and

41/19585–7

Dimensions: thickness 1–2 mm; largest 43 × 20 × 1 mm

Featureless fragments of copper-alloy sheet.

31

**Copper-alloy bowl (not illustrated)**

41/16804, 41/16807, 41/16814–16 and 41/18843

Dimensions: largest (18843) 35 × 14 × 1 mm (3 mm at rim)

Fragments from a copper-alloy bowl. The rim section is upright, slightly expanded and everted, and falls in a straight wall.

32

**Copper-alloy pin (Figure 122)**

41/16381A

Dimensions: thickness 4 mm, total length (both fragments) 33 mm

Two joining fragments of the shank of a stout pin. The shank is equivalent in weight to, for example, the pin on a large penannular brooch. Alternatively, the fragments may form part of the shank of a simple cloak pin.

33

**Copper-alloy stud (Figure 122)**

41/19061

Dimensions: diameter 17 mm; length of rivet 5 mm

A circular stud of thin, bronze sheet, with a dished tinned field against a plain rounded border. At the back, centrally placed, is a short, curved spike for attachment to leather (?). It was perhaps a belt fitting.

34

**Amber (Figure 122)**

41/19377

Dimensions: diameter 8 mm

A damaged spherical lump of crystalline structure. It is a clear orangey/brown in colour. There is no clear evidence of piercing, and the amber may therefore be a setting rather than a bead.

35

**Iron nail and wood from box (?) (not illustrated)**

41/21214

Dimensions: 17 × 7 × 6 mm thick

A small sliver of ferrified wood, preserved by the migrating oxides of an iron nail or rivet with a flattened, well-formed round head (3.5 mm diameter), resting on a sheet copper-alloy washer (6 mm diameter). The shank of the nail or rivet is now missing, but the hole left by it in the wood suggests a diameter of approximately 2.25 mm. The wood is silky, and is perhaps from a box.

36

**Three iron, flat, rivet heads (not illustrated)**

14859, 18049 and 22729

Dimensions: diameter 24 mm

From a shield (?), or alternatively from the iron fittings of a bucket or tub.

37

**Leather strip (not illustrated).**

41/14515

Dimensions: 100 × 40 mm

*In situ*, this appeared to be in the form of a strip. It now consists of thirteen desiccated fragments, some apparently connected by thread-like elements (probably bracken roots). The fragments

show no structure, and display no finished edges or metal staining. There are no holes for rivets, pins, threads, etc. The structure is fibrous, and might be decayed leather in a matrix of fine bracken root, which has sought leather as a source of food (see Mound 17, below).

38

**Fragments of unidentifiable mineral-preserved organic material**

41/16778

Possibly much abraded textile.

39

**Corroded iron fittings from the ship (not illustrated)**

A total of 496 items, including rivets, rib bolts and gunnel spikes, found scattered in the mound (none *in situ*).

**The textiles from Mounds 5, 7, 14 and 17**

Penelope Walton Rogers (Anglo-Saxon Laboratory)

**Introduction**

Substantial remains of textile were found in association with metalwork from Mounds 5, 7, 14 and 17. The fabrics have proved to be of consistently high quality and two pieces from Mound 14, an embroidery and a patterned tablet-woven band, are of especial significance. They represent early examples of two crafts for which the convents and courts of Anglo-Saxon England were to become justly famous in later centuries.

**Mound 5**

The iron shears which accompanied the male cremation in Mound 5 have remains of two textiles on one face. Both are good quality linens, one a tabby (plain weave) and the other a diamond twill. Fleur Shearman has pieced together the separate fragments of the shears (4a), so that it is possible to follow the path of some neat folds and seams in the linen tabby (4bi; Figure 94) and to see that the shears must have lain close against the tabby without being folded into it. The diamond twill (4bii; Figure 123a) lies at the hip of the blades on the same face as the tabby, although it is not clear whether it was above or below the other textile. Further loose fragments collected from the grave (6) prove to be remnants of the same two textiles (Figure 123b–d), together with a third, a linen tabby repp (6iii).

In technical terms, these are typical of linen textiles of the Anglo-Saxon period. They are made from a plant fibre – flax in the case of the tabby and flax or hemp in the others – with the yarn consistently spun in the Z-direction (clockwise, when using a suspended spindle). They represent some of the finest fabrics of the period, with counts of 26 × 16 threads per cm in the tabby, 24 × 14 in the diamond twill and 28 × 40 in the tabby repp. This compares with an average of 14–16 threads per cm for linen textiles from other Anglo-Saxon cemeteries.

The diamond twill is a 2/2 broken diamond twill with a pattern that repeats over 20 × 18 threads (Figure 123a–d). In the example on the shears, there is a weaving fault, where a row of the pattern has been omitted (Figure 123a). This fault is caused by an error in the order of lifting the heddles (the rods which control the weave), and commonly occurs when weaving with the warp-weighted loom. There are a number of different pattern repeats in Anglo-Saxon diamond twills, but the 20 × 18 pattern is one that recurs in good quality wool and linen diamond twills at sites around the North Sea (Walton 1989: 337; Bender Jørgensen 1992: 142–3). It is possible that it is an indicator of fabrics made in specialist weaving centres.

Linen tabby and diamond twill frequently occur as clothing fabrics, but repp, which is a stiff, slightly ribbed form of weave,

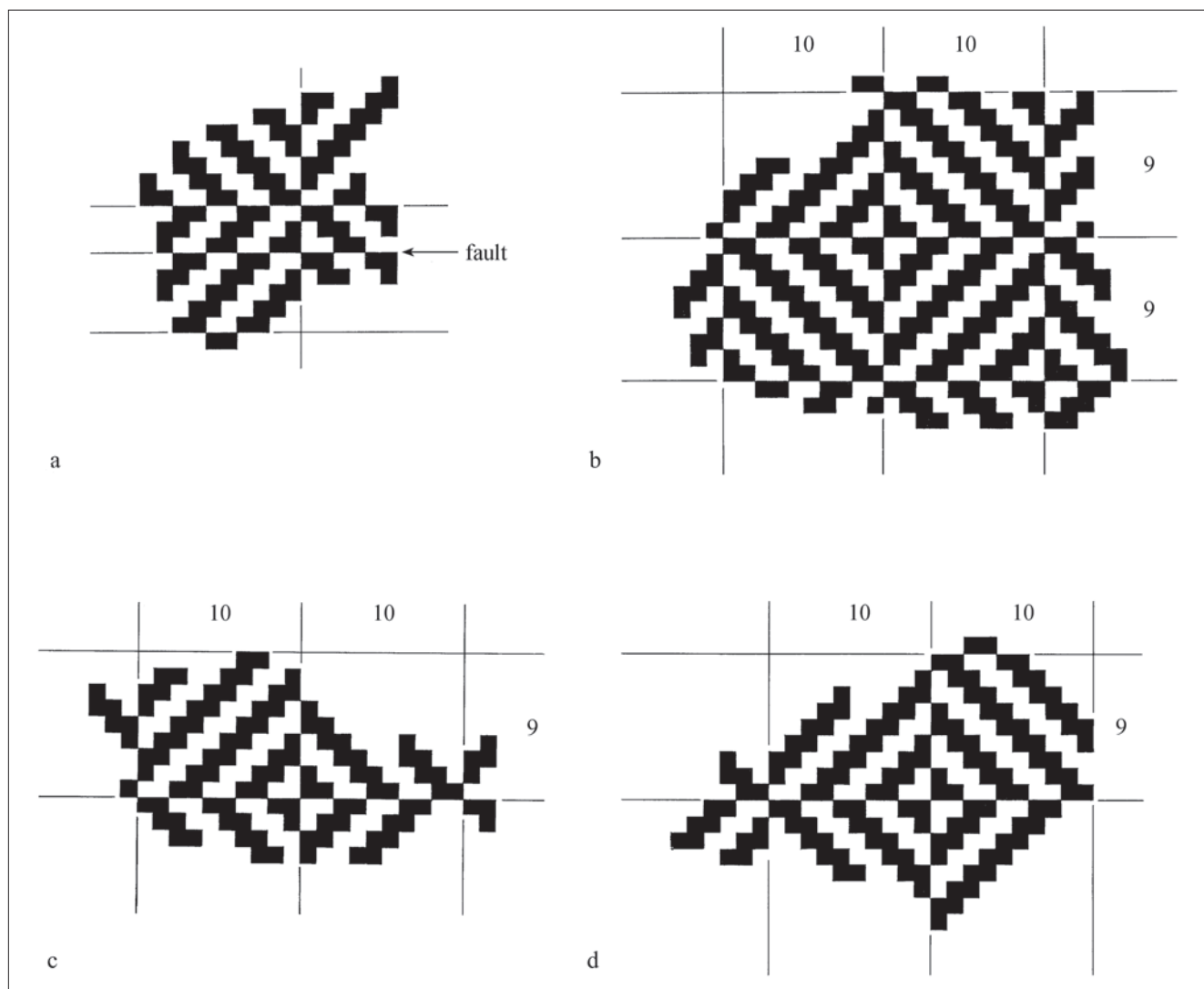
is more often found in narrow strips, reinforcement tapes and linings. An almost identical repp was recorded in the Mound 1 ship-burial (SH11; E. Crowfoot 1983), in association with a linen diamond twill with the same thread-count and pattern repeat as that described here (SH12). The repp formed the cover of a feather pillow and the diamond twill may have been the pillowcase (E. Crowfoot 1983: 447 and 460). The linen tabby on the shears, however, is more likely to be from a garment. It lies in longitudinal folds and has at least one seam. It is stitched with a plied linen thread into a form of reversible flat seam known as ‘run-and-fell’ and there seems to be a second seam joining it at an angle, so that the two form a triangular gore or gusset. Similar seams have been found on a charred linen, possibly the remains of a child’s shirt, from tenth-century York (Walton 1989: 348 and 404–9), while angular inserts can be seen in Migration Period tunics from Norway and Sweden (Nockert 1991: 46–7 and 329), a ninth/tenth-century embroidered garment from Llan-gorse crannog, Wales (Granger-Taylor and Pritchard 2001) and a Viking Age shirt from Viborg, Denmark (Fentz 1998). The inserts mostly occur under the arm or in the side seam.

**Mound 7**

Small, scattered fragments of another fine linen were recorded in Mound 7 (5), this time woven in 2/1 twill with 26–30 × 20–5 threads per cm, with the yarn Z-spun, as before. Twills with 2/1 structure are comparatively rare among Early Anglo-Saxon textiles, although there are a small number of examples from East Anglian sites, including three in linen from Sutton Hoo – SH7, SH8 and SH22 (a 2/1 chevron twill) – and one in wool from Broomfield, B6 (E. Crowfoot 1983: 438–42). The weave is not a natural product of the warp-weighted loom, which was the main loom of the Anglo-Saxon settlements, and it has been argued that it was produced instead on the two-beam vertical loom (Walton Rogers 2001). This loom was in use in Roman Gaul and seems to have survived in parts of Merovingian France, in one case at a site associated with a royal residence (*ibid.*: 163–4), while there are two small wooden examples in the ninth-century burial of Queen Åsa at Oseberg, Norway (Grieg 1928: 176–9). It may be suggested that the two-beam loom was regarded as a specialist tool and used in workshops attached to royal courts. This would explain the limited distribution of 2/1 twill and its concentration in the finer qualities.

**Mound 14**

Extensive textile remains were found in the woman’s burial in Mound 14, in association with a metal chain, a knife, iron rods and a small, perforated iron plate. Because the grave had been robbed, the original position of the objects was not known, but in other cemeteries these items are generally found in a cluster



**Figure 123** The pattern of the linen diamond twill from Mound 5: (a) from the shears, 41/40606; (b) unassociated fragment, 41/40810; (c) unassociated fragment, 41/41816; (d) unassociated fragment, 41/41402.

at the woman's left hip, where they were probably suspended from the belt. The textiles are crumpled and interfolded in a manner that suggests they are the folds of the woman's clothing, rather than garments placed in the grave.

There are three tabby-weave linens present. One is of average quality, with  $14\text{--}16/\text{Z} \times 16\text{--}18/\text{Z}$  threads per cm, the second is finer,  $28/\text{Z} \times 22\text{--}24/\text{Z}$  per cm, and the third has  $30/\text{Z} \times 28/\text{Z}$  per cm. The first two occur together or separately on fourteen different pieces of metalwork (see catalogue), but the tabby with the highest thread-count only occurs in one place, in association with the chain and rods, **9a** (50/4973), and this piece has been embroidered in wool yarn. In **9a** (50/4973) a sequence of layers could be recorded, with human skin forming the lowest level. Against the skin lay the medium-weight tabby, followed by, from the bottom up, the fine tabby ( $28/\text{Z} \times 24/\text{Z}$ ), the metal chain and iron rods, more fine tabby in association with cords perhaps from a tablet weave, then two layers of the finest tabby ( $30/\text{Z} \times 28/\text{Z}$ ), with embroidery facing up on one layer and down on the other, followed by one final layer of the medium tabby (Figure 99, Plate 43). This may be interpreted as an inner gown of medium-weight linen and an outer gown of fine linen tabby, with the metalwork caught between two layers of the garments in contact with the fine outer one. The

embroidered attachment seems at one remove from the metalwork, and is most closely associated with the part of the inner gown that lay uppermost in the burial (see below).

Further, patterned, tablet bands were found in association with another fragment of the same chain and rods, **9a** (50/4518). There seem to be three bands, parallel to each other, in association with fine linen tabby ( $28/\text{Z} \times 22/\text{Z}$  per cm). The line of bands runs across the line of rods, so that if the rods hung down from the waist, the bands would be horizontal to the body (see below, *The garments*, p. 267). The fibres of these bands could not be identified, although wool seems likely. Finally, over the top of all other textiles on objects **9a** (50/4495, 50/4497, 50/4523 and 50/4960), were traces of a much coarser fabric, more confidently identified as wool. The position and quality of this last fabric suggests a cloak or blanket.

#### *The tablet-woven bands*

There are three panels of tablet weaving on **9a** (50/4518), representing three separate bands (Figure 99; Plate 43). The outermost (A) has an incomplete width of 10 mm and has the corded appearance of plain tablet weaving. The second (B) is a worn band with a weft-face pattern and is 15 mm wide. It has been neatly folded, longitudinally, with its two edges alongside



Plate 43 Mound 14: embroidery 9a (50/4793) and tablet bands 9a (50/4518).

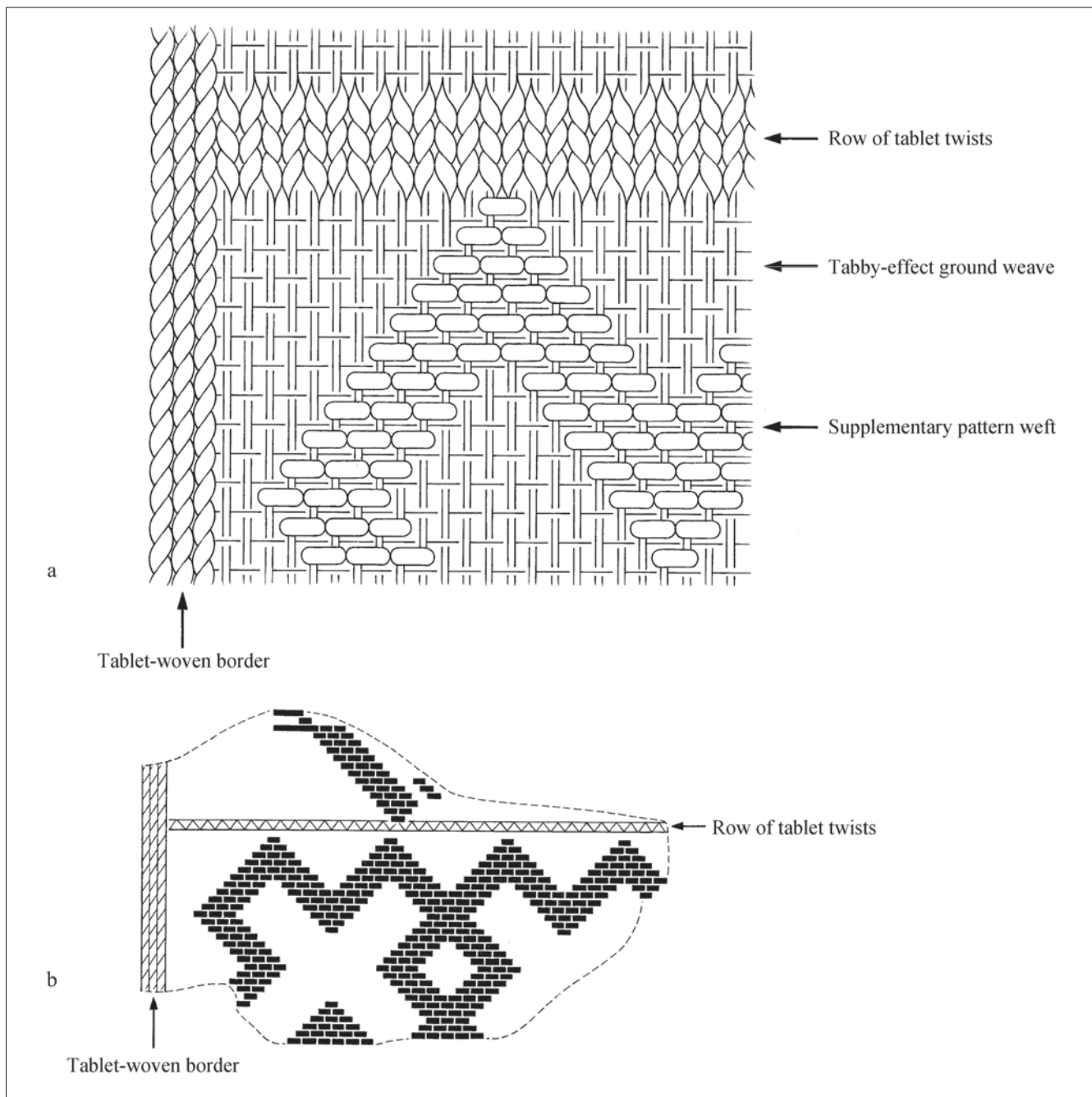
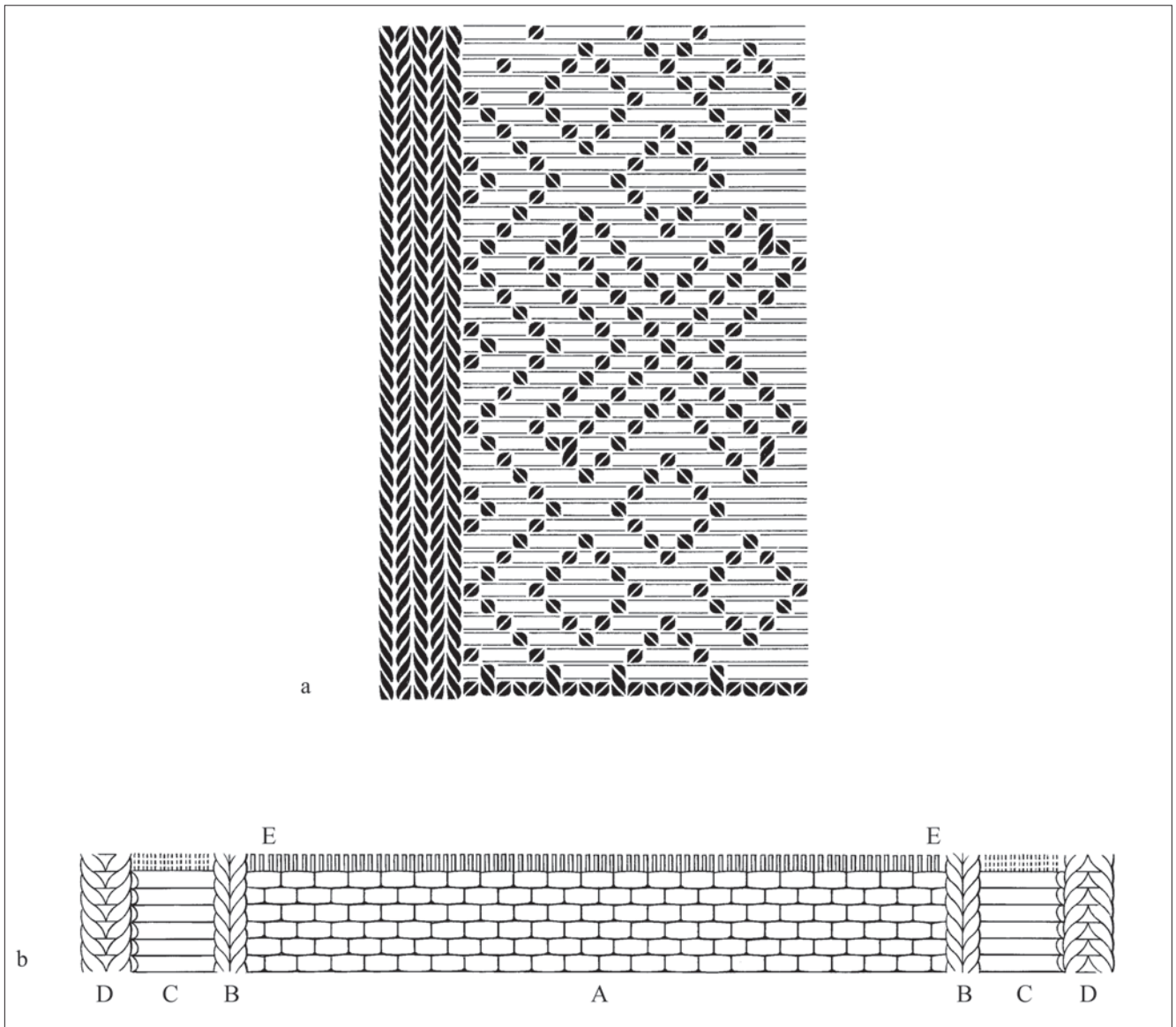


Figure 124 Tablet-woven band C from Mound 14, 50/4518: (a) the weaving technique;(b) the pattern.





**Figure 125** Tablet-woven bands from St Cuthbert's tomb at Durham: (a) the gold-brocaded pattern of braid 10, after G. Crowfoot 1956a: fig. 12; (b) the braid in soumak weave, after G. Crowfoot 1956a: fig. 14.

the selvedge of the first band (A) and the fold next to the selvedge of the third (C). The third band (C) is worked in an unusual weft-pattern technique, as will be described.

In its simplest form, tablet weaving is worked with a set of square plates with a perforation in each corner. Warp threads are threaded through the perforations, one per perforation, four per tablet, and placed under tension. As each tablet is rotated the four threads twist into a cord. If a set of several tablets is rotated simultaneously, they form several parallel cords and the introduction of a weft holds them together in a flat braid. If some of the tablets are threaded from a different side from the others, those cords will twist in the opposite direction, the two different directions of twist being designated Z and S.

Band A has been made in this simplest form of tablet weaving. There are eight cords present, representing eight tablets in use, and the cords have been twisted ZZSZSZZZ. Band B has a selvedge (where the weft returns) made up of four cords, twisted SZSZ, and a central patterned area. This area seems to be worked in the same technique as the patterned area of band C, but is less well preserved, the surface being abraded, presumably from previous use.

Band C has an incomplete width of 35 mm, but may be reconstructed as 40 mm wide. It has a selvedge border made up of three cords twisted ZZZ (Figure 124:a–b). The central panel has a ground weave which imitates tabby with a paired warp, but is in fact worked by turning the tablets two quarter-turns forwards and two quarter-turns back. There is a groove across the middle of the band, where the weaver seems to have forgotten to reverse, so that the tablets form the normal twists (Figure 124:a–b). A supplementary weft of thick plied yarn has been used for the pattern. It is worked over the surface, wrapping around adjacent pairs of warp cords, to give a brickwork effect on the side facing upwards. There would be longer wrapping threads on the back (not visible). This technique is sometimes called 'soumak'. There is an error in the upper left quadrant, where the weft floats over several warp cords, but most of the work is neatly and accurately executed. The pattern is of two contiguous saltires, shown in negative (Figure 124:b). It is possible that this is in fact the reverse, and the side with longer wrapping threads, at present face down, was meant to be the front.

This band is an important link between the early and the late forms of Anglo-Saxon tablet weaving, and has elements that

may be derived from Scandinavia. Tablet weaving was widely practised in both Anglo-Saxon England and in Scandinavia, and was used for garment borders and straps. The simplest corded forms are the most common, but where patterning occurs in the early bands, it is mostly carried in the warp. Bands with repeating diamonds in warp-patterned weaves, for example, have been recorded at Lacey, Lincolnshire (G. Crowfoot 1956b), and St John's College, Cambridge (G. Crowfoot 1951: 28–9). The Lacey pattern is worked on a tabby-effect ground with corded borders, so that it shares some common technology with the Sutton Hoo band. The weft-wrap technique, however, is more frequently encountered in Scandinavia. There is a group of at least twenty-eight Migration Period tablet weaves from Norway and Sweden in which motifs are worked in horsehair, in a weft-wrapping technique related to soumak (Nockert 1991: 96–105). Four of these horsehair bands have been recorded in Anglian cemeteries in England, but they are noticeably rare in relation to other forms of tablet weaving (Walton Rogers 1999: 150–3). The Sutton Hoo Mound 14 band replaces the fine horsehair with a thick, plied yarn in true soumak technique. True soumak in larger, loom-woven textiles also appears more commonly in Scandinavia (Hoffmann 1974: 185; E. Crowfoot 1983: 428–38; Grenander Nyberg 1992). There are three examples of loom-woven soumak from Sutton Hoo Mound 1 (SH5, SH7 and SH14; E. Crowfoot 1983: 428–38) and a fourth from Taplow Barrow, Buckinghamshire (TB4; E. Crowfoot 1983: 476), but they are otherwise rare in England.

The design of the Mound 14 band presages the gold-brocaded bands of later church vestments. The pattern of saltires re-appears in a late band brocaded with silver-gilt thread from St Cuthbert's tomb at Durham (Figure 125a; G. Crowfoot 1956a: 446–7), and versions of the design continued to be used well into the late Medieval period. Also in St Cuthbert's coffin was a tissue-taffeta silk (now called 'weft-patterned tabby') and, attached to it, a 20 mm wide tablet-woven silk band with a central panel in soumak (Figure 125b; G. Crowfoot 1956a: 452–61). The tissue-taffeta would have been imported, possibly from Italy, but Hero Granger-Taylor has argued that the tablet-woven band is Anglo-Saxon and that the two together form part of an Anglo-Saxon dalmatic, made around AD 800 (Granger-Taylor 1989).

To sum up, the tablet-woven band from Mound 14 may be categorized as an Anglian band that uses a borrowed Scandinavian technique, a technique that, although rare, re-appears in later Anglo-Saxon work. The design of repeating saltires is one that transferred to gold-brocaded bands and became part of the stock-in-trade of later vestment makers.

### *The embroidery*

The finest of the linens survives as a small fragment, 50 × 30 mm, with embroidery worked over much of its surface, **9a** (50/4973; Plate 43; Figure 99), and beneath it is a layer of what seems to be the same, face down. The technique is stem stitch, worked so densely that it could almost be called satin stitch (Wade 1981; Butler 1983). The embroidery yarn is plied wool, Z2S, 0.5–0.7 mm thick. The design incorporates pairs of parallel lines or bars, each bar being made up of two rows of stem stitch and each pair of bars ending in a roundel. The double rows of stem stitch are mostly worked in opposite directions, to give a chevron appearance, and each is edged by a single line of

running stitch. The preserved length of the bars is 20 mm, and the roundels are 8 mm diameter. Next to the first row of roundels is the edge of a second row, with a small gap between. The embroidery and the textile have been replaced by iron corrosion products, which have left it uniformly brown, but there is some variation in shade between the rows of stem stitch, which may represent the use of different colours.

This adds an early example to the small number of embroideries from royal and religious sites of the Early Medieval period. They include the tunic or chasuble of Queen Bathild (the Anglo-Saxon wife of Clovis II, died AD 680/681) at Chelles, France (Laporte 1982; Berthelie-Ajot, Oger and Vierck 1985); the eighth/ninth-century Anglo-Saxon embroideries among the relics of Sts Harlindis and Relindis at Maaseik in Limburg, Belgium (Budny and Tweddle 1984); a ninth-century Anglo-Saxon embroidery among the relics of St Ambrose in Milan (Budny and Tweddle 1984: 85–6, pl. viii); a garment fragment from the ninth/tenth-century royal residence at Llangorse crannog, Brecon, Wales (Granger-Taylor and Pritchard 2001); a tunic and cloak from the tenth-century prince's grave at Bjerringhøj (Mammen), Denmark (Munksgaard 1984, Østergård 1991); the early tenth-century stole, maniple and girdle in St Cuthbert's tomb at Durham (Plenderleith 1956); and the eleventh-century English-made Bayeux 'tapestry' (a misnomer, since no tapestrywork is involved; Wilson 1985; Messent 1999). Small areas of embroidery have also been found in a workbox from a seventh-century woman's burial at Kempston, Bedfordshire (grave 71, E. Crowfoot 1990) and on a knife in a man's burial at Worthy Park, Kingsworthy, Hampshire (grave 75, E. Crowfoot n.d.), which suggests that people of more ordinary rank also had access to embroidery.

The materials of the Sutton Hoo embroidery, wool yarn on linen, are similar to those used for the Bayeux hanging. The Chelles tunic, the Llangorse garment and perhaps also the Worthy Park piece are worked in coloured silks on linen, while the vestments at Maaseik, Milan and Durham are silk and gold on linen or silk. The Bjerringhøj garments and the Kempston fragment are wool on wool. The stem stitch technique is standard in all the wool embroideries and some of the silks, although the Llangorse example is a more exacting variation, 'counted stem stitch', in which the stitch closely follows the weave.

The designs are many. The Kempston fragment has a scroll border with some sort of foliate design and the Worthy Park piece is also leaf and scroll. Related versions of leaf and scroll appear at Bjerringhøj, along with linked face-masks, animals and birds. The Chelles embroidery replicates a jewelled necklace with pectoral cross and pendants; the Maaseik pieces have an arcaded design and monograms; and the Llangorse garment has stylized animals and birds in compartments, while the Durham stole and maniple have realistically depicted saints and prophets.

The Sutton Hoo fragment does not match any of these. It is difficult to say what the bars with roundels represent, although they bear a passing resemblance to the cuffs with fasteners that appear on Migration Period garments. In Norway, Sweden and Denmark tablet-woven cuffs were sometimes fastened with clasps that have round metal studs on the front. Three, four or five pairs of studs were arranged on either side of the cuff opening, and the cuffs, being tablet-woven, had a corded, often chevron, appearance (Plate 44:a–b). The Sutton Hoo lines of stem stitch resemble corded tablet weaving, and the roundels

are a similar diameter to the studs. The Scandinavian studs were not worn in England, but sleeve-clasps with embossed roundels reminiscent of studs were used with tablet-woven cuffs in the Anglian region until the third quarter of the sixth century (Hines 1984: 35–109).

#### *The garments*

Little is known of women's dress at this time. The traditional Anglian tubular gown, fastened on the shoulders with a pair of matching brooches, disappeared from the region in the second half of the sixth century and was replaced with a garment that required a small brooch at the front. The style of this garment is unknown, except that it must have had a vertical front neck opening. Because the Mound 14 burial had been robbed, the arrangement of the textiles on the body is uncertain, but some suggestions based on comparative material may be made.

Tablet weaving at this time nearly always marks the edges of garments and there is little evidence for its use as free-floating ornament. If it is correct to place the *châtelaine* in its normal position on the left hip, and if it is assumed that the woman lay in the grave on her back, with her arms by her sides, then the passage of the tablet-woven bands would mark her sleeve cuffs. A reconstruction that would fit the available evidence and the

layering of the textiles recorded in object 9a (50/4973) would be as follows. The woman wore an inner chemise of medium-weight linen tabby with long sleeves and separately worked cuffs made from ultra-fine linen, embroidered to imitate the metal-fastened cuffs of an earlier period. Over the chemise she had a garment of fine linen, also long-sleeved, but with wide patterned cuffs made of three parallel tablet-woven bands. Wide ornamental cuffs were preserved on the forearms of Queen Arnegunde (died AD c.600) at Saint-Denis (Périn 1991) and are referred to by later authors (Owen-Crocker 1986: 87–90 and 99). One or other of the gowns worn by the woman in Mound 14 was probably fastened at the throat with the brooch, of which only the brooch pin has survived in the grave (see above, p. 213), and a head-veil would almost certainly be worn. She would have had a belt, and suspended from this would be her



**Plate 44** The embroidery from Mound 14 may be imitating cuffs with metal fasteners: (a) round studs attached to a tablet-woven band from Skottssund, Njurunda, Medelpad, Sweden (photograph copyright: Margareta Nockert and University of Umeå); (b) cylindrical studs attached to a tablet-woven tunic cuff from Enebø/Eide, Gloppen, Sogn and Fjordane, Norway (photograph copyright: Bergen Museum, Cultural History Collections).



châtelaine and other accessories, which, when she was laid in the grave, would lie between her left forearm and hip. While much of this reconstruction is guesswork, it is the best fit for the data at the present stage of research.

### Mound 17

The burial of the young man in Mound 17 was largely undisturbed. The textiles included straps and bands associated with the sword, the lining for the leather purse and miscellaneous other textiles, some of which may represent clothing.

The sword (4) lay on the man's right, with the hilt by the shoulder and the tip by the knee. A 2/2 diamond twill with 18/Z × 16/S threads per cm, and an irregular pattern repeat, recurred along the outside edge of the sword from hilt to tip (36a and c–d). The fibre is wool and includes black and white fibres, which means that it comes from a grey fleece. There is a seam or hem in the fragment by the sword tip (36a). The large rectangles worn by Germanic men for cloaks were often made of wool diamond twill of this quality, but they were rarely stitched, and the presence of the seam may indicate that the cloth has been made into a bag for the sword.

The sword was in a scabbard, which had a cord binding wrapped neatly around the mouth opening (36k). The cord is linen (flax or hemp) and examination under a high-power microscope reveals that the fibres have been exposed to severe rubbing wear. In other high-status men's burials, such as Sutton Hoo Mound 1 (SH 16), Broomfield Barrow, Essex (B7), and Taplow, Buckinghamshire (TB8), a fine woven tape was used instead of a cord to bind the mouth of the scabbard (E. Crowfoot 1983). The Mound 17 cord could not be traced beyond the first few circuits, but the tape-bound examples reach as much as 150 mm down the scabbard.

A poorly preserved textile running diagonally over the lower part of the scabbard seems to be the remains of a coarse tablet-woven strap (36i). A second area of cording by the buckle below the hilt (36c(2)) may be another piece of the same. The cords of the tablet weaving have been spread apart in a way that occurs when the band has been put under repeated strain. This suggests that this, too, has seen heavy use.

The purse bar on the shoulder (2a) was associated with leather, presumed to be the main material of the purse, and there was a linen tabby repp (26/Z × 12/Z per cm) on the leather's inner surface. As noted above (Mound 5, p. 262), tabby repps are mainly used for tapes and linings and in this instance it seems to be a purse lining. Also inside the leather was a coarser linen tabby, 14/Z × 12/Z per cm, which may have been a wrapper for something in the purse, or a secondary lining.

Finally, a lightweight linen tabby, 20/Z × 16–18/Z per cm, was found on the outside face of the purse leather (2a) in association with the knife (7) and a buckle (5e). The disposition of this textile on the body suggests that it formed the upper garment, perhaps a tunic or jacket.

### The Early Medieval pottery

Keith Wade

#### Early Medieval pottery from Mound 17

One complete vessel was discovered, that accompanying the burial under Mound 17, 15 (F318/ 8250; Figure 104). The pot has a simple everted rim, globular body and flattened base, which is

heavily stained with copper-alloy and salts, as it stood within the cauldron (14; see Chapter 5, p. 122). The pot is decorated with seven narrow, equally spaced, vertical bosses. The fabric is chaff-tempered, with voids visible on the surfaces, and with sand and occasional chalk or shell inclusions. The outer surface is smoothed. The fabric has a dark grey-brown core and inner surface, with a brown to orange-brown outer surface.

Vessels decorated with bosses only, and having no other decoration, are fairly common in the Anglo-Saxon cemeteries of eastern England, and there is a considerable range of forms (Myres 1977: figs 79–85). The Mound 17 pot does not have distinctively early features, such as a biconical body or hollow neck, or late features, such as a long boss, low bulbous body or tall neck (Myres 1977: fig. 87). The most significant aspect of the vessel is its chaff tempering. Although present in the fifth century in England, chaff tempering only becomes common in the sixth and seventh centuries (Hamerow, Hollevoet and Vince 1994). In Suffolk, chaff-tempered vessels with bossed decoration are found locally as accessory vessels with inhumations at West Stow (West 1985: fig. 273, no. 12) and as cremation urns at Snape (Filmer-Sankey and Pestell 2001: grave 70, fig. 117). The Mound 17 pot could, therefore, date to the late sixth/early seventh century.

One small handmade sherd, with grog temper, of Early Anglo-Saxon date was identified among the backfill (48/8311).

#### Early Medieval pottery from other contexts at Sutton Hoo

The Mound 17 pot recalls earlier finds at Sutton Hoo, such as the pot found east of Mound 17 in 1968 (Longworth and Kinnes 1980: 11, fig. 6 – area a, cutting iv; here Burial 14), which had a pitted surface, and was also chaff-tempered. It was described as corky and heavily pitted 'as though fragments of chopped vegetable matter in the paste had burnt out in the firing', and was also dated late sixth/early seventh century (SHSB I: 28, fig. 23). The form of this vessel resembles those described by Myres as beakers 'which may well have served as drinking cups' (Myres 1977: 5). The form appears to occur only in seventh-century graves, such as the example from the barrow burial at Asthall, Oxfordshire (Dickinson and Speake 1992: fig. 16b). A similar beaker was found as an accessory vessel with an inhumation burial at the seventh-century cemetery at Buttermarket, Ipswich (Scull forthcoming).

Two Anglo-Saxon sherds, one plain and one incised with lines in a lightly pitted dark greyish-brown fabric, were found in Mound 3 in 1938 (SHSB I: 113–14). The chevron decoration seen on one of the sherds (*ibid.*: fig. 67a) is characteristic of East Anglian pottery of the sixth century.

In 1970 a sherd of Ipswich ware was retrieved from a context likely to belong to the original make-up of Mound 1 (SHSB I: 279–80). An Anglo-Saxon sherd was also reported in 1970 from the topsoil in Longworth and Kinnes' area A, cutting III (1980: 32).

In the 1983 campaign, four sherds from the large Prehistoric assemblage recovered from the buried soil beneath Mound 2 were selected as possibly Anglo-Saxon. Three have simple everted rims, and some show grog temper and voids. They could be Anglo-Saxon or Iron Age. Further study of the Prehistoric fabrics from the recent excavations may lead to the more certain identification of Anglo-Saxon material among the Iron Age material that it closely resembles.

**Table 26**  
**Early Medieval pottery from Sutton Hoo**

Context	Description	Date
Mound 17: grave goods in F318	1 whole pot as accessory vessel in a grave (Find 8250)	late sixth to early seventh century; adjacent and parallel to the grave was a horse-burial dated early seventh century by C <sub>14</sub> (see Chapter 5)
Mound 17: backfill of grave F318	1 sherd of grog-tempered ware (Find 8317)	early Anglo-Saxon
in buried soil beneath Mound 2, F158 and F206.	4 sherds of coarse ware from different vessels (Finds 30969, 32719, 32841 and 32854)	early Anglo-Saxon or Iron Age
in the make-up of Mound 1	1 sherd of Ipswich ware	seventh to ninth century
in the topsoil near Burial 56	1 sherd	sixth to seventh century
in a pit; containing cremated human bone (Burial 14)	1 whole pot as cremation urn	seventh century
within Mound 3 burial deposit	2 body sherds	sixth century

### The cremated human bone from Mounds 2, 5, 6, 7 and 18

Frances Lee

#### Methodology

The cremated bone was recovered, and each fragment was given a separate finds number. The remaining soil was then sieved to be certain that none of the cremated bone was lost.

Each fragment was next examined, and the weight, size, colour and type of fracture recorded. Wherever possible, the bone was identified along with any other distinguishing feature, such as pathological lesions. An attempt was also made to establish the minimum number of individuals present, the age at death and the sex of the individual.

#### Age at death

The methods employed in ageing cremated remains are the same as those employed for inhumations; however, the degree of fragmentation imposes greater limitations. The age categories in this study are as follows:

- infant: 0–2 years
- child: 2–12 years
- adolescent: 12–18 years
- adult: 18+ years

The estimation of age relies heavily on the development of the dentition (Ubelaker 1978) and on the appearance and fusion of the long bone epiphyseal plates. At Sutton Hoo, the absence and fragmentation of the pubic symphyses and sternal ends of the ribs made ageing impossible by these methods; nor was dentition present in any of the four cases. Ageing was instead entirely reliant upon the appearance and dates of fusion for the epiphyseal plates.

#### Sex of the individual

The sexing of cremated human remains is problematic. The degree of fragmentation made the assessment of the morphological differences in the adult skeleton impossible.

#### Non-metrical traits

Non-metrical traits and epigenetic variations are descriptions of minor morphological differences in the skeleton. These were

recorded where visible, according to the criteria laid out in Berry and Berry (1967) and Finnegan (1973).

#### Appearance of the bone

The colour, types of cracking and warping were recorded for each fragment, and the total weight of the sample given.

#### The cremated bone from Mound 2

Eleven fragments of bone were retrieved during the excavation and sieving of Mound 2. These weighed a total of 1.05 g. No single fragment could be positively identified as human, and only three fragments appeared to be calcined, or burnt. It is the author's opinion that this does not represent a human cremation.

#### The cremation from Mound 5

There were 1,560 fragments of cremated bone, weighing 679.5 g, excavated from a wrecked burial pit at the centre of Mound 5. The grave had been so comprehensively robbed that no evidence for its original structure survived (*Bull.* 6: 13). It was the excavators' opinion that the burial was originally placed in a copper-alloy bowl, however most of the cremated bone was found in disorganized heaps that had been scattered by burrowing rabbits.

Although much of the cremated bone was unidentifiable, a sizeable proportion could be placed in broad bone types – long bones, flat bones, cranium and vertebrae – and in some cases a more accurate identification proved possible. A significant proportion of the skeleton, including the lower legs, skull, upper limb, trunk and vertebrae, was identified, leading one to suppose that most of the skeleton had been present; however, the total weight of the sample would suggest otherwise (see discussion). None of the fragments were duplicated in any way, and it was considered that a minimum of one individual was present.

The age at death could only be established in broad terms. The cranial sutures were all unfused, and the thickness of the cranial vault was not great, suggesting a young age (adolescent to young adult). Sexing proved impossible. The bones appeared to be from a slight individual, but this may be an indication of age rather than sex. Nor were any observations on the presence of any abnormalities or pathological lesions possible.

**Table 27**  
**Cremated human bone from Mound 5: no. of fragments and total weights expressed as percentage for each size category**

Fragment size:	0–5 mm	5–10 mm	10–15 mm	15+ mm
No. fragments	246	349	370	595
%	15.8	22.4	23.7	38.1
Weight (g)	12	33.5	92.5	541
%	1.8	4.9	13.6	79.7

The colour of the cremated bone fragments from the Mound 5 cremation ranged from cream to light grey through to black with cream predominating. Much of the bone was well calcined and had characteristic patterns of cracking, while other pieces did not appear to have been well cremated. Some of the bone (a minimum of sixteen instances) was heavily covered in a concretion, which, when attempts were made to remove it, revealed a grey-white and generally angular piece of bone with a black, hollow centre. The author has not come across this before, but it has been suggested by archaeologists familiar with Sutton Hoo that this may reflect a process similar to that which developed the sandmen or bone that was fully carbonized.

On cremation, bone not only splits but cracks and warps, the greater the heat the greater the degree of fragmentation, distortion and splitting. 79.7% of the total weight of the sample had fragments over 15 mm in size (38% of the total number of fragments). Indeed the pieces ranged up to 51 mm in length (see Table 27). The larger pieces tend to be fragments of the long bones of the lower limb, while the small fragments are from the ribs, vertebrae and flat bones. The majority of fracture types recorded in Mound 5 were linear or longitudinal (52 per cent) and curved transverse fractures (28.4 per cent). Twisting, and some checking, occurred, but these are few in number.

By far the most interesting features of this cremation are the injuries sustained to the head. A minimum of nine fragments of bone, and possibly ten, exhibit injuries to the cranial vault that are consistent with those inflicted by a sharp-edged instrument such as the blade of a knife or sword. None of these has any evidence for healing, or indeed any bone reaction, which

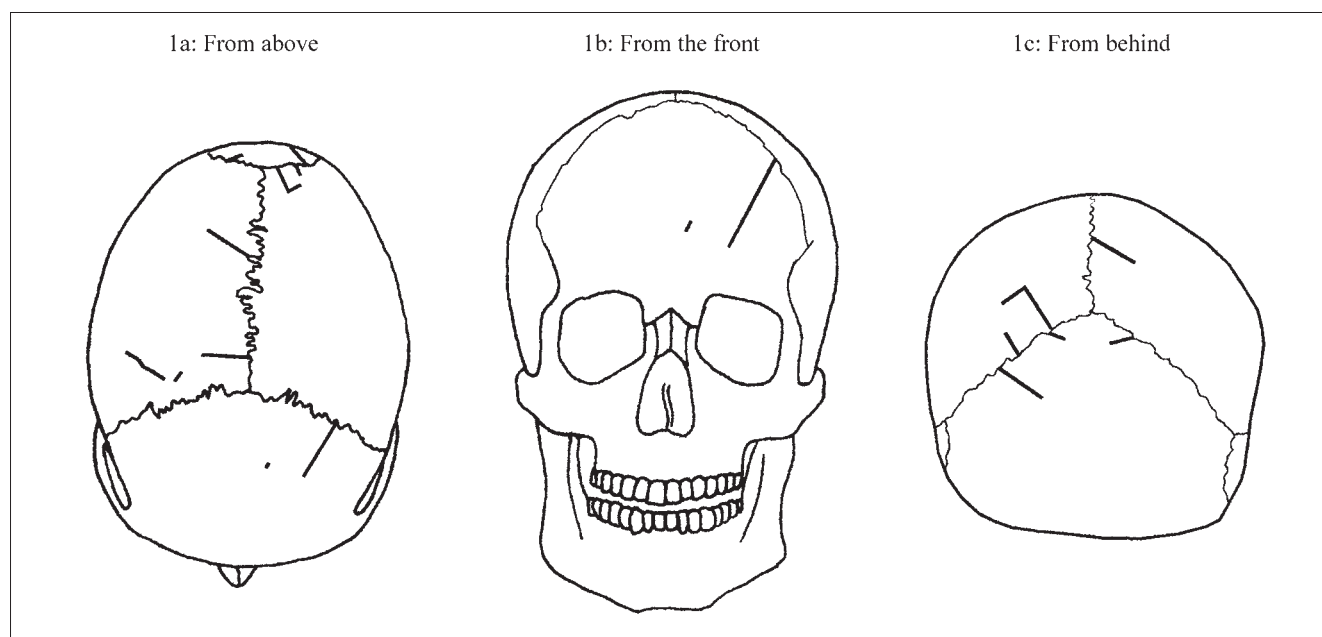
suggests that the injuries were either the cause of death or occurred after death.

Unfortunately, the fragmentary and incomplete nature of the bone assemblage made it impossible to state with absolute certainty where these injuries occurred, although the general area of the skull has been indicated (see Figure 126). Descriptions of the injuries for each fragment of bone are given below. One fragment of bone argues for at least one of the assaults being inflicted after death: 40445, a rectangular piece of bone with cuts on three sides, and the fourth side represented by part of the lambdoid suture. The three cuts are at right angles to each other, which is unlikely to have occurred in an attack while the individual was living. The motive behind this action is unclear, but the precision of the cuts makes the author wonder if an attempt was being made to remove a segment of bone, as in cases of trephination. The other fragments have no obvious pattern to the position of the injuries, and might have been the result of an armed assault. Nearly all of the cranial fragments exhibiting blade injuries were incomplete, and the full length of the incision remains unknown. Moreover, the skull was incomplete, and there may have been more cuts. Finally, there was no evidence for any blade injuries to any other part of the skeleton from this cremation.

**FRONTAL BONE**

**40724, 40007 and 39358**

An injury to the left side of the frontal bone: diagonally from the coronal suture, downwards towards the supraorbital ridge, measuring 33.5 mm in length (incomplete). There is also an area



**Figure 126** Skull fragments from Mound 5, showing position of blade injuries.

of iron deposit on 40724, on the broken fragment of bone, which looks as if a metal object had been inserted. However, given the degree of iron panning across the site, this interpretation must be viewed with caution. On fragment 40007, close to the coronal suture, there is a small shallow depression within the realms of normality.

#### PARIETAL BONE (LEFT)

##### 40445

This is arguably the most interesting piece of bone. One side of this broadly rectangular fragment is represented by the lambdoid suture. It is uncertain whether this fragment of bone is from the occipital or parietal side of the suture, but the author is inclined to feel that it is more probably from the left parietal bone. Blade injuries occur on three sides of the bone, at right angles to each other. Again, there is no evidence for any bone reaction.

#### BONES OF UNCERTAIN POSITION

##### 40728

A small area of bone from the sagittal or coronal suture, with a small oblique injury, at right angles to the suture, cutting the outer table. It is approximately 16 mm in length, but is incomplete.

##### 40960

This shows an injury which has been inflicted by a sharp edged implement, such as a sword or blade of a knife, and which has cut through the outer table of the cranial vault. Its exact position is uncertain, but is thought to be the parietal bone close to the coronal suture. One of the cuts is 25 mm in length, and is oblique. The second incision also only cuts the outer table and is 10 mm in length and incomplete.

##### 40986/88

This has a long diagonal, angled break, which is possibly the result of the irregular side of a blade injury.

##### 41014

Part of lambdoid suture, with an oblique blade injury, measuring approximately 21 mm along the entire length of the fragment, cutting through the cranial vault.

#### OCCIPITAL BONE

##### 38934

With an oblique blade injury, approximately 17 mm in length, running up to the lambdoid suture. It is uncertain whether this fragment is from the occipital or parietal bone.

##### 40817

The superior angle of the occipital bone, with lambdoid sutures meeting at the lambda. Approximately 26 mm from the lambda, along the lambdoid suture, is a small oblique injury inflicted from behind and to the right. The centre of the incision is

missing, post mortem. The cut measures 8 mm on the right, and 5 mm on the left. The wound penetrates the outer table, but the diploe and inner table remain rough and uncut.

#### Summary

The burial at the centre of Mound 5 was of a single individual, who was young in age and of unknown sex. Fragments from most of the body suggest that most of the cremation was present at the time of burial, but that it had been disturbed. The cremation process does not appear to have been particularly efficient, with the majority of the assemblage in the 15 mm and over category – although this only represents 38 per cent of the fragments. The most interesting features are the blade injuries to the skull, of which there are at least nine incidences. It is uncertain whether they were the cause of death or occurred after death, but the author would argue, in at least one instance (40445), for the assault occurring after death. Finally, it should be considered whether this individual achieved a marked social rank, visible in the burial, through the cause of death.

#### *The cremation from Mound 6*

An east-west robber trench cut across Mound 6 had effaced all structural traces of the original burial. However, from the fragments that were recovered, the burial was thought to resemble the cremations from Mounds 4, 5 and 7: a cremation placed in a bronze bowl, covered or wrapped in cloth (see Chapter 4, p. 87).

A total of 1,588 fragments of bone were recovered, weighing 557.25 g; 41 per cent of the total weight was identified as animal bone, while only a handful of fragments were positively identified as human. These include fragments of a human skull, the odontoid peg of the axis, the first proximal phalanx of the hand and a fragment of the pubic symphysis of the pelvis. This represented an adult individual and, although a more precise age could not be given, it was noted that some of the cranial sutures appeared to be open. The fragment of the pubic symphysis was small, and was not sufficient to give an indication of sex. No anomalies or pathological lesions were noted.

The degree of fragmentation was not great; the majority of fragments (60 per cent) were over 15 mm in length, while only 10 per cent were under 10 mm. These proportions varied slightly when the positively identified animal bone was removed, with 47 per cent of the total human bone weight over 15 mm in length while 15 per cent was under 10 mm (see Tables 28–30). The explanation for this may lie in the heavier nature of the animal bone.

The colour of the bone was cream to white, but cream with a light grey interior was not uncommon. Occasionally, fragments were a deeper grey, and very exceptionally (two instances) black fragments of bone were recorded. Overall, the colour of the

**Table 28**

**Cremated bone from Mound 6: no. of fragments and total weights expressed as a percentage for each size category, for the whole assemblage**

Fragment size:	Dust	0–5 mm	5–10 mm	10–15 mm	15+ mm
No. fragments	7	40	542	645	354
%	0.4	2.5	34.1	40.6	22.3
Weight (g)	0.4	1.45	52.3	169.45	333.65
%	0.07	0.3	9.4	30.4	59.9

**Table 29**

**Cremated bone from Mound 6: no. of fragments and total weights expressed as a percentage for each size category, for the unidentified and human bone**

Unidentified and human bone

Fragment size:	Dust	0–5 mm	5–10 mm	10–15 mm	15+ mm
No. fragments	7	40	498	504	188
%	0.6	3.2	40.3	40.7	15.2
Weight (g)	0.4	1.45	48	124.25	154.05
%	0.1	0.4	14.6	37.9	46.9

**Table 30**

**Cremated bone from Mound 6: no. of fragments and total weights expressed as a percentage for each size category, for the animal bone**

Animal bone

Fragment size:	Dust	0–5 mm	5–10 mm	10–15 mm	15+ mm
No. fragments			44	141	166
%			12.5	40.2	47.3
Weight (g)			4.3	45.2	179.6
%			1.9	19.7	78.4

**Table 31**

**Cremated bone from Mound 7: no. of fragments and total weights expressed as a percentage for each size category, for the whole assemblage**

Fragment size:	0–5 mm	5–10 mm	10–15 mm	15+ mm
No fragments	36	116	1241	323
%	2.1	6.8	72.3	18.8
Weight (g)	2.8	23.7	425.12	630
%	0.2	2.2	39.3	58.2

**Table 32**

**Cremated bone from Mound 7: no. of fragments and total weights expressed as a percentage for each size category, for the unidentifiable and human bone**

Unidentifiable and human

Fragment size:	0–5 mm	5–10 mm	10–15 mm	15+ mm
No fragments	36	83	515	190
%	4.4	10.1	62.5	23
Weight (g)	2.8	17.5	201.02	349.46
%	0.5	3.1	35.2	61.2

**Table 33**

**Cremated bone from Mound 7: no. of fragments and total weights expressed as a percentage for each size category, for the animal bone**

Animal

Fragment size:	0–5 mm	5–10 mm	10–15 mm	15+ mm
No fragments		33	726	133
%		3.7	81.4	14.9
Weight (g)		6.2	224.1	280.5
%		1.2	43.9	54.9



**Table 34**  
**Cremated bone from Mound 18: weights and numbers of fragments in each size category**

Fragment size:	Dust	0–5 mm	5–10 mm	10–15 mm	15+ mm
No. fragments		207	276	110	39
%		32.9	43.7	17.4	6.2
Weight (g)	20.9	15.2	27.6	70.3	34.6
%	12.4	9.0	16.4	41.7	20.5

calcined bone was similar to the cremations in the other mounds at Sutton Hoo. The patterns of fracture were recorded, and included longitudinal splitting along the length of the bone (predominantly long bones), transverse fractures and some curved transverse fractures. Checking, twisting and warping were also recorded, but only in a handful of cases.

#### Summary

A single adult of unknown sex was buried in Mound 6 with a significant amount of cremated animal bone. The body was by no means complete; only a very small proportion of human body could be positively identified. Given the disturbance and robbing of the burial and mound, this is not surprising.

#### The cremated bone from Mound 7

The cavity containing the original burial in Mound 7 was largely undisturbed, despite excavation of the mound in the nineteenth century, and a small hemisphere of cremated bone was recovered (see Chapter 4, p. 96).

The total weight of the cremation was 1,081.3 g, with c.1,713 fragments. Very little of this was positively identified as human, the exceptions being Finds 15487 and 15677 from the robber trench, which contained identifiable human remains, consisting of fragments of the proximal end of the radius and ulna. Fragments of a patella and lower-leg long bone were also identified. Approximately 48 per cent of the total weight of the sample and 53 per cent of fragments were positively identified as animal (see Bond, below, p. 276).

The individual was estimated to be adult from the proximal end of the radius. An assessment of sex proved impossible, although the radial head was noted to be large and robust.

The bone colour was predominantly cream or white, occasionally light grey and very exceptionally brown or black. The majority of fractures were longitudinal (56 per cent of those recorded) or transverse fractures (36 per cent), with some curved (5 per cent) fractures, mainly in the long bones. A small number had longitudinal twisting (1 per cent) and warping (0.5 per cent).

The size of the bone fragments can be seen in Tables 31–33. Table 31 shows that 97.5 per cent of the total weight were over 10 mm, and 58.2 per cent over 15 mm; over 91 per cent of the fragments were over 10 mm in length. When the identifiable animal bone is taken out of the sample (Table 32), 61 per cent of the total weight are over 15 mm, and 96.4 per cent under 10 mm, in length. Compared to Mound 6, the difference in removing the identifiable animal bone is not great. However, it must be emphasized that a considerable amount of the cremated bone, and probably most of the unidentifiable fragments, in this assemblage were animal.

#### Summary

The cremated bone from Mound 7 is predominantly animal bone, with a handful of fragments from a human individual.

These human fragments were from the robber trench, and consisted of remains of the lower arm and lower limb of a single adult of unknown sex. None of the cremated bone in the small deposit found in the original burial cavity contained any identifiable human remains, but there was a considerable amount of calcined animal bone. It therefore seems likely that the human cremation may have been disturbed and removed by the robber trench. If the discrete deposit were to represent the main cremation, then very little attention has been made to the collection of the human remains from the cremation site.

#### The cremated bone from Mound 18

Excavated from the centre of Mound 18 was a randomly dispersed deposit of cremated bone and charcoal. A total of 631 fragments of bone weighing 168.6 g were represented, with associated finds (see above, p. 210). Very little of the cremated bone was identifiable, and that which could be identified could only be placed in broad categories: long bone, flat bone or cranium. There is no suggestion of any duplication, and it would appear that only one individual was present. There is little information as to the age or the sex of the individual. The cranial fragments have thin diploic spaces, which suggest a young age, and the cortical and trabecular bone are also young in appearance. Unfortunately, in terms of ageing, neither the diagnostic ends of the long bones nor the dentition have survived, so it cannot be determined whether this is a subadult or young adult.

Approximately 80 per cent of the assemblage is unidentifiable, the size of the fragments being the limiting factor rather than any other consideration. Approximately 80 per cent of the assemblage is under 15 mm in size, and 21 per cent of the total weight is under 5 mm in length (see Table 34).

The colour of the calcined bone ranged from white to cream, and occasionally to dark grey. The majority of fragments were cream in colour, which is thought to represent the upper temperature spectrum (see discussion). The degree of fragmentation is greater than in the other cremations from Sutton Hoo, but the young age of the individual may be a predisposing factor. The types of cracking were predominantly longitudinal splitting (58 per cent) and curved transverse (34 per cent) fracture lines. Compared to the other cremations, relatively few notes of cracking were recorded. This reflects, once more, the fragmentary nature of the assemblage and, more specifically, the small size of the fragments.

#### Summary

A cremation buried in a bronze bowl was excavated from the centre of Mound 18. The majority of the assemblage is unidentifiable, but it was established that a minimum of one individual, of unknown sex but young in age, was present. There was a high degree of fragmentation, which limited gaining any further information on the individual buried.

**The cremated bone from Burial 14**

This was analysed by N.-G. Gejvall in SHSB 1: 98. To summarize:

- age: subadult – below 20 years, perhaps below 18
- sex: probably male

There were no results for Burial 13.

**Discussion and comparison of the cremations**

The cremations under discussion here are from Mounds 5, 6, 7 and 18.

All four of the burials had been disturbed. The cremations in Mounds 5, 6 and 7 were robbed and/or excavated in antiquity, while Mound 18 had been extensively damaged by ploughing. All four cremations were similar, in that they had been collected after burning, wrapped in a piece of cloth and placed in a bronze bowl. There was no suggestion of any burning in the mounds, so it is probable that the cremations took place in a pyre or pit, and were later collected and placed in the burial mound as a secondary burial.

Although much of the cremated bone was unidentifiable, it was often possible to place the bone in broad categories, such as long bones, flat bones, cranium and vertebrae, and in some cases a more accurate identification proved possible. Each of the mounds had at least one individual represented in the cremated bone. The age at death could only be established in broad terms. In Mounds 6 and 7 they were adult (in Mound 6 the cranial sutures were still open). In Mounds 5 and 18 the thickness of the cranial vault and the condition of the sutures suggest young individuals – adolescent or young adult. None of the cremations discussed here could be accurately sexed.

The overall weight of the cremated bone varied considerably, ranging from 168.6 g in Mound 18 to 1,081.3 g in Mound 7. Mounds 5 and 6 had similar amounts, with 676.5 g and 557.25 g respectively (see Table 35). Evans (1963) estimates that 1.6 kg is the average weight of bone from a single cremation, whilst Krogman (1978: 232) records the average weight of a dry, fat free, skeleton as 2–4 kg. This suggests that all the cremations excavated were incomplete bodies. Mound 5 has the most complete individual, with fragments from most parts of the body. The cremations from Mounds 6 and 7 have a large amount of cremated animal bone in their assemblage. In Mound 7 the

only identified human bone comes from the backfill of the robber trench, the discrete deposit of bone from the original burial cavity appears to be animal, with no identifiable human remains. The cremated bone from Mound 6 also was recovered from the robber trench, which had effaced all traces of the original burial and, like Mound 7, was predominantly animal with a handful of human fragments.

The colour of the cremated bone fragments ranged from cream to white to light grey and, very rarely, dark grey to black. The efficiency, or otherwise, of the cremation has been suggested from the colour and degree of fragmentation of the bone assemblage. When burnt, bone follows a progressive colour change, with white representing the most calcined bone, burnt at the highest temperature, while blackening of the bone reflects charring. This would suggest that the bone from Sutton Hoo was burnt at a reasonably high temperature, although some fragments, which are cream in colour, do not appear to be that well calcined. The relationship between colour and temperature may not be quite so simple. Experimental work by Parker (1985: 18) has suggested that the colour of calcined bone might not be determined simply by temperature, but that the amount of oxygen supplied to a fire is a crucial factor. Where there is a free circulation of air, such as in a pyre, the bone would be expected to have a uniform colour. This is the case at Sutton Hoo, where over 90 per cent of the bone is cream in colour.

On cremation, bone not only splits, but also cracks and warps: the greater the heat, the greater the degree of fragmentation, distortion and splitting. To some extent, the degree of fragmentation depends on the size of the unburnt bones. The larger pieces from Sutton Hoo tend to be fragments of the long bones from the lower limb, while the smaller fragments are from the ribs, vertebrae, and flat bones. Table 35 shows the proportion of fragments in each size category by fragment number and weight. The amount of information forthcoming from these cremations corresponds directly to the size of the fragments. In Mounds 5, 6 and 7, 63–90 per cent of fragments were over 10 mm, which represents 90–8 per cent of the total weight of the assemblage. In Mound 5, in the order of 80 per cent of the bone by weight is over 15 mm, and it is not coincidental that it is this cremation that yields the most information. Mound 18, on the other hand, has a greater proportion of smaller fragments compared to the other mounds,

**Table 35**  
**Number of fragments and weights of cremated in bone in each size category from Mounds 5, 6, 7 and 18**

Mound no.	Dust		0–5 mm		5–10 mm		10–15 mm		15+ mm	
	Frag.	%	Frag.	%	Frag.	%	Frag.	%	Frag.	%
5			246	15.8	349	22.4	370	28.7	595	38.1
6	7	0.4	40	2.5	542	34.1	645	40.6	354	22.3
7			36	2.1	116	6.8	1241	72.3	323	18.8
18			207	32.9	276	43.7	110	17.4	39	6.2
	Wt (g)	%	Wt (g)	%	Wt (g)	%	Wt (g)	%	Wt (g)	%
5			12	1.8	33.5	4.9	92.5	13.6	541	79.9
6	0.04	0.07	1.45	0.3	52.3	9.4	169.45	30.4	333.65	59.9
7			2.8	0.2	23.7	2.2	425.12	39.3	630	58.2
18	20.9	12.4	15.2	9.0	27.6	16.4	70.3	41.7	34.6	20.5

with approximately 77 per cent of fragments being under 10 mm (39 per cent of the total weight), and most of these are unidentifiable.

The types of fracture may also give information about the cremation practices. Baby (1954) suggests that the type of fracture varies between fleshed and defleshed cremations. Curved transverse lines, irregular splitting and warping, and splintering, are all indicative of fleshed cremations, while there is no warping in defleshed skeletons. Again, this relationship may not be quite so simple, as it is probable that the types of cracking also reflect the inherent properties and morphological structure of the bone. For example, long bones or round bones have predominantly longitudinal splits and curved cross-hatches, while flat bones such as the pelvis and cranium have more random cracks. In the samples discussed here, longitudinal and transverse fractures predominate. This may simply reflect the greater resilience of long bones to fracturing at high temperature, whilst the flat bones are more likely to form the unidentifiable and smaller fragments of the assemblage.

The most interesting aspect of these cremations is the blade injuries to the skull of the individual in Mound 5. A minimum of nine fragments had cuts to the cranium, with no evidence for healing. Many of these were incomplete cuts. All were consistent with injuries caused by sharp-edged instruments, such as a sword, spear or knife. The incision was usually at an angle that would have resulted from a downward slicing action. The injuries cut through the outer table of the skull, and often through the diploe and inner table. Figure 126 shows the likely positions of these injuries, although it should be noted that, due to the fragmentary nature of the skull, these reflect the general areas of the skull rather than the exact locations. Fragment 40445 is particularly intriguing. This is a rectangular piece of bone with blade injuries on three sides, at right angles to each other, the fourth side being represented by the lambdoid suture. No obvious parallels are known, but it would almost appear that the intention was to remove the fragment. This occurs in trephinations where an attempt is made to surgically remove a fragment of bone often as part of a post-mortem ritual.

Four of the satellite burials around Mound 5 are suggested to have been ritually killed by decapitation or hanging, supporting an argument for post-mortem ritual for the central burial. Indeed, it may not be inconceivable that the method in which they died afforded the individual the social ranking achieved in the burial.

Finally, none of the other cremations has any evidence for violent assaults, nor do they have associated burials arranged around the circumference of the mound. This sets Mound 5 apart from the other burials.

### *Summary*

On first appearance, the four cremations from Sutton Hoo have many similarities. All four are represented by single bodies placed in a bronze bowl, which was wrapped in a cloth. However, the Mound 5 cremation is the only body that is reasonably complete. Mounds 6 and 7 had a considerable amount of cremated animal bone, with only a handful of human fragments associated, while the fragments from Mound 18 were too small to provide much information on the cremation. Mound 5 is set apart not only by the injuries to the skull, but also by the presence of satellite burials surrounding the central cremation.

## **The cremated animal bone from Mounds 5, 6 and 7**

Julie Bond

### ***Introduction***

This report concerns animal bone, mostly cremated, from Mounds 5, 6 and 7. Human bone from these excavations is reported on above by Frances Lee, but there was also a substantial majority of material which could not be identified as human; some of this material is identified as of animal origin, and forms the basis of this report. Thanks are due to Terry O'Connor, who allowed me to see his report on the Mound 17 Sutton Hoo horse burial prior to publication, and to Frances Lee and Jackie McKinley for helpful discussions.

Animals have long been known as grave offerings in both inhumation and cremation rituals of the Early Medieval period, and their presence at Sutton Hoo had already been noted by Gejvall in his examination of material from Mounds 3 and 4 (Gejvall 1975). However, since Gejvall's work, the completion of studies on large early 'folk cemeteries' (Filmer-Sankey 1992: 50) such as Spong Hill and Sancton (McKinley 1993 and 1994; Bond 1993 and 1994) has given a new perspective on the context of these depositions. The presence of animal bone in the recent excavations at Sutton Hoo offers an opportunity to extend our knowledge of animal offerings in the burial rites at this higher-status site.

As in all studies of cremated bone, only a small proportion of the bone recovered can be positively identified. At Sutton Hoo this proportion was even lower than usual, due to the small size of the recovered fragments. McKinley has observed (pers. comm.) that disturbance of the cremated bone, once deposited, leads to the break-up of fragments into even smaller (and therefore less identifiable) pieces, and the history of disturbance and grave robbing at Sutton Hoo is well known. Mounds 5, 6 and 7 all suffered in this way. This report concerns only those fragments of bone that could be identified as animal. Listings of unidentified fragments will be found in the archive; see Lee's report above for size and weights of bone present (Tables 30 and 33).

### ***Method of identification***

Bone fragments were compared directly with material in the reference collection of the University of Bradford Department of Archaeological Sciences, and with the author's own reference material. Because of the fragmentary nature of cremated bone, and the fact that studies such as Spong Hill (Bond 1994) have shown that several animals (and sometimes more than one individual of the same species) may be present in a cremation, no assumptions can be made in identification of this material. Hence the category 'large ungulate' is used to describe cattle and horse-sized bone fragments which could not be positively identified to either species (this category could also include red deer). 'Sheep/goat size' is a similar category for smaller animals, a size range that might also include pigs, large dogs or small deer. Even where only one species in a size category was identified from a deposit, no assumptions were made about bone fragments that could possibly be from that species but which could not be precisely identified. These fragments were listed in the broader categories of 'large ungulate' or 'sheep/goat sized'. This system was used at both Spong Hill and Sancton I (Bond 1993), and a fuller explanation can be found in the Spong Hill report (Bond 1994).

**Range of species**

Very little of the material from Mound 5 (Int. 41) could be identified, although some material fell into the 'large ungulate' and 'sheep/goat' categories. One of the 'large ungulate' fragments may possibly be from a horse metapodium, although the identification is uncertain. The smaller material consists of three rib fragments, which are probably, though not definitely, from a sheep or goat. Mound 6 yielded material that could be identified as sheep/goat, pig, an unidentified large ungulate and 'modern' (uncremated) rabbit bone, presumably the result of earlier disturbance. Mound 7 contained evidence for horse (cremated and uncremated bone), cattle, sheep/goat, pig, a fragment of unworked red deer antler and, again, modern rabbit. In addition, the examination of this material also yielded a few fragments of worked bone and antler from Mounds 5 and 7.

**Mound 5**

None of the cremated bone from Mound 5 could be positively identified to animal species, and very little could be assigned to the two size categories (see Table 36). The bone fragments in the 'large ungulate' category did suggest, however, that a large animal was present in the cremated bone. The large mammal bone included a small piece, which could be part of the shaft of a horse metapodium, but the identification is not definite. The other bone in the 'large ungulate' category consists of two other shaft fragments, an area of articular surface, possibly from a distal femur, and part of a vertebra. The three fragments in the 'sheep/goat size' category are all from ribs.

**Table 36****Animal bone from Mound 5**

1 Large ungulate-size (cremated bone)

Find no.	ID	Description
38909	longbone	1 shaft fragment
38961	longbone	shaft fragment; horse (?) metapodium
38994	longbone	articular frag.; possibly distal femur
40878	longbone	1 shaft fragment
40982	vertebra	fragment of articular surface

2 Sheep/goat size (cremated bone)

39206	rib	shaft fragment
40878	rib	1 shaft fragment
40981	rib	1 shaft fragment

**Mound 6**

The bone identified from Mound 6 included 'large ungulate', sheep, pig and modern (uncremated) rabbit (see Table 37). The relatively large amount of bone in the 'large ungulate' category (forty-two fragments) suggests the presence of at least one large mammal, although this animal (or animals) cannot be positively identified. The bone includes cranial elements, mandible, long bones, vertebra and rib. One fragment is tentatively identified as possible horse metapodium, and one as a probable fragment of cattle humerus shaft (right side).

The sheep/goat bone from Mound 6 includes cranial elements (horn core and skull), foreleg (left and right humeri, scapula), hind leg (right half of pelvis, left and right femur, left and right tibia), vertebrae and rib fragments. The pattern of the skull fragments strongly suggest that this animal is a sheep rather than a goat, and the presence of so many elements from both sides of the body makes it probable that a whole animal,

rather than selected joints, is represented. No butchery was visible on any of the bones. Assuming that these fragments do represent a single individual, an age at death of less than 2½–3 years can be suggested. This is based on the fact that both proximal and distal femur were unfused; the former fuses at 2½–3 years, and the latter at 3–3½ years (data from Silver 1969). This would suggest a valuable, meat-age animal, rather than an old, worn-out specimen.

The pig bone in Mound 6 consists of fragments from a right scapula, right pelvis, right tibia and right astragalus, as well as some metapodial and phalangeal fragments. Some of the rib and vertebral fragments in the large 'sheep/goat size' category may also be from pig. In view of the lack of cranial elements, and the fact that all the other pieces are from the right side of the carcass, it is tempting to argue that the pig was deposited either as the right half of a butchered carcass, or as joints from the right side of the body. However, no butchery marks were found on any of the bones, and where so few bone elements are identifiable, it is probably unwise to speculate beyond the strictest interpretation of the evidence.

On balance, the epiphyseal fusion data from the identified pig bones would suggest an animal of approximately two years old; the exception is one fragment of first phalanx, which appears to be unfused, and would suggest an age of less than one year old. The other pig bones are too large and robust to be from an individual this young, so it seems likely that this one bone either represents a second pig or is residual, perhaps from an earlier cremation at the pyre site.

There were a number of unburnt rabbit bones from Mound 6. They are in good condition, appear relatively modern and are presumed to be the remains of the animals responsible for much of the disturbance at Sutton Hoo.

**Mound 7**

The animals identified from Mound 7 were horse (cremated and unburnt), cattle, sheep or goat, pig, red deer and (modern and unburnt) rabbit (see Table 38).

The horse was represented by fragments of head (orbit and sphenoid), axis vertebra, foreleg (right radius, right ulna and right metacarpal), pelvis, hind leg (femur and right astragalus) and first phalanx. All these fragments were of cremated bone. There was also an uncremated left metacarpal, left lateral metacarpal and a front first phalanx. There is no evidence for the age of the cremated horse, although the bone is obviously too robust to be a neonate or very young juvenile. All the uncremated bones are fully fused, giving a minimum age of eighteen months or so, though the animal may well have been much older. There is no evidence of butchery on any of the bone, cremated or unburnt. On the basis of the very few available measurements (Table 39), the uncremated bone would seem to be from an individual of much the same build as the animal from the Mound 17 horse burial at Sutton Hoo (O'Connor, below and 1994).

There is no evidence of butchery on either the cremated or uncremated horse bone. There are two pathological features. In the cremated bone there appears to be some reactive bone formation at the distal end of the ulna, perhaps indicative of some trauma. The uncremated metacarpus has a swelling on the lateral (outer) side of the distal shaft, with a corresponding slight difference in the bone-surface texture, which is the sort of

Table 37

## Animal bone from Mound 6

## 1 Sheep/goat (cremated bone)

Find no.	ID	Description
6060	horn? core?	2 fragments
6057	cranium	2 fragments, fit, occipital; shape suggests sheep
6230	scapula	blade and part of <i>spina scapulae</i>
4582	humerus	distal shaft fragment
4585	humerus	sheep or goat (?), right distal shaft fragment; part (?) of 4582
6009	humerus	3 fragments of shaft; probably left humerus of sheep/goat
6042	humerus	6 left shaft fragments
6062	humerus	proximal articular surface fragment
4598	pelvis	ischium (?) fragment, right (?)
5885	pelvis	ilium shaft fragment
5872	femur	distal epiphysis, not fused, right (?)
6030	femur	proximal fragment (trochanter), not fused, left
6037	femur	proximal articulation, left (?)
4599	tibia	sheep or goat (?), shaft fragment, right
4621	tibia	sheep or goat (?), longbone shaft fragment
5828	tibia	sheep or goat (?), distal shaft fragment, right?
5896	tibia	shaft fragment, left?
5916	tibia	sheep or goat (?), shaft fragment, right
6020	tibia	proximal shaft fragment, left
6026	tibia	3 shaft fragments
6175	tibia	shaft fragment, right
5869	vertebra	cervical vertebra fragment, epiphysis fused
6095	rib	shaft fragment
6208	rib	3 shaft fragments

## 2 Pig (cremated bone)

Find no.	ID	Description
6183	scapula	3 fragments, fit, distal fused, right
4633	pelvis	left (?) ilium fragment
5853	pelvis	right ilium fragment, not fused
6149	pelvis	ilium fragment
6094	tibia	shaft fragment, right
6097	tibia	proximal fragment, not fused
6357	tibia	distal fused, right, quite large
6031	astragalus	3 fragments, fit, right, quite large
6167	metapodium	distal epiphysis, not fused
5838	phalange II	proximal epiphysis, not fused

## 3 Large ungulate-size (cremated bone)

Find no.	ID	Description
5888	cranial	supramaxillary (?) fragment
6028	cranial	frontal (?) fragment, very thick
4591	mandible?	large (?) ungulate mandible fragment
6007	ulna?	2 possible ulna shaft fragments, fit
4611	longbone?	5 large (?) ungulate shaft fragments
4626	longbone	horse (?) metapodial shaft fragment
4628	longbone	shaft fragment
4629	longbone	2 shaft fragments
4637	longbone	shaft fragment
5915	longbone	2 fragments
5922	longbone	large (?) ungulate size shaft fragment
6027	longbone	shaft fragment
6039	longbone	shaft fragment
6047	longbone	probably cattle (?) humerus shaft fragment, right
4593	metapodium?	fragments of distal articulation
5905	vertebra	4 fragments of caudal vertebrae; epiphyses not fused
5863	rib	2 fragments, fit
5908	rib	3 shaft fragments
6102	rib	c.10 fragments

## 4 Sheep/goat sized (cremated bone)

Find no.	ID	Description
5862	scapula?	blade fragment
6202	scapula	fragment of blade with part of spine; not pig
4600	longbone	possibly femur shaft fragment
4609	longbone	shaft fragment
4625	longbone	shaft fragment
4650	longbone	tiny fragment; may be part of humerus shaft
4655	longbone	fragment of articular surface, tibia (?)
5851	longbone	5 shaft fragments
5882	longbone	shaft fragment
5900	longbone	metacarpal (?) shaft fragment
5907	longbone	shaft fragment
5910	longbone	3 shaft fragments; possibly tibia
6005	longbone	shaft fragment
6013	longbone	4 fragments shaft
6170	longbone	could be sheep/goat metacarpal (?) shaft fragment
6186	longbone	shaft fragment
6203	longbone	probably metacarpal shaft
4659	vertebra	fragment of articulation, epiphysis not fused
5884	vertebra?	body fragment
5921	vertebra	epiphysal plate, not fused
6046	vertebra	3 fragments of epiphysal plates, not fused
6063	vertebra	fragment of thoracic or possibly lumbar vertebra body, not fused
6092	vertebra	2 fragments of thoracic vertebra that exhibit spinous processes and part of neural arch (possibly pig)
6155	vertebrae	1 lumbar vertebra, not fused, 2 fragments of vertebral body, not fused
6159	vertebra	body fragment, not fused
6172	vertebra?	a lateral process from a cervical vertebra?
6173	vertebra	a lateral process?
6204	vertebra	cervical vertebra, body fragment, not fused
6205	vertebra	body fragment
6232	vertebra	fragment
4586	rib	fragment
5860	rib?	shaft fragment
5914	rib	4 shaft fragments
6012	rib	fragment
6015	rib	fragment; probably from a juvenile pig?
6024	rib	12 shaft fragments
6066	rib	fragment
6034	rib	1 shaft fragment
6038	rib	1 shaft fragment
6093	rib	2 shaft fragments
6174	rib	6 fragments
6233	rib	2 fragments
4632	rib	4 fragments
4639	rib	shaft fragment
4642	rib	2 shaft fragments
6236	phalange I	fragment of sheep/goat or pig phalange; proximal not fused (?)

## 5 Rabbit (modern and uncremated)

Find no.	ID	Description
5635	tibia, radius and vertebra	unburnt
5490	vertebra	unburnt

**Table 38****Animal bone from Mound 7**

## 1.1 Horse (cremated bone)

Find no.	ID	Description
11311	cranium	sphenoid?
15691	cranium	horse (?), fragment of orbit
11305	axis	fragment of proximal articulation
5820	radius	distal articular fragment, right
13777	ulna?	horse (?), shaft, right; with pathological feature – new bone at distal end
15691	pelvis	horse (?), fragment of acetabulum margin
11259	femur	shaft fragment, <i>fossa (?) plantaris</i>
15692	astragalus	2 fragments, fit, articular surface, right
5783	metacarpus?	proximal, fit, right (?)
11291	metapodium?	shaft fragment
12659	phalange I	2 fragments of distal articulation, fit

## 1.2 Horse (uncremated bone from Mound 7)

Find no.	ID	Description
7615	metacarpus III	unburnt, whole, left
7615	lateral metacarpus IV?	fused to metacarpus III.
7614	phalange I	whole, fused

NB There were no visible butchery or dismemberment marks; the surface was mostly intact. There was a pathological feature on the metacarpus III: a slight swelling on the outer (lateral) side of the lower shaft with some alteration of the surface texture.

## 2 Cattle (cremated bone)

Find no.	ID	Description
15486	cranial	3 fragments of right occipital, fit
11288	mandible?	fragment of lower edge of mandible?
15688	astragalus	4 fragments, fit
15685	sesamoid	1 fragment

## 3 Sheep/goat (cremated bone)

Find no.	ID	Description
5730	pelvis	acetabular fragment, iliac side, left (?)
15692	astragalus	1 fragment, left
15485	astragalus	1 fragment, right (?)

## 4 Pig (cremated bone)

Find no.	ID	Description
6420	humerus	distal fragment, right, fit
11304	rib	1 fragment of pig (?) rib, shaft
64112	rib	1 fragment of pig (?) rib, proximal shaft, with possible knife marks at proximal end

## 5 Red deer

Find no.	ID	Description
11270	antler	1 fragment of antler, unworked

## 6 Large ungulate-size (cremated bone)

Find no.	ID	Description
15485	cranium	10 mastoid fragments
15692	cranium	1 frontal (?) fragment
15486	tooth	2 root fragments, fit
15679	tooth	root fragment
13792	humerus?	distal (?) shaft, right
13813	humerus	1 distal shaft fragment
5749	femur	1 distal fragment, fit
5745	longbone	1 shaft fragment
5746	longbone	1 shaft fragment from cattle (?) humerus
5747	longbone	1 shaft fragment
5773	longbone	1 shaft fragment
5775	longbone	5 shaft fragments
5779	long bone	1 shaft fragment of palmar (?) face of horse metapodium

Find no.	ID	Description
5784	longbone	1 shaft fragment
5785	longbone	1 shaft fragment
5799	longbone	articular fragment of distal (?) femur
5810	longbone	1 shaft fragment of cattle (?) metacarpus
6415	longbone	1 shaft fragment
11317	longbone	1 shaft fragment
11330	longbone	1 shaft fragment
12807	longbone	1 shaft fragment
14359	longbone	1 shaft fragment
15485	longbone	4 shaft fragments
15486	longbone	1 articular fragment and 5 shaft fragments
15678	longbone	1 shaft fragment
15679	longbone	1 shaft fragment
15688	longbone	1 shaft fragment
15690	longbone	4 shaft fragments
15691	longbone	1 fragment of articular surface and 8 shaft fragments
15692	longbone	4 shaft fragments and 3 articular fragments
11331	rib	1 shaft fragment
13915	rib	ossified cartilage fragments
14360	rib	1 shaft fragment
15485	rib	2 shaft fragments
15681	rib	2 shaft fragments
15684	rib	4 shaft fragments
15688	rib	1 proximal shaft fragment, fit
15690	rib	3 shaft fragments
16545	rib	1 shaft fragment
13800	vertebra	1 fragment epiphysis, not fused
15486	vertebra	1 fragment of caudal vertebra
15691	vertebra	1 body fragment, fit
15692	vertebra	3 fragments
16546	vertebra	1 fragment body

## 7 Sheep/goat size (cremated bone)

Find no.	ID	Description
5774	scapula?	2 fragments of blade
5735	longbone	shaft fragment
5772	longbone	shaft fragments
5799	longbone	shaft fragment
15691	longbone	4 fragments
11302	rib	shaft fragment
11303	rib	shaft fragment
11315	rib	shaft fragment
11334	rib	shaft fragment
11335	rib	shaft fragment
12807	rib	shaft fragment
13801	rib	shaft fragment
15485	rib	7 shaft fragments
15488	rib	1 shaft fragment
15685	rib	1 shaft fragment
15686	rib	1 shaft fragment
15692	rib	22 shaft fragments

## 8 Rabbit (unburnt bone, modern)

Find no.	ID	Description
5159	left mandible	
10856	femur	
10171	right femur, left femur, pelvis, sacrum, right tibia, vertebra, calcaneum, astragalus, metapodium and phalanges	
11717	tibia	

feature that could be associated with subperiosteal reaction to trauma, for example. The metapodia have little soft tissue covering to cushion against blows, and the outer face of the metacarpal would be a likely place for such damage. The possibility that both these bones could be from the same animal, and the pathologies the result of the same incident is intriguing but unprovable. Skeletally, it is possible that these bones are from the same horse; both ulna and metacarpus appear to be from animals of roughly the same build, and neither is obviously very old nor very young. It is possible to find unburnt or lightly burnt bones in a cremation deposit: McKinley (1994: 83) notes that poor burning of human skeletal areas, particularly the extremities, is not uncommon, and can happen for a number of reasons, including a small pyre or poor positioning. Some of the horse bones from single cremations at Spong Hill also showed variable degrees of charring (Bond 1994: 123). The metapodia and phalanges are among the elements that are most likely to burn unevenly, as they are endowed with little natural ‘fuel’ in the form of fat and muscle, and are situated at the extremity of the limbs, and so are most likely to be on the cooler edges of, or even protruding from, the pyre.

The skeletal elements of cattle from Mound 7 consist of head (right occipital bone and mandible) and hind leg (astragalus and sesamoid) bone fragments. There are also possible humerus and metacarpal fragments in the ‘large ungulate’ category. There is no evidence for the age of this animal; nor are there any pathological features or butchery marks.

The sheep/goat bones positively identified in Mound 7 are all from the hindquarters: left side of the pelvis, and left and right astragali. There is a possible fragment of scapula in the ‘sheep/goat size’ category, although this could also be from the pig. There are many fragments of long bone and rib in the ‘sheep/goat size’ category that could also be from this individual. There is no evidence for the age of the animal, or for butchery of the carcass.

The only positively identified pig bones from Mound 7 are the rib and right humerus. The animal was over one year old, as the distal humerus is fused. There are possible knife marks on the proximal end of one rib fragment, suggesting that these remains might represent a joint of meat, or a jointed carcass, rather than the whole animal.

Red deer is represented in Mound 7 by a single fragment of unworked antler. Although it is possible that some of the many fragments identified only as ‘large ungulate’ may belong to a red deer, unworked antler has been found in other Anglo-Saxon cremations and inhumations where no other deer bone is present (Bond 1996: 85). The issue is discussed more fully below.

Some fragments of modern, unburnt rabbit bone were found in the Mound 7 assemblage, again signifying disturbance by these animals.

### Discussion

Recent work on the cremated animal bone from other, lower-status, cemeteries of the fifth to seventh centuries AD in England (Bond 1993, 1994 and 1996; Harman 1989) means that there is now a considerable body of data to call on for comparison with the Sutton Hoo material. Although the Sutton Hoo animal bone was in even smaller pieces than is usual, due perhaps to disturbance by the nineteenth-century robber activity, it was still possible to identify a number of bone elements and animals. The

**Table 39**

#### Measurements of uncremated horse bones from Mound 7

Finds 7615 and 7614. All measurements are given in the standard terminology of Von den Driesch (1976), with values in millimetres; values for the Mound 17 horse burial (O’Connor, below and 1994) are given in italics. Measurements in brackets indicate a damaged surface, and therefore a value which is possibly too small.

7615	metacarpus III	O’Connor 1994
GL1	(239)	
Bp	(47.8)	50.6 and 51.62
Dp	(31.3)	
SD	35.3	35.6 and 35.6
Bd	48.3	50.6 and 51.2
DD	23.2	

7614	phalanx I	O’Connor 1994
GL	(86.2)	83.9 and 83.0
Bp	(48.7)	55.5 and 56.9
Dp	34.0	
SD	36.0	34.4 and 34.5

fact that large mammals such as horses and cattle might be represented by only a few small identifiable fragments, representing a small percentage of a bone, is usual in cremations; both the author’s experience and experimental studies have shown that bones of large mammals survive less well under cremation than those of smaller ones – large bones break up into more pieces than small bones (Buikstra and Swegle 1989).

The small size and rather unimpressive appearance of these fragments of animal bone do not in any way mirror the importance or material investment the animals would have represented in the burial ritual. The cremation of horses and cattle would have required a significantly bigger funeral pyre, or multiple pyres, and would have consumed a much greater quantity of fuel and created a far more impressive spectacle. The evidence, both from these mounds at Sutton Hoo and from studies of the Spong Hill and Sancton I cemeteries, seems to indicate that whole animals were involved, rather than the head and hoof offerings suggested by earlier writers (e.g. Vierck 1970–1). At neither Sancton I, Spong Hill nor Sutton Hoo is there any butchery evidence to suggest that these larger animals had been jointed as meat, although there is evidence for the dismemberment of sheep and pig at the first two cemeteries (Bond 1993, 1994) and possibly of pig at Sutton Hoo (above).

The investment represented by the loss of a full-grown cow or ox is itself substantial, but the loss of a horse is on a different scale. If these were fully-broken riding horses, as the parallel horse burials would suggest (O’Connor 1994), then the investment includes the time and effort required in breaking and training the animal, as well as the secondary products (hide, bone and meat) which might normally be expected at the end of its working life. The relative abundance of horses in some lower ranking cemeteries, such as Spong Hill and Sancton (23 per cent and 22 per cent respectively of the cremations had material identified as horse), thus seems even more remarkable than the presence of horse at Sutton Hoo in the burial of a male human (O’Connor 1994), in the cremations examined here, and in Mounds 3 and 4, which contained a male human and a horse each (Gejvall 1975). In contrast to the apparent association with

male humans in these examples at Sutton Hoo, at Sancton and Spong Hill there appeared to be little sex bias in the deposition of horses in cremations. At Spong Hill, for example, 13 per cent of the definitely male, and 11 per cent of the definitely female, cremations were associated with horse bone (McKinley 1994: 99), implying that the relationship being expressed is less obvious and more intriguing than simply a male warrior going to the grave with his favourite horse.

Müller-Wille argued, in his study of Continental horse burials, that the custom was concentrated in the Anglo-Saxon homelands of north-west Germany and the Netherlands, while Vierck has suggested that there was a connection between the horse burials and cremations found in England and west Scandinavian customs (Müller-Wille 1970–1; Vierck 1970–1). Horse bones are very common in Swedish cremation burials of the Vendel and Viking periods, mainly from men's graves, but also from women's (Gräslund 1980: 43; Gejvall and Persson 1970; Persson 1970). More recently, however, O'Connor has pointed out that horse burials can be found across Europe, from England to Hungary (O'Connor 1994), so perhaps it is unwise to attribute too great a cultural significance to the simple presence of horse in the burial rite.

Compared to the range and variety of animal remains found at other Anglo-Saxon cemeteries, it may be thought surprising that these investigations identified only horse, cattle, red deer, sheep and pig, plus the possible dog identified from Mound 4 (Gejvall 1975). In contrast, Spong Hill contained all of these, plus bear (terminal phalanges, possibly from skins), roe deer, beaver, fox, hare, domestic fowl, goose and fish (unidentified to species). Other smaller cemeteries, whilst not producing such a wide range, have also included some of these species. Sets of bear terminal phalanges were found in six cremations at Spong Hill, two at Sancton I and two at Elsham Wold (Bond 1994, 1996; Harman 1989). Whilst it is undoubtedly true that the sheer size of the Spong Hill cemetery means that the excavated sample is very large, and that this might influence the greater range of species seen there, it might have been expected that the high status of the Sutton Hoo mounds would mean that more 'exotic' items such as bearskins could be expected. It has been suggested that these skins may have been imported, from Scandinavia for example, since the available evidence implies that bear was rare in Britain by this time (O'Connor 1989: 187). It could be argued that the small sample of cremations at Sutton Hoo, poor preservation and the effects of nineteenth-century disturbance are sufficient explanation for the absence of this wider range of material; but there is also the possibility that the rarer deposits such as bearskins, fox carcasses and pieces of hare and beaver indicated something other than high social rank.

The single piece of unworked red deer antler from Mound 7 is interesting, because a number of cremations have contained similar material without evidence for any other parts of a red deer carcass. Unworked red deer antler was found in three cremations at Sancton I and five at Spong Hill (two were female humans, one with a child), as well as in cremations at Millgate, Nottinghamshire and Lackford, Suffolk (Bond 1993, 1994; Harman 1989; Lethbridge 1951, 17–18). At Spong Hill there was no other possible red deer bone from the contexts, though at Sancton I two of the burials had 'large ungulate' bone which could just possibly have come from a deer. Unworked roe deer antler was also found in two cremations at Spong Hill, with no definite evidence for the presence of other roe deer bone. At

Millgate, 300 g of unworked antler was found with a male cremation. There is no material from Mound 7 at Sutton Hoo that is definitely, or probably, red deer bone, though since there is material identified only as 'large ungulate' there is a slight possibility that more of the animal was present. It has been suggested that antlers found without other red deer bone may have been used in shamanistic practices, although it is difficult to see how this could be demonstrated (Wilson 1992: 136; Lethbridge 1951: 17–18).

The cremated animal bone evidence from the new investigations of Mounds 5, 6, and 7 has not merely confirmed the pattern suggested by earlier investigations of Mounds 3 and 4, where horse and dog were identified (Gejvall 1975). The presence also of cattle, sheep and pig and the fragment of red deer antler in the Mound 7 cremation demonstrates a much larger collection of animal offerings than has previously been identified from a Sutton Hoo mound. The unidentified large ungulate (horse or cow, but possibly both), sheep and pig in Mound 6, and the presence of large ungulate (possibly horse) and sheep/goat size material from Mound 5 show that the deposition of multiple animal offerings is not a feature unique to Mound 7. These offerings show many similarities with those seen in studies of the humbler cemeteries of Spong Hill and Sancton I. It is now necessary to re-evaluate the function and purpose of these offerings, and their relationship to the status of the humans with whom they were buried.

### The human skeletal material from the furnished inhumations

Frances Lee

For the methodology used, and a general assessment, see below, Chapter 9, p. 349.

### The skeletal material from the burial beneath Mound 17 (Burial 9)

The preservation of the inhumation was not good, but some of the bone had survived despite lying in a timber coffin, which at Sutton Hoo usually inhibits bone preservation (*Bull.* 8: 11). Fragments of the skull, dentition, upper cervical vertebrae, lumbar vertebrae, left and right radii, pelvis and left and right lower limbs survived. The body was of a young adult, probably in the early twenties, based on the degree of dental attrition and the fact that the epiphyseal plates had recently fused. The fragments that do survive from the pelvis suggest that this is probably a male individual. There is very little other information from the bone, although enamel hypoplasia was marked and recorded on the incisors, canines and first premolars. Nutritional deprivation, disease and parasitic infection may all be causative factors in disrupting the enamel forming process of teeth, but used singly they have little use or meaning.

## Catalogue of skeletal material

### BURIAL 9

#### Body F359

Int. 48/F318

Age: Adult (young)

Sex: Probably male

Bone preservation: Poor. There are fragments of skull, atlas and

axis, lumbar vertebrae, left and right radii, pelvic girdle and left and right lower limbs.



**Table 40**  
**Dentition of body F359.**

	R										L																
Maxilla	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8											
Mandible	7					6					5					4			3		2			1		4?	

A single tooth has slight deposit of calculus. Enamel hypoplasia is present and marked.

#### **The skeletal material from the furnished burials around Mound 6**

On the east side of Mound 6 were three graves, Burials 12, 15 and 16. Burial 12 was considered by the excavators to represent a child in a coffin, surrounded by a ring ditch (see Chapter 5, p. 138). None of the bone survived from this grave. The other two burials were in coffins and were furnished. They were on an east–west alignment, and were very poorly preserved. Burial 15 was predominantly a stain, but also included small fragments of tooth enamel and a piece of vertebral body. Burial 16 was equally badly preserved, with only a few bone splinters from the left femur surviving. Neither had sufficient material for any indication of age or sex to be given, and the excavators' impression that they were both juveniles cannot be verified. The grave goods associated with these burials suggest that Burial 15 was probably male and Burial 16 was female.

## Catalogue of skeletal material

#### BURIAL 12

##### **Body F147**

I402 and I410

Int. 4I/F114

A stain only, no bone was recovered.

#### BURIAL 15

##### **Body F137**

II14–16, II89 and II90

Int. 50/F54

Age: Unknown

Sex: Unknown

Bone preservation: Very poor, predominantly a stain

#### BURIAL 16

##### **Body F186**

I254

Int. 50/F58

Age: Unknown

Sex: Unknown

Bone preservation: There were a few fragments, probably from the left femur with bronze staining.

#### BURIAL 56

##### **'skull pit'**

Int. II

Bone preservation: Very poor. No determination of age or sex possible (SHSB I: 99).  
Not seen by the author.

#### **The horse from Mound 17**

Terry O'Connor

The articulated skeleton of an equid was found in 1991 in pit F319, below Mound 17. The bones were submitted to the author for examination and report in 1993. Individual bones and groups of bones were given finds numbers on site, and these are used as the basis of the catalogue (see archive).

I am grateful to Wietske Prummel, Rijksuniversiteit Groningen, for access to unpublished data.

#### **Condition**

The bone tissue was mainly very degraded and friable. Although records show the skeleton to have been largely intact and complete, as excavated, the bones of the thorax and skull were extensively fragmented, and the more distal elements of the limbs were markedly eroded. Only elements with a high

proportion of dense cortical bone were at all robust, and even these showed some fine longitudinal cracking.

#### **Identification**

The limb proportions and the morphology of the molars and premolars are consistent with horse, rather than any other equid, and are presumably from the domesticated ecotype generally attributable to *Equus caballus* L.

#### **Age and sex**

The horse appears to have been male. Substantial lower canine teeth were present in both mandibles. No trace of upper canines could be located, though given the highly fragmented state of the maxillae and premaxillae, this is not categorical evidence of absence.

Age is less straightforward. All of the epiphyses of the appendicular skeleton were found to be fully fused, as were most of the vertebral centra except the caudal aspects of the lumbar and posterior thoracic vertebrae. Full fusion of the vertebrae might be expected by five years old (Silver 1969), though the supporting modern evidence is insubstantial. All of the permanent dentition had wear, with some attrition on lower I3 and very slight attrition on the lower canines. This would imply an age at death in excess of five years, though the infundibulum on LI3 was still confluent with the lingual margin of the crown of the tooth, indicating an age not greatly in excess of that figure. The condition of the jaws and teeth made crown height measurements problematic, but the right UP3 gave a fairly secure measurement of 75 mm. Using Levine's (1982) data for comparison, this would be consistent with an age of around five years. Taking all of the data together, an age at death of five to six years is proposed, thus suggesting the vertebral epiphyses to be fusing a little late, and placing greater confidence in the eruption times of the lower incisors and canines.

We thus have a male horse, though whether stallion or gelding is not clear, of five to six years old.

#### **Stature**

The shoulder height of the horse has been estimated using the conversion factors of Kiesewalter, as recommended by von den Driesch and Boessneck (1974). Table 41 gives the data used in these estimates and the results obtained.

The estimates obtained from the lateral length of the femora fall rather below those from the rest of the bones, suggesting that the abrasion to the greater trochanters was more significant than had been appreciated. It is proposed that these two estimates are anomalous and should be disregarded. The

**Table 41**  
**Shoulder height estimates, following von den Driesch and Boessneck (1974)**

**Humerus measurements were not available. All measurements and estimates are in millimetres.**

	Left	Right	Estimates
Radius	331	332	1443 and 1448
Metacarpal	225	223	1442 and 1429
Femur	384	379	1348 and 1330
Tibia	339	339	1478 and 1478
Metatarsal	264	262	1407 and 1396

remaining figures give a mean shoulder height estimate of 1,440 mm (SD 29.55; N = 8), or about fourteen hands. The breadth measurements and the degree of development of muscle insertions indicate a fairly heavy, muscular build, completing the picture of a rather thick set male horse, around the size of a very large pony, aged about five to six years old at death.

### Pathology

No indication of the cause of death could be found, though given the state of preservation not much can be read into such an absence of evidence. The horse was at least skeletally healthy at time of death. There are minor degenerative changes to the caudal aspect of the last lumbar vertebra, indicating the initial stages of an arthritic development. There is an obvious temptation to link this with the use of the horse for riding, but minor arthropathic change in one joint in the lower back is not conclusive evidence, and the teeth showed no wear patterns that could be associated with the use of a bit. The skeletal evidence is thus neither consistent nor wholly inconsistent with the use of this horse for riding.

### Date

A radiocarbon date taken on the bone of the horse gave AD 596–660 (95 per cent cal.) (see Chapter 3, p. 54).

### Comparanda

Horses seldom comprise more than a small part of any archaeological bone assemblage from north-west Europe, so the range of published comparanda is rather small, though sufficient to place the Sutton Hoo horse in some sort of roughly contemporary context. The closest group of material comes from the Anglo-Saxon settlement at West Stow (Crabtree 1990), whence measurements of fifth- and sixth-century horses gave shoulder height estimates in the range 1.18–1.39 m, with a mean of 1.38 m. Slightly later material comes from the industrial site at Ramsbury, Wiltshire (Coy 1980), where estimates ranged between 1.21 m and 1.40 m. As a rough comparison of robusticity, Crabtree gives metacarpus SD measurements ranging from 28.3–33.6 mm for West Stow, in comparison with 35.6 mm for Sutton Hoo.

In 1997 a further horse burial of Anglo-Saxon date was excavated in Suffolk, at the USAF base at Lakenheath. A preliminary examination of this horse by the author indicated a male individual of similar age, shoulder height and build to the Sutton Hoo horse. The Lakenheath animal showed no pathological changes to the lower back, despite having been buried with a harness, so indicating that it was ridden during life.

A similar horse burial is reported from a broadly seventh-century context at Oosterbeintum, Frisia (Prummel 1989; also pers. comm.). The burial, which also included six dogs, was

located within a cemetery. The horse was a male aged six to seven years old, and was buried in much the same position as the Sutton Hoo and Lakenheath horses: on the right flank, with legs flexed. The Oosterbeintum horse is estimated to have stood between 1.35 m and 1.39 m at the shoulder, similar to the West Stow series. Prummel (1989) observes that larger horses, up to 1.50 m, came into Europe at an earlier date but were quite rare, a point clearly shown by data given in an earlier paper (Prummel 1979). It is notable that the Oosterbeintum horse is described as a stallion (*hengst*), not a gelding (*castreren*).

A second example from the same region and similar date comes from the cemetery at Ezinge-de Bouwerd, where two horses and a dog were recovered from a single grave (Prummel pers. comm.). The horses are both described as males. Measurements of the Ezinge horses are approximate, as they have had to be measured whilst *in situ* in a display at the Groningen Museum, but give a range of estimates between 1.43 m and 1.50 m for 'stallion I', and 1.44 m and 1.48 m for 'stallion II'. In a wider discussion of Early Medieval horses from the Netherlands, Prummel (1979) compares samples from the Roman Iron Age through to Carolingian deposits. The data show the Roman Iron Age specimens to be generally smaller in stature than military Roman or later samples, with the Sutton Hoo horse falling within the range, though above the mean, of samples from Carolingian sites in the terpen area of Groningen and Friesland, and at Rijnsburg and Dorestad.

A further brief survey of horses from northern European sites is given by Benecke (1986), in the course of an examination of the size of domestic livestock across northern Europe from the Iron Age to Medieval periods. Benecke suggests that horses from grave contexts from fifth- to tenth-century sites are, in general, somewhat larger than those from contemporary settlement site contexts, though the supporting data (*ibid.*: 265) show substantial overlap. Horses from graves are typically of between 1.34 m and 1.40 m shoulder height, whilst those from settlement sites are typically 1.27 m to 1.36 m. The Sutton Hoo horse thus stands at the upper end of Benecke's grave-context range, though, as Benecke points out, environmental effects on phenotype have to be taken into account when making comparisons across such a relatively large area (from the North Sea to the Baltic).

The Sutton Hoo horse thus fits into the wider northern European picture of horses from grave and settlement contexts, being of the same sex and similar age to individually buried horses from the Netherlands, and towards the upper end of the general size range. This report is deliberately limited to discussion of the skeleton as a zoological study. The burial context and the wider issues raised by the apparent 'offering' of horses are discussed in O'Connor 1994.

# The seventh-century burial rites and their sequence

Martin Carver and Christopher Fern

### Introduction

The determination of the sequence of burial rites used at Sutton Hoo was the principal objective of the project design (see Chapter 2, p. 30), and was intended to lead to an understanding of the changing ideology and political allegiance of an East Anglian community. However, the identification of the burial rites and their sequence both presented problems. Most of the burials had been disturbed by grave-robbing, and their assemblages are incomplete. This makes it difficult to draw a chronological distinction between one burial and another, and there were few stratigraphic indications of the order in which the mounds were constructed or the graves were dug. Even in unrobbed examples, such as Mound 1, the form of the chamber and the layout of the body were not clearly observed. This is due primarily to the deterioration, often near to invisibility, of human remains and of timbers used in the grave-structures. Nevertheless, by using the rarely observed traces of decayed timbers and the scraps of artefacts and bone that the tomb robbers left, and by drawing comparisons from better preserved examples in England and on the Continent, it has proved possible to propose for the Sutton Hoo burials an original form and rite. This chapter argues for the date and the cultural affiliations of each of the burials, without concealing the range of possible interpretations that remain.

Fifty-five burials are currently known and they fall into two distinct categories. The sixteen burials described in Chapters 4–7 are distinctive in that the majority were richly furnished, and ten of them are (or were) marked by burial mounds. They will be shown to belong mainly to the seventh century. The other thirty-nine inhumation graves were unfurnished, included examples of mutilated bodies and were sited in two discrete groups: Group 1, on the eastern edge of the mounds, and Group 2, around Mound 5. These are described in Chapter 9, where it will be argued that they are execution burials dating to a period from the eighth to

the eleventh century. It is possible, therefore, to make a primary division of the Sutton Hoo cemetery into a ‘princely burial ground’ (seventh century) and an ‘execution cemetery’ (eighth to eleventh centuries).

A third group of burials referred to in this chapter provides an invaluable prelude to the Sutton Hoo burial ground. It consists of thirty-six graves situated 500 m north of the Sutton Hoo mounds, and cited here as the *Tranmer House cemetery* (Bromeswell 018). Here, nineteen inhumations were furnished with weapon sets, which included swords and shields, or with ornamental dress, which included brooches and beads. Seventeen cremations were buried with and without pots or, in one case, in a bronze hanging-bowl. There were ring ditches around nine of the cremations, implying small mounds 2.5–3.5 m in diameter. These burials were excavated in the year 2000 in advance of the building of the Sutton Hoo display centre; a preliminary report, kindly provided by the excavation director, will be found in Chapter 13. The cemetery almost certainly extends into the field to the west, where a Byzantine bucket was ploughed up in 1988 and where other burial mounds are suspected to have stood (see Chapter 12, p. 467). In the Tranmer House cemetery we seem to see small hierarchies signalled by cremations under mounds, with bids for higher status in the use of a hanging-bowl and prestigious imports like the Byzantine bucket. This cemetery, which dates from the sixth into the seventh century, has some claim to represent the society from which the personalities of the Sutton Hoo princely burial ground emerged.

Of almost equal importance for the genesis and development of Sutton Hoo is the fifth- to seventh-century cemetery at Snape, sixteen miles to the north-east, where fifty-two cremations, forty-seven furnished inhumations, a horse burial (grave 47), two boat-burials (graves 4 and 47), two possible part-boat-burials (graves 3 and 10) and a ship-burial (grave 1) have been

excavated between 1862 and 1992 (Filmer-Sankey and Pestell 2001). Modern research conducted at Sutton Hoo, Tranmer House and Snape, not entirely unconnected in its execution, has allowed the interpretation of all three cemeteries to be mutually enriched.

In this chapter we review the burial rites that have been defined at the Sutton Hoo site and described in Chapters 4–7. We consider their probable original forms, their dates and cultural parallels, and propose a model for their sequence of use in this particular place. For all the difficulties, it has proved possible to underline certain characteristics: the princely burial ground was short-lived, sparsely used and varied in burial rite. As has been argued in Chapter 7, the latest dates of manufacture of the grave goods cluster in the later sixth or seventh century, and, as will be argued here, the burials themselves belong broadly to a period of a hundred years, about AD 590–700. Only eighteen burial mounds are confirmed at Sutton Hoo, and only six additional associated graves have been discovered in over a hectare of excavation. But the burial rites in this small sample are remarkable in their variety: virtually every example contacted has been different in some way from the others. We find cremation, inhumation, burial of ashes in a bronze bowl, interment of a body in a coffin, on a trough, in a boat and, perhaps, in a bed, and a range of status which varies from an unurned cremation (Burial 13) to the magnificence of Mound 1, one of the greatest burial investments known in Europe.

This study begins with a review of the burial rites practised in the princely burial ground, as so far known, and a discussion of the status, cultural affiliations and date ranges that these forms of burial have been given when found elsewhere. The list of burial rites to be considered is shown in Table 42. We then attempt to put the Sutton Hoo examples into a dated sequence, using a number of arguments drawn from the relative dates of the assemblages, spatial associations, stratification, the methods used to construct mounds, the use of the Prehistoric landscape and the fate of the mounds after the princely burial ground had fallen into disuse. None of these arguments will be found decisive, and the model for the sequence with which we end depends upon an accumulation of current probabilities that the

reader will wish to modify and refashion as more certain information is won from other sites.

**Burial rites: cremations**

Cremation involves a number of consecutive stages, each adding to the overall significance of the burial rite for those attending the funeral, but each diminishing the tableau that finally survives (McKinley 1994; Oestigaard 1999; Williams 2001b: fig. 13.1). Cremation requires the construction of a funeral pyre sufficient to attain the temperatures necessary to cremate the corpse, which implies certain techniques, resources and social organization (McKinley 1994). The inclusion of selected objects on the pyre, such as joints of meat and whole slaughtered animals, provides indications of socio-economic control, and may be viewed as reflecting the perceived status of the deceased (Richards 1987; Ravn 1999). At this point, the pyre is set alight and may itself become the memorial, all the burnt offerings upon it being buried *in situ*. Alternatively, the ashes may be (partially) gathered and placed in a container, in which case the type of container offers another opportunity for expressing social status and ideological affiliation (Richards 1987; Oestigaard 1999, 2000). Next, unburnt grave goods may be selected to accompany the container, and all the items arranged in a burial pit. Finally, a mound may be erected, another sign of investment in the memorial as a whole. The end-product of this process is a greatly reduced version of its parts, so that much of the original complexity and its messages are lost. These are diminished further where the burials have been scattered by robbing and ploughing. The cremation at Rickeby, Vallentuna (Sweden), can be used to emphasize this point: thanks to the careful excavation of a pyre buried *in situ*, the excavators were able to record 2,000 fragments of objects, together with the burnt bones of a large number of whole animals and food offerings in their original positions on the pyre, the relatively complete assemblage revealing a deposit of high value and complexity (Sjösvärd, Vretemark and Gustavson 1983; see Figure 127). Such a high-status funeral offering, mostly of animals, must have been widespread in the early Middle Ages, although very hard to find today.

**Table 42**  
**Burial rites considered in Chapter 8**

Burial rite	Status attributed	Where practised earlier than Sutton Hoo	General date range of the practice
<i>Cremations</i>			
Unurned (Burial 13)	low	East Anglia and northern Europe	before 600
In an urn (Burial 14)	low	East Anglia and northern Europe	before 600
In a bronze bowl (Mounds 4, 5, 6, 7 and 18)	high	East Anglia, northern Germany and Scandinavia	second to sixth century
On a silver dish? (Mound 1)	very high		
On a boat piece (Mound 3)	medium	Baltic and North Sea coasts	fourth to eighth century
Inclusion of animals	medium	Norfolk to the Humber; north Germany and Scandinavia	fifth to ninth century
<i>Inhumations</i>			
Use of a coffin, trough or chamber (Mounds 1, 2, 14 and 17; Burials 12 and 15)	medium	Northern Germany and Scandinavia	fifth to eighth century
Horse burial (Mound 17)	high	Eastern England and Germany	fifth to eleventh century
Bed burial (possibly Mounds 1 and 14, and Burial 16)	high	Northern Europe	sixth to eighth century
Boat- and ship-burial (Mounds 1 and 2)	medium to high	Baltic and eastern North Sea coasts	sixth to ninth century



**Figure 127** Rickeby: the cremation pyre – plan and reconstruction (Sjösvärd, Vretemark and Gustavson 1983: fig. 5).

At Sutton Hoo there were six cremations (under Mounds 3, 4, 5, 6, 7 and 18), an unfurnished cremation buried in the ground (Burial 13), and a cremation in a pot (Burial 14; see Chapter 4), all of which were disturbed to a greater or lesser degree. The cremations in Mounds 4, 5, 6 and 7 occupy a central north–south axis, and used bronze bowls, and are the burials most similar to each other at Sutton Hoo. Mound 3 was a cremation in which the ashes were apparently placed on a wooden trough, tray or dugout boat or boat piece.

#### **Use of an organic container or a pottery vessel (Burials 13 and 14)**

Only one unurned cremation (Burial 13), which was presumably originally in a bag, box or organic container of some kind, and one cremation in a plain pot (Burial 14), are so far known from Sutton Hoo (see Chapter 4, p. 105). There were no grave goods in either, and no animal bones, and these are ostensibly burials low on the social scale. The pot, undecorated and marked by burnt-out organic temper, was dated on its discovery to the sixth to seventh century (SHSB I: 28) although Wade (see Chapter 7, p. 268) would put it slightly later, into the seventh century. The cremated bone inside the pot was from one young male (SHSB I: 98).

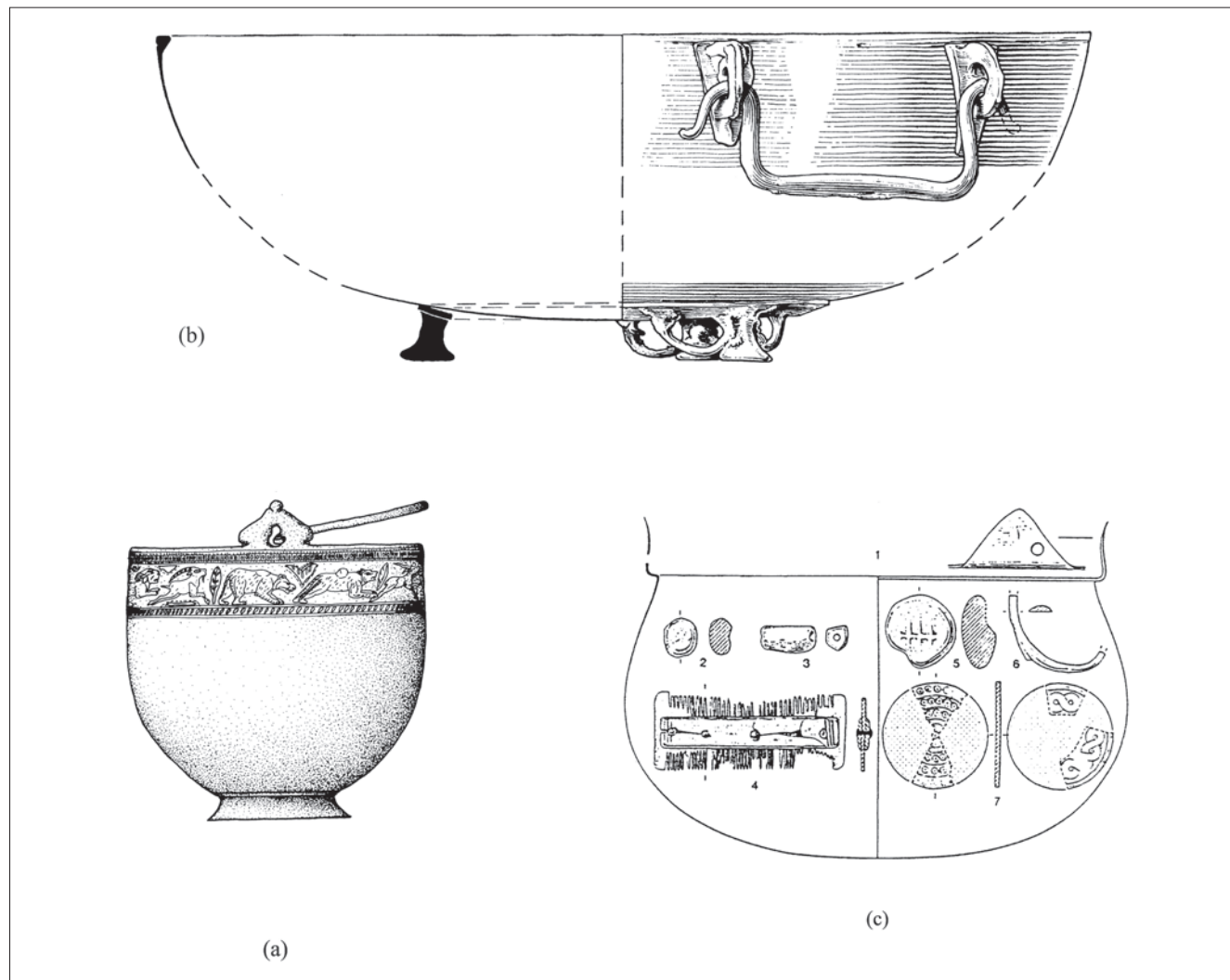
Given the date of the urn, Burial 14 might be a cremation made by people familiar with the Tranmer House cemetery in the late sixth or early seventh century, and Burial 13, next to it, might belong to a similar period and cultural milieu. Could there have been many other cremations at Sutton Hoo, albeit sparsely distributed, as at Tranmer House? The shallow depth of the Burial 13 cremation, and the plain pottery of Burial 14, warn that this is material that can be easily dispersed by ploughing and remain unrecognized. The few Early Medieval sherds discovered amongst the wealth of Prehistoric pottery (see Chapter 7, p. 268) might, therefore, derive from cremation vessels. If so, they were all situated in the same general area, in the north-western part

of the mound cemetery. However, the number of possible sightings remains small. If Burials 13 and 14 are members of a group of cremations, then it would be a small and dispersed group compared to those at Tranmer House or Snape, which had a density of about 480/ha. (see Filmer-Sankey and Pestell 2001: fig. 6). At Sutton Hoo, burials like Burials 13 and 14 are conspicuous in their rarity and their poverty, and some consideration might be given to an association of servitude between these cremated persons and the subjects of the mound-burials, close to them on the ground and in date.

#### **Use of a bronze container (Mounds 4, 5, 6, 7 and 18)**

Mounds 4, 5, 6, 7 and 18 yielded numerous fragments of cremated bone, pieces from copper-alloy bowls and traces of textiles. All the mounds had been robbed, but the circumstantial evidence is strong enough to suppose that the original rite involved the placing of cremated bone in a bowl (see Chapter 4). The textile, fragments of which were found adhering to the copper-alloy bowl pieces, must have been used to wrap the bowl or to cover it in the ground. The cremated bone derived from both humans and animals (see below).

The rite of placing cremations in a bronze vessel in the Germanic world can be traced back to the late second century AD, when it is found beyond the Roman *limes* in northern Germany and Scandinavia. Roman bronze buckets, probably manufactured in the Aachen-Cologne region, were exchanged beyond the frontier with Germanic peoples, who used them in drinking rituals, and these containers were adapted as cinerary urns. The type of heavy bronze vessel concerned is named after the cemetery at Hemmoor, near Hamburg, where nineteen examples were found (Waller 1959; Todd 1987: 25 and 46–7; Capelle 1998: 14, Abb. 2; here Figure 128:b). They typically have a decorative frieze around the mouth, the finest of which portray hunting scenes of beasts and armed hunters, indicating



**Figure 128** Bronze vessels used in cremation: (a) Hemmoor (Capelle 1998: 14, Abb. 2); (b) Coombe, Kent (Davidson and Webster 1967: 19); (c) Brightwell Heath, Suffolk (Reid-Moir 1921: fig. 24).

that they were prestige items. ‘Hemmoor’ bucket cremations cluster in the Weser-Elbe region of northern Germany, although they occasionally occur outside this region, for example at Nijmegen (Gelderland), Holland, and at Anda Klepp (Rogaland), Norway (Kramer, Stoumann and Greg 2000: 143 and 146).

In Scandinavia other bronze vessels were used for cremations, the so-called ‘Vestland-cauldrons’ imported from the Rhineland throughout the late Roman and into the Early Medieval period (Hauken 1984: 10 and 102; Oestigaard 1999: 357). This cauldron has triangular lugs and a flared carinated body, manufactured from a single piece of metal (Evans 1983: 499, fig. 363). The cauldron is named from the Vestland region of Norway, where finds predominate, while other concentrations are found in Trøndelag, Norway, and Medelpad, Sweden (Stenberger 1977: 370–3, Abb. 243; Hauken 1984; Ramqvist 1992: 196).

In England cremations associated with a cloth and a bronze bowl have been found thinly scattered throughout the Anglo-Saxon cultural zone, with a marked preponderance in ‘Anglian’ regions (Dickinson and Speake 1992: 120 and 128, table 1). Including those at Sutton Hoo, Dickinson and Speake recorded twenty possible examples, and to their list may now be added the cremation in a bronze hanging-bowl under a small mound at the Tranmer House cemetery (see Chapter 13, p. 484), which

was also accompanied by a stamped pottery urn (Topham-Smith 2000). Twelve of the twenty-one possible instances of bronze-bowl cremation are from East Anglia, and eight of them cluster in the Sandlings area of Suffolk. Examples local to Sutton Hoo are known from Tranmer House (above), Brightwell Heath, mound 3 (Reid Moir 1921; West 1998: fig. 11:6) and Snape, grave 68 (West and Owles 1973; Filmer-Sanke and Pestell 2001: 250). The examples elsewhere in East Anglia are burials at Field Dalling, Norfolk (Webster and Cherry 1976: 167), Illington, Norfolk and two examples from Little Wilbraham in Cambridgeshire. Outside East Anglia, nine examples of the rite have been identified, with five at Baginton, Warwickshire and two at Loveden Hill, Lincolnshire (Wilson and Hurst 1957: 148; Dickinson and Speake 1992: table 1), with isolated examples at Coombe, Kent (Davidson and Webster 1967) and a possibility at Asthall, Oxfordshire (Dickinson and Speake 1992). As well as placing cremations in bronze bowls, the rite of cremating bronze vessels with the dead is a practice known from the large cremation cemeteries situated between north Norfolk and the Humber estuary, such as at Spong Hill (Hills 1977: 26; Hills 1998).

The type of bronze vessel used to contain the English cremations varies considerably, but does not include Hemmoor buckets. At Coombe the calcined bone fragments were placed in a beaten-bronze bowl of Rhineland type with cast drop handles



**Plate 45** Cremation in copper-alloy bowl from Snape, grave 68 (photograph: Suffolk Archaeological Unit K27359).

and a soldered tripod (Davidson and Webster 1967: 1 and 32–3; Webster pers. comm.; here Figure 128:b). At Brightwell Heath and Field Dalling globular cauldrons with triangular lugs ('Gotland type') were employed (Reid-Moir 1921: fig. 24; West 1998: fig. 11.6; Webster and Cherry 1976: 167; here Figure 128:c). A cauldron burial is also suggested by Davidson and Webster (1967: 13) at Illington. Finds of 'Gotland cauldrons' (with triangular lugs and a globular body) and 'Vestland cauldrons' (with triangular lugs and a carinated body) are otherwise rare in Anglo-Saxon inhumation and cremation burials (Thompson 1956: 195, fig. 5; Vierck 1973: 32–3, Abb. 5). At Loveden Hill, in Lincolnshire, two hanging-bowls (which appeared to have been ritually stabbed through their bases) may have contained cremations (Wilson and Hurst 1957: 148; Dickinson and Speake 1992: table 1). In grave 68 at Snape the bowl was a shallow 'dog-dish' with thin curved walls, a flat bottom and a thickened rim, measuring c. 330 mm in diameter and 65 mm in depth (West and Owles 1973: 50, fig. 19.1; Filmer-Sankey and Pestell 2001: 157, fig. 115; here Plate 45). At Coombe, Brightwell Heath, Baginton, Snape and Loveden Hill evidence of textile, attached to the bowl, suggested that a cloth of some kind had covered the cremated remains.

The type of bronze bowl or cauldron used at Sutton Hoo to contain the cremations is not known, as examples have only survived in small fragments. Three identified 'Gotland cauldrons' accompanied inhumations, two in Mound 1 (Evans 1983: 480–510, figs 357 and 360), and one in Mound 17. The tentative identification of cauldron lugs in Mound 7 might argue for the use of a cauldron to hold the cremation, but this is uncertain, as the bronze fragments actually recovered with the cremated remains indicate a different vessel with thin walls (see Chapter 7, p. 209). No diagnostic features of hanging-bowls or imported vessels, such as foot-rings, escutcheons or drop handles, were found with the Sutton Hoo cremations. The analysis of the fragments (Chapter 7: see especially those from Mound 5) would appear to suggest the use of thin-bodied, shallow bowls, for which the best parallel is probably that from the nearby Snape cemetery, grave 68 (above).

Vierck compared the burial at Brightwell Heath (mound 3), which featured a 'Gotland' cauldron interred within a Bronze Age mound, with the cremation under a mound at Jondal, Hardanger in Norway, which contained a 'Vestland' cauldron. Both contained possible gaming-counters, ornamented bone

plaques (of unknown function) and bone combs, and were wrapped in cloth (Vierck 1970–1: 32–3, Abb. 6, 7). He considered these similarities as evidence for West Scandinavian influence in the Sandlings area of Suffolk. The affiliations of the Sutton Hoo cremations in bronze bowls are less specific, but they nevertheless refer to a practice rare in England but prevalent in the north-German/Scandinavian cultural zone in the sixth century.

#### **Cremation on a silver dish**

Vierck's (1973) suggestion that the Mound 1 ship contained a human cremation placed on the Anastasius dish has neither been substantiated nor disproved (see Chapter 6, p. 191). If true, it would represent a higher status variant of the cremation ritual, where the bronze bowl is upgraded to silver and the whole carried in a ship (Vierck 1980). The dish certainly carried some cremated bone, some of which was animal, together with pieces of gold foil. The majority of the assemblage on the dish seems not to have survived and cannot now be identified, but the improved case for an inhumed body in the Mound 1 ship (East 1984) has probably reduced the attraction of Vierck's hypothesis.

#### **Use of a trough, tray or boat part (Mound 3)**

The Mound 3 cremation was not placed in a bronze bowl, but was associated with sherds of a sixth-century decorated pottery urn (SHSB I: 28 and Wade in Chapter 7, p. 268). The cremation, in or out of the pot, was placed on a wooden tray or trough, the so-called 'butcher's tray' (SHSB I: 108–10). It is possible that this anomaly represents all that remains, following the robbing episodes, of a trough or part of a dugout boat (see Chapter 4, p. 67, and below). Cremations in boats under barrows occur in Scandinavia, for example at Lyckås and Gamleby, Småland, southern Sweden. In both these burials the cremated remains of a man was found (covered by a cairn), together with the cremated remains of a horse, three dogs, a goshawk, an eagle owl and, in the latter case, fragments of helmet (Nicklasson 1999: 101–2). The boat was signalled by the presence of rivets (clench nails) and, in this case, was burnt with the body of the deceased. Mound 3 could represent a variation on this ritual in which the boat, an unburnt dugout, was used to contain the cremated ashes.

#### **Animals in cremations**

Those Sutton Hoo cremations which were under mounds included burnt offerings drawn from a range of animals: sheep/goats, pigs, dogs, red deer, cattle and horses (Gejvall 1975: 136; Chapter 7, p. 274; see Table 45 for summary). A similar repertoire of animals, representing both whole animals and joints, have been shown to have featured in up to 43 per cent of the cremations interred in the more typical pottery urns, which predominate in Anglian areas of England (Bond 1996: 78, table 1). The cemetery at Spong Hill (Norfolk) has an unusually high percentage of instances, with animal remains found in 43.7 per cent of urns. At Spong Hill the favoured beast was the horse, with 227 individuals identified in total, occurring in 23 per cent of all cremations with animal bone (McKinley 1994: 123). The cremation cemetery at Sancton I, Yorkshire, demonstrated similar findings, with horses accounting for 22 per cent of animal cremations. From its distribution in England, horse cremation has been seen as an 'Anglian' rite (Hills 1998: 149).

At Sutton Hoo, also, the horse seems to have been important in cremation, with remains identified in Mounds 3, 4, and 7. Julie Bond also noted 'large ungulate' remains in Mounds 5 and 6, perhaps deriving from horses. Other animals were represented, including sheep in Mounds 6 and 7, sheep/goat in Mound 5 and pig in Mounds 6 and 7, while red deer and cattle were also suggested for Mound 7. Anglo-Saxon bronze-vessel cremations elsewhere also included sacrificed animals: horse and sheep at Asthall, Oxford (Dickinson and Speake 1992: 110), a small ox and a dog at Brightwell Heath (Reid-Moir 1921: 12) and a small ox, dog and bird in hanging-bowl 1 at Loveden Hill (Davidson and Webster 1967: 13). Animal cremation was a prominent feature of Scandinavian cremations, including those in boats and cauldrons (Hauken 1984; Nicklasson 1999). In addition to a man about forty to fifty years old, the Richeby cremation contained four dogs, a horse, three geese, a crane, a hazel grouse, an eagle owl, a sparrow-hawk and two peregrine falcons, while the bones of sheep, cattle, pig, chicken and black grouse were thrown randomly onto the pyre, presumably as discards from feasting (Sjösvärd, Vretemark and Gustavson 1983; and here Figure 127).

The type of animal does not reflect the abundance of domestic stock, showing that animals were chosen for reasons of rank or religion (Richards 1992: 139). Dogs, falcons and horses seem to have had special status, as trained hunting or riding animals, which were the preserve of elites in the period. Williams (2001b) has argued that animal sacrifice was important in shamanistic ritual, in that it assisted the soul to travel. Moreover, it would seem that in Anglo-Saxon England, the horse above all was an animal of symbolic status (Fern: in press a).

### **Sex, age and status**

Given the exiguous samples which survived, Frances Lee's osteological analysis of the cremated material at Sutton Hoo was seldom able to draw definite conclusions on age and sex for human remains from the cremations (see Chapter 7, p. 269). A young adult was suggested for Mound 5, and adults for Mounds 6 and 7; no identification could be made from the bone fragments recovered from Mound 18. The bones from Mound 3 had previously been attributed to an adult man, and those from Mound 4 to an adult man and a woman (see Chapter 4). Attributions of gender can be made on the basis of grave goods, but these too may be ambiguous. Many grave goods (and animal species) found with cremations have associations with both men and women, which might argue that gender differentiation was not a main concern for societies that cremated and, indeed, that perhaps the opposite was true, that the intention of the funerary ceremony was to ritually remove gender demarcations (Lucy 2000: 111).

As noted above, Mounds 3, 4 and 7 (and less certainly Mounds 5 and 6) contained horses, which might offer a signal of gender for the buried person. In his study of cremation in Anglo-Saxon England, Richards argued for a link between horses and adult males (1987; 1992: 139, figs 21 and 22). Recently, however, Bond has questioned this association, pointing out that at Spong Hill 13 per cent of horses were identified with males, and 11 per cent with females (Bond 1996: 83). Correlating information on gender and age with that for artefacts, Ravn (1999) used correspondence analysis of the Spong Hill material to identify a male elite group ('group II') with strong associations with horse

and sheep bones, together with (miniature) shears, gaming-pieces and glass (drinking) vessels (*ibid.*: 46 and 51, fig. 30).

This elite group finds some echoes in the Sutton Hoo cremation assemblages. Adult males were identified from the cremated bone in Mounds 3 and 4 (Gejvall 1975), and in Mound 3 this association is strengthened by the presence of a francisca (throwing axe) in the burial, which as a weapon is a diagnostic male emblem (Härke 1992a). Horse remains were identified in both Mounds 3 and 4, as was a playing piece in Mound 4. Mound 5 contained evidence for at least one silver-mounted wooden drinking-cup; wooden drinking-cups with silver rim-ornament have been found almost exclusively with high-status males in Anglo-Saxon England (East 1983; Geake 1997: 92). It is also tempting to associate Mound 5 with a man, on account of the evidence that this young individual had suffered blade cuts to the head, suggesting a violent death symptomatic of the occupational hazards of the male warrior class. Mound 7 contained gilt-silver fragments with repoussé ornament of the sort that decorated wooden drinking-cups, bowls and horns in this period (East 1983), as well as a fragment of a cauldron. Gaming-pieces were recovered in Mounds 4, 5, 6 and 7. Composite gaming-pieces (formed of a hollow cylinder, capped at both ends) found in Mounds 5 and 6 (Youngs 1983; Hills, Penn and Rickett 1987: fig. 116; Geake 1997: 100–1), have a strong association with male 'princely' burials, such as that at Taplow, Buckinghamshire (Youngs 1983) and Asthall (Dickinson and Speake 1992).

If it can be related to the Mound 6 burial, the sword pyramid found on the surface of the mound may be taken as tentative evidence for identifying this as a male burial. Two swords and a francisca were included with the Coombe cremation, and a folded sword was associated with hanging-bowl 1 at Loveden Hill, together with a bronze cauldron, bucket and glass palm cup, although in both cases there is some ambiguity in the records (Wilson and Hurst 1957: 148; Davidson and Webster 1967; Richards 1980: n.47, fig. 54; Dickinson and Speake 1992, 120). It should be noted that the other sword pyramids from Sutton Hoo were associated with inhumations, which enhances the possibility that the Mound 6 find is intrusive.

There are some challenges to the identification of an all-male contingent. In Anglo-Saxon England full-sized shears (as Mound 5) have a strong association with female inhumations, dated to the seventh and eighth centuries (Geake 1997: 96–7). They are rare finds in cremations: an example is recorded in urn 2751 at Spong Hill but the deceased was of indeterminate sex (Hills, Penn and Rickett 1987: figs 47 and 101). Miniature shears occur with both males and females, a trend repeated with full-sized shears on the Continent in inhumation burials (Geake 1997: 97; Beilke-Vogt 1998). The sex implied by the Mound 5 shears, therefore, remains equivocal. Caskets, suggested for Mounds 6 and 7 (see Chapter 7, pp. 207–8), have also been found to have a strong association with high-status females. However, a notable exception is the maple-wood box in a seventh-century male grave (grave 95) at Finglesham, which also contained a gilded triangular buckle, ornamented with a dancing warrior crowned with a horned headdress (Hawkes, Davidson and Hawkes 1965; Geake 1997: 82). So here, again, the presence of a casket as a determinant of sex is not decisive. Good parallels for the biconical reticella bead from Mound 7, both locally, at Morning Thorpe, Norfolk (grave 299: Green, Rogerson and



White 1987: I, 118, fig. 203; II, figs 392–3), and in Schretzheim (Koch 1977: Farbtafel 4), Germany, were from the graves of women. However, the Mound 7 find does not have a secure context or identification: it might be a stray from robbing (perhaps originating from a female grave such as Mound 14); alternatively it may be interpreted as a sword-bead, with male associations (see Chapter 7, p. 208).

The presence of local female cremations in bronze vessels (identified from the surviving bone fragments) at Brightwell Heath (Reid-Moir 1921: 12) and Snape grave 68 (West and Owles 1973: 55), also raises the possibility of their being represented in Mounds 5, 6, 7 and 18, a possibility perhaps reinforced by the probable similarity of the Snape and Mound 5 bronze bowls. Another possibility is that both men and women are represented, as in Mound 4. Men and women cremated together were identified at Coombe (Davidson and Webster 1967) and acknowledged as a possibility at Asthall (Dickinson and Speake 1992: 121), and, more generally in the Germanic world, are associated with uncorroborated connotations of 'suttee' sacrifice (Hirst 1985: 40–3; Davidson 1992). The possibility must thus be raised that one or more of the Sutton Hoo cremations was dedicated to a woman, or that women, with or without grave goods, had been cremated and buried with men. But on present information and understanding, the attributes of the burials are those of male behaviour as we currently understand it, and the balance thus lies in favour of those commemorated in Mounds 5–7 being men.

#### *Status*

The use of bronze vessels in place of the more traditional clay pot may be considered strongly suggestive of high status. Sheet-metal bowls and cauldrons, Coptic bronze vessels and hanging-bowls were all exotic items in Anglo-Saxon England, with connotations of hospitality and the feast, the prerogative of North Sea elites (Richards 1980; Werner 1992; Herschend 1998). This is further confirmed by finds of these vessels in inhumations, where they are in association with wealthy assemblages. The use of such prestige objects in burial rituals may have served to symbolize the power of elite groups, which was exhibited through the ability to acquire and dispose of wealth, and, by implication, to associate with foreign ruling groups. Such vessels, therefore, served as objects of exclusion, since they could only be obtained through elite social networks, established by political alliance and maintained in part through economic exchange (Oestigaard 1999: 349). In Scandinavia the high-status associations of cauldron cremations are also suggested by finds of prestige objects in the cremation assemblage. At Sæbo, in Hordaland, Norway, for example, a fourth-century solidus, together with a fifth-century sword chape and buckle, were found in a cauldron cremation (Oestigaard 1999: 357). Likewise, 'princely' status is suggested for the Anglo-Saxon bronze-bowl cremations at Asthall and Coombe. The Asthall burial contained gilded Style II decorated artefacts and a rich vessel assemblage, while one of the swords in the Coombe burial was gilded and decorated with Style I and Style II ornament. There was also a garnet-decorated square-headed brooch, perhaps worn by the deceased male's consort.

Mound 3 also fits with this image of elite status, despite the lack of a metal cinerary urn. The francisca, the ewer lid from a Nubian bronze vessel and the limestone plaque fragment, of

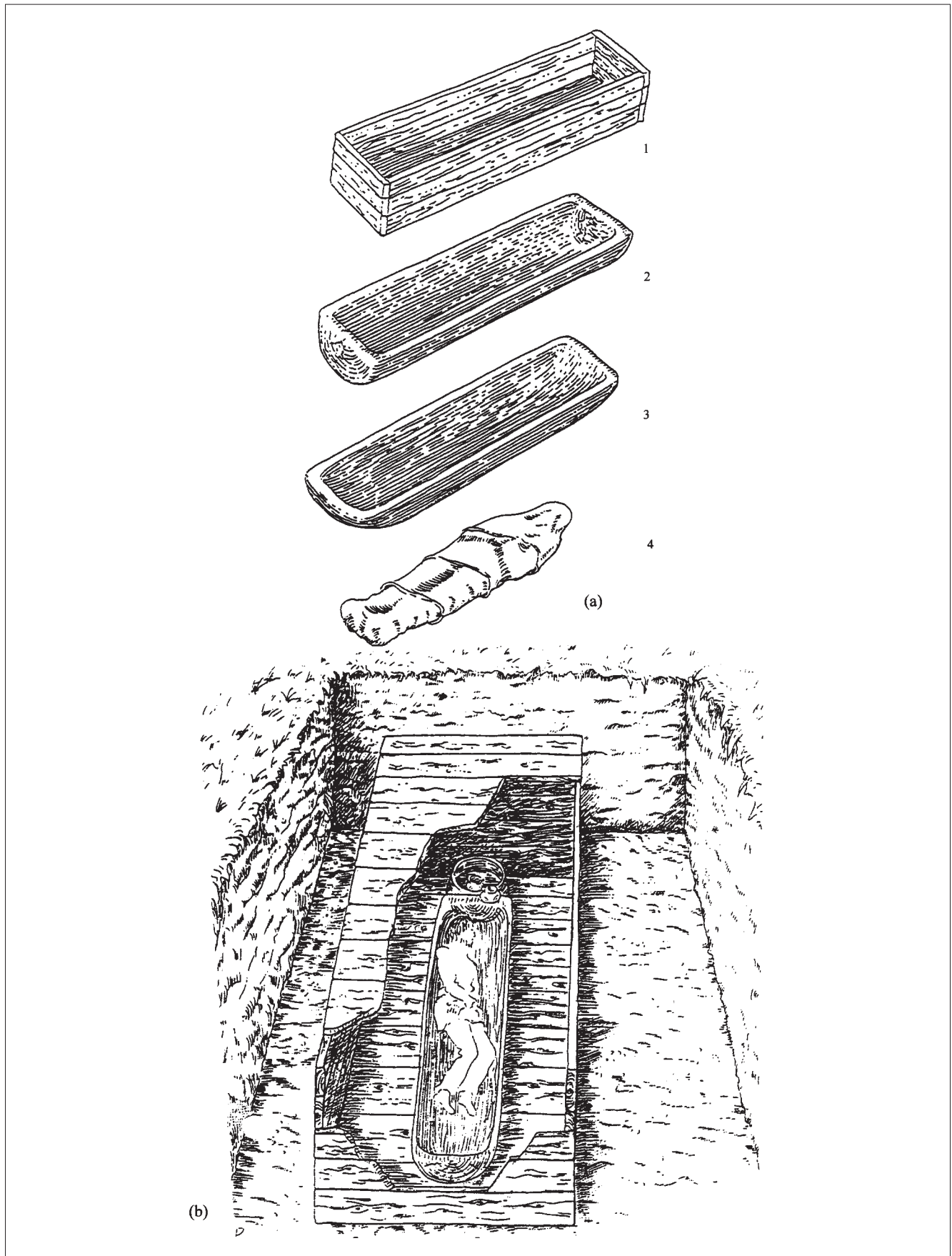
Byzantine derivation, decorated with an image of Winged Victory, all represent exotic acquisitions.

#### *Date*

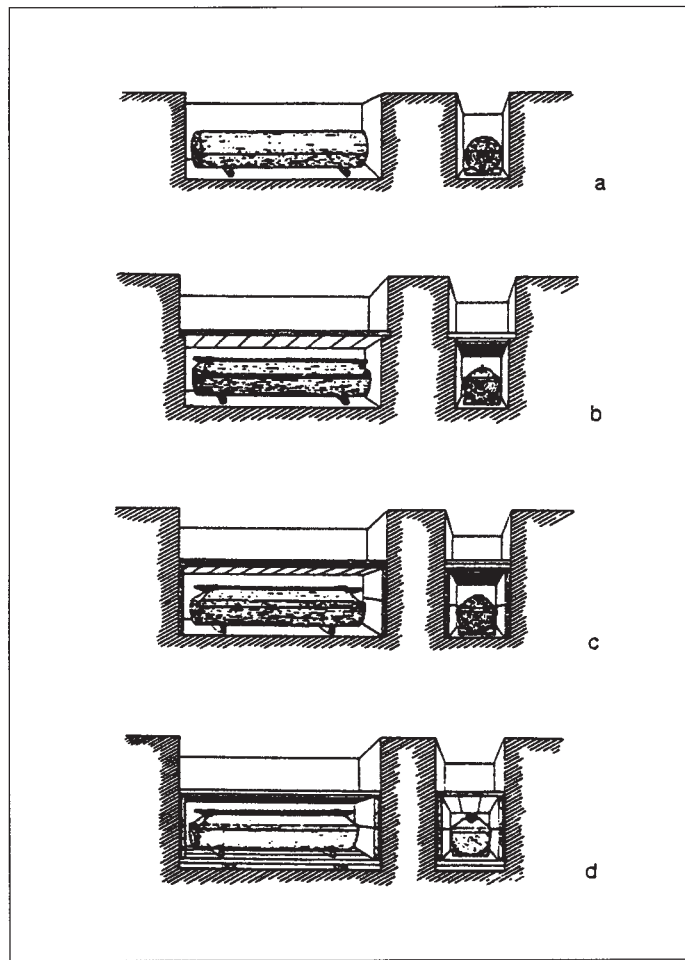
In Chapter 7 (pp. 204–10) Angela Evans allows all the artefacts from the burials in Mounds 5–7 a date in the late sixth or early seventh century, and additional observations might put them into the later part of that bracket. The fragmented silver cup-rim with fluted clips from Mound 5 is typical of the ornamented fastenings of wooden cups and drinking-horns that are dated at the Dover, Buckland, cemetery to Evison's Phase III, that is c. AD 575–625 (Evison 1987: 105). Likewise, the composite gaming-pieces found in Mounds 5 and 6 are dated, by their association with the Taplow burial, to around the turn of the seventh century (Webster and Backhouse 1991: 55–6); although the Style I decorated drinking-horns are evidence that not all the artefacts in this burial were new when buried. Full-sized shears, as in Mound 5, appear in inhumations dated between the seventh to eighth centuries in Anglo-Saxon England (Geake 1997: 96–7). The reticella bead, tentatively attributed to Mound 7, has 'late sixth-century affinities' (Evans in Chapter 7, p. 209). Peggy Guido put it slightly later, identifying it as Type 8xviii(a) and dating it to the seventh century (Guido 1999: 318). Elsewhere, she commented that it 'may be safely placed within the approximate date bracket of 600–700' (letter to MOHC, 1 Oct. 1990). The francisca from Mound 3, with its bearded profile (SHSB I: 113 and 126, figs 66 and 85), incidentally paralleled by an example from Ipswich (Smith 1911: 343, fig. 11), is a derivative of Siegmund's forms 3.1 and 3.2, dated to his Rhineland Phase 6 (AD 570–580/90) and 7 (AD 580/90–610; Nieveler and Siegmund 1999). This dating is also supported by the other items found in Mound 3, the ewer lid and fragment of limestone plaque, which have both been dated by Bruce-Mitford to the late sixth century (SHSB I: 125–6, figs 65 and 84). As frequently emphasized here, the material is neither sufficiently complete nor chronologically sensitive enough to give the precision we desire. But it can be noted that the dating of the artefacts gives a likely date for the high-status cremation burials in the early decades of the seventh century.

In Scandinavia bronze cauldron cremations, although also difficult to date exactly, are believed to come to an end in the second half of the sixth century (Hauken 1991). A date around the mid sixth century is likely for the 'Gotland-cauldron' burial at Brightwell Heath, just a few miles west of Sutton Hoo. Similarly, a date in the last quarter of the sixth century is also suggested for the Coombe cremation (Davidson and Webster 1967: 36). Parallels, therefore, suggest that the bronze-bowl cremations at Sutton Hoo lie at the end of their period of currency elsewhere, or even slightly beyond it. However, the Sutton Hoo group would not be unique in this respect. Asthall, with its Style II decorated 'princely' assemblage, may extend the rite of bronze-vessel cremation outside East Anglia into the early seventh century (Dickinson and Speake 1992), and a date well into the seventh century is possible for the cremations in hanging-bowls (Geake 1999b).

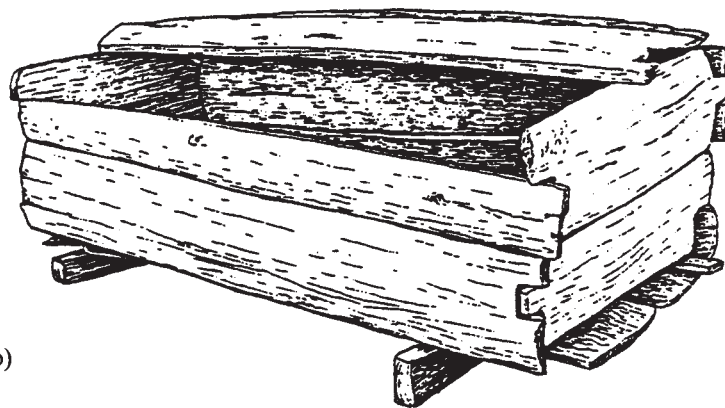
In sum, the cremations in Mounds 4–7 seem to proclaim a burial rite that is prevalent in Scandinavia in the sixth century, but to do so in the later sixth or early seventh century. It thus constitutes a late English manifestation of a rite that had largely come to an end elsewhere.



**Figure 129** Chambers, coffins, troughs and trays: (a) types of body bearer used at Liebenau (Hässler 1999: Abb. 29); (b) dugout trough in grave 3521, Issendorf, Ldkr. Stade, Niedersachsen (Hässler 1994: Abb. 12).



(a)



(b)

Figure 130 (a) Combinations of coffins and chambers used at Oberflacht (Paulsen 1992: 13, Abb. 2); (b) Oberflacht: plank coffin, grave 211 (Schiek 1992: Taf. 84).

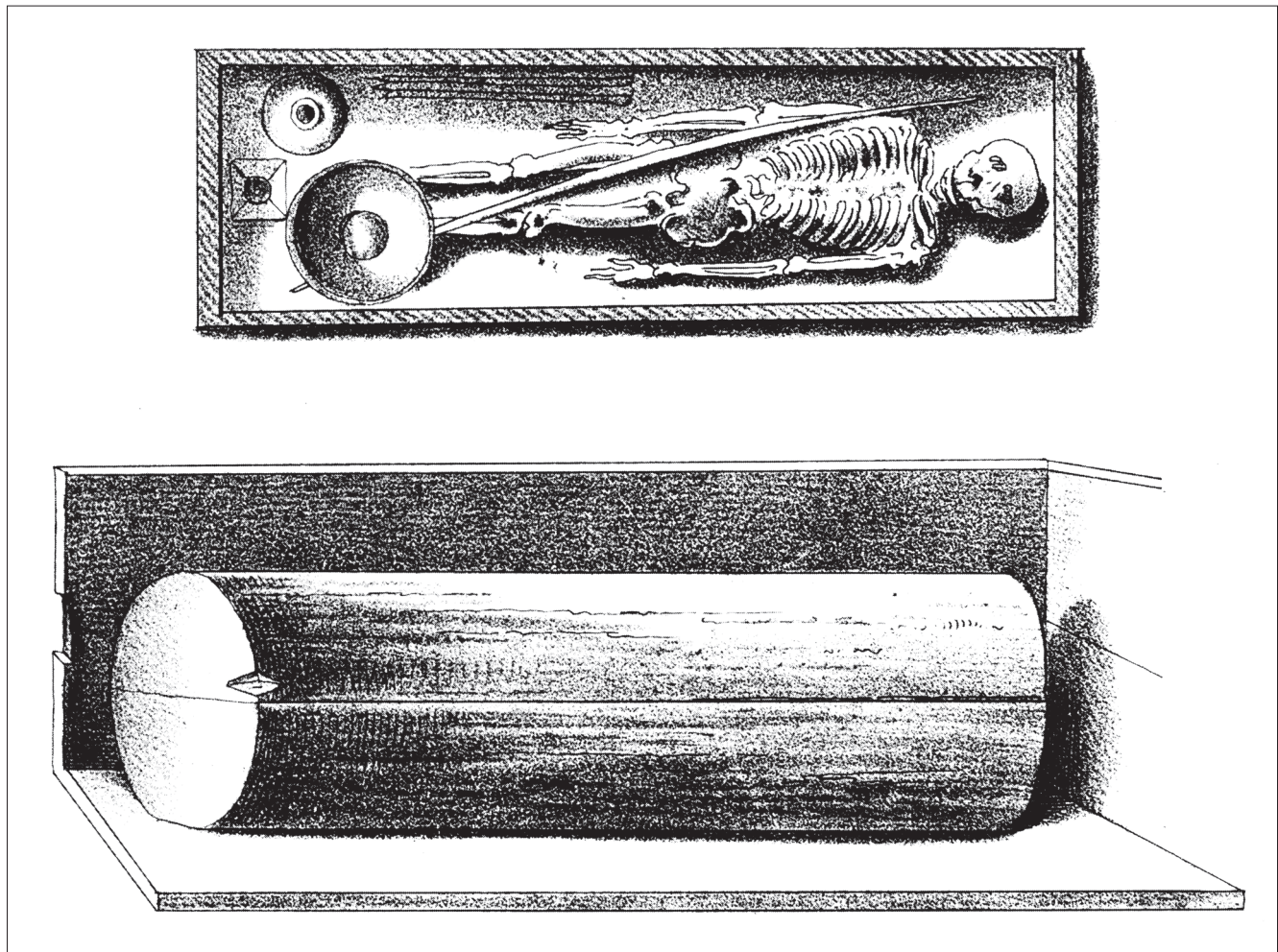


Figure 131 Oberflacht: tree-trunk coffin in chamber, grave 15 (Schiek 1992: Taf. 4).

### Burial rites: inhumations

Inhumation burials at Sutton Hoo include examples ranging from the most simple to the most wealthy and complex. Burials 12, 15 and 16 were furnished with three or four objects only. Burial 12 was a child, and Burials 15 and 16 may have been those of young persons. Mound 17 was the burial of a young man in a coffin accompanied by weapons and a bridle. His horse was buried in an adjacent pit nearby. Mound 14 was the chamber grave of a woman. Mound 2 was the chamber grave of a man, which was covered by a ship c.24 m long. In Mound 1 the chamber was constructed in the centre of a ship, 27 m long, buried in a trench.

Because of the poor preservation of timber, the structure of coffins and chambers is not very clear, even in the better-preserved examples (Mounds 1 and 17). This section begins with a consideration of burial structures in contemporary and related cemeteries on the Continent, which may help to increase confidence in some of the identifications made at Sutton Hoo. Contexts for the horse burial and ship-burials are then discussed, and the section ends with an assessment of the significance of the sparsely furnished graves, Burials 12, 15 and 16.

### Body-bearers and grave structures

Observation and analysis in the field, and later, has resulted in the proposal of a great number of possible grave structures (Chapters 5–6). In Mound 1, the body was laid on a platform, bed or coffin in a chamber in a ship. In Mound 2, the body

originally lay in a chamber beneath a ship. In Mound 14, the chamber may have contained an upholstered bed or coffin. In Mound 17, the body lay in a tree-trunk coffin, with a horse buried in an adjacent pit. Burial 15 used a tray or trough (as with Mound 3, above), and Burial 16 is suspected of including a bed. The ambiguity of the type of structure adopted in the graves has obliged us to use the expression ‘body-bearer’ in an attempt to find a neutral term that might be applied equally to a coffin, bier, platform, bed or boat, structures which are sometimes difficult to tell apart in the absence of preserved wood or ironwork.

Such structures are common in Early Medieval Scandinavia and Continental Europe, where they have often been more clearly observed than at Sutton Hoo. For example, at Heidberg bei Liebenau (fourth to eighth century), where 143 graves have been excavated, many of the dead survived as body-shadows (*Leichenschatten*), and in many cases the shadows of body-bearers were also seen. Among the latter, Hässler could distinguish a plank coffin, a tree-trunk coffin, an open trough and a textile or fur shroud (1999: 37; Figure 129:a). Preservation was exceptional at Fallward, near Feddersen Wierde, on the coast between the Elbe and Weser estuaries, where twenty-four inhumation burials of the fourth to fifth century have been excavated. ‘Body-bearers’ included coffin-chests, tree-trunk coffins and wooden troughs, or simply an oak plank (*‘Eichenbohle’* or *‘Totenbrett’*; Schön 1999: 48). A tree-trunk coffin with ‘end-flaps’ provides a useful parallel to the Mound 17

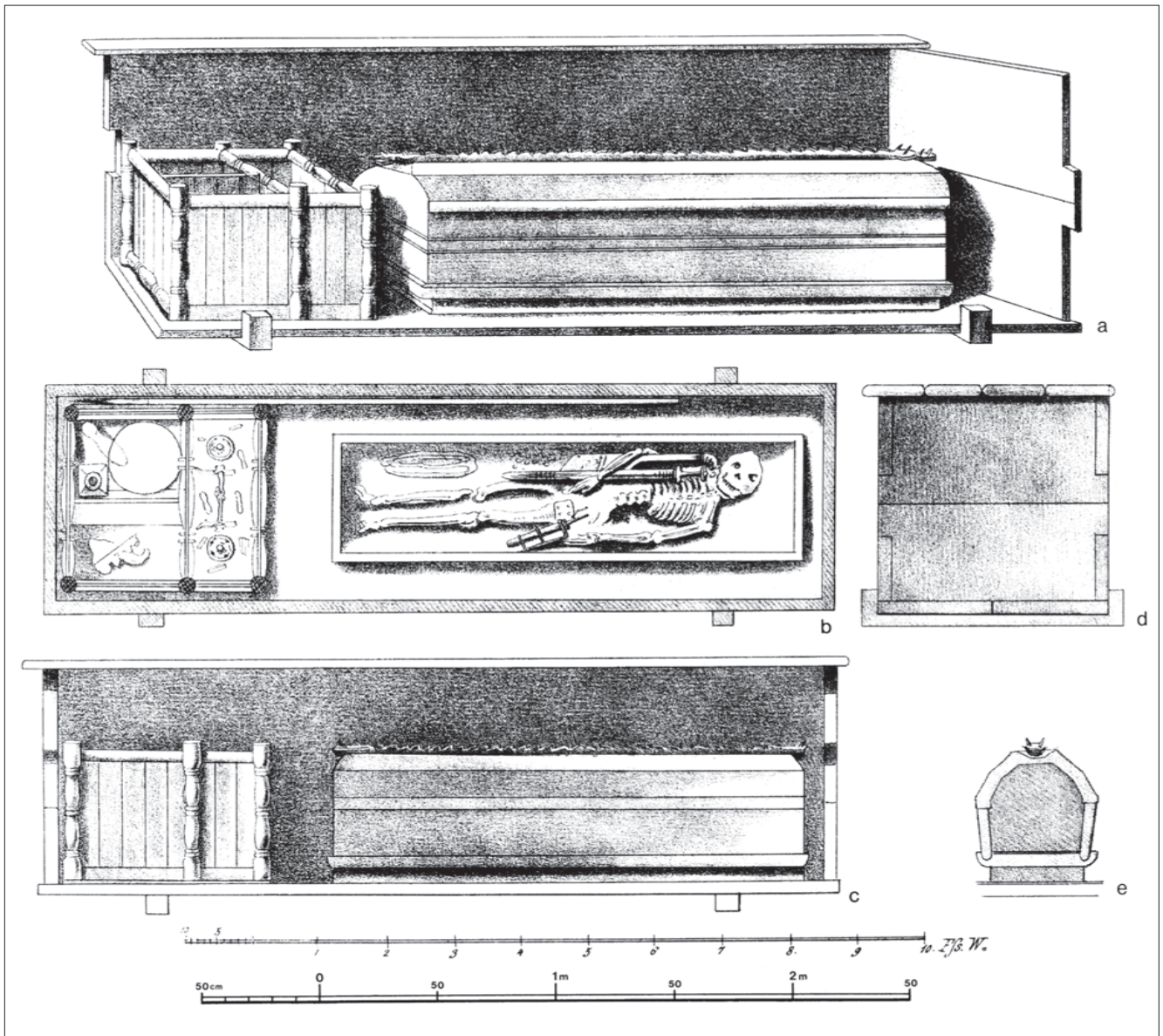


Figure 132 Oberflacht: coffin in chamber with open chest, grave 37 (Schiek 1992: Taf. 8).

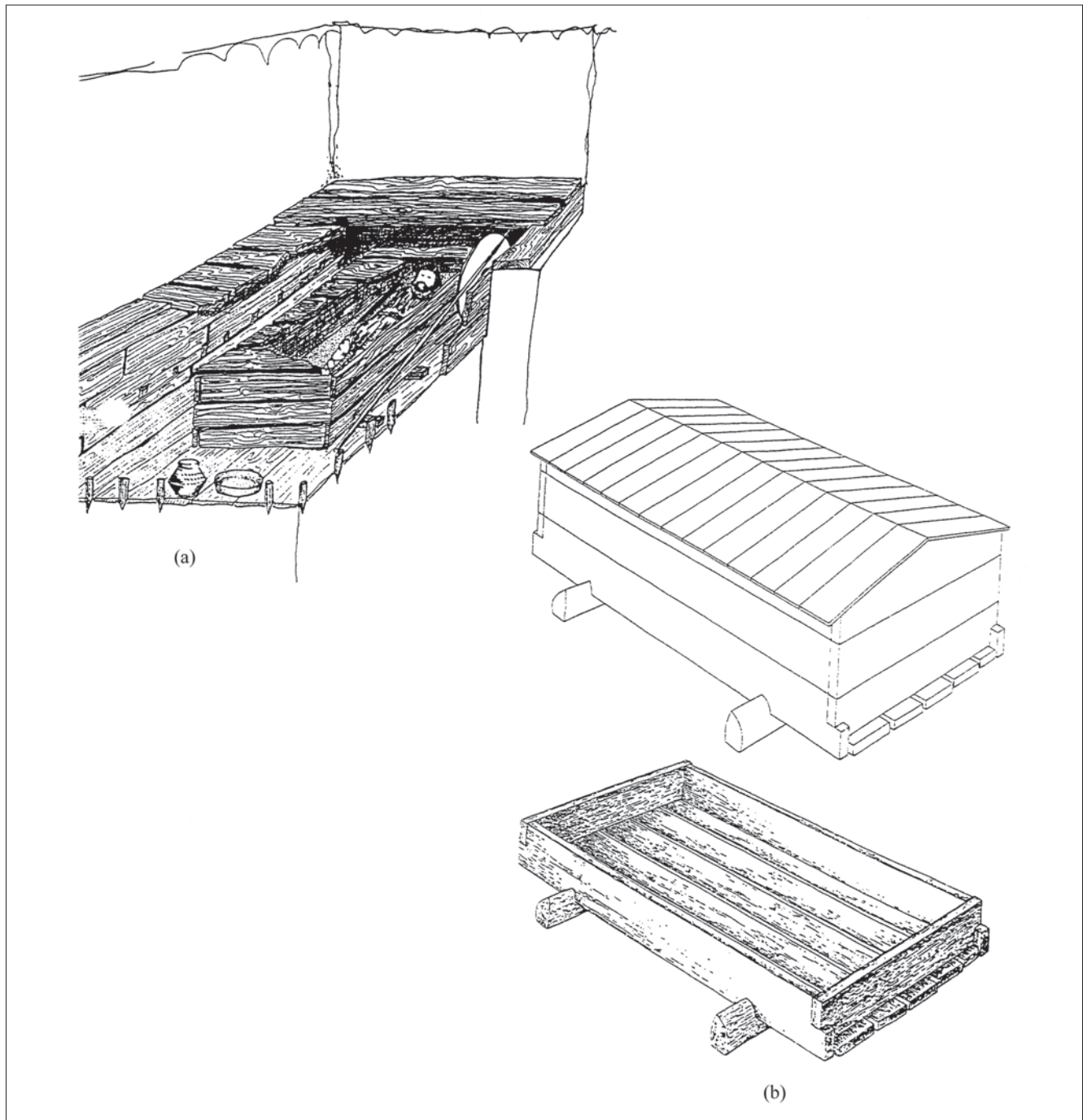
coffin (Schön 1999: 54). In the same cemetery were also two well-preserved boat-burials (see below).

The best-preserved examples of contemporary grave structures currently known are probably those from the sixth to seventh century cemetery at Oberflacht, Baden-Württemberg (Schiek 1992; Paulsen 1992). Coffins here were made from planks, without iron fittings (Figure 130:b), or from dugout tree-trunks (Figure 134:b). Some were placed directly in pits and back-filled, or the pit was roofed with planks, or the coffin was placed in a chamber (Figures 130:a, 131, 132 and 133:a). Some of the tree-trunk coffins had lids carved in relief, with animal heads facing outwards (Figure 134). Some of the coffins at Oberflacht were of chest-like construction (grave 162; Paulsen 1992: 43; Figure 135:c), and were not easy to distinguish from a box-bed (cf. Ramqvist 1992: 49). But others, with lathe-turned rails and post-feet, were more clearly intended as beds, as in graves 84 and 92 (Paulsen 1992: 46 and 51; Figure 135:a), or the prince's grave at Cologne (Doppelfeld 1964). Graves 37, 46, 84 and 92 at Oberflacht also had open chests or railed containers at the foot of the coffin or bed, so extending the effective length of the body space to the length of the chamber (3.3 m for grave 37,

see Figure 132). In this context, we may note that such an extension could have contained clothes, thus providing a compromise to the coffin argument in Mound 1 (see Chapter 6, p. 192). Herschend (2001: 69–71), proposing a connection between a furnished chamber and the hall, would expect some wooden construction, such as a high seat near the cooking equipment in a high-ranking grave.

Where preservation is poor, planks are indicated only by thin lines, and it is tempting to complicate the structure by inference. A so-called coffin may actually be a trough with no lid, as at grave 352I, Issendorf (Hässler 1994: 31, Abb. 12; Figure 129:b). A grave structure might be a hybrid between a chamber and a coffin, as at grave 137 at Tauberbischofsheim-Dittigheim (Figure 133:b). There, the bottom half constituted a planked 'trough' supported on cross-members. With partial survival, certain aspects of such a structure would prevail and influence the interpretation towards a certain 'type'. In reality, the variety of structures might be very great and not easy to classify from a partial sighting.

Beds have been distinguished from coffins by the square feet at each corner (as at Oberflacht 162; Figure 135:a) or by the



**Figure 133** (a) Oberflacht: reconstruction of plank coffin in chamber in grave 211 (Stork 1998:Abb. 475); (b) Tauberbischofsheim-Dittigheim: grave structure from grave 137 (Stork 1998:Abb. 476).

parallel planking of the bed base (Figure 135:b). The Högom chamber, which was lifted in its entirety in the field and excavated upside down, produced a clear picture of the bed base (Ramqvist 1992: 47–50, pls 12 and 13). The horizontal timber slats were 30–100 mm wide and spaced at between 220 and 400 mm; they presumably supported a mattress. Eyelets were present at Högom, which suggested, to the excavator, a link with the early English series of beds assessed by George Speake in his study of Swallowcliffe Down (1989). The English examples have so far been signalled by the presence of eyelets and other pieces of metal shown by Speake to be distinctive, to date to the seventh century, and to be used by both women and men (1989: 110). The Sutton Hoo material contains no diagnostic metalwork (except one possible eyelet in Mound 1, see Chapter 6, p. 193, Table 23), and the other examples proposed for Burial 16, and

Mounds 1 and 14, remain inferential. It may be noted that the lady in the well-preserved Grave 75 at Tuna in Badelunda, Sweden, lay on a mattress of straw or hay on a wooden stretcher, an arrangement which would leave little trace at Sutton Hoo (Nylén and Schönback 1994: 147).

In the Oberflacht cemetery, and elsewhere, both coffins and beds were placed inside wooden chambers, which were widely deployed in northern Europe. In a recent review, Frauke Stein found that the size of chambers varied from about 1 × 2.2 m for the smaller to 3 × 3 m for the larger, with outsize chambers being up to 5 m wide and 6.5 m long. The larger chambers are used for persons of high rank throughout the Early Medieval period into the seventh century, while the smaller become common only at the end of the sixth century (Stein 1993: 21). Chambers most frequently contain a plank coffin or a tree-trunk coffin, or, more

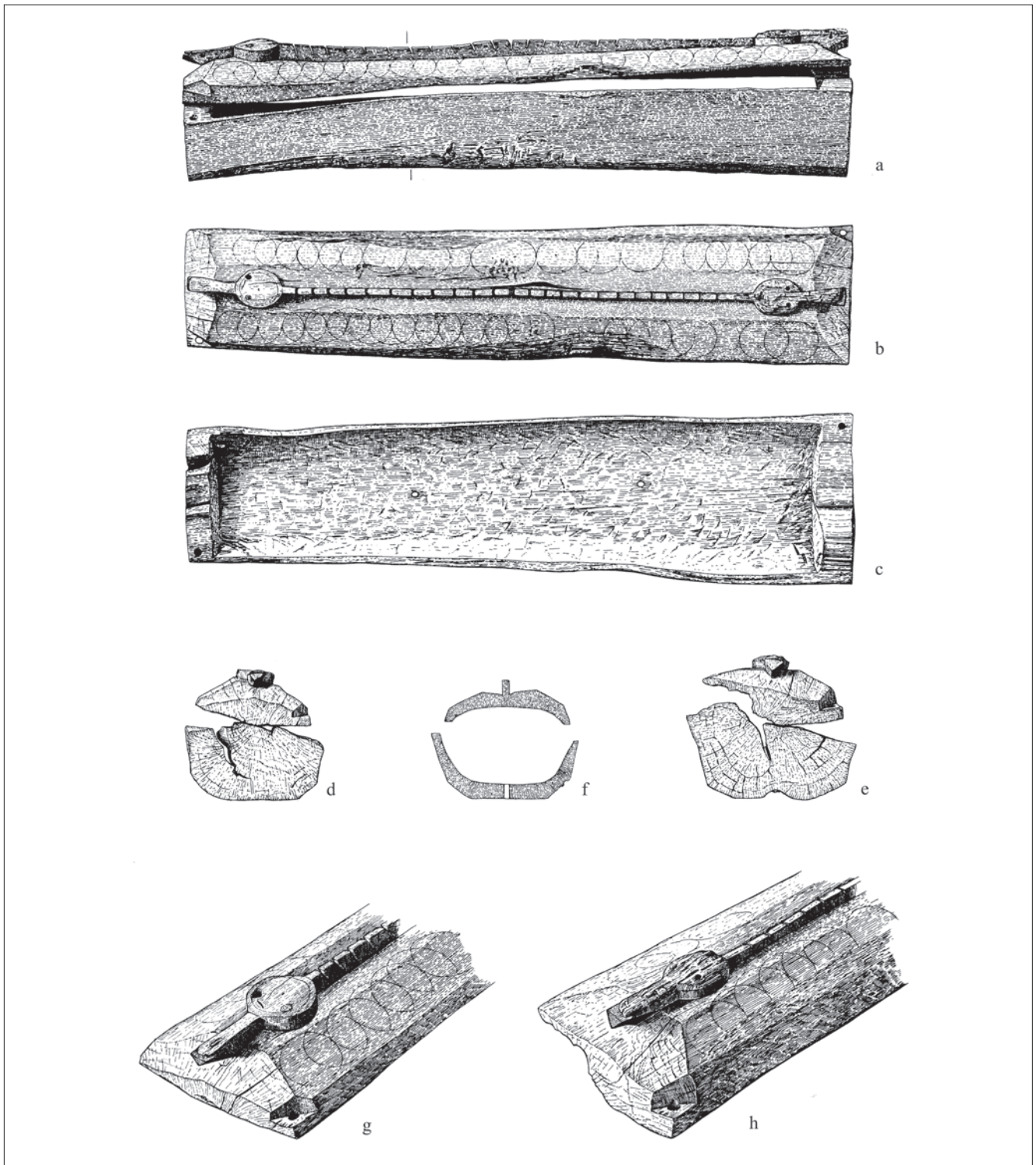
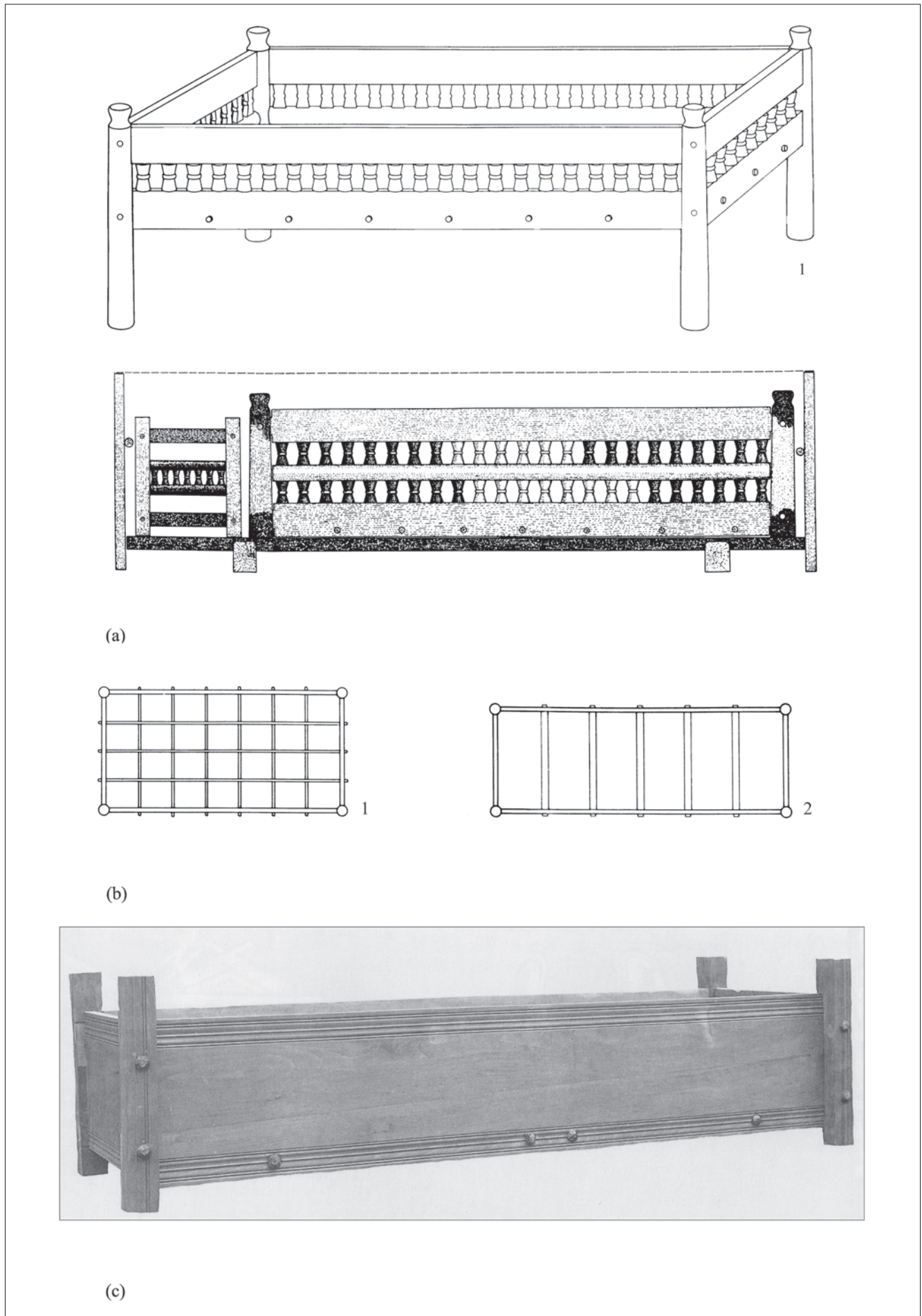


Figure 134 Oberflacht: tree-trunk coffin, grave 8 (Schiek 1992: Taf. 11).

rarely, another type of body-bearer (Stein 1993: 9). Predominant among the coffin-in-chamber burials is the Morken type, where the body lies in a coffin at one side of the chamber. At Morken the burial was located inside St Martin's Church, and the chamber, 1.8 × 2.65 m in plan, was built of oak planks laid horizontally, edge-on-edge. The coffin had sides made of single planks joined with iron corner pieces. It measured 2.05 × 0.65 m, and was placed along the north wall of the chamber. A sword, some knives and a belt were placed inside the coffin, a shield stood on edge between the coffin and the north wall, and in the space south of the coffin were a tub, horse harness, dishes and clothing (Böhner 1954: Abb. 17). In her analysis, Stein found that

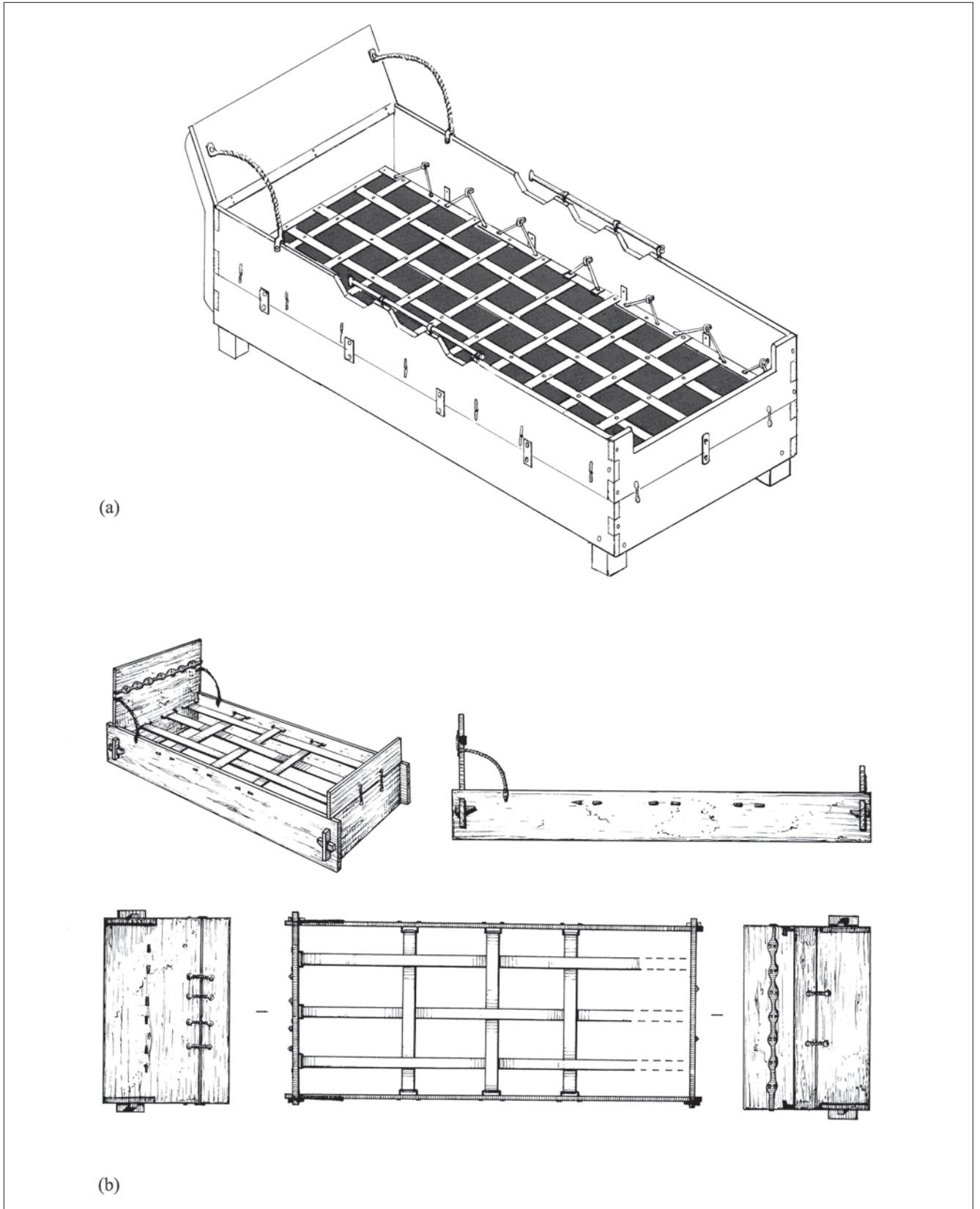
Morken-type chambers occur in both Frankish (west of Rhine) and Alamannic (east of Rhine) regions, and did not amount to a specific cultural marker.

Ultimately, the roots of the use of a furnished chamber may lie in Roman practice. Reviewing the changing burial customs in Cologne during the third to seventh centuries, Nasumann-Steckner quotes documentary evidence for burial on a wooden bier cited by Gregory of Tours VII.1 (1997: 156) and for *lecti funebri* – high funeral beds with bronze ornamental fittings or bone trimmings (1997: 146). Actual archaeological examples include coffins placed along one side of the grave pit, wooden biers and wide graves reinforced with wooden braces (chamber



**Figure 135** Oberflacht beds: (a) post-bed from grave 92 (Paulsen 1992: 46); (b) bed-base from grave 92 and grave 84 (Paulsen 1992: 47); (c) box-bed from grave 162 (Paulsen 1992: 43).





**Figure 136** (a) Swallowcliffe Down bed (Speake 1989: 95, fig. 81); (b) Shudy Camps box-bed, grave 29 (Speake 1989: 101, fig. 84)

graves) containing the coffin and grave goods. Especially long graves date from the mid sixth century. Herschend would prefer to see the introduction of chambers for princely graves as analogous to, and contemporary with, the introduction of the hall, and to read both as part of a reaction to the pomp of the Roman Empire (2001: 92–3).

This brief review shows that the burial of a person in a bed or coffin inside a chamber was widely practised and had an extensive repertoire. The difficulty is to distinguish specific usage from partial wood stains. Sutton Hoo is not alone in having this problem. In her excavations at Butley Corner, a few miles east of Sutton Hoo, Valerie Fenwick found a similar range of bearers (Fenwick 1984: 37): 'Frequently the coffin-stain occurred as a dark line where the base of the side-walls had been; sometimes 1–4 nails were found on this outline. Occasional iron hinges showed that some coffins were lidded. The most interesting coffins were U-shaped in cross-section, some apparently consisting of a narrow trough beneath the corpse. In a few instances this type of coffin curved also along its longitudinal axis and was boat-shaped. In some cases one end was truncated.' Where made from a single piece of wood which has been hollowed out and then partially preserved, trough, coffin and boat will look similar in the ground, although at Slusegård, on Bornholm, Scandinavian excavators have succeeded in distinguishing the lines of coffins from those of boats (see below).

Certainly there would be nothing surprising about a coffin or bed in the Mound 1 chamber (see Chapter 6, p. 192), apart from its size, although both chamber and ship were oversized too. If Mound 1 had no coffin, the use of a railed container as at Oberflacht 37 (Figure 132) might provide an alternative way of stabilising the pile of clothing beneath the Anastasius dish (see Chapter 6, p. 191). Of the three Sutton Hoo chambers, Mound 1 at 4.5 × 5.6 m is clearly extra-large, and Mounds 2 (3.8 × 1.5 m) and 14 (2.65 × 1.90 m) fall into Stein's larger category. The tree-trunk coffin in Mound 17, the beds in Mound 14 and Burial 16, and the troughs or boats in Mound 3 and Burial 15, all have good precedents, even if at Sutton Hoo their manifestation was barely determinant.

### **The Mound 14 'bed-burial'**

The Mound 14 burial is suggested as that of a high-status woman, on the basis of the use of a mound and a chamber, and the presence of an iron and copper-alloy *châtelaine* amongst other grave-goods (see Chapter 7, p. 211). Fragments from an array of silver items were identified as a bowl, mounts from a drinking-cup, a purse-lid, buckle-loops, a casket and dress-fastener. There were also fragments of embroidered textile, two iron knives and two copper-alloy pins. The silver bowl signifies the elevated status of this burial, on account of the extreme rarity of such artefacts in female burials (East 1983; Geake 1997: 92), as does the evidence for embroidered materials (see Walton Rogers, p. 267), on the grounds that the activities of embroidery and tapestry were reserved for aristocratic and royal women (Gräslund 1999: 97).

An example local to Sutton Hoo perhaps reveals something of the wealth that could have accompanied the person commemorated in Mound 14. At Boss Hall, Ipswich, a woman was inhumed with a knife and a satchel at her breast; found in the satchel were a composite brooch, four gold disc-pendants, two bulla pendants set with a garnet and glass, some glass beads, a pierced gold solidus of Sigebert III, a *châtelaine* of

linked iron rods and a silver toilet set attached to a chain of silver rings. This burial was assigned by a Series B silver sceatta to a date after c. AD 690 (Webster and Backhouse 1991: 51–3; Geake 1997: 177).

It is suggested that the eighty-seven iron tacks found in the Mound 14 chamber might relate to a bed, an upholstered couch or a coffin (see Chapter 5, p. 112). A comparable rite is that at Swallowcliffe Down, Wiltshire, where an adult woman was laid on a bed measuring 1.83 × 0.84 m inside a chamber, which in this case was inserted into a pre-existing Bronze Age barrow (Speake 1989; see Figure 136:a). She was accompanied by a satchel decorated with an elaborate 'Style II' disc-mount with alternating gold and silver repoussé foils. Inside a maple-wood casket, placed near the left leg, was found a silver spoon, a comb, five silver safety-pin brooches, a pair of iron knives, some beads and a device for sprinkling water. In addition, the grave also contained two glass palm cups and two buckets, representing a drinking assemblage (Speake 1989). On the evidence of the disc-mount, a date in the second half of the seventh century has been suggested for this burial (Youngs 1989: 54–5).

Five (of a total of eleven) possible English bed-burials are from East Anglia. They include two at the Edix Hill (Barrington A) cemetery in graves 18 and 60 (Malim and Hines 1998: 267–8), one each at Shudy Camps grave 29 (Figure 136:b) and Cherry Hinton grave 4, all in Cambridgeshire, together with one at Ixworth, in Suffolk. Six of the bed-burials have been identified as those of females, against two, at Lapwing Hill, Derbyshire, and Shudy Camps 29, which have been identified as the graves of males (Speake 1989: 110). The grave goods in the majority of these burials confirm the high status associated with the rite. The burial at Ixworth, for example, contained a gold and garnet pectoral cross and a much damaged *cloisonné* brooch (Speake 1989: 101; Webster and Backhouse 1991: 26–7). The female grave 18 at Edix Hill contained two iron knives, a bucket, a comb and an iron weaving-batten made from a cut-down sword, with a horn hilt and possibly a leather scabbard (Malim and Hines 1998: 52–3, figs 3.38 and 3.71). Where grave assemblages survive, they suggest a date within the seventh century for bed-burial in England. In addition, high status is also suggested by the fact that eight had evidence of being covered by barrows.

As it survives, Mound 14 is not the most splendid of the examples of high-status female burial so far known. But if not buried on an upholstered bed, she was at least interred in a chamber, and the silver items, embroidery and *châtelaine* suggest that she was a prominent person of marriageable age. In line with the other examples cited, a date within the seventh century can be suggested for Mound 14, with perhaps an inclination towards its middle or second half.

### **The Mound 17 horse burial**

Under Mound 17, the burial of a man was accompanied by a horse buried in a separate pit to the north. Originally, both burials were probably covered by one mound. The horse was placed on its right side, facing the man's grave, and the horse's bridle and saddle were placed inside the man's grave at the west (head) end. The man was equipped with a sword, a shield and two spears, as well as a cauldron and bucket (see Chapter 5, p. 115ff). The inhumation of a horse with an armed rider has a special ceremonial quality, and they may be referred to as 'horse-and-warrior graves'. Horses also featured among the cremated

Table 43

## East Anglian horse-and-warrior inhumations

Burial	Structure	Horse	Harness	Weapons	Feasting equipment	Date
Sutton Hoo, Mound 17	mound and coffin	in separate pit	at head of coffin	a sword, 2 spears and a shield	a cauldron, a tub, a bronze bowl and pot	early seventh century (Style II)
Snape	boat?	head separated	on horse	a sword and 3 spears	tub	early seventh century
Lakenheath I (Eriswell 104 4116)	mound (?) and coffin	in grave	on horse	a sword, a spear and a shield	tub	sixth century (Style I)
Lakenheath II (Eriswell 046 0355)	mound (?) and coffin (?)	in grave	on horse	a sword, a spear and a shield	pot	sixth century
Little Wilbraham	?	?	?	a sword and a shield	?	sixth century
Great Chesterford 142	flat grave	in grave	on horse	a spear and a shield	pot	sixth century
Warren Hill	mound	?	?	spear, shield	?	?

bone in Mounds 3, 4 and 7, and possibly in Mounds 5 and 6 (above), so these too could have been horse burials in the sense that a horse was placed on the pyre. Where weapons were present (as in Mound 3), a cremation might also qualify as a 'horse-and-warrior' burial.

Horse burial has been reviewed, mapped and assessed by Müller-Wille (1970–I, with a survey of horse burial in England by Hayo Vierck), and studied more recently by Oexle (1984, 1992; and for horses, harness and riding techniques see Sundqvist 2001). In her study of harness in graves, Oexle showed that horse burial began in the fifth century, although its ultimate origin was probably in earlier eastern-European burial practice (Arrhenius 1983; Oexle 1992; O'Connor 1994). An important moment for the rite was marked by the burial of Childeric (died AD 482) at Tournai, in which a horse with a decorated bridle accompanied the dead king and twenty-one other horses were buried in three pits at the edge of the putative burial mound (Müller-Wille 1998: 16). In the following centuries there were notable concentrations of horse burials associated with military equipment along the Rhine. By the later sixth century the rite was found all over the upper Rhine, Weser and Elbe, continuing until about AD 700 in the Rhineland (Müller-Wille 1970–I: Abb. 1 and 2; Oexle 1984: figs 4 and 8; 1992, II: Taf. 214). From the Continent, the rite spread to Scandinavia, where it maintained an association with a warrior elite (Müller-Wille 1999: 18; Sundqvist 2001). An example is boat-grave 7 at the Valsgårde cemetery, in which the remains of four horses with bridles formed part of the overall assemblage (Arwidsson 1977; Figure 138).

Horses might be buried with the bit in the mouth as, for example, at Rügenach, near Koblenz, middle Rhine (grave 146; Oexle 1992, II: Taf. 207, Abb. 297), and in the same grave as the dead man; or man, horse and harness might be buried separately. When the bridle was placed separately, it is usually found at the foot of the grave (for example, Oexle 1992, II: Tafn 204–6). One of the few exceptions is grave 9 at the Alamannic Niederstotzingen cemetery, in which an elaborate 'Style II' harness with gilt and silver mounts, rivets and strap-ends was placed at the right of the head of an adult male (Oexle 1992, I: 150–I; II: Tafn 47–8 and 206, Abb. 102). Oexle identified an important change that took place about AD 600, when the bridle began to be deposited with the rider rather than with the horse, the horse being placed in a separate pit (Oexle 1984: 123). This

change was also reflected in the Swedish boat-graves at Vendel and Valsgårde, where bridles were placed on the horses' heads in the earliest phase, but placed separately in the ship from around AD 630 (following the dating of Arrhenius, see below). At Valsgårde it was suggested that the separation of the harness from the horse might be due to its exceptional value as a parade harness (Arwidsson 1983: 76). Whether with the rider, or separate, Oexle concluded that the horse is generally treated as part of the equipment for the dead person, not as an animal sacrifice or honoured companion (1984: 148–50). In this interpretation, even decapitation is viewed as just a method of killing the horse, rather than a ritual activity, although it was hardly the easiest of methods (Williams 2001b: 201).

#### Horse burial in East Anglia

Horse-and-warrior inhumation burials are rare in Anglo-Saxon England, in contrast both to those on the Continent and to the English examples of horses associated with cremations (Hills 1998: 149; Ravn 1999; and above). Vierck's survey of horse burial in Anglo-Saxon England suggested some twenty-nine instances in which whole or parts (such as limbs and teeth) of horses had been included in burials (1970–I: Abb. 48), and other sites can now be added to his inventory (Filmer-Sankey and Pestell 2001: 256; Fern, in press a). In addition, further sites have produced pieces of harness that imply a horse and/or bridle burial; for example, items of horse gear were identified at Loveden Hill, Lincolnshire (bowl 4: Richards 1980: 394, fig. 14) and at the Faversham cemetery, Kent (Speake 1980: pls 15g and 16h), while two burials of whole horses were recorded at Icklingham and Mildenhall, although their associations are unclear (West 1998: 274). On this basis, instances of horse interment and finds of harness in burials and cremations have been recorded for practically all of the regions of Anglo-Saxon England (Vierck 1970–I: 218–20; Filmer-Sankey and Pestell 2001: 257). Given the poor recording of many of the earlier finds this distribution may have been skewed by recent discoveries, and the horse-and-warrior burial rite may have been even more widespread, especially if cremations are included.

It is possible to isolate a group of six burials datable to the Early Medieval period in which horse, harness and weapons were certainly present. Including Mound 17, these 'horse-and-warrior' graves are Great Chesterford, Essex (grave 142, horse 2:

Evison 1994: 29–30 and 203, fig. 83); Little Wilbraham, Cambridgeshire (grave 44: Evison 1967: 83 and 105, fig. 2); Snape, Suffolk (grave 47: Filmer-Sankey and Pestell 2001: 102–11); and the two recently discovered at Lakenheath (Little Eriswell), Suffolk (Caruth and Anderson 1999: 244; S. Anderson: pers. comm.). A seventh, less certain example, is the horse from Warren Hill, Suffolk, which Smith associated with a ‘warrior’ found with a spear and shield (1911: 341). It is notable that all these examples of horse-and-warrior inhumations come from regions within East Anglia, and four, including Mound 17, were found in Suffolk.

These horse-and-warrior inhumation burials share a number of characteristics that are summarized in Table 43. At Great Chesterford, and in both the Lakenheath graves, the horse and the warrior were buried together in a large grave, in each case with the horse on the left-hand side of the deceased man and with the bit in the horse’s mouth (Evison 1994: fig. 83; Caruth and Anderson 1999: 247; S. Anderson: pers. comm.). The inhumation from Snape revealed only the head of a horse, in association with a bridle, a rite defined by Vierck elsewhere as special (1970–1; Filmer-Sankey and Pestell 2001: 256). A Continental example is given by the decapitated horse found in a grave containing harness at Staubing bei Weltenburg on the Danube, near a wooden church of the seventh century (Oexle 1984: 138). At Snape, harness fittings suggest that the reins led down to the hands of the dead man. However, it is possible that the rest of the horse had been ploughed away, since it appears to have been buried well above the floor of the grave (Filmer-Sankey and Pestell 2001: fig. 75).

The rite of horse burial has long been suggested as indicative of high status (Müller-Wille 1970–1), and the grave goods in the English examples endorse a theme of the high-ranking male warrior. Three of the horse-and-warrior burials from Suffolk (Sutton Hoo, Lakenheath I and Snape) included pattern-welded swords, with those at Sutton Hoo and Snape both having horn grips. A sword and sword-bead were found in the Little Wilbraham and Lakenheath I burials; while a possible ivory bead recovered from the Lakenheath II burial may be a sword-bead (S. Anderson: pers. comm.). Spears were found in six of the burials, and shield bosses in all. The food-containers in three of the burials from Suffolk also suggest high social rank. Large iron-bound buckets were found in the Lakenheath I and Snape burials (Caruth and Anderson 1999: 247; Filmer-Sankey and Pestell 2001: 106). Mound 17 contained a rich vessel assemblage that included a small iron-bound bucket, a pottery vessel, a small bronze bowl and a ‘Gotland’ cauldron. The association of weapons with all of the graves is a strong indicator that these were the burials of adult males (Härke 1992a). This is confirmed where osteological analysis has been undertaken, as at Great Chesterford, Lakenheath I and II, and Sutton Hoo (Evison 1994: 26; Caruth and Anderson 1999; S. Anderson: pers. comm.; Lee in Chapter 7, p. 280). At Great Chesterford, Sutton Hoo and Snape young males of between twenty and thirty are suggested (Evison 1994: 111; Filmer-Sankey and Pestell 2001: 102).

The high social status of these burials is further signalled by the physical effort expended on their grave structures, with large graves and mounds. Mounds were probably erected over the graves at Lakenheath I and II, which were set within a subrectangular ditch and ring ditch, respectively (Caruth and

Anderson 1999: 245; S. Anderson: pers. comm.), while that at Warren Hill was associated with a Bronze Age burial mound (Smith 1911: 341). In all of the Suffolk burials there is evidence to suggest the deceased may have been buried in a container, which took the form of coffins at Sutton Hoo and Lakenheath, and a boat at Snape (Filmer-Sankey and Pestell 2001: 102; Caruth and Anderson 1999: 246; S. Anderson: pers. comm.). In three cases the horse-and-warrior burials were also associated with the burials of infants and juveniles. At Lakenheath II a child’s grave was found within the ring ditch, while a concentration of children’s burials was noted around the Lakenheath I horse-and-warrior grave (Caruth and Anderson 1999: 250; S. Anderson: pers. comm.). Similarly, at Great Chesterford a cremation containing a juvenile was subsequently inserted centrally, and directly above, the inhumation (Evison 1994: 29).

#### *Sequence of the East Anglian horse burials*

The East Anglian horse-and-warrior graves exhibit three different types of bridle-bits. They are part of an Anglo-Saxon corpus of thirty-eight examples, which may be compared to the much larger sample of some 600 bridle-bits from Continental Europe (Oexle 1992: Fern in press b). Those from Snape and Lakenheath II have a simple ring-snaffle, paralleled at Marston St Lawrence, Northamptonshire (Dryden 1882: pl. XXV; S. Anderson: pers. comm.), Chamberlain’s barn II, Bedfordshire, and by two from Garton II, Yorkshire (Geake 1997: 101, fig. 4.43). These are forms of *Ringtrense*, a style of bit found widely on the Continent, but which is not closely datable (Oexle 1992, I: 19, Abb. 2). The second group comprise the bridle-bits from Lakenheath I, Great Chesterford (Figure 117) and Little Wilbraham. These are related to the Continental *Knebeltrense* (Oexle 1992, I: 18, Abb. 2) in that they have a *Knebel*, a vertical bar set at right angles to the *Trense* (bit), but they are not directly paralleled across the Channel. On the English examples, the vertical bar has an axe-shaped lower terminal and a lozenge-shaped upper terminal. According to the assemblages in the Continental graves, this form of *Knebeltrense* Form I bridle-bit belongs mainly to the sixth century. Vierck offers a mid sixth-century date for the *Knebeltrensen* in Vendel XIV and XII, while the *Ringtrensen* in the other Vendel graves were dated between the late sixth and early seventh centuries (Vierck 1970–1: 191–3, Abb. 53; see below, Table 44).

The Mound 17 bridle appears to represent a development from the Great Chesterford type. The vertical bar has the lower axe-shaped terminal, but the upper terminal is a disc rather than a lozenge. Both terminals are decorated with ‘Style II’ ornament. The bit appears not to be paralleled exactly on the Continent, although it shares certain elements with other *Knebeltrensen*. An example is the brass and silver inlaid bridle-bit from Hintschingen, on the Lower Rhine (grave 14). This has a D-shaped lower terminal decorated with inlaid ‘Style II’ bird heads, and an upper terminal that is a multi-faceted knob (Oexle 1992, I: 138; II, Taf. 31).

It can be argued that a bridle would be made especially to fit the horse, so that this particular piece of equipment should be ‘up-to-date’ and align closely with the date of the grave (Arrhenius 1983: 67). However, it has also been noted that at Vendel and Valsgärde many of the most splendid objects were

worn or incomplete, suggesting they had been selected from an old collection of such things (see below). If so, some of the objects might have been older than the grave. In this respect, it may be significant that the Mound 17 bit was relatively small (Chapter 7, p. 230) and that some straps may have been replaced (p. 236).

The sequence of the East Anglian horse-and-warrior graves can be refined using other grave goods. Great Chesterford 142 is dated *c.* AD 500–75 (Evison 1994: fig. 104) and Lakenheath I/II can be assigned a date in the middle third of the sixth century by their shield boss forms, and the bichrome Style I ornament on the Lakenheath I harness (Dickinson and Härke 1992: 10–11, 23, fig. 16). A similar date is suggested for the Little Wilbraham burial by its sword-bead (Evison 1967: 64–5 and 105, fig. 2). At Snape grave 47, the group 6 shield boss and a radiocarbon date calibrated at *c.* AD 543–652 suggested a date around AD 600 to the excavators (Filmer-Sankey and Pestell 2001: 256). Angela Evans (see Chapter 7, p. 243) argues for a date of manufacture for the Mound 17 objects in the second half of the sixth century, perhaps even in the third quarter (AD 550–75). However, it can also be argued that the Mound 17 harness-mounts would fit stylistically within a decade either side of AD 600, by drawing on Avent's (1975: 62) and Høilund-Nielsen's (1999: figs 6 and 10) dating of the Kentish Class 7.1 keystone garnet disc-brooches. This is also the date suggested by the Group 6 shield boss (Dickinson and Härke 1992: 20–1 and 23, fig. 16) and the *cloisonné* belt-suite, with its triangular belt-plate (Evison 1963). The radiocarbon date for the horse suggests the first quarter of the seventh century (Ambers, Chapter 3, p. 54), a date within the established typological ranges for the burial assemblage. If an earlier date of manufacture for the bridle is preferred, it should be noted that several of the straps in the bridle had been replaced (see above), suggesting that some of the metal components may have served for several decades before burial. A deposition date after AD 600 is compatible with Oexle's observation (cited above) of a change at that time that saw the bridle placed in the grave of the dead person, and the horse buried in a separate pit.

It is significant that three of the sixth-century burials have a distinctive Anglo-Saxon form of bridle, from which developed the bridle form seen at Mound 17. The existence of a horse culture in Anglo-Saxon England independent of Continental fashions, though influenced by them, may therefore be inferred. Evans' study (see Chapter 7, pp. 238–41) refers the style of the Mound 17 bridle to the Scandinavian roots noted by Høilund-Nielsen (1999: 194), and at the same time acknowledges the Continental influence, while Fern would emphasize the familiarity with Kentish ornamental vocabulary and an ostensibly Continental burial rite. It seems likely that the Mound 17 saddlers were competent in both northern and eastern genres, and deployed them with a particular East Anglian originality. With its mound of 14 m diameter and 'princely' grave assemblage, the Mound 17 burial is the richest of the English horse-and-warrior burials so far known. It manifests a burial rite that had a history in East Anglia as well as in the Rhineland, with a common expression of warrior status.

### **Boat-burial and ship-burial (Mounds 1 and 2)**

The rite of burial in boats and ships has been recently reviewed for Britain (Carver 1995b) and in northern Europe (Müller-Wille 1995). In general, 'boat-burial' refers to the use of a small vessel around

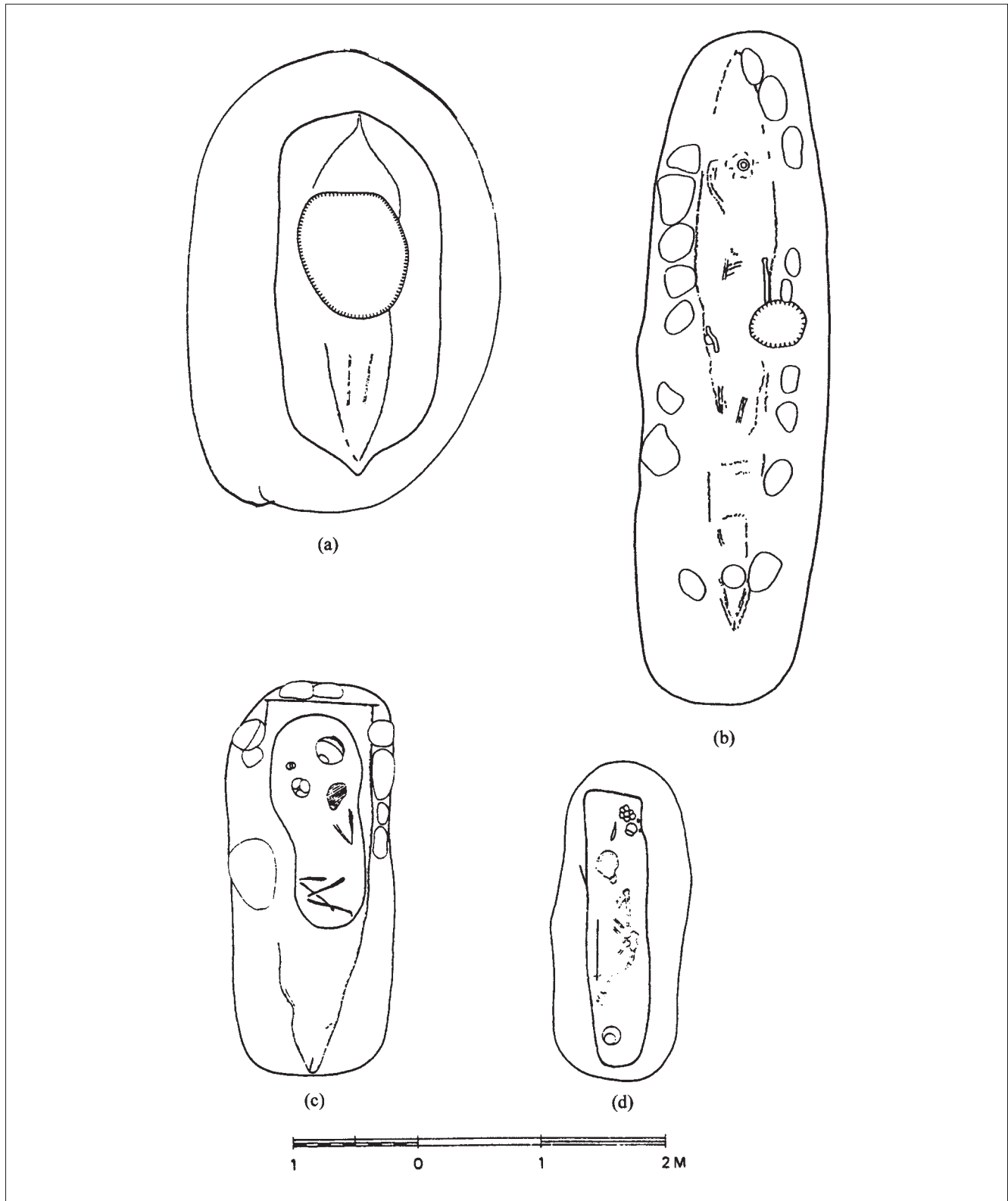
3–10 m long, while 'ship-burial' is a term reserved for vessels longer than 10 m and clinker-built with iron rivets – although the terminology is not used consistently. At Sutton Hoo there were no certain boat-burials, although the troughs or trays in Mound 3 and Burial 15 have been considered as possible parts of boats (see Chapter 4, p. 69 and Chapter 5, p. 141). A ship was used in Mound 1, where a chamber was constructed in the ship, and in Mound 2, where the ship lay over the top of the chamber (see Chapter 6).

Early Medieval ships in northern Europe are generally easier to find than boats, since they are held together with iron rivets which survive when wood does not. Smaller boats may be made from dugouts, in which case they are hard to tell apart from coffins or troughs. Dugout boats may be log boats, where the buoyancy of the wood is exploited, or 'pods', where the wood is expanded, using heat, into a thin-walled hollow craft. Alternatively, a boat may be constructed of planks that are set edge-to-edge and sewn with fibres, or made of leather stretched on a wooden frame. There are therefore several kinds of boat, of increasing technical complexity, which do not require iron rivets (Johnstone 1988).

In conditions where wood does not survive, pod and sewn boats may leave a boat-shaped stain in the ground. At Slusegård on Bornholm, forty-three boat graves were identified in this way, including eighteen whole boats and twenty-nine half-boats or boat parts in a cemetery of 1,400 graves (Crumlin-Pedersen 1991: 252; Figure 137). Boats up to 5 m long survived as timber stains, which were sliced and recorded in horizontal spits at vertical intervals (as small as 15 mm). The boats were distinguished from coffins by their having pointed ends or traces of caulking in conifer/birch resin or clay, and the boats were slightly broader (*c.* 0.8 m) than the coffins (*c.* 0.6 m). The boats were all considered to be examples of thin-walled expanded pods, constructed from single logs without the use of rivets. In the earliest burials the boats were used as covers, with the boat upside down, covering the body, while the later ones used the boat as a bier on which the body lay. Nine examples of the more complete pod boats also contained coffins, and, in one case, two boats were used, one forming a lid. The Slusegård boat-burials date to the period AD *c.* 80–*c.* 250 (Crumlin-Pedersen 1991: 202).

Recent discoveries with well-preserved wood are increasing the impression that boat-burial was widespread, varied and early in northern Europe. Boat 2 at Fallward, on the coast between the Elbe and the Weser (excavated in 1994), was adapted as a coffin by the removal of the thwarts and the provision of a wooden roof. The boat was dugout but ship-shaped, 4.40 m long, and placed with the prow northwards, inside a chamber of split-logs measuring 5 × 1.3 m. Grave goods in the boat included a bronze bowl with a diameter of 325 mm, and the well-preserved wooden objects lying outside the boat included a table 650 mm long and 200 mm high, with lathe-turned legs. The boat was roofed with a lid of sixty short oak planks, pegged to a beam running from stem to stern (Schön 1999: 76). The Fallward burial is dated to the fifth century by a late Roman military belt set and a dendrochronology date of AD 421 (Böhme 1999: 56–7).

A recent roll call, by Matthias Schön, of boat-burials datable to the period of the first to sixth centuries shows examples distributed widely (if sparsely) along the coast of the Baltic Sea and the eastern North Sea (Schön 1999: 78–9). This suggests that a more extensive Germanic and Scandinavian coastal



**Figure 137** Boats and coffins at Slusegård, Bornholm: (a) whole boat used as coffin (robbed; Crumlin-Pedersen 1991: fig. 1, grave 1131); (b) whole boat used as vault supported by stones (ibid.: fig. 1, grave 613); (c) half-boat used as vault, truncated end closed with planks (ibid.: fig. 1, grave 365); (d) tree-trunk coffin (ibid.: fig. 1, grave 1057).

distribution of early boat-burials still lies hidden, giving a broader range of exemplars than that previously supposed (in Carver 1995b, for example). Crumlin-Pedersen's diagnosis of the boats at Slusegård, and the Fallward discoveries, have made it likely that their use in burial rites, as whole or half boats, was widespread in place and time, but has often gone undetected by excavators (Müller-Wille 1995: 101), and the record is naturally still more depleted in the case of all-wood boats used in cremation (Schönbäck 1983: 126). Nevertheless, the distribution of boat-burials earlier than Sutton Hoo, as we have it, lies mainly in the area of the Scandinavian and North German coastlands.

Similarly, the distribution of boats and ships featuring iron rivets and rich assemblages lies mainly in Scandinavia. Examples are known from Finland, Sweden, and Norway, from before AD 600 (eighteen burials), from AD 600–800 (forty-two burials) and from AD 800–1100 (one hundred and ninety-seven burials) – Carver 1995b: III, following Müller-Wille 1974a. The figures suggest that boat and ship-burial were known in Northern Europe in the sixth century, but there was a marked increase of interest in the rite after AD 600, especially in Scandinavia (Carver 1995b: III–12), although the trend may also reflect the increasing use of rivets.

Notable cemeteries of the seventh to eighth century (the Vendel period), often invoked as parallels to Sutton Hoo, are Vendel, Valsgårde, Tuna in Badelunda and Tune in Alsike (all in Mälaren, Sweden), and possibly the first phase at Borre (Norway). The twelve boat-graves which have been excavated at the two cemeteries of Vendel and Valsgårde, Uppland Sweden, are summarized in Table 44 (see Sandwall 1980 and Lamm and Nordström 1983 for summaries). Both cemeteries had other earlier graves, and both continued into the Viking period when boat-graves also featured in the burial rites. In general, the Vendel period boats were 7–9 m long and placed in a trench beneath a mound. No human bodies survived, but a body space was generally inferred, which at Valsgårde was supposed to be marked by a layer of bedding and cushions. Except where robbing is suspected, each burial was furnished with a helmet, one or more swords, up to three shields, and gaming-pieces. Seven of the graves contained a drinking-horn or glass vessel. Every burial had up to three horses, which were tumbled on top of the boat or into the trench beside the boat, and most had dogs. Bridles and dog-leads were found, the number of pieces of harness often matching the number of animals.

The status of the graves from these two cemeteries is that of high-ranking males, although this is not a precondition of ship-burial: at Tuna in Badelunda, by contrast, the ship graves commemorated eminent women, while the men in the same cemetery were cremated (Nylén and Schönbäck 1994: 148). Moreover, in the Swedish context, the high ranking men of Vendel graves are not proposed as kings, but rather local aristocrats commanding mercantile and other resources. The decorated objects of Vendel and Valsgårde have been ordered into five style groups (Vendel A–E), which offer a sequence of burial, even if the styles occasionally overlap both within graves and sometimes on individual objects (Arwidsson 1983: 79). It has been observed that many of the finest objects were old, repaired or incomplete at the time of deposition, which together with the lack of objects that are strictly personal, led to the supposition that objects were selected for burial out of a reserve

collection held in an 'armoury' (Arwidsson 1983: 72–3). This also has implications for the relations between the date of a burial and the date of the most datable objects within its assemblage.

The dating of the stylistic sequence has been subject to a number of studies, of which the most radical is that of Arrhenius (1983: 44). She pushes Vendel XIV, X, XI and XII, and Valsgårde 7 and 8, to before AD 600, using comparisons with bits, saddles and shields found in east Germanic cemeteries, in turn corroborated by historical dates, such as the Frankish conquest of the Thuringians in AD 531 and the withdrawal of the Lombards from Pannonia in AD 568: 'The forerunners to the Vendel artefacts are found in East Germanic graves from the earlier part of the sixth century... the transit of influences to Scandinavia cannot have taken place later than around the middle of the sixth century which would mean that such items should be found in graves from the later part of the sixth century... I would thus assume that all the early Vendel graves, that is the grave with ornaments in Vendel style A and B, belong to a period corresponding to... AD 560/70–600. This date would thus be valid for Graves X, XI, XII and XIV at Vendel' (Arrhenius 1983: 64).

Even if all relative stylistic dating should be treated with caution, it is an important thesis that at least some of the Vendel graves are earlier than say AD 625, as the burials could then, theoretically, act as exemplars for the rites deployed at Mounds 1 and 2. In the Vendel series, the early group (before AD 600) look towards eastern Germany, while the later group (after Vendel I) seem to find a Frankish connection in their seaxes, glass and francisca (Arrhenius 1983: 64–5).

#### *Boat-burial in England*

Bronze Age boat-shaped biers, resembling those at Slusegård, have been excavated at Bowthorpe in Norfolk and Loose Howe in Yorkshire (Lawson 1986: 46). These are assumed to derive from boats with flat bottoms, known elsewhere from Bronze Age Britain (Johnstone 1988: 140). However, apart from these, the boat-burial custom in England appears to belong to the period from the later sixth to the eighth century, and is confined to four cemeteries in Suffolk (Carver 1995b). The most important of these cemeteries is Snape, which has produced four examples of boat-burial and one of burial in a ship. In grave 47 a man was buried in a boat, pointed at both ends, c.3 m long, together with a knife, sword, three spears, a shield, a bucket and a possible casket. A horse's head (complete with bridle) is associated with this same grave, which is dated to the early seventh century (Filmer-Sankey and Pestell 2001: 102 and 256). In the undated grave 4, a boat c.3 m long contained an iron knife and a buckle, and a pair of drinking-horns (Filmer-Sankey and Pestell 2001: 25–9). In two other undated graves parts of a boat may have been used as containers or covers. Grave 3, which contained a spear, knife, copper-alloy buckle and a shield, had a carbonized container c.2.40 m long, which may represent a boat that was cut up for use in burial (Filmer-Sankey and Pestell 2001: 23), while a boat-like soil stain in grave 10 suggested a boat placed above the body (Filmer-Sankey and Pestell 2001: 40, fig. 23).

Grave 1 at Snape was a ship-burial excavated in 1862. The ship itself was 14 m long and was buried in a trench beneath a mound, and the surviving grave goods included an intaglio ring similar to that found in grave 1782 at Krefeld Gellep (early sixth

Table 44

## Boat-burials at Vendel and Valsgärde

Ordered by style group (after Arwidsson 1983 and Arrhenius 1983).

\* indicates looted grave

Vendel	XIV	X		XII	XI		I		VII*	III*		
<b>Valsgarde</b>			<b>8</b>				<b>7</b>		<b>5</b>	<b>6</b>		<b>13</b>
Boat (length)	8 m	9 m	9 m	5 m	9 m	8.5 m	10 m	11.7 m	10 m	9 m	7 m	9.8 m
Horses	1	1	2	2	3	4	3	2	2	5	3	?
Bridle on horse	1	1	2	2	1	4	3	3?				
Bridle in boat								3?	2?	4	2	1
Saddle	1		1	1		1			1		1	
Stirrup												1
Dogs	2		1	2		1?	3	4	3	2	4	
Helmet	1	1	1	1	1	1	1	1	1			
Sword	1		1	2	1	2	2	1	2			1
Shield	1	1	2	2	2	3	1	3	3			2
Gaming pieces	2		29	17		36 or 37			63	15	2	36
Drinking horn			1		1	3						
Glass vessel			1	1			4	1	3			
Style Group	A/B	B	B	B	A/B	A/B	B/C	B/C	A/B/C/D	D/E	D	D/E
Date (Arwidsson 1977)	600				650				700	720		
Date (Arrhenius 1983)	560					600		630				750

century) and a glass claw beaker of Evison's type 3c (mid sixth century). These objects led Filmer-Sanke to suggest a date for the burial of 'mid to second half of the sixth century' (Filmer-Sanke and Pestell 2001: 196). But reviewing the possible date of all the surviving finds, which included a fragment of a blue glass jar and a pile cloak, Bruce-Mitford (1974: 131) and Geake (1997: 180) have suggested that the Snape ship-burial is compatible with a date of about AD 600 or shortly after. It probably pre-dates Sutton Hoo Mound 1, but not by much more than a generation. The Mound 1 ship-burial is dated AD 620–c.630, as is argued in detail in SHSB I: 326 ('c.625–c.637 AD'), and the close association of several items suggests a similar date for Mound 2 (see Chapter 7, p. 258).

At the Buttermarket cemetery, Ipswich, a tray-like body-bearer in grave 67 may have been a boat-part (J. Newman: pers. comm.; Geake 1997: 179–80; Carver 1995b: 119) in a cemetery that dates to the seventh century (Scull 1999). At Caister-on-Sea twelve boats, or parts of boats, were used as bearers or covers in the period AD 720–820 (Darling and Gurney 1993).

The English contingent is thus very small, with five boat-burials, of which two are dated to the seventh century, three ship-burials of the early seventh century and a group of twelve burials using parts of boats in the eighth/ninth century. Links with Continental and Scandinavian examples are not direct. The boats at Snape and Slusegård are morphologically similar, but are different in assemblage and far apart in time (a minimum of 350 years). The Swedish burials of the Vendel period are close to those at Sutton Hoo in date, but the Sutton Hoo ships are over twice as long and the burial rites followed at Mounds 1 and 2 differed from those practised at Vendel and Valsgärde. The Mound 1 burial was contained in a chamber and there were no horses in or beside the ship, while the only parallel for the Mound 2 ship-burial, where the ship was placed over a chamber grave, is provided by the ship-grave excavated at Hedeby, Schleswig-Holstein (Müller-Wille 1976; see also Chapter 6, p. 164; Figure 139). This was dated to the tenth century (recently

re-assigned to the first half of the ninth century: Wamers 1994), providing no exemplar for Mound 2. Rather than being funerals which follow a cultural norm, the Mound 1 and Mound 2 burials seem to be compositions drawn from a common vocabulary and specially made to suit the person to be commemorated, and the time and place in which they died (Carver 1995b).

The use of the ship or boat in burial is likely to have had a number of different levels of meaning. At one level it is simply a grave good, a piece of equipment which was often too large to go in the grave, as perhaps exemplified at Hedeby (Schönback 1983: 129), and this might apply to Mound 2. At another level an old boat might provide a convenient container for the dead person in the grave. However, in the light of numerous examples of the practice worldwide and its frequent citation in folklore (from *Beowulf* to *Morte d'Arthur*), it is difficult to resist the notion that boat-burial carried some meaning related to a belief system now largely lost (Crumlin-Pedersen and Thye 1995). Crumlin-Pedersen (1995: 93–7) favours an association with a fertility cult at Slusegård, which was also referred to in the larger, later ship-burials. It is also possible that the troughs and more ambiguous coffins cited above are actually references to boats, and that the boat was able to carry its spiritual meaning into non-functional versions of watercraft (Madeleine Hummler: pers. comm.). Whatever that belief may have been, there is considerable archaeological interest in when, where and why it may have been adopted, as at the least it suggests a change in the way people were thinking.

In this case, the introduction of boat and ship-burial into England should have an explanation rooted in the ideological circumstances of the times. If we accept an early seventh-century date for Snape I (see above), all the known examples are in East Anglia and belong to the seventh century, except for Caistor-on-Sea, which belongs to the eighth or ninth. A wholly diffusionary explanation for the adoption of this rite, where customary users of boat-burial settle in England, seems implausible, as we do not have a continuous sequence. In East



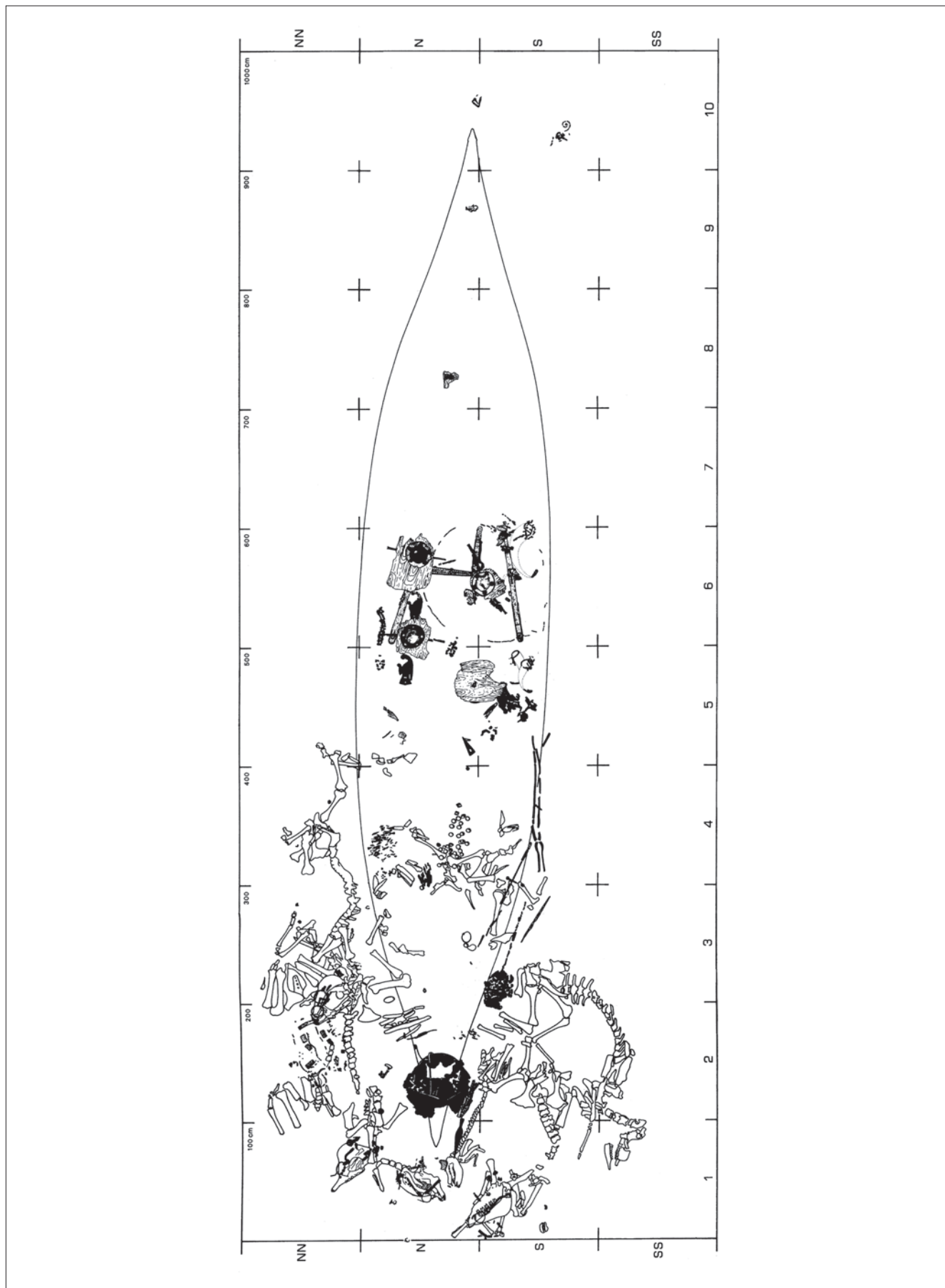
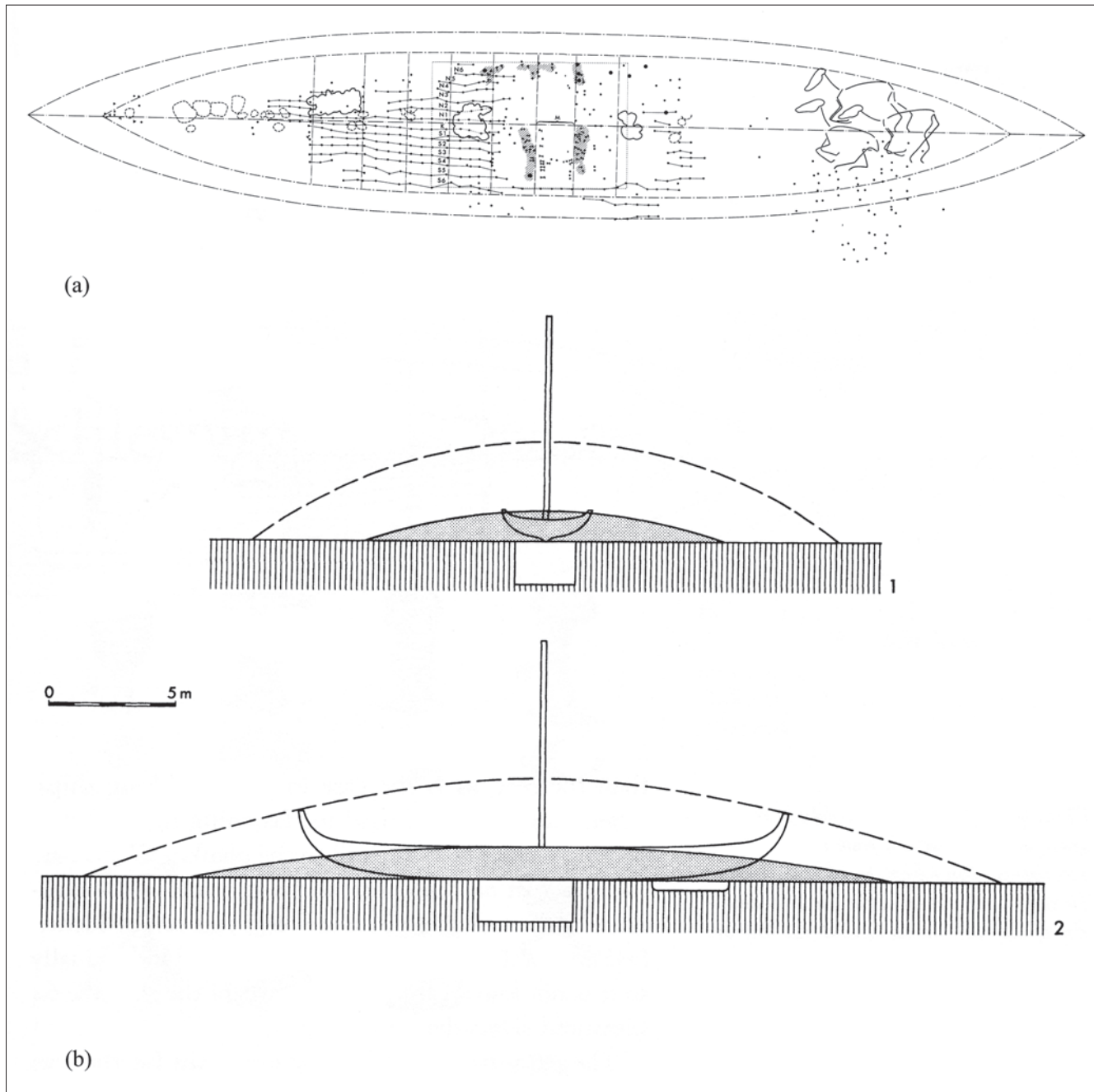


Figure 138 Ship-burial at Valsgärde, Sweden, burial 7 (Arwidsson 1977:Abb. 45).



**Figure 139** Ship-burial at Haithabu, Schleswig-Holstein: ship over chamber (Viking period; Müller-Wille 1976: Abb. 9 and 13).

Anglia local precedents for boat-burial (later than the Bronze Age, see above) are rather remote, and the distribution of early examples, although broadening (see above), is still concentrated on the shores of Norway or Sweden rather than Anglo-Saxon homelands in Angeln or Saxony.

However, ship-burial need not represent a cultural borrowing from contemporaries, but may instead be the reification of an enduring idea, that is an idea which had long formed part of the Northern European ideological substrate, but was only put into practice at a given moment in certain places. In England, this moment may have had its root-cause in the advance of Christianity in Northern Europe (Carver 1986, 1992b and c, 1995b, and 2001). At Sutton Hoo ship-burials seem to belong to the early seventh century, a generation or more after the practice re-emerged in Sweden. The relatively late, very wealthy, and individual versions of ship-burial seen at Sutton

Hoo seem to fit with a period in which a defiant dialogue with Christian Frankish Europe was well developed.

#### **Simple furnished inhumations**

Alongside the mounds, four sparsely-furnished burials have been excavated, which may be among the latest that can be attributed to the princely burial ground. Burials 12, 15 and 16 lay to the east of Mound 5, and Burial 56 lay to its west. Burial 12 was the burial of a child in a coffin with a buckle, a pin and a miniature spearhead. The orientation of the body was uncertain: it might have lain head to the north-west, in which case the spearhead's tip was by the shoulder, with the pin by the feet; or to the south-east, in which case the pin was on the shoulder, but the spear was point-down, by the feet (see Chapter 5, p. 140). Angela Evans' tentative identification of the hafted iron projectile tip as a spearhead, rather than an arrowhead (see

Chapter 7, p. 252), is supported by three similar examples found at Snape, in graves 37 (one) and 47 (two), which have also been identified as spears (Filmer-Sankey and Pestell 2001: 88 and 105). Snape grave 37 has also been suggested as a juvenile, on the evidence of the body stain (Filmer-Sankey and Pestell 2001: 85). By their proportions and form, the spearheads from Burial 12 and Snape can be related typologically to Swanton's type F1, which is characterized by straight-sided angular heads (1973: 91–3, fig. 31).

The miniature spearhead in Burial 12 is significant, given the likely age of the deceased. The attribution of miniature versions of adult attire and weapons in the graves of juveniles and infants has been argued as prescribing their future social role in life (Stoodley 2000: 461 and 469, fig. 1). Spearheads have been found with burials of children as young as one year in Anglo-Saxon England, as in grave 89 at the Broadstairs I cemetery, Kent (Stoodley 2000: 461). Härke's (1992a) study of weapon burials in Anglo-Saxon England found that 2.5 per cent of his 252 spear burials were those of young children (age <7) and 8.5 per cent those of juveniles (age 8–14). This can be compared with 10 per cent for young adults (age 15–20) and 54 per cent for mature (age 20–40) adults (Härke 1992a: 156; table 4). The spear can be seen as an emblem of warrior status that, while not necessarily identifying the deceased as an active fighter, signified his right to bear arms. The conferment of such status on a child no doubt marked him out as a potential member of a ruling group.

It is argued that Burial 15 was a young male buried on a boat-part (see Chapter 5, p. 140, and above) and that Burial 16 was a young female, buried on a bed (see Chapter 5, p. 142, and above). These two burials, which are aligned and are perhaps contemporary, are datable only broadly to the seventh to early eighth century, the period of the conversion in Anglo-Saxon England (Geake 1997: table 6.1, group B). Dating graves more precisely in this period is difficult, due to the lack of chronologically sensitive artefacts. Men typically have a knife and simple buckle, while pendants, pins and simple monochrome bead necklaces accompany women. More specifically, Geake found that long iron *châtelaines*, (associated with bags) peaked in female graves in the later seventh century (1997: 58).

It was suggested in Chapter 5, p. 144, that Burial 56 was a robbed inhumation grave. A surviving scrap of metalwork may belong to the seventh century (Webster in Longworth and Kinnes 1980: 30), and the glass bead has been published as Type 3iii(a) – an opaque white bead with light blue or turquoise waves – which is generally dated to the sixth and seventh centuries (Guido 1999: 32 and 200). The skull gave a radiocarbon date centred in the mid eighth century (SHSB I: 682). In reconsidering the radiocarbon dates, Ambers allows the skull an equal probability for a date in the seventh, eighth or ninth centuries, so it would be wrong to insist that this burial has to belong to the eighth century. Assuming the skull was not displaced from the execution cemetery (see Chapter 5, p. 145), and acknowledging the scrap of seventh-century metalwork, Burial 56 may fit into the seventh-century range proposed for the princely burial ground as a whole.

### Cemetery sequence

The information available for the determination of sequence consisted firstly of the dates of objects in the assemblages, which

have just been reviewed, and then the date range of comparative burial practices. In some cases (Mounds 1 and 17) this was enhanced by radiocarbon dating. A second source for sequencing was obtained from observations made on the ground: the spatial associations between the graves, and their stratification, from which it was hoped to observe which mounds or graves succeeded each other. Certain other possible indications of chronology were also considered, such as the relation of the mounds to Prehistoric earthworks and the method of construction used to make the mounds. The conclusions of this exercise are summarized in Table 45.

The comparative dating of burial practices and of objects has been considered above. As a generality in Anglo-Saxon England, cremation goes out of use before inhumation, although both may be in use together in a particular cemetery (Lucy 2000: 121). Simple Anglo-Saxon cremation (as in Burials 13 and 14) may generally be thought to cease before AD 600 (the seventh-century Buttermarket cemetery, below, had no cremations), but the pottery vessel in Burial 14 has been assigned a seventh-century date (above). Cremations in bronze containers are expected to be sixth-century on the basis of local and Continental parallels. However, the hanging-bowl in the Tranmer House cemetery, and the latest objects found in Mounds 5 and 7, suggest that the practice at Sutton Hoo belongs to the early seventh century. The cremation on a trough in Mound 3 represents a different burial rite (in a different group of mounds, see below), and might on this account be supposed later than Mounds 5–7.

Among the inhumations, the use of coffins, chambers and coffins in chambers, is not chronologically specific within the period of the fifth to eighth centuries. Horse burial is a fifth- to eighth-century practice on the Continent, with a change c. AD 600, after which the bridle may be found buried with the deceased rather than the horse. Mound 17, with its assemblage, conforms to a date after AD 600. Bed-burial, while as early as c. AD 500 at Högom, Sweden, is so far a seventh-century rite in England, a date allowed to the putative bed-burials in Mound 14 and Burial 16 by their *châtelaines*. Burial 15 too appears to have an assemblage that belongs in the seventh century. Boat or boat-part burials are uncertain at Sutton Hoo, but if Mound 3 and Burial 15 qualify, the nearest parallel is early seventh-century at Snape (see above). Ship-burial occurs in Scandinavia before the early seventh century, the date implied for Mounds 1 and 2 by their assemblages. The latest burial, from radiocarbon dating, is Burial 56, which is seventh century or later.

In Chapter 9 (p. 347) it is argued that the execution burials, some of which can statistically belong in the seventh century (according to radiocarbon-dating), are unlikely to have been contemporary with the princely burials. This has influenced the attempts made here to establish a dated sequence. If Mound 14 belongs in the later seventh century (see above), then the earliest execution should be later than that. The overlap of the radiocarbon dates allows all the executions to be placed in the eighth century or later (Figure 21, p. 54).

Reasoning from these comparative dates alone, all the funerals of the princely burial ground could have been enacted within the seventh century, although naturally incorporating material from previous decades in the sixth. In so far as any relative order is implied between them, Mounds 5–7 ought to be among the earlier burials (c. AD 600), Mounds 17, 1 and 2

**Table 45**  
**Summary of the sequence of burial at Sutton Hoo, showing the bases for dating**

Burial	Rite	Datable artefacts	Animals in burial	Age and sex of buried person	Other evidence for date or sequence	Suggested date
Mound 5	cremation in bronze bowl	shears (fifth to sixth century), drinking vessel (sixth century or later) and composite playing piece (late sixth to early seventh century)	large ungulate (horse?) and sheep/goat	young male (?)	Spong Hill Group II, and use of quarry pits	late sixth to early seventh century
Mound 6	cremation in bronze bowl	sword pyramid (late sixth to early seventh century)	large ungulate (horse?), sheep/goat and pig	adult male (?)	stratigraphically later than Mound 5, and use of quarry ditches	late sixth to early seventh century
Mound 7	cremation in bronze bowl	composite playing piece (late sixth to early seventh century) and reticella bead (550–600 AD)	horse, cattle, sheep/goat, pig and red deer	adult male (?)	stratigraphically contemporary with Mound 6	late sixth to early seventh century
Burial 13	cremation without container					?
Burial 14	cremation in undecorated pot	grass-tempered pot (seventh century)	no animals in urn	young male		?
Mound 18	cremation in bronze bowl				no quarry ditch	late sixth to early seventh century
Mound 3	cremation in pot on trough	ewer and stone plaque (late sixth century) and Francisca axe (570–610 AD)	Horse	adult male	quarry ditch	late sixth to early seventh century
Mound 4	cremation in bronze bowl	plano-convex (sixth century) or composite (late sixth to early seventh century) playing piece	Horse	adult male and female	use of quarry pits?	late sixth to early seventh century
Mound 17	inhumation in coffin with horse	Group 6 shield-boss (mid sixth to early seventh century), type D2 spears (mid sixth to mid seventh century), buckle (c.575–625 AD) and Style II ornament (590–610 AD)	Horse	adult male	radiocarbon date 596–660	early seventh century
Mound 2	inhumation in chamber under ship	disc mount (Style II, phase A2, c.590–620)		adult male?	drinking horn from same die as that in Mound 1	early seventh century
Mound 1	inhumation in chamber in ship	assemblage early seventh century		adult male	radiocarbon date (seventh century) and historical association with Raedwald (ob. 624/5)	early seventh century
Burial 12	inhumation in coffin	spearhead or arrowhead		child		seventh century
Burial 15	inhumation on boat-part?	buckle (seventh century)		young male?		seventh century
Burial 16	inhumation on bed?	châtelaine (seventh century)		young female?		seventh century
Mound 14	inhumation on bed in chamber	châtelaine (seventh century)		adult female?	most easterly mound	mid seventh century
Burial 56	furnished inhumation?	fragment of bronze mount (seventh century)			radiocarbon date (seventh to ninth century)	later seventh century

amongst the next (c. AD 625) and Mound 14 and Burials 15, 16 and 56 among the later (c. AD 650 or later).

**Spatial association**

Linear chronological development has been seen as a characteristic of large barrow cemeteries in Scandinavia, as at Högom (Medelpad), Gamla Uppsala (Uppland), Sweden, and Bertnem (Nord-Trøndelag), Norway (Müller-Wille 1992: 3, Abb. 2). The origin of this phenomenon is perhaps to be found on the Continent in the *Reihengräber* cemeteries, which date between

the fourth and seventh centuries AD in Francia (Halsall 1992: 196). The graves in these cemeteries were laid out in rows, with a focus on a *Grundergrab* (founder grave), although the organization might break down during the period of the cemetery's use (Halsall 2000: 97).

Bruce-Mitford (SHSB I: 5) pointed out that an axis for the Sutton Hoo cemetery was provided by a north–south alignment of mounds, Mound 2 to Mound 7. If this line provided the foundation, then later mounds would have been added to east and west, north and south, and the untidy character of their

locations seem to offer some confirmation that this might be so. However, another axial row can be distinguished on the western side nearest the river, comprising Mounds 12, 17, 18, 1, 10 and 11. If the first burials began on the edge of the slope, these would comprise the 'founder row', with the centre row and the eastern outliers following. The western row, however, contains a mixed bunch of mounds of different sizes and burial rites, while the centre alignment features the cremations of Mounds 5–7 and 4. The central row also stands on the highest ground.

### **Stratification**

There is some evidence for the order of mound-building or, at least, of quarry-digging, from the stratigraphy, although none of it is wholly unequivocal: for example, a Mound 6 quarry pit cuts a Mound 5 quarry pit (see Chapter 4, p. 89). Some consideration of the final disposition of the quarries of Mounds 6 and 7 invites the supposition that either Mound 7 followed Mound 6 or both were constructed together (see Chapter 4, p. 94). The Mound 2 quarry ditch cuts a pit (F71), which may have functioned as a quarry pit for Mound 5 (see Chapter 6, p. 169). This information hints at the possible primacy of Mound 5.

### **Mode of mound construction**

The west row of mounds (Mounds 1, 18, 17 and 12) is distinguished from the others by having no quarries (neither ditches nor pits). Mound 5 (central row) employed quarry pits, Mounds 6 and 7 (central row) had quarry ditches, and Mound 2 (central row) and Mound 14 (to the east) used a quarry ditch with causeways. These modes of construction do not correlate with size, as both Mound 1 (one of the largest mounds) and Mound 17 (one of the smaller) are without quarries. Does the method of mound construction imply a chronological progression?

Mound 1, in particular, is a very large mound to be constructed without a quarry, and constitutes a large bulk to be inserted within a ring of three pre-existing mounds (Mounds 18, 3 and 10). Some of the turf and soil used to construct Mound 1 could have been found to the east, the eventual locations of Mounds 2–7, 3 and 4. This might suggest that the front or western line of mounds was the earliest, and that Mound 1 was the earliest of these. But the height of the buried soil under Mounds 5, 6, 7 and 2 suggests that the old ground surface had not been especially lowered there. The central row had buried soils with a thickness of c.400 mm, and the buried soil under Mound 1 was a similar thickness (see Chapter 6, p. 179 and Chapter 10, p. 374). If the western row was the first to be constructed, using soil from the location of the central row, it might be expected that the buried soil under the western row would be relatively higher than that of the central row. The Mound 18 burial pit scarcely reached the subsoil, implying that it had been cut through a once much thicker buried soil. However, if material had been taken from the eventual sites of Mounds 2 and 5–7, to build the western row, the quarrying managed to leave a very even thickness of buried soil (400 mm) – which would imply an oddly precise surveying exercise whenever quarrying took place. Alternatively, Mound 1 and the whole western row could have been constructed without affecting the central area, and in this case it might be supposed that the place they quarried was the western slopes of the scarp now covered by Top Hat Wood.

Mound 14, at least, is thought to have been one of the later burials. So if the mode of construction is chronologically sensitive, a progression from pits to ditches seems reasonable, suggesting Mound 5 as the earliest in the centre row. The sequence from Mound 5 to Mound 7 also represents one of increasing mound diameter. A possible model for the changing method of construction would be that the western row (Mounds 17, 18, 1 and 10) began without quarry pits, to be followed by a central row of mounds beginning with quarry pits (Mound 5), and continuing with quarry ditches (Mounds 6 and 7), followed later by Mound 2 and Mound 14 (with quarry ditches with causeways). Alternatively, it remains possible that the western row quarried the scarp, and so could follow rather than precede the centre row.

### **Prehistoric earthworks**

It is concluded in Chapter 11 (p. 457) that several Prehistoric earthworks remained visible when the Sutton Hoo cemetery began, and some in the east remained visible after mound burial had ceased. The Iron Age enclosure (S22) must have been a marker for Mound 17, as well as for Mounds 5, 6 and 18. Burial pit F318 of Mound 17 had cut through the corner of the Iron Age enclosure ditch, and across the line of its putative internal bank. This implies that the Iron Age ditch was visible as an earthwork, and also perhaps that the human burial (F318) was sited before the horse burial (F319). However, no bank survived, and the ditch was not recognized in the buried-soil surface. This contradiction was reconciled under Mound 6 by supposing that the Iron Age earthwork was visible in the seventh century, but that the bank was levelled and the ditch refilled just before the burial pit was dug and the mound erected. There was evidence for some turf stripping and stacking under Mound 6 (see Chapter 4, p. 94). At Mound 17, also, the mound builders may have noted the bank and ditch, and sited their mound accordingly, but then eliminated them by levelling the platform. The model here would assume that turf was first stripped from the earthwork, and then any remnant bank pushed into the remnant ditch. Such a feature would be hard to detect in a buried-soil platform, especially if later affected by ploughing.

The use of Prehistoric features as markers for Anglo-Saxon cemeteries is well-known, and is equated with an ability of the Anglo-Saxons to read the vocabulary of the landscape and re-use and, occasionally, rename it (Carver 1986; 2001; Bradley 1988b; Williams 1997). The Sutton Hoo Prehistoric earthworks are hardly spectacular or symbolic, but may have stood for a remembered sanctity in an area where actual Prehistoric monuments were relatively scarce.

### **Model**

It is taken as axiomatic that each of the princely burials represents both personal and political statements composed from a choice of burial rites, grave goods and the positioning of the burial and its monumental mound (Carver 1986, 1992a and b, 1998a and b, and 2000; Filmer-Sankey and Pestell 2001: chapter 7; Williams 2001a). The order of the burials, if we can discover it, thus has some potential contribution to a wider historical narrative (see Chapter 14).

The cumulative evidence for ordering and dating the burials, such as it is, is summarized in Table 45. From such slender

indications, there emerge at least three hypotheses for the sequence of the Sutton Hoo cemetery. In hypothesis number one, the first mound to be constructed is Mound 1, in a prominent position behind a spur over the flood plain of the River Deben. This ‘founder mound’ is joined by others, extending the line to north and south. None of this first series used or required quarries. Subsequent rows of mounds followed to the east, the central row beginning with Mound 5, which used quarry pits, and continuing, according to stratigraphic order, with Mounds 6 and 7.

In hypothesis two it is the central axial line, occupying the highest ground, which contains the first series of mounds, on the basis that they would have had maximum visibility from both west (the river) and east (inland). Within this line, Mound 5 appears to be the earliest on stratigraphic indications, followed to the north by Mound 2 and to the south by Mounds 6 and 7. However, if topography is determinant, then Mound 2, in the most prominent spot, should be the earliest mound. From this axial line, another north–south row is added to the west, and then the burials that lie to the east. The western row leaves no quarries, not because they are the earliest mounds, but because they have access to the turf and soil cladding the adjacent slopes.

The first of these two options allows a liberal choice of burial rites, which, therefore, at Sutton Hoo at least, would not be time sensitive. The western row included ship-burial, horse burial and cremation in a bronze bowl. The primacy of the western row also obliges the assemblages of Mound 1 and 17 to pre-date those of Mounds 3–7, which, although not impossible, given the partial survival of the latter, is not supported by the material we have. After an initial series of cremations in bronze bowls, hypothesis two also allows a liberal choice of burial rite.

Hypothesis three proposes a less ordered evolution, and a much harder story to tell, but one which perhaps correlates better to human experience. Here, the geography of the cemetery is structured by a number of historical events and choices, each of which is imperfectly known. The result is not a linear progression, but a number of different focal points representing a series of refoundings. Useful recent support for this idea is offered by Scull’s study of the Buttermarket cemetery in Ipswich, where preservation was better and radiocarbon dating has been extensively used (Scull 1999). Buttermarket is an inhumation cemetery, and is devoid of cremations. Most of the burials contained evidence for coffins and/or chambers, and it was inferred (by the presence of annular ring ditches) that some had been burials under barrows. The cemetery contained both furnished and unfurnished graves. Initially, artefact and coin dating suggested a start date in the seventh century and an end date in the late eighth century (given by a coin of Offa, dated AD 792). Intensive radiocarbon dating, however, has revealed that the use of the Buttermarket cemetery was almost entirely confined to the seventh century, and the Offa coin was probably intrusive (Scull 1999: 82). This dating has raised concerns over the validity of using spatial sequencing (horizontal stratigraphy: cf. Evison 1987) for modelling cemetery chronology, as the radiocarbon results showed no clear single early focus from which the burials had spread. Rather, it revealed a ‘haphazard spatial development perhaps resulting from a polyfocal structure’ (Scull 1999: 85). The radiocarbon results also demonstrated that furnished and

unfurnished burial at the Buttermarket cemetery represented contemporary practices (Scull 1999: 86).

At Sutton Hoo the different indications of date over a short time-scale can also be reconciled most easily by supposing more than one originating focus. Mound 5 is a potential founder mound, which develops with Mounds 6 and 7. These three mounds represent a sequence, generally increasing in size, in which cremations are placed in bronze bowls, and may also provide a context for Mound 18 and the simple cremations (Burials 13 and 14) to the west. Given its position, Mound 18, although a sorry survivor, may have itself initiated or joined the series.

Mound 3, which employs a new form of burial, may represent a second ‘starter burial’ with successors to the south (Mounds 4, 8 and 9). Mounds 17, 14, 2 and 1 are difficult to place with respect to this system. One assumption, which might be legitimate, is that the burial rite itself would be progressive, a supposition which is easier to sustain in a small, short-lived, elite cemetery, in which the burial rite would be prominent and of high investment. It does not mean that a cremation in a bronze bowl can never follow a horse burial or that a horse burial can never follow a ship-burial. But if the burial rites at Sutton Hoo did echo their appearance elsewhere, this would be the order: cremations in bronze bowls, then horse burial and then ship-burial. The spatial pattern produced by this ordering could be reconciled with the ordering implied by the deposits readily enough, by allocating the following foci and phases, their currency attributed somewhat arbitrarily to periods of two or more decades (Figure 14o):

- Phase 1 (AD 590–610): Mounds 5, 6 and 7; followed by Mound 18, Burials 13 and 14
- Phase 2 (AD 590–610 or later): Mound 3; followed by Mounds 4, 8–11
- Phase 3 (AD 600–20): Mound 17
- Phase 4 (AD 610–30): Mound 2
- Phase 5 (AD 615–35): Mound 1
- Phase 6 (AD 620–50): Burials 12, 15 and 16
- Phase 7 (AD 630–70): Mound 14
- Phase 8 (AD 650–700): Burial 56

This model also suggests that certain major foci would be remembered (Mounds 5 and 3), and that later generations could refer to them. Such a supposition might help to explain the later choice of Mound 5 as a gallows site. Mound 5 has no obvious advantages over other mounds as a place of execution, and may have had its rationale in the identity of the person buried there (see Chapter 9, p. 349). It would be expected that both family and politics were instrumental in the choice of the burial site and burial rite, and that the burial mound was a visual memory of both. This would allow the sequence of choice to have a certain historical value.

The narrative suggested is that a family having roots in the community which was burying at Tranmer House (see Chapter 13, p. 483) broke new ground with burial at Sutton Hoo, proclaiming its status and its ethos in the rite of cremation in bronze bowls (Mounds 5–7). These were local aristocrats, who nevertheless invested in the ideas of the Scando-Germanic north, some time around AD 600. A second family of similar origins established another focus with Mound 3, a cremation on a boat piece.



Figure 140 A model for the sequence of burial at Sutton Hoo.

The Mound 17 burial may represent a new family or a new political alignment, or both. Equally high status, and equally local in its roots, it is possible to see references to contemporary warrior-class communities in both Scandinavia and the Rhineland.

The Mound 1 and 2 ship-burials, again the work of a local elite with a broad and eclectic knowledge of contemporary symbols of ideology and allegiance, point the political compass back to the Baltic countries, where equally massive investments were sited prominently in the landscape.

These ship-burials represent the peak of demonstrative burial. Sutton Hoo is subsequently used for the burial of younger or later members of these famous families (Burials 12, 15, 16 and 56). Among them, a prominent woman (Mound 14) is commemorated, by her own or her community's will, as a last celebration of the princely burial ground.

### Significance of the burial rites

If this sequence is acceptable, then the burial rites at Sutton Hoo changed often during its short use, and in conclusion we reflect briefly on why that might be: why that, why there, and why then? The reader will be aware that the sequence given above is neither very secure nor wholly independent from the interpretation that follows. The probable meaning of the burial mounds in their context at Sutton Hoo, inferred from other archaeological evidence and such documentation as exists, has exercised an influence on the sequence itself. In that sense the arguments are convergent, rather than consequent.

The size and character of the Mound 1 monument offers an unusual opportunity to interpret a burial as a historical event. Bruce-Mitford (SHSB I) argues that it commemorates a king, on the grounds of its size and wealth, and that being located in East Anglia, it represents a king of East Anglia. Given a likely date in the early seventh century, it is possible to select a named king (who died around that time) from the east Anglian genealogy, and this he does, settling on Raedwald (SHSB I: 683 *et seq.*). The practical accoutrements are explained as those of a warrior (sword and shield), and the symbolic objects (standard and sceptre) are interpreted as being regalia. The regalia are seen as referring to Anglo-Saxon kings, and to the office of Bretwalda in particular (SHSB I: 699). The theme of individual power has been a leitmotif in Sutton Hoo studies. William Filmer-Sankey (1996) suggested that the Mound 1 burial was an attempt to emulate a Roman emperor, reading the helmet and shoulder clasps as referring to Roman parade dress. Andres Dobat of the University of Aarhus has advanced the interesting suggestion that the axe-hammer is a sacrificial axe for killing oxen and horses, and thus denotes a cultic role for the leader buried in Mound 1 (pers. comm.). The religious significance of Mound 1 has been much debated, and there have been confusing assertions on the subject of whether the ship-burial must represent a pagan rite, or whether it could have been the burial of a Christian by pagans, or a pagan by Christians, or some other combination. Such discussions have often had the identity of the buried person as the principal item on their agenda (Bullough 1983; Wood 1991; see Chapter 14, p. 502). As has been stressed above, ship-burial is in no sense a tradition, belonging to a previous pagan practice; it is a newly adopted burial rite, with no antecedents in Britain (Carver 1995b). Its meaning is therefore not customary, but is particular to its use in the Sutton Hoo cemetery.

The archaeological argument must stop short of naming an individual as the subject of any burial (but see Chapter 14, p. 502). It can be said, however, that Mound 1 and the other mound burials defined so far at Sutton Hoo are of high rank, and for that reason are here called 'princely'. It is accepted that wealth is sufficient but not necessary to define high rank: the latter can be signalled in another way, such as being in a prime location within church. However, Mound 1 and the other Sutton Hoo mounds can be assessed as having high rank relative to contemporary burials: the mound-burials and, in particular, Mounds 1 and 2, represent major investments compared with the known corpus of burials of similar date in Northern Europe. They are among the largest and wealthiest known (Müller-Wille 1992). Within their local context, the mounds exhibit monumentality. They can be seen from the access waterway of the River Deben, and from a broad territory inland to the east. Especially at their original height, they can be said to have had a large vista.

As such, they are likely to have been vehicles of political, religious or ideological rhetoric (Carver 2001). The model envisaged is that the burial party responsible for the design, construction and furnishing of such graves had considerable means at their disposal, but used them selectively to impart particular messages to the heirs and bystanders (Carver 2000). In this interpretation, the grave goods in the Mound 1 ship do not represent the belongings of the dead person, or even a measure of their wealth. They represent rather the public expression of pride, grief and hope that is the concomitant of a funeral. For this reason, the making of a memorial grave can be compared to the composition of a poem (Carver 2000). As is the way with poetry, even eulogies and elegies, the references are not specific, as in 'pagan' or 'Christian' or 'a Roman emperor', but allusive, and the result may be described as a 'palimpsest of allusions'. We should acknowledge too that, although the affair was no doubt directed by someone in authority, the person in question may not have exercised – or wanted to exercise – total control. Members of the family, including children, may have contributed to the composition in ways that were irrational or even quirky.

In Mound 1, the burial chamber (see Chapter 6, p. 195) can be seen as divided into four zones: a personal zone inside the coffin, containing shoes, clothes and toiletries; a warrior zone on top of the coffin, with sword and helmet; a leader zone at the east end, with the 'sceptre' and 'standard'; and a feasting zone at the west end, with cauldrons. These exemplify the multiple roles of the dead person as an ambassador for the living, and the ship as the highest ranking means of transport of the age, a fitting conveyance in which to arrive. At the basic level, the metaphor is enforced with provision of Stockholm tar with which to mend the ship (Carver 1998a: 127–9).

In the various objects laid out in these zones, we see clear signs not only of Rome, but of Byzantium, France and North Britain: in fact, of much of the known world. If the shoulder clasps and helmet refer to Roman parade costume, the silver finger bowls and spoons may refer to Christian Byzantium, the sword to France, the shield to Sweden, the yellow cloak to Syria and the hanging-bowls to North Britain (Carver 1998a). In practice, each of these objects is not simply hosted, but reworked, either by symbolic transformation, as in the case of the helmet and shoulder clasps, or by being placed in a new context, like the



silver bowls. The sceptre and standard are unique creations, long seen as symbolic. Their role is also metaphoric: they are attempts to invent a signifier that draws authority from its references to other things. The sceptre takes the form of a Byzantine imperial staff of office, but incorporates the faces of the gods/ancestors and a 'Celtic' stag (Carver 1998a: 170).

The Mound 1 burial is a composition, a poem, a statement composed of objects declaimed in a theatrical setting, in which a warrior, a leader, an ambassador, a mariner and a mortal man are sent off in a ritual display that expresses the present loss and the future resolve of the burial party. The religious and ethnic identities are not the issue here, nor can they be determined. The burials contain complex layered messages, in which several ideological positions can be detected, and argued over, as is the case with literary criticism. My own reading is that the burial of the ship in the trench, and its subsequent burial in a mound, was the most public, the most onerous and the most costly gesture of all, and therefore constituted the determinant rite. Its connection with Scandinavia is not in doubt. The Scandinavian paganism or 'non-Christianism' of the Mound 1 burial is, therefore, not an insignificant incidental of the occasion, but its main thrust. My interpretation therefore has the Mound 1 burial as a major historical statement of East Anglian autonomy, expressing alignment with pagan Scandinavia, and opposition to Christian France. However, this was not the only component of the message expressed on the day of burial. If the message lacks clarity for us, that is understandable: they did not have our historical perspective or our analytical vocabulary, and they could not know they were going to lose their pact with history.

The historical context, such as we have it, provides a plausible context for such a theatrical statement (see Chapter 14, p. 497). The archaeological sequence also provides a context, but one of a different kind. It shows that the Mound 1 ship-burial was not alone: there was at least one other (Mound 2) showing a slight variation on the theme. Both were situated in a cemetery reserved for the elite, which had broken away from an earlier

folk cemetery in the late sixth century. The earliest burial rites in the new elite cemetery emphasized cremations of high rank (in bronze bowls). A horse-and-warrior grave also shows high rank and a composed burial statement, full of allusions to the northern Germanic world. Within the sequence, the ship-burials represent a major change in emphasis, and in size, wealth and rite. It is possible that this demonstrates, in the early seventh century, the arrival and death of an even more pretentious princely class. Alternatively, it suggests the onset, among a pre-existing princely class, of shared anxieties that caused the investment to be magnified. Probably both were contributory, but the latter is consistent with England in the early seventh century: a period of intense interest and political pressure from Christian France (see Chapter 14, p. 502). Burial investment and complexity rise to a peak as the pressure, with its concomitant anxieties, increases.

The period that follows the emplacement of the burial ships is notable for its relative poverty, a slow running down of investment after the climax. Only the woman in Mound 14 seems to have represented a mid seventh-century reprise of more glorious days, the cuffs and bands of her elaborate garments still making reference to Scandinavian tradition (see Chapter 7, p. 266). By the eighth century furnished burial was at an end at Sutton Hoo. But a new phase started, probably within living memory of the old phase: the princely burial ground became a place of execution. The character and purpose of this new cemetery, and its relationship to that of the seventh century, are argued in Chapter 9.

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# Execution burials of the eighth to eleventh centuries

Martin Carver

(with a report on skeletal material by Frances Lee)

Thirty-nine unfurnished burials have been found in two groups: on the eastern edge of the site (Group 1) and around Mound 5 (Group 2). They are described in turn and it is argued (p. 347) that all are executions dating from the eighth to the eleventh century.

### **The burials of Group 1 (Burials 17–39)**

#### ***Description of the investigations***

The Group 1 burials were discovered during the exploration of five contiguous areas on the east side of the mound cemetery (Ints 20, 32, 38, 39 and 52; see Plate 46; Figures 19 and 141). The first grave was located in Int. 20, a transect cut in 1984 as part of the evaluation (see Chapter 2, p. 21). Ints 32 and 38 were opened with a mechanical excavator (back-actor) in 1985. Int. 32, which was designed to explore the burials, and which contained most of them (eighteen out of twenty-three), was thoroughly studied by horizon mapping (see Chapter 1, p. 9 and Chapter 3, p. 43). Excavation did not, however, proceed further in the adjacent Int. 38, which appeared to be largely free of graves. In 1986, to confirm the eastern limit of the burials, Int. 39 was stripped by a Drott mechanical excavator (front-shovel), and then mapped by hand at Horizon 2. It contained no burials. The excavation of the track (Int. 52) separating Int. 32 from the princely burial ground (Int. 50) was fully excavated in the spring of 1991. It contained a further five burials. There were no execution burials in Int. 50.

The procedures followed during the excavation of Ints 20–39 were still experimental, while those that followed Int. 52 were more fully developed. All features were located at Horizon 2, which normally equated with the surface of the subsoil, and here also represented the lower limit of modern ploughing. Natural, Prehistoric and Early Medieval features appeared at Horizon 2, and the graves were distinguished by their characteristic rectangular shape (p. 48, Plate 16:a).

All graves were excavated and recorded at Data Acquisition Level E (see Chapter 2, p. 25 and Table 4). The fills were removed in spits, c.100 mm deep, which were initially called 'Definitions' or 'Levels' (Level 1 etc.), before the terminology was standardized as 'Stages' (Stage 1 etc.). In the fully developed

procedure, the clean horizontal surface was recorded by colour photography at each stage, and drawn if any anomalies were visible. A cumulative section was maintained along the long axis of the grave, and was renewed in the same place after each horizon had been recorded. This section was used for taking chemical samples. However, few of these cumulative sections or profiles have proved informative, and most are omitted in the drawings of individual graves reproduced here (Figures 142–5).

Contact with the body was generally unequivocal: though bone was very rare, the locus of the decayed body was indicated by hard, dark-brown sand, which usually contrasted with the softer and lighter coloured grave-fill. Wood did not survive, but the locus of its decay product was often detectable. 'Wood-sand' differed from 'body-sand', in that it was softer, darker and patchier, and was sometimes accompanied by black granules (Plate 16:c). The two types of decay products could therefore usually be distinguished, although where the body lay within a coffin or on wood it was much harder to see and define. There is also some indication that the decay of bodies lying on top of wood was further advanced than that of those that lay on the subsoil. Where bodies lay beneath or beside wood their relative visibility seemed less affected.

When a body was contacted the axial section was abandoned, and attempts were made to excavate it in three dimensions (Plates 16:b and 17). By making use of shelters, and with the occasional application of consolidator, this was usually found to be possible (see Chapter 3, p. 41).

#### ***Natural and Prehistoric features***

Apart from the graves, most of the features were considered Prehistoric on the grounds of their fill, shape or spatial association with each other (see Chapter 11). Feature 178 in Int. 32 and F42 in Int. 39 were identified as 'tree pits', that is natural hollows, often D-shaped in plan, formed by the root mantle of trees that had blown down or otherwise been uprooted (see Chapter 3, p. 43 and Chapter 11, p. 401). Feature 243 (associated with the gallows, see below) is also thought to have been a tree

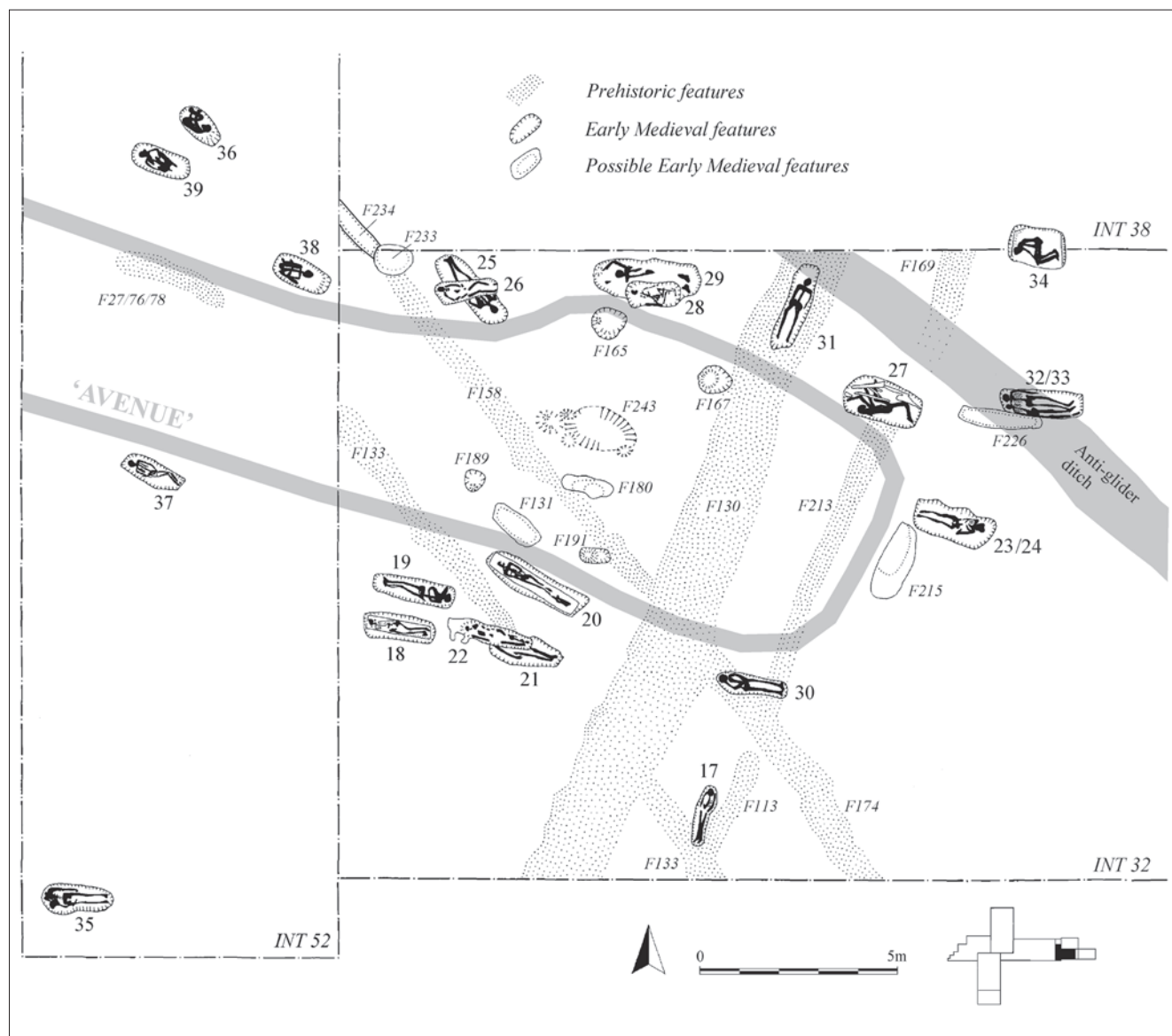


Figure 141 Plan of Group 1 burials, with burial numbers.

pit. The principal elements of the Prehistoric system were the parallel palisades, F5 and F15, running north-west to south-east and dating to the Bronze Age, which were superseded by the ditch and palisade, F1 and F4, running north-east to south-west and dating to the Iron Age.

The ditch F1 was respected by two graves: F9 (Burial 17), which was parallel to it and F231 (Burial 31), which lay within its fill. This ditch is thus likely to have survived as a visible feature into the Early Medieval period. The parallel palisades, F5 and F15, were cut by Burial 17 (F9), Burial 21 (F108), and Burial 30 (F173), and the relative depths of some of the graves (see below) suggest that this Bronze Age feature had also survived as a slight earthwork. This is endorsed by the north-west alignment of five graves.

**The Group 1 burials – description**

These are extracted from the detailed inventory in the *Field Reports* (FR 8i/7 and FR 8ii/7). For dimensions of graves, see Table 46; for body posture, see Table 47; for plans and sections, see Figures 141–6; for a report on human bone by Frances Lee, see p. 349.

*Burials in Int. 32 (FR 8ii/7)*

**BURIAL 17 (FIGURE 142; PLATES 16:B AND 47:A)**

Grave F9 cut Prehistoric palisade trench F4, and was aligned with ditch F130 (which was probably visible to the gravediggers). The body (F254), probably a man, was lying on its back, with shoulders hunched and neck upright (vertical) against the north wall of the grave; the feet were parallel and turned south-west; the arms were fully extended, with the left hand across the abdomen; the left leg was turned over to the west, and was slightly flexed; the face (determined from the teeth) was turned nearly due south. (Excavated by J. Cane and P. Leach.)

**BURIAL 18 (FIGURE 142; PLATE 47:B)**

The grave (F39 in Int. 20, and F101 in Int. 32) contained a coffin (F245) composed of rectangular planks jointed at right-angled corners. The planks (Context 1066) survived only as a vertical locus, 10 mm wide, or as localized brown staining beneath, and above, the body. The body (F246) was lying on its back, with the left leg turned over towards the south, and slightly flexed; the position of the arms was uncertain. The position of the head



**Plate 46** General view of Group 1 burials under excavation, taken from a hot-air balloon tethered by a rope (left).

seems to indicate that it had been displaced, or detached and replaced. This might suggest decapitation, or, given that the body was contained in a coffin, post-depositional movement. (Excavated by P. Leach.)

#### BURIAL 19 (FIGURES I42 AND I47)

The grave (F40 in Int. 20, and F102 in Int. 32) contained a body (F247) lying face down with legs slightly flexed, the toes pointing north. The head was on its right ear, looking north. The left arm was bent so that the hand lay, with cocked wrist, behind the back, over the upper vertebrae. The position of the right arm was unclear, but appeared to lie beneath the chest, emerging to the north. The position of the left arm is unstable, and may imply that it was tied to the other arm, around the body. (Excavated by P. Leach and C. Royle.)

#### BURIAL 20 (FIGURE I42; PLATE I6:C)

Grave F106 was a rectangular cut, back-filled with silty sand topped by a patch of large flints up to 200 mm across (Context 1065). Such stones were not otherwise recorded in the vicinity; their apparent selection implies a cairn that has subsequently dished into the grave. Coffin F248 was thought to have been a tree-trunk coffin, due to its apparently tapering form and the thick 'barky' character of the base. Body F249 was lying on its back, with arms to the side. An organic sand-shape (Context 2093) was defined in the coffin at the south-east end. Originally thought to have been the decay product of an animal bone, it proved, on dissection in the laboratory, to be composed of thin laminae of a wood decay product, and clearly derived from the coffin. (Excavated by M. Cooper, P. Leach and A. Favoro.)

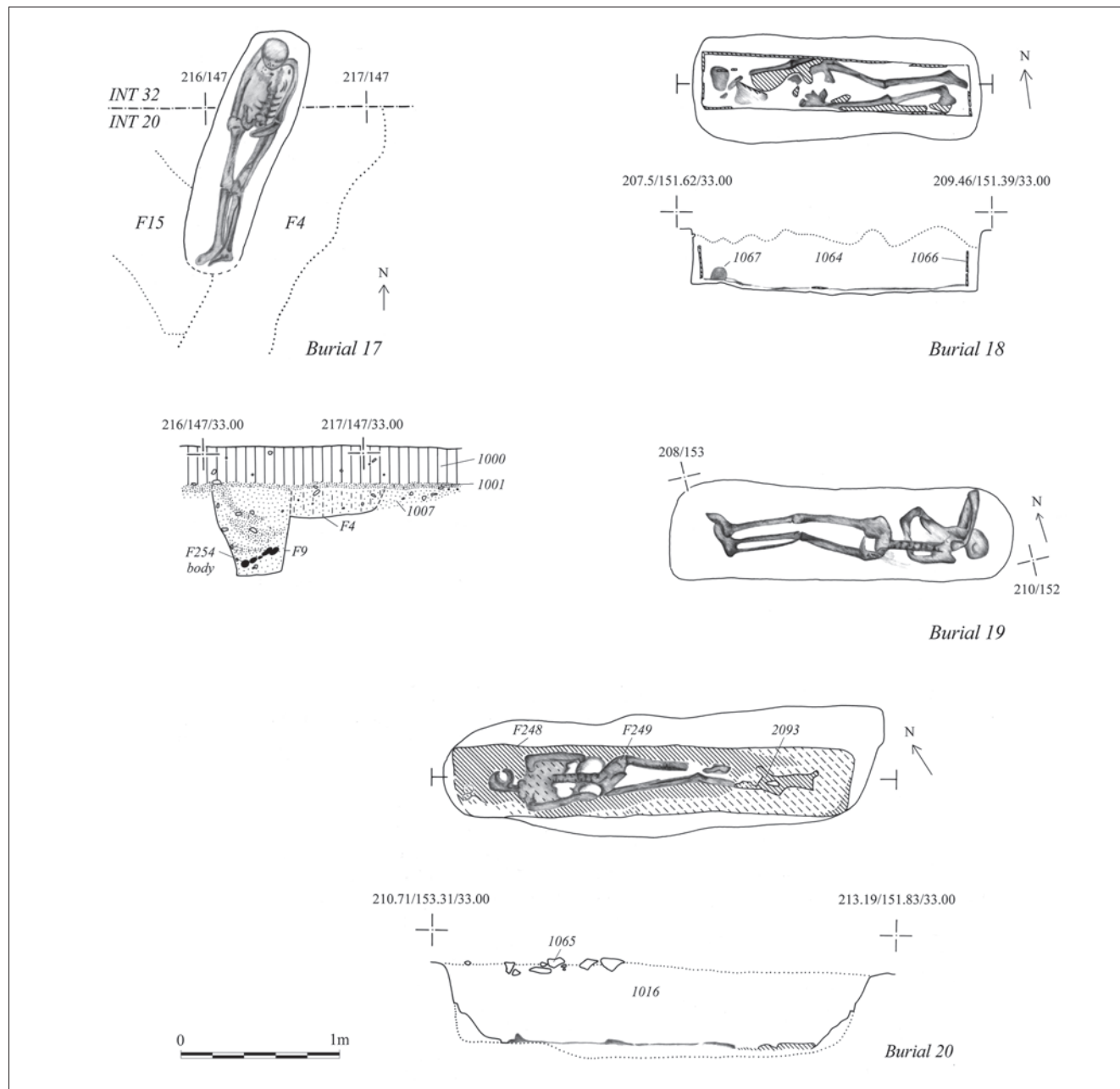


Figure 142 Group 1: Burials 17–20, plans and sections.

**BURIAL 21 (FIGURE 143)**

Grave F108 contained body F251, a headless torso. The body lay on its back, with legs extended and arms by its side. The right hand appeared to clutch a stone (Find 2395). A sand-form head, deriving from this body, was found in the grave above (Burial 22). (Excavated by M. Cooper and B. Noble.)

**BURIAL 22 (FIGURE 143)**

Grave F109 had cut palisade F133 and grave F108 (Burial 21). Poorly defined, body F252 probably lay on its back with the arms to the side. The additional head (from Burial 21) lay on the knee of the left leg. A possible marker post (F107) was investigated, but the evidence was inconclusive.

Burials 21 and 22 were closely associated, but did not constitute a double burial in a single grave. The grave for Burial 21 was dug first. The second grave (for Burial 22) was not coincident with the first, although it had a similar alignment.

The grave of Burial 21 is the same length as the headless body, implying that the body had already been decapitated before burial. Alternatively, the head could have been tilted forward on the chest of the body as originally laid out, and then inadvertently removed by the diggers of Burial 22. This explanation assumes that the diggers of the second grave were ignorant of the position of the first. Burial 22 was unusually shallow, possibly because the gravediggers wished neither to start again, nor to exhume further pieces of the corpse they had encountered. The mobility of the head implies that the time interval between the digging of the two graves would have been less than ten years, the notional time for a sand body to form, even if the site of the first grave had by then been forgotten. If F107 were a marker post, then it may have been a signal to future gravediggers to dig no further in that place. (Excavated by B. Noble, M. Cooper and J. Lawrence.)

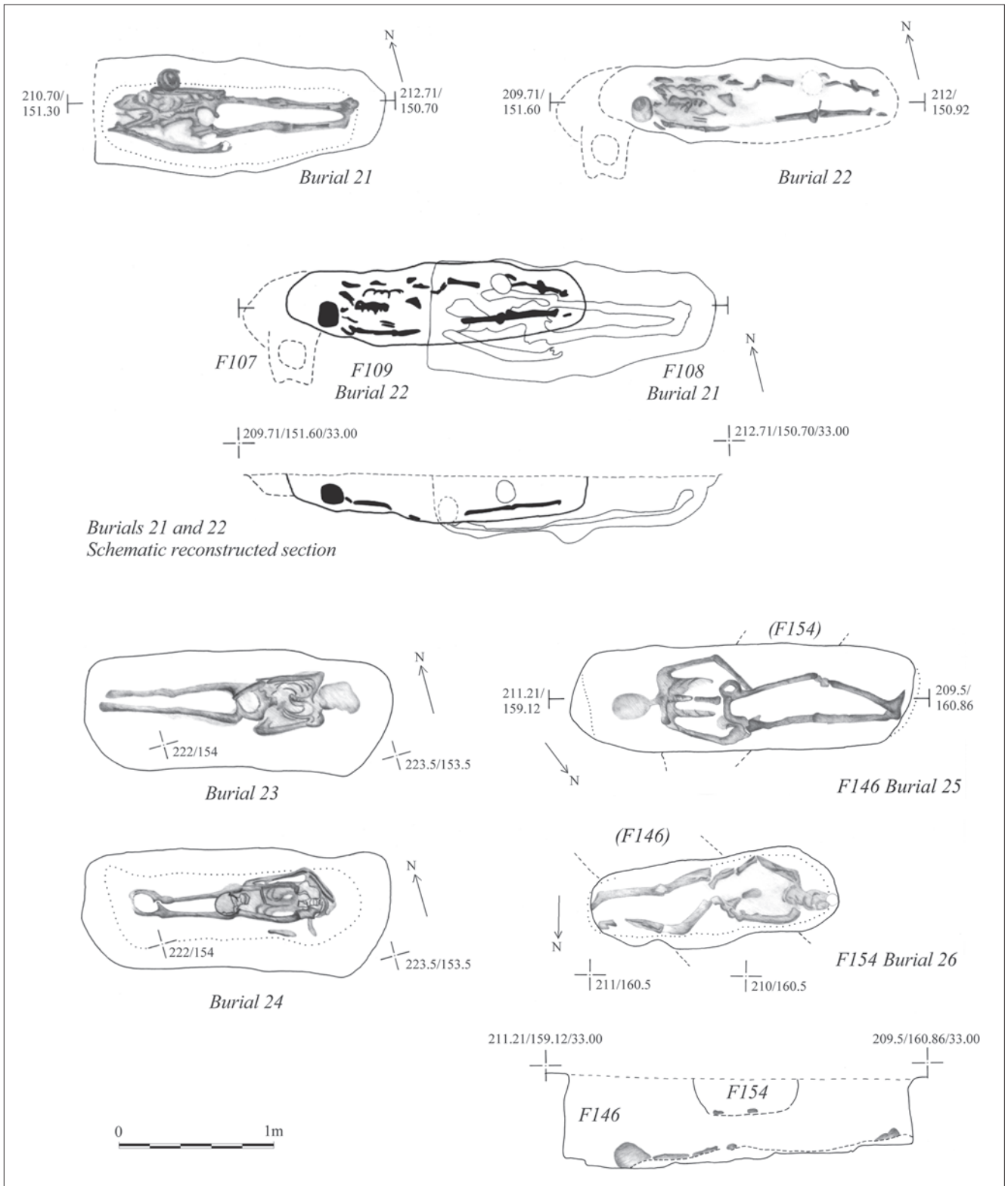


Figure 143 Group 1: Burials 21–26, plans and sections.

BURIAL 23 (FIGURES 143 AND 147)

Grave F137 appears to have been a single structure to take two burials: Burial 23 (the upper) and Burial 24 (the lower). The two bodies were in contact, with no detectable backfill between them. Burial 23, a middle-aged man, lay on his back, with legs and right arm straight, and the left arm bent with the wrist cocked. The head was connected by body stain to the torso, but

lay unnaturally, with the rear cranium on the right shoulder. The direction of the face, lower jaw and teeth offered the impression of a severed or broken neck. The only convincing piece of wood was a short strip, 140 mm long, running parallel to the right-hand forearm of Burial 23. It is not likely that this derives from a coffin. It was possibly a stick that was back-filled with one or other of the two bodies. (Excavated by R. Beesley, S. Foster and C. Cane.)

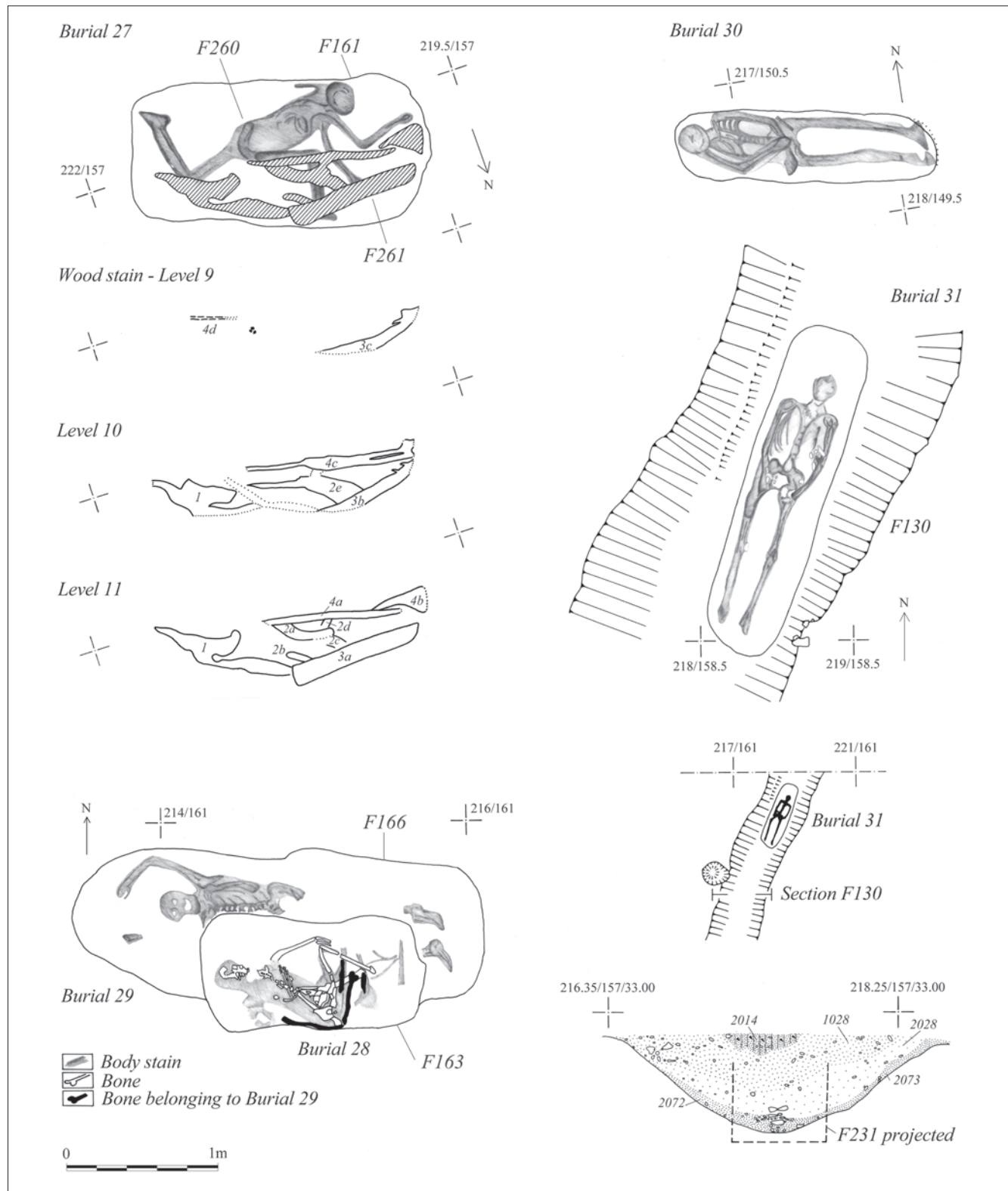


Figure 144 Group 1: Burials 27–31, plans and sections.

BURIAL 24 (FIGURE 143)

Beneath Burial 23 was Burial 24, the body of a young man sitting and doubled forward. The legs and pelvis were extended. The head rested on the knee, but the jaw was uppermost. The left arm was beneath the trunk, the right arm was behind the back. Burial 24 was placed in a cavity of its own, clearly visible below that for Burial 23. The body of Burial 24 was in direct contact with the one in Burial 23, and must have been left proud of the lower cut provided for it. The head of Burial 24 lay directly

beneath the left femur of Burial 23. Under the head of Burial 23 lay a radius and an ulna of Burial 24.

There are two possible readings of the posture of Burial 24. Firstly, that the body was folded forward at the hips, so that the trunk was horizontal and the head rested on the knees; this would be anatomically possible with the arms positioned in front of and behind the chest, but the head would have to have been twisted through some 120° from its normal carriage for the jaw to face over the right shoulder blade. Secondly, that the



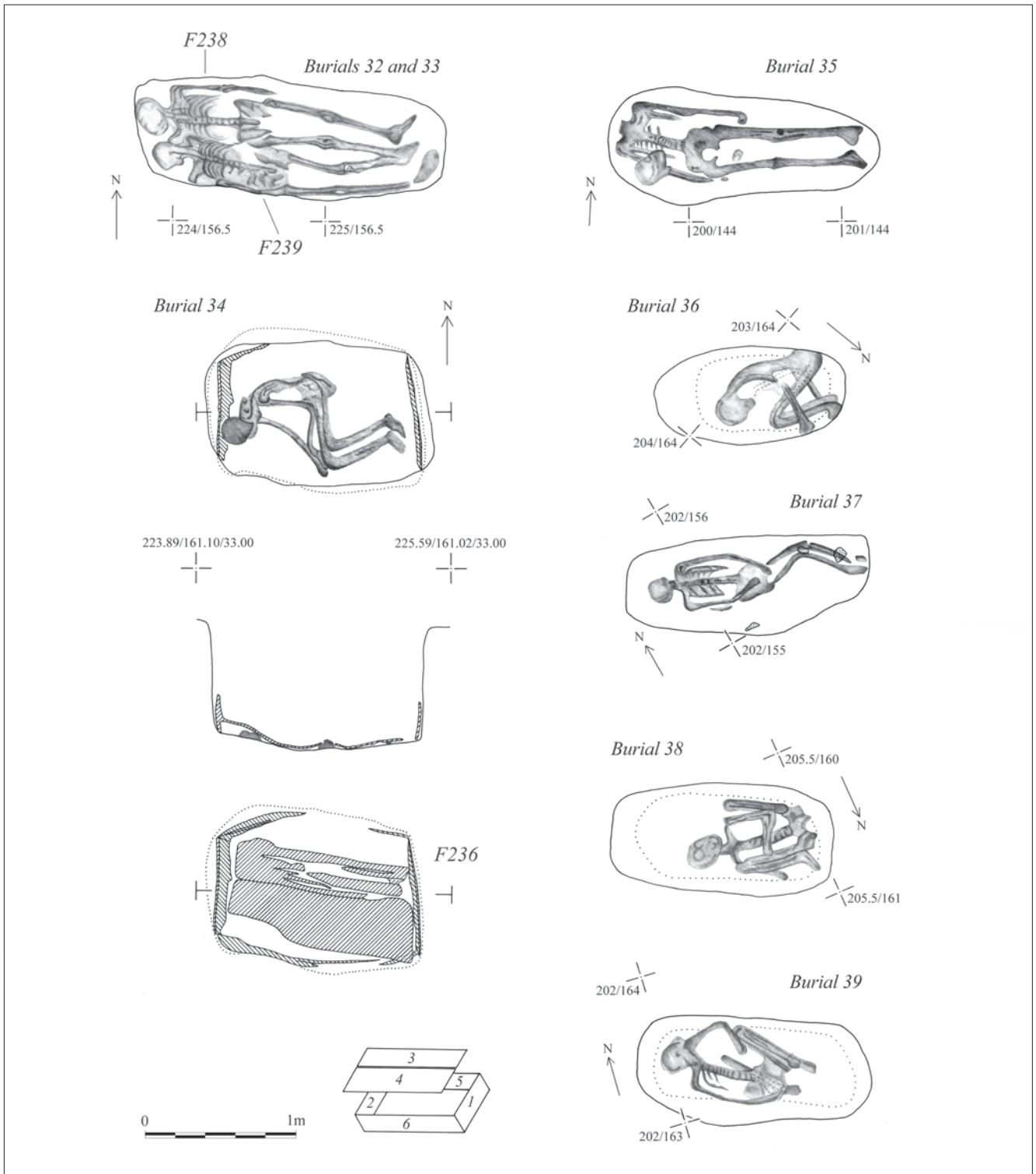


Figure 145 Group 1: Burials 32–39, plans and sections.

head, and possibly the trunk, was severed prior to burial, with the head being deposited on the knees of the trunkless corpse. The first reading is possibly the more acceptable, but the neck would have to have been broken, and possibly partially severed, to achieve the position recorded.

Burials 23 and 24 are likely to have been deposited in a single incident; the grave for both burials being cut as a stepped construction through topsoil and subsoil. The lower cut, for Burial 24, was only some 150 mm deep. It was long enough, at 1.68 m, for an average human, but the body was folded and

placed with the pelvis near the east end of the lower cut. The corpse of Burial 23 was laid on its back directly on top of Burial 24, such that the back of Burial 23 lay over the (reversed) back of Burial 24. The legs of Burial 23 were not quite coincident with those of Burial 24. The left thigh of Burial 23 rested on the head of Burial 24. Both bodies had been hanged and/or decapitated, and the heads lay, or had been replaced, in approximately their correct anatomical positions. These positions could not be explained by post-depositional movement. (Excavated by S. Foster and C. Cane.)

BURIAL 25 (FIGURES I43 AND I47)

Grave F146 contained Body F258, which lay face down with hands beneath the trunk; the hands were not actually observed, but arms suggests a convergence at the abdomen. The right foot and ankle lay over the left foot, with both sets of toes pointing right (the posture suggests that the feet were bound – and perhaps also the wrists). Burial 25 was cut across, at an angle, by grave F154 of Burial 26. (Excavated by A. Favoro, P. Leach and W. Filmer-Sankey.)

BURIAL 26 (FIGURE I43)

Grave F154 contained a body (F259) that lay on its back, with the left leg slightly flexed, arms by the side and hands resting on the pelvis. Burial 26 cut across Burial 25, and both burials were amongst the shallowest. It might be inferred that either the diggers of Burial 26 were aware of Burial 25, and kept to a discreet depth, or that both sets of diggers were attracted to the same place by a pre-existing feature, such as an earthwork. The presence of an earthwork would also explain the apparent shallow depth (see below, p. 325, for discussion of pre-existing earthworks). (Excavated by P. Leach and A. Favoro.)

BURIAL 27 (FIGURE I44; PLATE 48:A AND B)

The extra-large grave F161 contained body F260, that of a young to middle-aged man. The body lay on its left side in a ‘running’ position, that is, with the right leg forward and the left leg back, and with the two arms pushing forward. The ‘lapper’ behind the head is unexplained. There was no direct evidence for trauma. The various members of the body were distinguished from wood, and were located with reasonable confidence on plans and photographs. Half of the skull was found in preserved bone in the predicted location, giving additional confidence that the posture of the body had been correctly read in the pseudomorph.

Anomalies attributed to wood (F261) were recognized, from Level (Stage) 9 onwards, from their black coloration and linear character. Fourteen pieces of wood – deriving from an object, or objects, that were not securely identified – were defined. All the wooden traces were thin, horizontal and discontinuous with one another, and lay over the body. This suggests they derived from a number of differently shaped, flattish pieces of wood thrown into the burial, rather than from a coffin or chamber. The composite plan taken from all three plans (Stages 9–11) and from the photographs suggest one or more jointed, heavy wooden objects. There was no metal present. The components have been distinguished as follows:

- 1 A flat ‘beaked’ object with ‘handle’. The beak is at least 550 mm long, and 150 mm wide. The handle is at least 550 mm long and 100 mm wide.
- 2a–e A series of curved or straight pieces, 40–70 mm wide.
- 3a A heavy handle or beam, 870 mm long, 120–50 mm wide and up to 50 mm deep.
- 3b Lying above 3a, and possibly an earlier sighting of the same piece, this has two ‘pegs’ projecting to one side on one edge.
- 3c This is likely to be a manifestation of the same piece at a higher level.
- 4a–d A linear feature running along the centre of the long axis of the grave.
- 4a The most persistent feature, this is a rod 50 mm wide and 900 mm long (with 4d it is at least 1350 mm, or 4.5 ft, long).
- 4b A fan-shaped object resembling wooden spade.

- 4c A version of 4a and 4b at a higher level, without improving the interpretation.
- 4d A linear strip of charcoal staining that aligns with 4a.

The pieces of component 4 may have come from a shovel, perhaps an unexceptional object to be found in a grave. The pieces of components 1–3 were initially seen as belonging to a primitive ard (*Bull.* 4: fig. 30), and the rod and the posture suggested that of a ploughman. It must be noted, however, that the decay trajectory of wood can give rise to some eccentric patterns (for instance, the coffin base in Burial 20 was mistaken for a piece of meat), and the shapes of the pieces as found in the ground offer an insecure basis for reconstruction. This burial is unique at Sutton Hoo, and elsewhere, so it would be hard to insist that some new mortuary behaviour had been identified. The likelihood is that the burial, like the others in Group 1, was a victim of ritual or judicial execution, and that the woodwork of pieces 3–4 derived from a hurdle, gallows or some other instrument of execution. The posture would have to find its explanation, here as elsewhere in the cemetery, as representing the position at death. (Excavated by A. Favoro, C. Williams, S. Foster, W. Lockyer, R. Beesley and P. Leach.)

BURIAL 28 (FIGURES I44 AND I47)

Grave F163 contained body F262, which was buried in a kneeling position, with the pelvis at the highest point, the knees 300 mm apart, and left and right tibias in contact with the grave floor. The vertebrae curved downwards from the pelvis to the skull, which rested on the grave floor, and was turned to the right and perhaps twisted hard round so that it looked nearly upwards/backwards. The left arm was beneath the trunk, and the right arm was along the grave floor, with the hand near the right knee. The small area of the grave shows that it was dug to receive a body that had already adopted a folded posture.

The skeletal matter encountered was so complex that the tableau went through various interpretations, as additional limbs were defined and attempts to explain the position of the body were confounded. At first it was thought to be an animal (sheep), but P. A. Rahtz saw that the basic form was that of a crouched human burial. On complete excavation, it became clear that the primary burial was in fact kneeling. The limbs that remained after the subtraction of a completely articulated skeleton were disarticulated. A spare ‘head’ was supposed from a sand stain at a relatively high level. If this were discounted, the remaining limbs can be assigned to disturbance of the body in the earlier Burial 29. (Excavated by J. Cane, A. Favoro, W. Filmer-Sankey and F. Lee.)

BURIAL 29 (FIGURE I44; PLATE 47:C)

Especially long, at 2.50 m, grave F166 contained a body (probably of a man), of which the right arm, right hip, right-hand ribcage and both legs were missing. The remains show that the body had lain on its back with both arms above (i.e. horizontally stretched beyond) the head, and both feet turned to the right. Burial 28 (grave F163) had been dug through Burial 29, over its southern side, disturbing the right half of the supine body in Burial 29. The grave cut for Burial 28 severed the right leg of the earlier body at the ankle. The left leg and right arm were also displaced, leaving a foot and a hand, respectively, still *in situ*. These limbs did not remain articulated when back-filled into Burial 28. This implies that Burial 28 followed Burial 29 after no great interval: long enough to disconnect the limbs, but

not long enough for them to have become sand forms. On the basis of the experiment (see Chapter 3, pp. 49–52), the limbs lose their structure in five to ten years.

The graves dug for Burials 28 and 29 – one abnormally long, the other abnormally short – reflect the likelihood that the graves were designed for postures adopted before burial. (Excavated by A. Favoro.)

#### BURIAL 30 (FIGURES I44 AND I47; PLATE I7)

Grave F173 cut Prehistoric linear features F5/174 and F219. It contained the body of a young man F264 which lay on its back, with the right hand over the pelvis and resting on or over the central part of the left forearm. The left leg was slightly raised at the knee. The head was turned to face south. The pseudomorph was unusually complete and the bone was in good to fair condition. There were no indications of trauma.

The sand body (Context 2038) was located, defined and recorded at Stages 9–11, it being noted that the brown crust of sand represented body and not bone. Thin shells of bone were however located inside the jacket of the sand body and an attempt was made to retrieve the skeleton. This was largely successful; it proved possible only when the sand was very dry and could be brushed off to the bone horizon. (Excavators P. McCullough and F. Lee).

#### BURIAL 31 (FIGURE I44)

Grave F231 contained body F237, which lay on its back, hands converging on the area of the abdomen. The grave was aligned with, and had cut into, the Prehistoric ditch F130. Ditch F130 had primary fills (Contexts 2072 and 2073) that were mainly sand and contained no charcoal, while its upper fills (Contexts 1028 and, especially, 2014) were relatively charcoal-rich. Context 2014, a black charcoal patch, was said to be 'noticeable along the entire length of F130'. The backfill of grave F231 (Context 1103) had only a trace (less than one per cent) of charcoal. In spite of the common difficulty of observing the stratification directly on this site, it seems probable that the grave was dug only through the lower fills of the ditch. The gravediggers of F231, therefore, dug their grave into the ditch of a visible earthwork, a conclusion endorsed by the alignment of the grave itself, which sits symmetrically within the ditch. (Excavated by P. Leach and C. Williams.)

#### BURIAL 32 (FIGURE I45)

Grave F227 was a double grave in which a single pit was used to bury two bodies, F238 (Burial 32) and F239 (Burial 33). Feature 227 was truncated by a Second World War anti-glider ditch, F220. A lozenge-shaped feature immediately to the south (F226) was excavated, but remained unidentified. Burial 32 (F238), the upper of the two bodies, lay extended and face down. (Excavated by P. Bethell.)

#### BURIAL 33 (FIGURE I45)

The lower of the two bodies in grave F227, body F239, also lay extended and face down. Two young adults of unknown sex had thus been placed in a single grave, one after the other. Burial 33 was placed face down first; then Burial 32 was placed, also face down, slightly overlapping the body of Burial 33. The grave was abnormally broad, suggesting the expectation of two bodies side by side. (Excavated by P. Bethell.)

#### BURIAL 34 (FIGURE I45; PLATE 48:C AND D)

Grave F235 contained body F240, which had been laid on its right side, legs semi-flexed, right hand on right knee, and left elbow on left thigh. A wooden chest or coffin (F236) was identified above the body, and consisted of six planks: four set on edge (or nearly on edge) at each end (east and west) and each side (north and south), and two laid over the top. At the east end the line (Plank 1) was that of a thin, curving vertical band, 10 mm thick. At the west end (Plank 2) the board or boards ran north to south. At Stage 7 another plank appeared (Plank 3), this time lying flat, and running east–west, slightly north of centre. It was 220 mm wide. A fourth plank (Plank 4) was defined at Stage 8. It was up to 350 mm wide, and lay over the southerly part of the grave. It showed as a curving surface sloping down from its southern edge and, to a lesser extent, from its west end.

During excavation the body was previewed through Planks 3 and 4, which were then removed to show the body tableau. At this point, linear traces could also be observed running down parts of the north (Plank 5) and south (Plank 6) sides. There was no sign of bottom planking despite careful cleaning of the grave floor, particularly adjacent to the coffin ends. The planks derive from a structure that measured 1.32 × 0.65 × 0.25 m. One interpretation is that the container must have been a rigid structure, like a drawer. There were, no doubt, many such containers in use in early rural England for carrying grain, feed, dough or cheese. Alternatively, it might be seen as a grave lining or chamber, with planking on the sides, but not the base, of the grave, and with a cover of planks added after the burial was inserted.

The grave was dug to the size required to take the body laid on its side in a semi-flexed position, and the container was placed on top. The posture of the body was such that it could also have been adopted if the container was used to carry it. If so, the body would have had to be unloaded, lowered into the grave, arranged on the grave floor and then covered by the container. The grave had been dug with a view to accommodating the wooden structure and/or the posture of the body. (Excavated by K. Spandl and P. Leach.)

#### *Burials in Int. 52*

#### BURIAL 35 (FIGURES I45 AND I47; PLATE 47:E)

Grave F4 contained the body of a young adult (F34), which lay extended, lying on its back, and with the head placed on the right arm. The definition and the posture of the body were very clear: the patella could be seen still in place over the left knee. The length of the grave was only sufficient to accommodate the extended body without its head, although the whole corpse could have been placed within it, with a little flexing. This is, therefore, more probably the burial for a decapitated person, rather than representing decapitation for purpose of burial. (Excavated by A. Copp.)

#### BURIAL 36 (FIGURES I45 AND I47)

Grave F37 was bath-shaped, with a depression at the north-west end. The body (F71) lay in a crouched position on its right side, on the uneven floor of the grave. The head was on its right side, facing north (towards the feet), and the legs were tucked up, so that the knees were nearly opposite the chin. The left arm lay over the left leg, and the right arm lay in contact with the grave floor beneath the trunk, pelvis and left femur. The body was in a position where the knees, around which the arms were clasped,

were tucked up to the chin, and then the whole body was lain on its side. The size of the grave, or pit, showed that the expected burial would occupy a small space (maximum length 1.25 m). The corpse had been placed in the pit, the limbs being arranged or tied in the position found. (Excavated by A. Copp.)

**BURIAL 37 (FIGURE 145; PLATE 47:D)**

Grave F25 contained the body of a young person (F72), which was lying on its back, face upwards. The hands were laid across the abdomen. The legs – slightly flexed – lay on their left sides. The excavator reported a ‘cracked skull’ in the sand form, and suggested that the hands and feet were tied. The head faced upwards. Unidentified additional pieces of organic matter may have derived from a second body, or the disturbance of the first, or the inclusion of some corporeal matter in the backfill. (Excavated by M. Hummler, K. Lister and A. Copp.)

**BURIAL 38 (FIGURES 145 AND 147; PLATE 47:F)**

Grave F35 contained body F75, which lay on its back, folded, on a slope at the west end of the grave. The head faced upwards, slightly turned towards the south. Both legs were drawn up so that the knees rested on the shoulders, and the legs hung outwards, displaying the abdominal area. The right foot was turned outwards, and the left foot pointed upwards. The right arm lay beneath the right leg, and the left arm lay across the chest. There was also a stain of an organic object, perhaps a stick or fragment of cord in the backfill. Such a body position would be difficult to maintain, leaving the possibility that it had been tied (trussed), or that it had attained rigor mortis to a sufficient degree to maintain the posture during back-filling. In either case, the body position, exceptionally certain, peculiar and disturbing, must represent a posture adopted or enforced just before death. (Excavated by A. Copp.)

**BURIAL 39 (FIGURES 145 AND 147)**

Grave F36 contained the body of a mature man (F74), which was buried kneeling, face to floor, knees apart, toes dug in, left arm over back, with hand on base of spine, and right arm over right thigh and under trunk. The excavator’s case for the face-down posture was based on the high position of the pelvis in the grave, with the legs tightly flexed, the stain of the right thigh above the pelvis, the discovery of the ribcage and spine at an early stage (i.e. high up), and the shape of the head (small and round, suggesting it was the back of the head that was uppermost).

The jaws were seen during the removal of the body samples, and the mouth was then recorded as facing the floor of the grave. The head proved to have been in good condition, with a good set of teeth. Both arms were higher than the backbone or the skull, suggesting they were behind the back. The body was thus buried kneeling, with the face against the grave floor, and the hands tied behind the back. This position must have been taken up by a live body, or been secured by trussing or rigor mortis. (Excavated by A. Copp.)

**Timber foundations and other features in the centre of the cemetery – a gallows? (Figures 141 and 148)**

**F138**

Dimensions: high point 33.03 m AOD, low point 32.53 m AOD, diameter 0.20 m, min. depth 0.50 m.

This was identified as a double or single post-hole.

**F139**

Dimensions: high point 32.80 m AOD, low point 32.45 m AOD, socket diameter 0.19 m, min. depth 0.35 m.

Outside the F243 group, this is included as the only post-hole outside that group to have had a post silhouette.

**F165**

Dimensions: high point 32.84 m AOD, low point 32.23 m AOD, min. depth 0.61 m.

This had a post silhouette that was square in section. It was 150 × 150 mm and sloped at c.30° from the vertical, in an easterly direction. Charcoal from fills was identified as being from *Betula sp.* by C. R. Cartwright, British Museum.

**F167**

Dimensions: high point 32.94 m AOD, low point 32.35 m AOD, diameter (circular) 210 mm, min. depth 0.59 m.

This cut the upper fill of ditch F130. It had to be excavated before the upper ditch fill of F130, which makes the post-hole contemporary with, or later than, Burial 31. The post was set vertically, and was possibly removed eastwards.

**F189**

Dimensions: lowest point 32.56 m AOD, diameter of pit 550 mm, diameter of post-silhouette 190 mm.

This was identified as a post-hole.

**F191**

Dimensions: high point 32.76 m AOD, low point 32.31 m AOD, diameter (subcircular) c.300 mm, min. depth 0.45 m.

This was identified as a post-hole.

**F198**

Dimensions: high point 32.77 m AOD, low point 32.45 m AOD, diameter 0.40 m, min. depth 0.32 m.

This was identified as a post-hole.

**F241**

Dimensions: high point 32.73 m AOD, low point 32.60 m AOD, min. depth 0.13 m.

This resembled a post pit and post setting, but was discounted as such by the excavator.

**F242**

Dimensions: high point 32.69 m AOD, low point 32.66 m AOD, diameter 0.30 m, min. depth 0.03 m.

This was thought to be a very shallow post-hole.

**F243**

Dimensions: high point 32.81 m AOD, low point 32.22 m AOD, min. depth 0.59 m.

This was thought to be a tree pit. It was first defined as an elongated area of mottled dark and orange-brown soil, which was relatively stone free, and retained its shape as a damp area during the drying of its surroundings. Outer margins, particularly to the north and east, were defined and lined by a concentration of pitched pebbles and cobbles, many of which were angular. The main central fill had few stones, and was well-sorted sand, such as might derive from wind-blow or from back-filling by ploughing.

*Discussion*

The dating of the F243 group to the early Middle Ages, and its interpretation, must necessarily be tentative. Feature 243 resembled tree-pit features that were recognized elsewhere on the site (see Chapter 11, p. 401), and it seems to provide a focus for a group of execution graves. Features 198 and 138, and possibly F241, are post-holes which cut F243; F242, which also cuts F243, is a very shallow post impression. This array of posts could certainly have held a shored tripod, bipod or single post, such as would be required for a gallows. The posts F139, F191, F165, F167, F189 and F198 are distinguished by being the only ones with post silhouettes (and therefore the only posts?) in Int. 32 (FR 8ii/3632). The posts F165, F167, F189 and F191 make a four-post rectangular structure with F243 at its centre

The following interpretation is offered for these features. A tree was the original focus for the Group 1 cemetery, and was used to perform its executions. When this tree blew down, and its tree pit had been back-filled, its function was replaced by a gallows of two posts supporting a single bar. This gallows was replaced at least once, and maybe three times or more.

**Timber foundation in Int. 52**

*F27/76*

Dimensions: high point 32.82 m AOD, low point 32.50 m AOD, max. length of the arc 3.00 m, min. width 0.85 m, min. depth 0.32 m.

This was a linear slot (F27/76/78), with five post-holes (F79–83) along its base. One small lump of organic stain was located inside F78 at Stage 2 (recovered as Find 157). It was a disc, 50 mm in diameter and 20 mm thick. The excavator reported: ‘There is no doubt this was a piece of body stain – the colour and texture were typical’. The most westerly post (F79), and the next but one (F81), are the largest. In the excavator’s interpretation, F79 and its smaller companion F80 formed a pair that were replaced by the pair F81 and F82. Feature 83 was a final replacement for the small F82. Thus the feature can be seen as one large post and a ‘support’, which was replaced at least once. The feature was seen as Early Medieval, on the basis of its sharp cut (in comparison with Prehistoric features) and the piece of body-matter included in the backfill. It was interpreted as the foundation for a ‘gallows’. However, the deepest post would have been less than half a metre deep, and would have received very little support from a post immediately behind it. A raking shore would have been needed to support a vertical post that acted alone as a gallows. None of the post-impressions, however, showed any signs of an angled position. (Excavated by A. Copp.)

**The Group 1 burials – analysis**

*The geography of the cemetery*

Twenty-three graves containing sand bodies were recorded, as were a further five grave-shaped features (F131, F180, F215, F226 and F233) which proved not to have been used for burial (Figure 141). One feature that lay partly in Int. 38 (F234) was not investigated, and may have been a burial. Burials 32 and 34 are the easternmost graves, and mark the eastern limit of burial located at Sutton Hoo, there being nothing for at least 30 m beyond. Burials 35, 37 and 39 proved to mark the western limit to the group; nearly 50 m of Int. 50 was investigated beyond them, and found to be free of burials. To the north and south the limits are less sure, although the largely blank Int. 38 and the

lack of graves at the north end of the carefully scrutinized Int. 52 suggest that the perceived northern limit is the real one.

The graves appear to respect an ‘avenue’, c.5 m wide, running nearly ESE between Burials 37 and 38. The locus of this avenue does not relate directly to pre-existing Prehistoric features, and appears to terminate in an ‘arena’, an open space around which the graves curve on the east side. Four post-holes located in this arena retained evidence for former wooden posts (F139, F165, F167 and F191). They were situated near to each other in the empty space in the centre of the Group 1 graves (Figure 141). The post-holes may therefore be associated with each other. A seventh- to ninth-century radiocarbon date for wood that survived in F165 supports dating to the early Middle Ages (p. 54). They are interpreted as structures connected with the structure of a gallows (see below).

*Grave markers*

There was possible evidence for grave markers in two graves. In Burial 20 the upper backfill of the grave contained a band of large, sorted stones (flint and chert nodules) running parallel to the long axis of the grave. It seems likely that these represent the remains of a longitudinal cairn marking the grave at the old ground level. In Burial 22 a possible post-hole at the head end would have been contemporary with the back-filling of the grave; this feature was, however, only shallow and cannot be interpreted certainly as a post-hole. In other cases the intersection of non-contemporary graves suggests that they were not clearly marked (Burial 22 cut Burial 21, Burial 26 cut Burial 25, and Burial 28 cut Burial 29).

*Orientation*

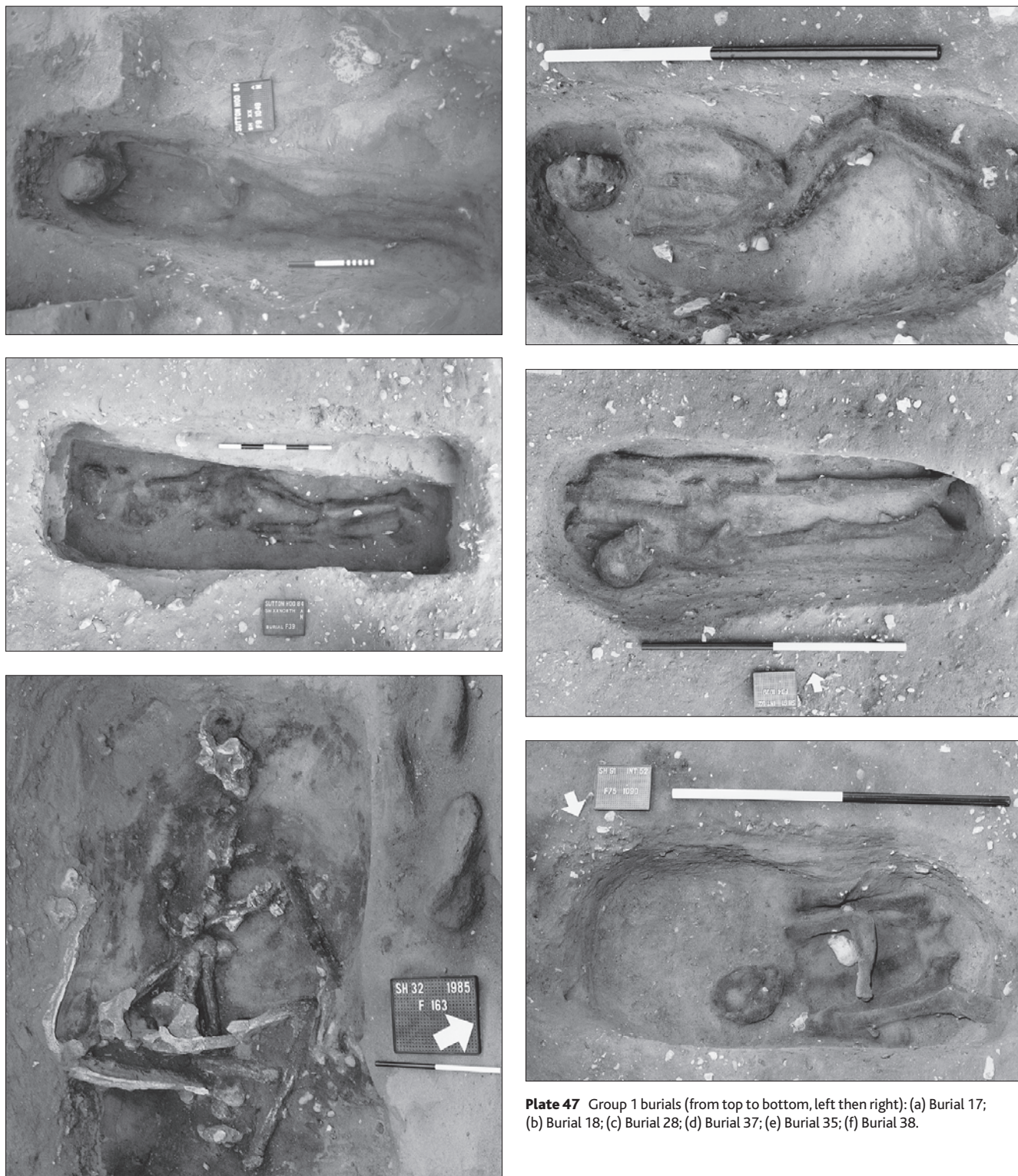
Twelve out of twenty-three graves were aligned approximately east–west, five appeared to respect the line of the Bronze Age palisade (F133 and F158) and two seemed to respect the line of the Iron Age bank and ditch F130 (Figure 146). These Prehistoric features may have survived as slight earthworks; or alternatively some surface feature, such as a track, may have persisted to explain the alignment. These variations in orientation do not suggest that a particular ritual is prevalent.

*Sequence*

While Burials 23/24 and 32/33 were single graves designed for two people, at Burials 21/22, 25/26 and 28/29 the second grave was in each case dug in ignorance of the location of the first. The head of Burial 21 had been struck off and deposited with the backfill of Burial 22. In a similar episode, the legs and an arm of Burial 29 were dragged out of position and re-deposited in Burial 28. The time interval, in the second case at least, must have been quite short, as sand bodies form within ten years or so at Sutton Hoo, and displacement and transportation of such large limbs would be unlikely after that had occurred (see Chapter 3, p. 49). The pattern of the graves, including those that cut each other, is not suggestive of an axial or radial sequence; they instead appear to have been mainly unmarked and to have been added at random in the vicinity of the central ‘arena’ on which the graves were focused.

*Variations in size and depth*

Table 46 gives the heights AOD of the base of each grave, together with their dimensions as defined; attempts have been made to use this data to explore the variations in the old ground surface

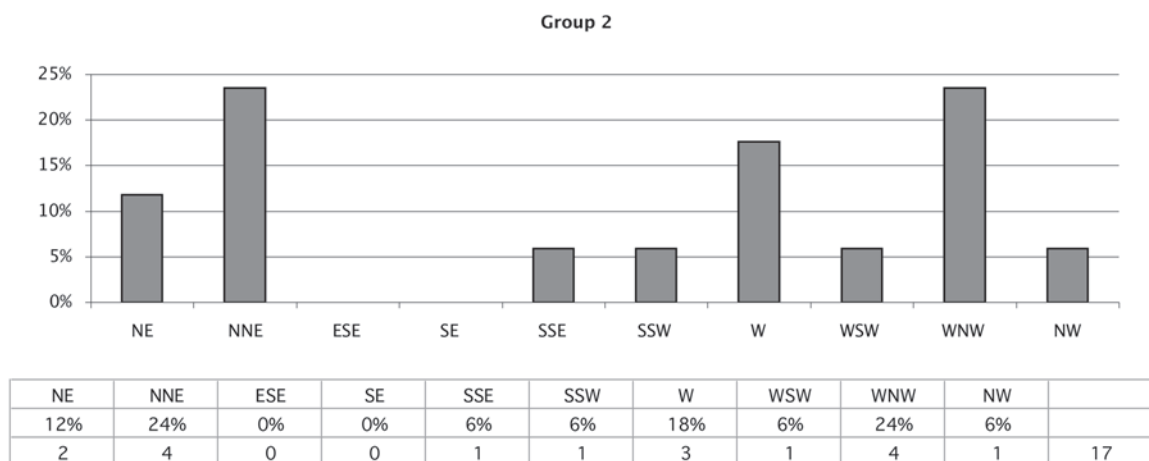
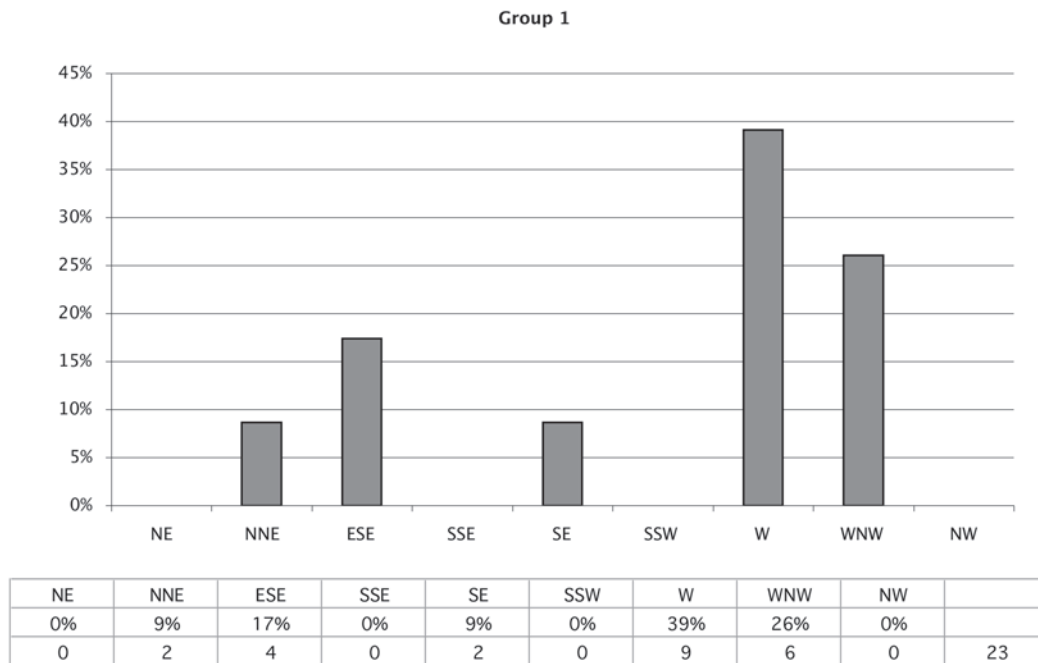


**Plate 47** Group 1 burials (from top to bottom, left then right): (a) Burial 17; (b) Burial 18; (c) Burial 28; (d) Burial 37; (e) Burial 35; (f) Burial 38.

and the possible presence of Prehistoric earthworks. On the assumption that all graves were originally dug to roughly the same depth, the observed variations should relate broadly to the preceding Prehistoric landscape. The highest burials, bottoming at about 32.50 m AOD, are Burials 22, 25, 26, and 36. These can be seen to follow the line of the double palisade, F133 and F158, which runs north-west to south-east, and their relatively high bases may be explained by a levelled bank originally contained by the parallel palisades, or running parallel along the north-east side of them. Burials 23/24, 32/33 and 34, all on the east side away from any putative Prehistoric earthworks, have bases at about 32.00 m AOD, as has Burial 18 on the west side. The

variation in height is less than a half a metre: this is thus likely to have been a 'soft' relict Prehistoric landscape, over which had developed the new topography implied by the 'avenue'. On the other hand, the burials which were not coincident with Prehistoric banks are not typical graves: Burials 23/24 and 32/33 are double graves, and Burials 34 and 18 contained coffins. These may therefore be graves that were dug relatively deeply for other reasons.

A depth of about 0.5–0.6 m from the uppermost cut (usually in the subsoil) was recorded for twelve graves. Assuming a thickness of topsoil equivalent to the 400 mm encountered under mounds (see Chapter 10, p. 377), these graves would seem



**Figure 146** Orientation of Group 1 and Group 2 burials.

to have been cut to a depth of about 1 m. Graves that, from the depth of their base, would seem to have been deeper than this, may have been cut from higher up (through extant earthworks), or may have been cut deeper to accommodate a coffin or an extra body. The length and width of the graves appear to have been determined mainly by the form of the body at the time of burial (see 'Posture', below).

#### *Coffins and furnishings*

All the remains encountered in the graves were decay products, in discoloured sand, presumably deriving from flesh, bone or wood. Wood was generally darker than anatomical material, and possible furnishings were recognized on this basis: coffins in Burials 18 and 20, and a plank lining and cover in Burial 34. An anomaly in Burial 20, originally thought to be a piece of animal sand body and interpreted as an offering of a joint of meat, was lifted and

dissected in the laboratory, where it was seen to be a part of the decayed wood of a coffin. The coffin in Burial 18 was a straight-sided rectangular box, which probably had a lid. The wood in Burial 20 appeared to taper, and was thought to be a tree trunk. The timbers in Burial 34 also came from a rectangular construction, one that was exceptionally broad and had been placed on top of the body.

The timbers in Burial 27 (Plate 48) made a shape that resembled a primitive ard with a staff or a spade, and were given this interpretation in 1986 (*Bull.* 4: 41, fig. 30, 'the ploughman'). However, further experience with wood and body traces on the site has led to reduced confidence in the supposition that they were representative of original objects, rather than being images provoked by decay patterns. Given the posture of the body (below), the wood is unlikely to derive from a container or chamber. The timbers may have come from some piece of agricultural equipment, such as a plough or hurdle, or have been

**Table 46**  
**Group 1 graves**

Burial no.	Cut (mAOD)	Base (mAOD)	Depth (m)	Length (m)	Width (m)	Area (m <sup>2</sup> )	Volume (m <sup>3</sup> )
17	32.76	32.20	0.56	1.57	0.43	0.67	0.38
18	32.90	31.98	0.92	1.82	0.63	1.47	1.35
19	32.80	32.20	0.66	2.15	0.60	1.29	0.85
20	32.79	32.21	0.58	2.62	0.70	1.47	0.85
21	+32.75	32.30	0.45	1.75	0.53	0.93	0.42
22	+32.75	32.48	0.27	2.20	0.45	0.99	0.27
23	+32.75	32.11	0.64	2.10	0.80	1.68	1.07
24	+32.75	31.97	0.14	1.68	0.45	0.76	0.11
25	32.92	32.44	0.48	2.20	0.70	1.54	0.74
26	32.92	32.59	0.33	1.61	0.53	0.85	0.28
27	32.80	32.07	0.73	1.97	0.97	1.91	1.39
28	~32.68	32.11	0.57	1.42	0.73	1.04	0.59
29	~32.68	32.25	0.43	2.50	0.64	1.60	0.69
30	32.72	32.12	0.60	1.75	0.47	0.82	0.49
31	32.35	32.04	0.31	2.20	0.56	1.23	0.38
32	*32.48	31.87	0.61	2.04	0.75	1.53	1.24
33	*32.48	31.87	0.61	2.04	0.75	1.53	1.24
34	32.60	31.89	0.91	1.46	1.05	1.53	1.39
35	32.72	32.19	0.53	1.77	0.77	1.36	0.72
36	32.83	32.47	0.36	1.25	0.65	0.81	0.42
37	32.80	32.28	0.52	1.62	0.65	1.05	0.55
38	32.75	32.11	0.64	1.2?	0.55	0.66	0.42
39	32.83	32.31	0.52	1.58	0.70	1.11	0.58

• Burial 22 cuts Burial 21

+ Burial 23 and 24 are in the same grave

~ Burial 28 cuts Burial 29

\* Burial 32 and 33 are in the same grave

connected with apparatus for execution, the activity which alone appears to link these burials.

#### *The posture of the body*

Burials 17, 18, 20, 21, 22, 26, 30 and 31 were relatively conventional: they lay on the back, with the arms by the side or across the lap, although in some cases, for example Burial 17, the grave was too short for the body, and the neck and shoulders were raised into a half-sitting position. With the exception of Burials 26 and 31, these are on the south side. Most of the other bodies in Group 1 were buried in unusual and elaborate postures (Figure 147, Table 47). Burials 19, 25, 32 and 33 were buried face down (prone) with the legs extended or very slightly flexed. The body in Burial 29 was supine, but with the arms extended above the head, and that in Burial 27 was in a 'running' position. Burials 28, 34, 36, 38 and 39 were buried in a folded position, with the knees flexed tight against the chest. Burial 28 was kneeling, with the back arched and the head twisted against the floor of the grave, while Burial 39 was also face down with the legs tightly flexed under the body. Burials 34 and 36 were lying on the side; Burial 34 with the legs semi-flexed, Burial 36 with the legs tightly flexed against the body. Burial 38 was on its back in a grotesque position, with the knees on the shoulders.

It is suggested that the postures adopted by the body in the three tightly flexed burials mentioned above (Burials 36, 38 and 39) would have been difficult to maintain during burial and back-filling unless the body had been bound or trussed. There

were also other hints that the limbs of some of the bodies could have been tied: in Burial 25 the ankles lay one over the other, and in the same, prone, burial the hands converged beneath the pelvis. In Burial 19, also prone, the right arm lay beneath the chest and the other behind the neck, a position that would seem to require tying. This same position (one arm in front, the other behind the back) was also noted in Burials 24 and 39, and is also a possible interpretation of the arm positions in Burial 28. However, no evidence for cord was found with the burials of Group 1, with the possible exception of a fragment in Burial 38.

In Burials 18, 21, 23, 24 and 35 the head had been detached from the neck. In Burial 21 this was caused by the digging of a subsequent grave (Burial 22); in Burial 18, the angle of head to neck could be due to post-depositional movement within the coffin. In Burial 35, however, the head was placed on the right shoulder of the supine burial, and the grave was dug to fit the headless corpse. The head is therefore likely to have been detached before burial. In Burials 23 and 24 the head retained contact with the vertebrae but was skew to the spinal column, suggesting that the neck had been broken, or that the head had been detached and replaced.

The posture of the bodies is held to provide indirect evidence for death by hanging or beheading (see below).

#### *The bone evidence*

The sand bodies produced little bone. Five out of twenty-two bodies contained sufficient collagen-bearing bone for a



**Plate 48** Group 1 burials: (a) Burial 27 (photograph by Christopher Brooke); (b) skull of Burial 27; (c) Burial 34, the plank lid; (d) Burial 34, the body.



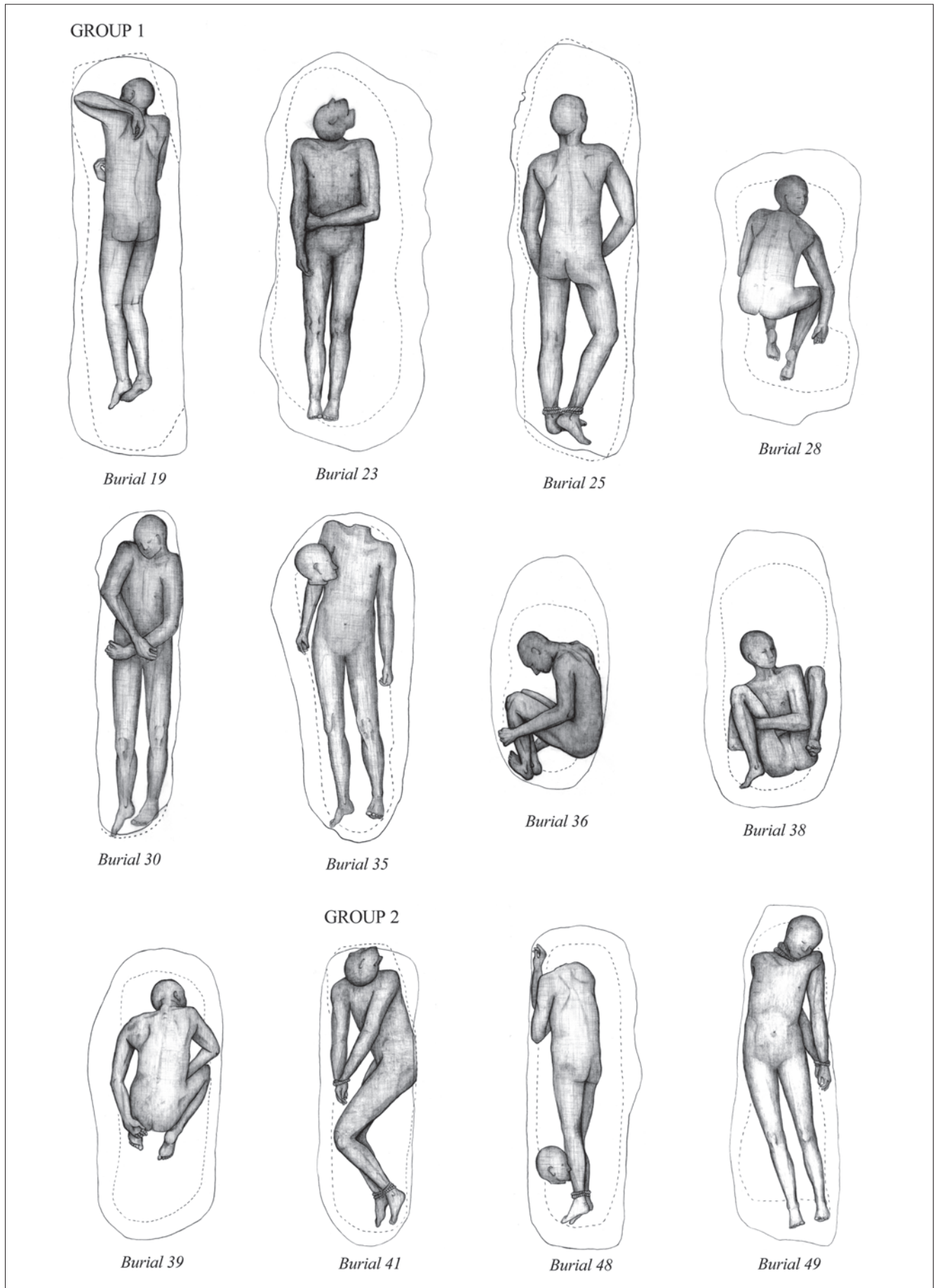


Figure 147 Images of body positions in selected burials (J. Reeves).

radiocarbon determination to be attempted, but two had already been consolidated (having no expectation of bone; see Chapter 3, p. 54). In ten out of twenty-two bodies sex could be determined and, of these, three were probable, and seven were possible, males (see report by Lee, below). A determination of age was possible in nineteen out of twenty-two bodies: all were adult. A more precise age was possible in six cases: two were aged 25–35; four were aged 15–25. Stature could only be estimated for one burial (Burial 30, c.1.72 m; see Lee, below). The lengths of the individuals as measured in the ground varied from 1.55 m to 1.87 m.

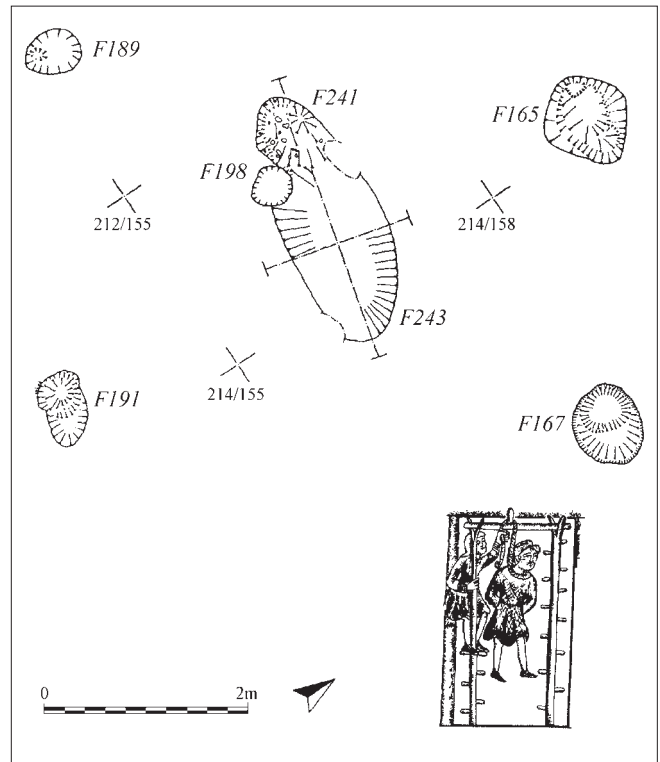
#### Date

The antecedent features have been dated to no later than the Iron Age, and the subsequent features to no earlier than 1940 (the anti-glider ditch dug in the Second World War). The graves contained no objects, and radiocarbon dating was attempted on all samples that contained sufficient bone uncontaminated by chemical consolidation. This produced three successful results (Burials 30, 35 and 39) with a date range of seventh to thirteenth century (95 per cent cal.; see Chapter 3, p. 54 and Table 9).

#### A gallows? (FR 8ii/732)

The disposition of the burials appears to show that they are focused on a central space (Figure 141). There was no trace of a barrow or other burial here; instead it was occupied by a number of pits and post-holes (Figure 148). The largest of the features, F243, is interpreted as a tree pit of a kind familiar at Sutton Hoo (see Chapter 3, p. 43). The remaining eleven features resembled post-holes. Of these, F198, F138 and F241 cut the 'tree pit' F243. The set of four post-holes F139, F191, F165 and F167 are distinguished as being the only excavated post-holes to display post shadows (see above). The post-hole F167 cut the upper ditch fill of F130, a ditch thought to have been visible to those responsible for Burial 31. This suggests that the post F167 was contemporary with or later than Burial 31. The other posts of the group resemble F167. The post in F165 had been square and was 150 × 150 mm; carbonized wood from this was identified as birch *Betula sp.* The post in F167 had been 210 mm in diameter. The post-hole in F139 had contained a post 190 mm in diameter; that in F191 was about 300 mm in diameter. These, while not exactly identical, form a set of robust vertical posts that could have acted as one square frame, or could have functioned as a four post structure, or two two-post structures. There is no direct evidence for the purpose these posts may have served. In view of the nature of the cemetery, however, the possibility must be raised that these were the posts of a gallows, the simplest form of which is provided by two upright posts about six feet apart, with a crossbar to which the rope was attached. A gallows of this type is illustrated in an eleventh-century Anglo-Saxon manuscript (BL Cot. Claud. BIV: f59v; Figure 148). The post in F165 yielded sufficient wood for a radiocarbon date between AD 690 and 980 (95 per cent cal.; see Chapter 3, p. 54).

A second feature that might have belonged to the Early Medieval period was defined and studied near Burial 38, at the entrance to the 'avenue' from the west. This was a linear slot (F27/76/78), with five post-holes (F79–83) along its base. A piece of body matter was confidently identified within the fill by an excavator experienced with the sand bodies. If this was a



**Figure 148** Structural features in the centre of the Group 1 burials, and illustration of gallows from British Library ms Cot. Claud. B, IV.

structure, it did not seem sufficiently sturdy for a gallows, but might have had another function, such as a gibbet or a row of the 'head-stakes' known from Anglo-Saxon literature (see discussion below).

#### Conclusions

The predominantly anomalous burial positions of the majority of the Group 1 burials (only 35 per cent were 'normal', i.e. supine extended burials) and, in particular, evidence in four burials of decapitation or broken neck, and of binding or trussing in seven or eight burials, are interpreted as positive indicators of an execution cemetery. It is suggested that the condemned, who were predominantly young men, were bound and executed, mostly by hanging or beheading. The individuals who were trussed were not beheaded. They may have been hanged, despatched with a blow on the head, or buried alive. The postures may also be explained by the bodies having reached *rigor mortis* while still exposed outside the grave. For example, the disposition of Burial 29 suggests that the victim died grasping the rope that hanged him. These postures hint at the gruesome proceedings that accompany ritual or judicial killings, and the subsequent exposure of the body for deterrent purposes that is known to have occurred in the Middle Ages. Certain individuals were nevertheless buried in coffins or wooden containers of some kind, suggesting that respectful burial was occasionally permitted or practised.

Radiocarbon datings from three bodies and a possible gallows post provide the only indication of the period of use of the cemetery. They place the burials no earlier than the mid seventh century and no later than the early thirteenth century.

The Group 1 burials were focused on a central space that may have contained a tree, and then two gallows. A context for the executions of both Group 1 and Group 2 is considered below.

**Table 47**  
**Group 1 bodies**

Burial	Sex	Age	Body length /stature (m)	Bone preservation	Body posture	Leg position	Arm/hand position	Head position	Other organic matter	Marker	Orientation of head end of grave	Stratification	Comment
17	probably male	young adult	1.57	poor	supine	extended	left hand over abdomen	fallen forward			north-north-east		
18	?	adult	1.57	very poor	supine	extended	uncertain	on side (?) at right angles to neck	coffin (?), with rectangular sides, base and lid (?)		west		head position indicates possible decapitation or post-depositional movement within coffin
19	?	adult	1.80	good	prone	extended, slightly	left arm bent behind neck; right arm flexed bent (?) beneath chest	face down			east-south-east		possibly bound (from arm positions)
20	?	probably adult	1.70	poor	supine	extended	along sides	looking left?	coffin, with rounded corners but mostly vertical sides	large stones in upper backfill may suggest calm	west-north-west		barky character of coffin base suggested tree-trunk as did rounded corners, but only south-west edge tapering
21	?	adult	1.75	very poor	supine	extended	by side, stone in right hand	missing			west-north-west	cut by Burial 22; cuts F133	head above left leg of Burial 22
22	?	adult	1.60	poor	supine?	extended	by side	uncertain		possible marker post, F107	west-north-west	cuts Burial 21	alignment of two graves similar but not coincident
23	male	middle to mature adult	1.75	good	supine	extended	right arm extended over pelvis; left arm bent across chest	back of cranium on right shoulder; face at right angles to neck	short strip parallel to right arm		east-south-east	contemporary with coincident Burial 24	head position suggests possible broken neck or decapitation
24	male	young to middle adult	1.85	good	sitting folded forward	extended	left arm beneath trunk; right arm behind back	on knee, with jaw uppermost			east-south-east	double burial (below Burial 23)	head position suggests broken neck or decapitation
25	probably male	young adult	1.85	very poor	prone	extended; right leg slightly flexed, with right foot over left foot	arms bent over pelvis; hands together (?)	face down and central			south-east	cut by Burial 26	feet position suggests ankles bound; possibly wrists also
26	?	adult	1.55	poor	supine	extended, left leg slightly flexed	arms slightly bent, with hands over pelvis	face central?			west	cuts Burial 25	

**Table 47 continued**  
**Group 1 bodies**

Burial	Sex	Age	Body length /stature (m)	Bone preservation	Body posture	Leg position	Arm/hand position	Head position	Other organic matter	Marker	Orientation of head end of grave	Stratification	Comment
27	male	young to middle adult	1.77	poor	on left side	right leg flexed up against trunk; right leg extended but flexed back at knee	left arm extended out from body; right arm bent up	face central?	wood traces relating to spade or gallows		west-north-west	cut by palisade F2 13	posture interpreted as ploughman
28	?	?	1.50	stain only	prone, kneeling; pelvis uppermost	flexed	left arm beneath trunk; right arm extended with hand near knee	on left side			west	cuts Burial 29	
29	probably male	adult	1.74	poor	supine	extended	arms above head	central			west	cut by Burial 28	abnormally long grave
30	male	young adult	1.72	good	supine	extended	on pelvis, right wrist over left	looking right			west		
31	?	?	1.73	stain only	supine	extended	hands over hips	central			north-north-east	cuts F130 ditch	
32	?	young adult	1.70	poor	prone	extended	by sides	looking left			west	cut by anti-glider ditch; body over Burial 33	double grave
33	?	adult	1.79	poor	prone	extended	?	?			west	below Burial 32	grave quite wide? (for 2 bodies?)
34	?	?	1.67	stain only	on right side	semi-flexed	right arm extended, hand on knee; left arm bent along legs	on right side	plank lining and cover		west		
35	?(robust)	young adult (18–21)	1.87 (with head)	poor	supine	extended	extended along sides	on right arm (decapitated)			west		decapitated; grave too short for extended body with head
36	?	probably adult	1.70	very poor	on right side	flexed	by side, round legs	slightly to left			south-east		wrists and ankles quite close together (bound?)
37	?	subadult–adult (15–25)	1.55	very poor	supine	semi-flexed to left	hands on pelvis	slightly to left			west-north-west		posture difficult to maintain bound?
38	?	?	1.80	stain only	supine	flexed with knees on shoulders	right arm beneath right leg; left arm across chest	slightly to left	stick or cord in fill		east-south-east		
39	male	mature (?) adult	1.60	fair	prone	flexed under body	left arm round back; right arm between thigh and front of body	slightly to right?			west-north-west		

## The burials of Group 2 (Burials 40–55)

### Description of the investigations

Most of the sixteen Group 2 burials were located within Int. 41 (excavated 1987–9), but there was one outlier in each of Int. 44 and Int. 48, and two in Int. 50 (excavated 1991) (Figure 149). All the Group 2 burials were located around Mound 5, within or beside quarry pits. Burial 55, however, was cut within a quarry pit that, while still adjacent, more probably served Mound 6. Burials 45, 50 and 51 had already been excavated (or in the case of Burial 45, partially excavated) in 1966 (Int. 12).

As with Group 1, the graves of Group 2 were distinguished by their shape and were excavated at Recovery Level E (see Chapter 2, p. 25). There were, however, two special challenges: finding graves in the buried soil and finding graves in refilled quarry pits. The contrast between grave-fill and buried soil could be very slight, and initial definition relied particularly on the telltale presence of lumps of concreted sand, which were included in the backfill where a grave had reached the subsoil. In this way it could be confirmed that the majority of the graves were later than both the buried soil and the make-up of Mound 5. Burials 40, 42/43, 44 and 48 were cut through the buried-soil platform, as defined. Burials 50 and 51 were cut through relict mound make-up over buried soil, and the cut for Burial 50, which lay closest to the mound centre, did not reach the subsoil. It is, therefore, probable that there had been other graves closer to the centre of the original Mound 5 that were not cut sufficiently deeply into the body of the mound to survive Medieval and later ploughing. For individual grave plans see Figures 150–4.

Six burials (Burials 41, 46, 49, 53–5) were cut into pits that had been used to quarry soil to build Mound 5 (Plate 50). These quarry pits had been partly refilled at the time of mound-building, and had turfed over and then been completely refilled by ploughing before the later sixteenth century (see Chapter 4, p. 83 and Chapter 10, p. 371). The establishment of the stratigraphic relationship between the graves and the quarry was crucial to the interpretation of the Group 2 burials, and in particular as to whether they were contemporary, later, or much later, than the mound. The sequence of refilling in a quarry pit was itself one that was rarely observed with clarity, and the most effective method for establishing it proved to be the traditional one of excavating the pits in quadrants (see Chapter 3, p. 49). The presence of any grave was neither known nor (initially) suspected before excavation of a quarry pit began; no grave was visible on the surface of any unexcavated quarry pit at Horizon 2. Graves were only seen for certain as cuts in the subsoil at the base of a quarry pit within a leading quadrant. In two cases (Burials 49 and 54) the grave was retrospectively seen in the section of a trailing quadrant, cutting the lower fills of the quarry pit. On the basis that the graves were seen to cut the base of the quarry pits or its primary fill, they are thought to be close to the mound in date. In general, wood and bone were less well preserved and harder to see in Group 2 (than in Group 1), but the excavators had had the benefit of more experience in Sutton Hoo strata.

### The Group 2 burials – description

These are extracted from the detailed inventory in the *Field Reports* (FR 4/7.4, 5/7.4, 6/7.4 and 7/7.3). For dimensions of graves, see Table 48; for body posture, see Table 49; for plans

and sections, see Figure 149–Figure 154; for a report on the human bone by Frances Lee, see below.

### Burials in Int. 41 (Burials 40–51)

#### BURIAL 40 (FIGURE 150)

Grave F81 was straight-sided and flat-bottomed, and cut into the buried-soil platform of Mound 5 (Context 1127). Beside it, on the north side, was a supposed post-hole (F80), which was initially thought to be a grave marker, but subsequently was interpreted as an animal burrow. Body F152 (probably a young man) was lying on its right side, legs semi-flexed and together. The right foot was tucked under the left, inviting the suspicion of binding. The right arm was bent, with the forearm curved back towards shoulder. The left arm was indistinct. The head had been removed before burial and placed in the grave face-up and rotated (the stub end of the neck would have been lying approximately against the right ear). It was deduced that a young man had had his legs tied and had then been hanged or decapitated. The head had been severed from the body and placed in the grave at the neck end, but not aligned with it, at the time of burial. (Excavated by P. Bethell.)

#### BURIAL 41 (FIGURES 147 AND 150; PLATE 49:A)

Grave F82 was cut into a partially back-filled quarry pit, F508. The body (F510) was lying in the grave on its right side, legs slightly flexed, both arms forward and hands together, as if tied. The body had no observable bone, and had been disturbed by vigorous bracken root growth.

Two pieces of pseudomorph were found separated from the body: one (F507) was 100 × 50 mm, and was found at 32.50 m AOD, about 0.5 m above the left thigh, at a point vertically above where a piece of thigh of about the right length was missing. The second piece (F509) was 40 mm in diameter and 30 mm deep, and was found at 32.24 m AOD, about 90 mm above the head, where there was an indented area on the crown. The transport of these two pieces of sand body must have been owed to a mechanical, human agency rather than to vegetable or animal disturbance. Although not observed directly, a later intrusion (F82A) was assumed to be responsible for the displacement of pieces of sand body when the grave was redug and immediately back-filled.

The stratigraphic relationship between the grave and the quarry pit was ambiguous. The existence of a grave was not suspected until the excavation of the quarry pit was well advanced. A cut was seen against the natural sand at the bottom of the quarry pit at 32.50 m AOD, and the base of the grave was reached at 31.88 m. The top of a cut was subsequently seen in section (during the excavation of the trailing quadrant) between Contexts 1164 and 1940, at 32.75 m AOD. This would allow an approximate depth for the grave of  $32.75 - 31.88 = 0.87$  m. (Excavated by A. Copp.)

#### BURIALS 42A, 42B AND 43 (FIGURE 150; PLATE 49:B)

Grave F86 cut buried soil and (more debatably) mound make-up for Mound 5. Feature 86a is a possible socket for a grave-marker. Elements of three different bodies were found in the grave: two bodies, probably female, Burials 43 and 42a (F149 and F148a), had been placed prone on top of a supine decapitated male Burial 42b (F148b); all the heads were at the north end. The bone was reasonably rigid, but had been partly scrambled by burrowing rabbits. Even the remains of the two clearest

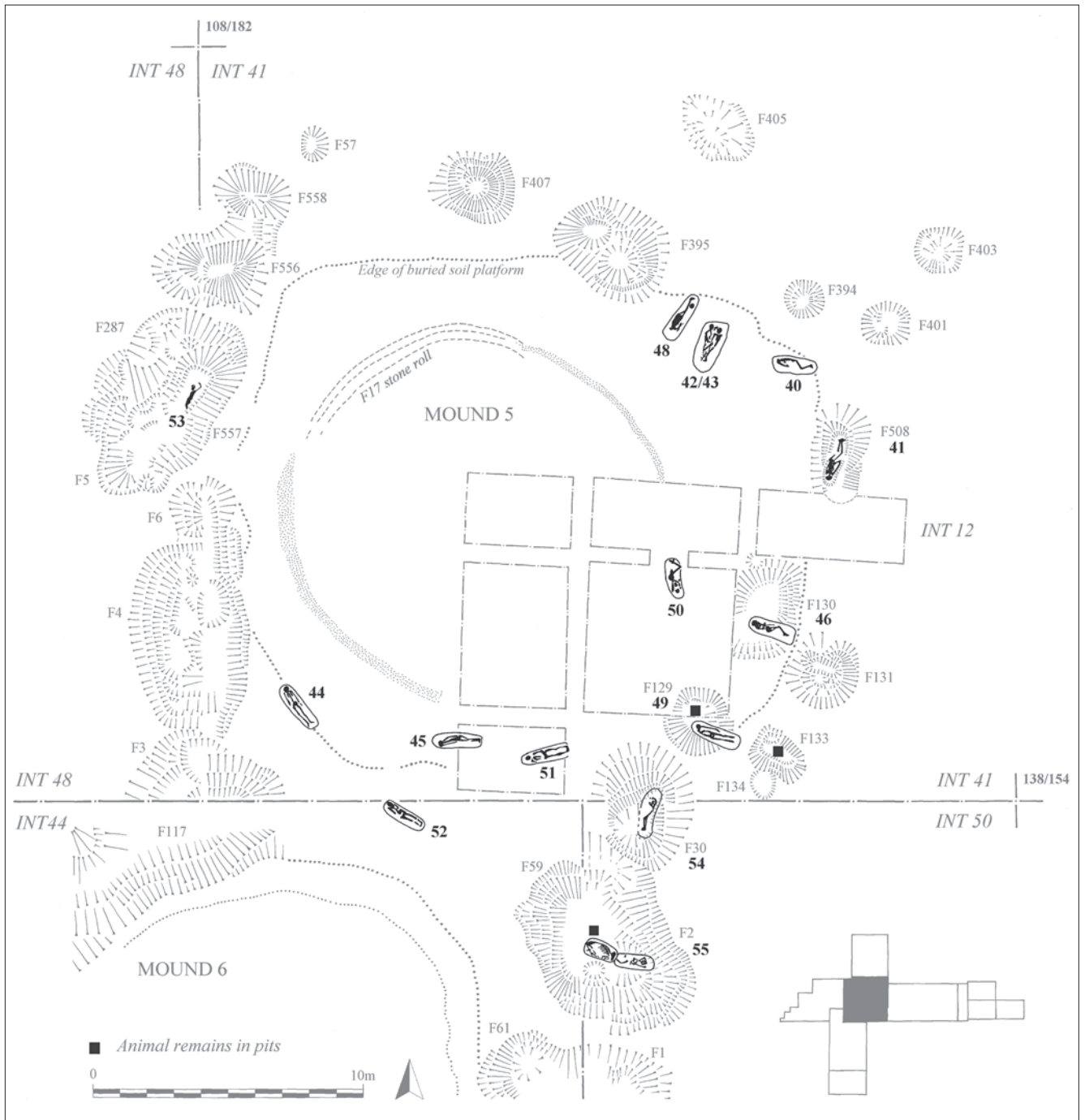


Figure 149 Plan of Group 2 burials, with burial numbers.

individuals (Burials 42b and 43) were not distinguished from each other until excavation was well advanced; while the third (Burial 42a) was not defined during excavation, but emerged during the specialist's analysis in the form of pieces belonging to an additional head.

The records are consistent with a mature man (Burial 42b) having been placed in the grave first. His head had been cut off and repositioned in the grave at the neck end, face-downwards; the rest of the body lay on its back. The positions of the arms and legs were unclear, but were probably extended. The left arm, however, seems to have curved towards the left, as the head of Burial 43 lay upon it. At an estimated 1.80 m, the body of Burial 42b was too long to fit into the base of the grave as dug.

A woman (Burial 43) lay face down on the crook of the left arm of the man (Burial 42b). The rest of the body was also

thought to have been prone, and the legs, if correctly identified, were semi-flexed westwards. The arms were probably by the side, and the westerly arm was recorded as lying over the pelvis of Burial 42b. The other woman (Burial 42a) is known only from her head, and there is an inevitable uncertainty about where the body lay. Since the principal difficulty was disarticulation caused by rabbits, it is likely that she had lain in the upper part of the grave. The main victims of the rabbits were Burial 42a, and the legs of Burials 42b and 43.

The positions of the heads suggest that all three bodies were buried with their heads to the north. The man (Burial 42b) was decapitated and placed in first, his head being returned to the neck location, and the remainder of the body being placed on the back. Two young women were buried in prone positions, first Burial 43, beside Burial 42b to the east, her head resting on

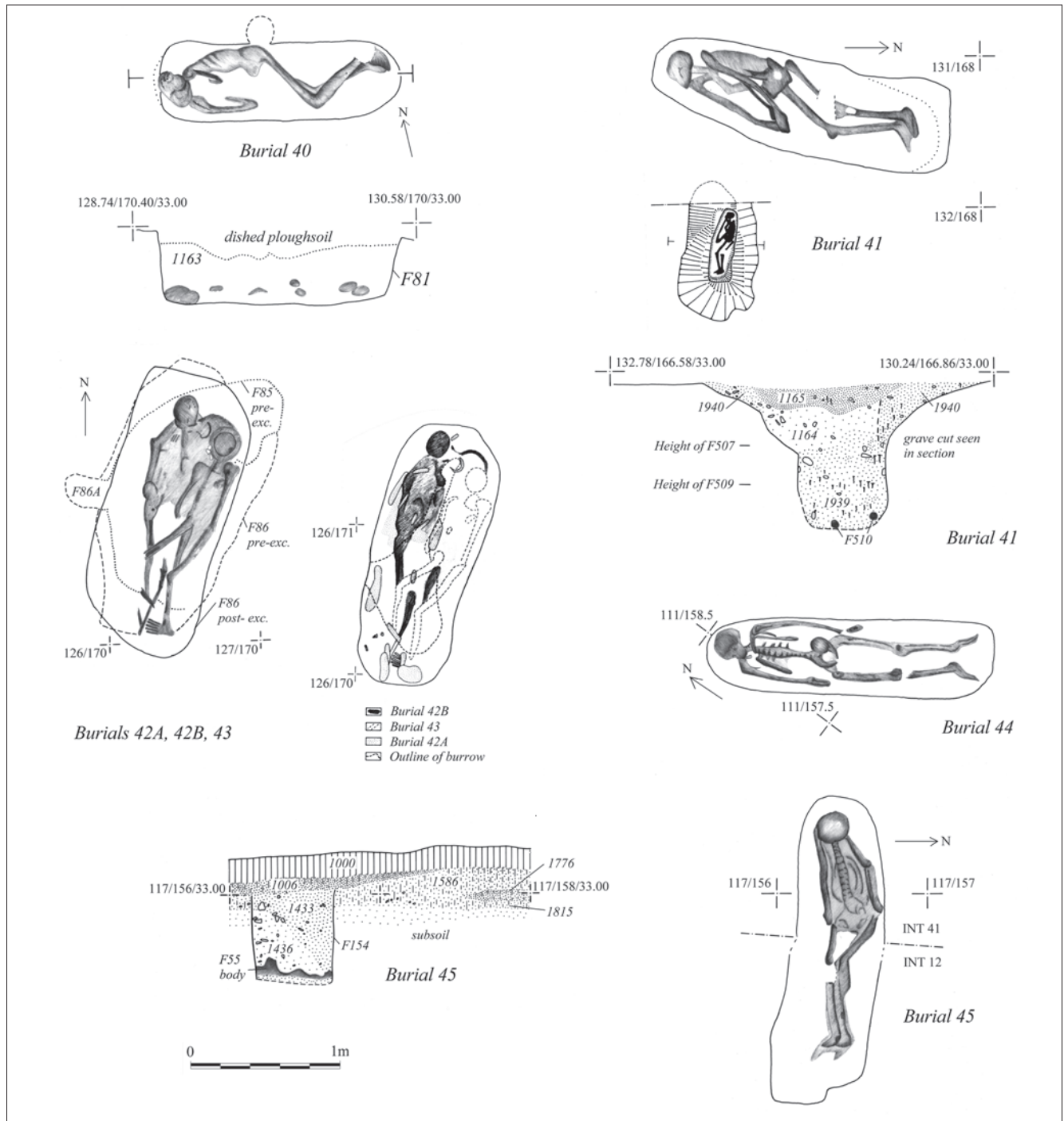


Figure 150 Group 2: Burials 40–45, plans and sections.

his shoulder; then Burial 42a, prone, over the other two. (Excavated by A. C. Evans.)

**BURIAL 44 (FIGURE 150)**

Grave F124 was cut along the south-west edge of the buried-soil platform for Mound 5 (F224). It contained body F542 lying on its back, extended north-west to south-east. The arms were by the side, the head turned to south-west and the well-preserved feet turned outwards. (Excavated by A. Copp.)

**BURIAL 45 (FIGURE 150; PLATE 9:C)**

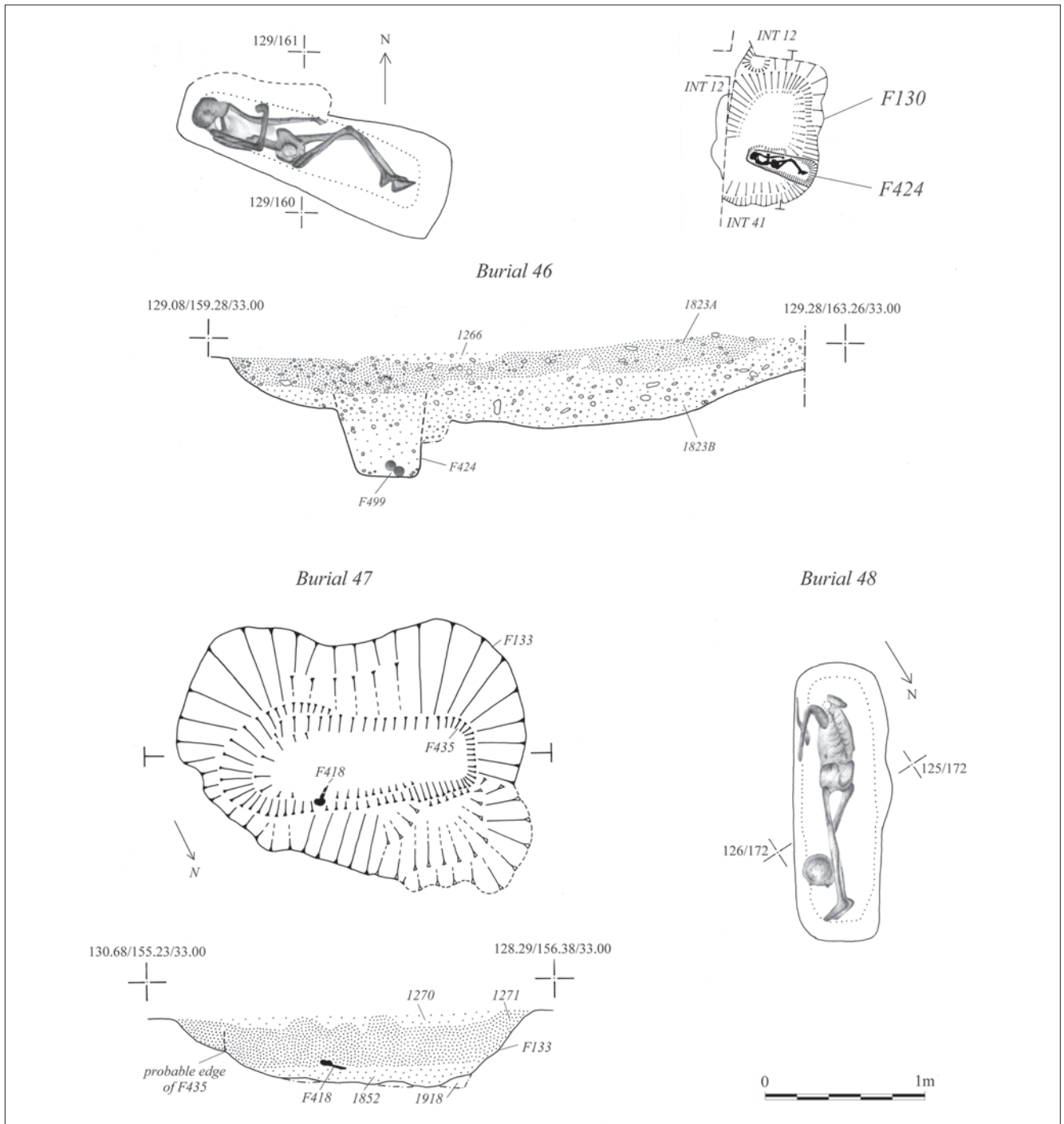
Grave F154 was originally defined and partially excavated in the campaign of 1966–70 (Int. 12; Longworth and Kinnes 1980: 26; Grave 3). A wooden box, decomposed into blocks by 1987, had been left *in situ* to protect the body. The grave had cut through

the buried-soil platform of Mound 5 (F224). It contained body F55, the posture of which was hard to define. It may have lain face down, with the elbows pointing up, and the knees down, and the head directed over the left shoulder, implying that the neck may have been broken. Alternatively, it lay in a supine position, with the chin on the chest. It proved impossible to decide between these two alternatives, and the posture has to remain uncertain. (Excavated by M. Johnson.)

**BURIAL 46 (FIGURE 151; PLATE 50:C AND D; SEE ALSO CHAPTER 4, FIGURE 32)**

Grave F424 had vertical sides and a flat bottom, with a gentle slope at each end, and was defined in a quarry pit (F130). Within it, body F499 lay on its left side, legs slightly flexed. The left arm was by the side, crossed by the right arm, which was bent at the





**Figure 151** Group 2: Burials 46–48, plans and sections.

elbow. The head, slightly raised, looked north-east (i.e. downwards towards the right hand).

The excavators reported repeated difficulties in finding the east end of the grave, and in discovering its relationship with the quarry pit. The fills of the grave and the pit were closely related to each other, and to the natural subsoil, in colour and composition. It was decided (mainly from observing sections in quadrants) that pit F130 had been filled in three principal episodes, corresponding to a stony dark-brown soil (Context 1823b), capped by a darker version of the same thing (Context 1823a), followed by a pinky-grey silt (Context 1266). The grave was not seen to cut any of these layers.

Three possibilities for the relationship between grave and quarry pit were studied on site:

1 that the quarry pit had truncated a pre-existing grave

2 that the grave was cut into the bottom of an empty quarry pit  
 3 that the grave was cut into a partially filled quarry pit

The base of the grave was recorded at 32.19 m AOD, and the base of the quarry pit at 32.42 m AOD. A. J. Copp favoured the interpretation that the pit had truncated the grave, citing in support the composition of the fills. But the depth of the grave, if cut from the original ground surface (33.37 m AOD), would have been unusual at 1.18 m, and the composition of the fills does not support the grave having cut through topsoil. The sandy fill would allow the grave to have been cut into the base of an empty quarry pit, but at 0.23 m the grave would be barely deep enough to conceal a body. If it were to conform to the average for Group 2 (50–70 cm), the cut would be from a point within the lower fills of the quarry pit (Context 1823). The preferred model is

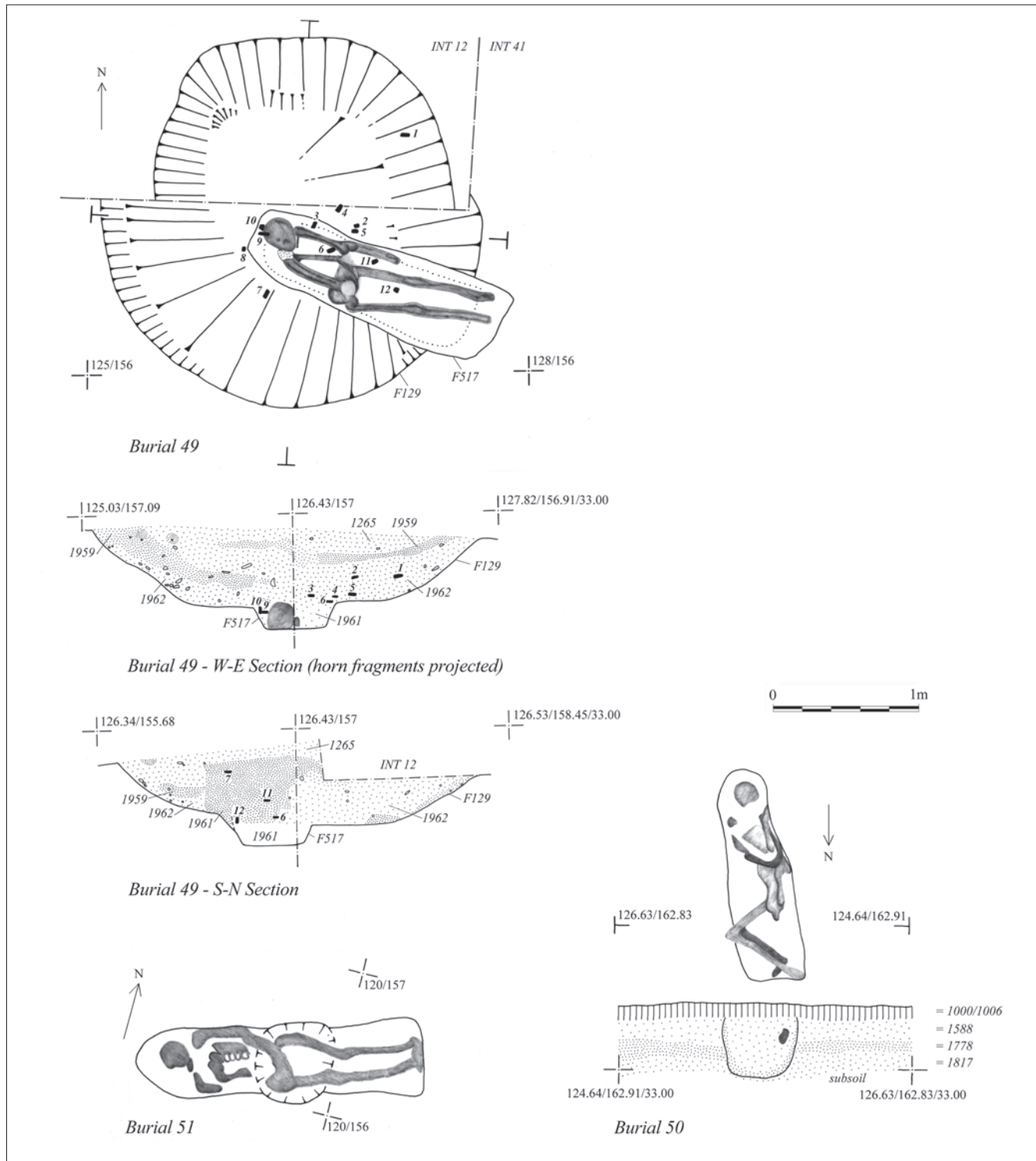


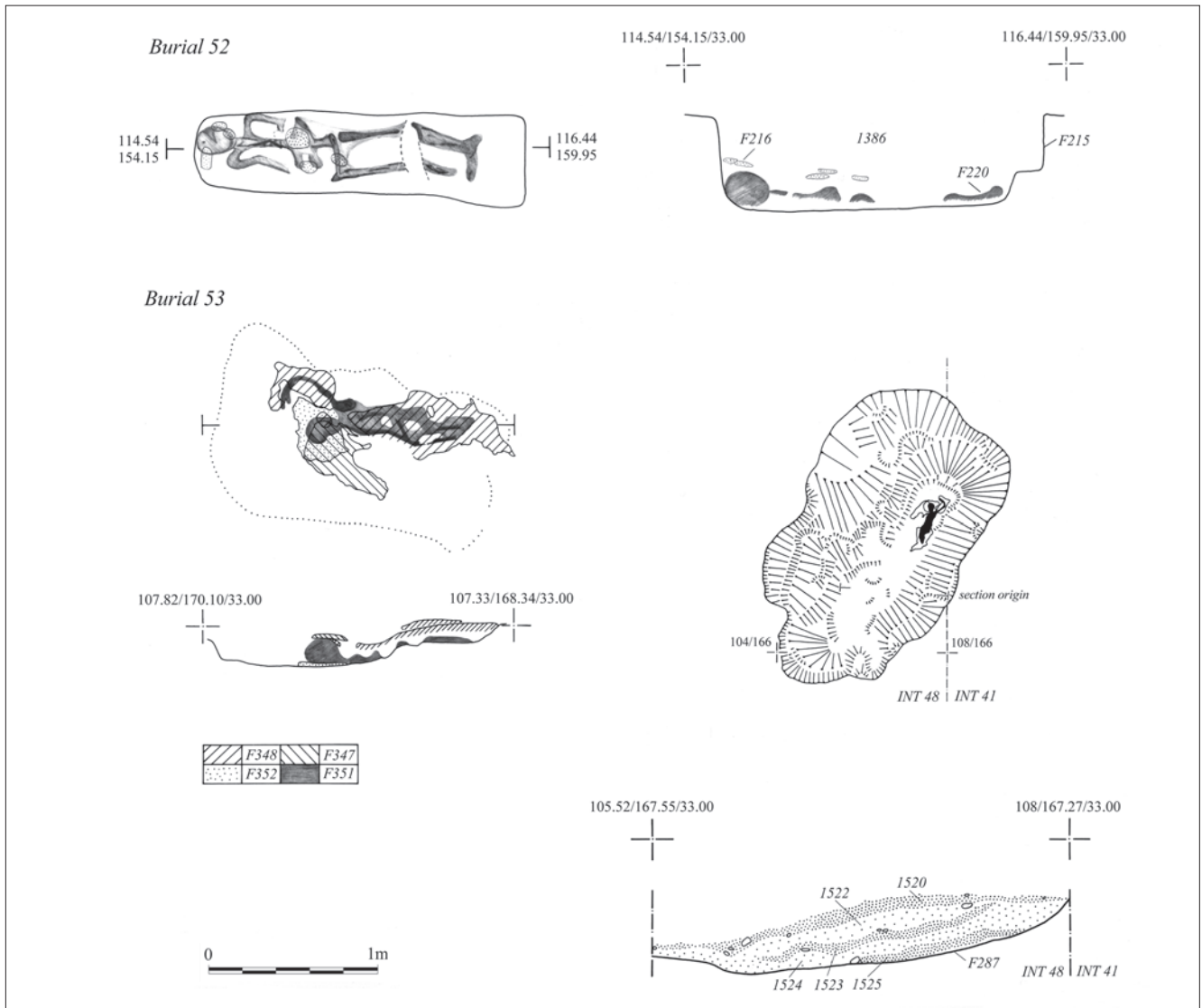
Figure 152 Group 2: Burials 49–51, plans and sections.

therefore that the grave was cut through the primary filling of the pit (Context 1823b). (Excavated by A. Copp, M. Hummler, T. Hedley-Jones and P. Gentil.)

**BURIAL 47** (FIGURE 151; SEE ALSO CHAPTER 4, FIGURE 32)

A grave-shaped feature, F435, was defined at the base of quarry pit F133. No body was defined, but a black spongy strip of organic decay product (F418), at first thought to be wood, was encountered at 31.51 m AOD, within the lower fills of the quarry pit. Feature 418 was later identified as the stain of a long bone, although not necessarily a human one. There was considerable uncertainty as to whether F435 was a separate feature with

distinguishable cuts, or whether it was merely the lower part of the quarry pit, F133. There are two alternative models for Burial 47, which remain unresolved. In the first, a grave is supposed to have been cut through the lower fills of the quarry pit (i.e. through the turf line, Context 1271). The contents of this grave had then been disturbed and had largely vanished, perhaps through the action of scavenging animals. The second model supposes that an organic fragment of a large mammal had found its way into the primary fill of quarry pit F133, perhaps in the same way as those in Burial 49 (below). (Excavated by A. Copp, M. Hummler, A. Towle and P. McCarroll.)



**Figure 153** Group 2: Burials 52–53, plans and sections.

#### BURIAL 48 (FIGURES 147 AND 151; PLATE 49:C)

Grave F486 had probably cut the buried-soil platform of Mound 5, although this was not observed directly. Body F555 lay prone, legs extended, feet together, slightly flexed at the right knee. The right arm, apparently detached from the shoulder, lay beneath the left arm and shoulder blade. The head had been placed over the left leg, neck towards the feet, eyes and mouth facing north-west. The body had apparently been decapitated before being laid in the grave. The feet lay together and may have been tied. The detached right arm and head, however, might alternatively be construed as evidence for the body having partly decomposed before burial. (Excavated by A. Copp.)

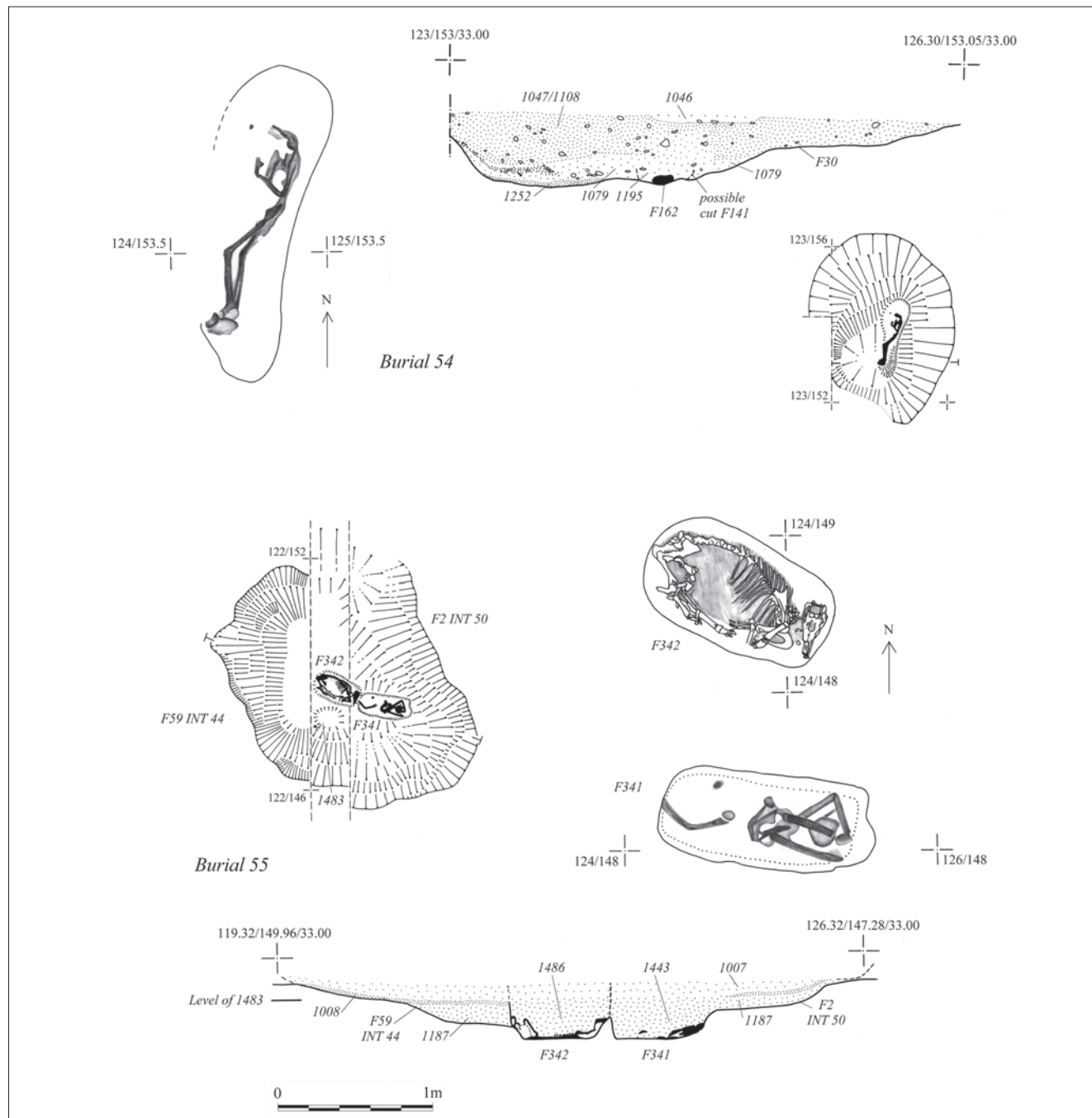
#### BURIAL 49 (FIGURES 147 AND 151; PLATE 50:A AND B; SEE ALSO CHAPTER 4, FIGURE 32)

Grave F517 was located within quarry pit F129, which also contained a number of upper jaws of horse and cattle in its primary fill. Grave 517 contained body F524, which had no bone but the position of the kneecaps and feet show that it lay on its back. The right (south) arm is behind the back, and the left arm converges towards it, so the hands may have been tied. The head is crooked over to lie almost on the left shoulder. The toes point down (east). A fragment of organic matter (F525; Find 41859), 100 × 120 × 30 mm in size, was defined between the bend in the

neck and the head, i.e. around the neck. It was interpreted as a piece of rope. The excavator noted, ‘There is absolutely no way in which stain 41859 was part of the body.’ It differed from the adjacent body stain by its Munsell colour and in its colonization by small white rootlets. The body posture is interpreted as that of a person with the hands tied behind the back, cut down from a gallows, with a piece of rope still around the neck.

The stratigraphy of Burial 49 was crucial for the sequencing of the execution burials in general. The body F524 lay in a cut, less than 100 mm deep, on the quarry pit floor. The head therefore rose above the level of the pit floor, and would have been unlikely to survive had the grave been dug from the old ground surface and then later truncated by the quarry pit. The eastern outline of the grave had proved elusive, but after the grave had showed in the bottom of the pit, an extension was sought and found, showing that it had cut the quarry pit edge. The grave was also seen, in the quadrant sections, to have cut into one or more fills of the quarry pit. No interruptions were reported in Context 1265, the final filling of the quarry pit, but anomalies were noted in Context 1959, in the central area over the grave. Therefore the likelihood is that the grave was cut through Context 1959, which was identified as the turfing over of the primary fill (see Chapter 4, p. 183).

Twelve fragments of animal teeth were found in the fills of the grave and the quarry pit F129 (see Chapter 4, p. 83). They



**Figure 154** Group 2: Burials 54–55, plans and sections.

were identified by T. P. O'Connor as deriving from the upper molars of large herbivores, probably horse and cattle (see FR 4/749). The teeth were recovered in cylinders or strips of dark soil up to 70 mm long that had presumably been jawbones. No other traces of animal bone were found, so the origin of the teeth would be the upper jaws or skulls belonging to a minimum of two animals, one horse and one ox. The distribution of the teeth shows that they lay either in the primary fill of the quarry pit (Context 1962), or in positions above the body and thus within the grave. On this reasoning, the grave had been cut from at least the height of the highest jaw fragment (32.71 m AOD, Fragment 7), giving a minimum depth of 0.51 m. This would imply that the grave had been cut through a layer of turf (Context 1959) in the quarry pit before it was filled with ploughsoil (Context 1265). At the time the grave was cut the quarry pit was thus visible but grassed over, and the jaws

contained in its primary fill were still transportable. (Excavated by A. Copp.)

**BURIAL 50 (FIGURE 152)**

The grave and body were excavated in the 1966–70 campaign (Int 12; Grave 1 in Area C 5/2 and 5/4; Longworth and Kinnes 1980: 23). The grave was cut through 20 in. (50 mm) of mound make-up and the buried soil below it. The body lay semi-flexed on its right side, with head to the south. A fragment of sand body was seen in section 300 mm above the level of the body, which might imply that a knee was raised. (Excavated by I. Longworth and I. Kinnes.)

**BURIAL 51 (FIGURE 152)**

The grave and body were excavated in the 1966–70 campaign (Int 12; Grave 2 in Area C 5/7; Longworth and Kinnes 1980: 23). The grave was cut through a depth corresponding to c.24 in.



**Plate 49** Group 2 burials: (a) Burial 41; (b) Burial 42/43; (c) Burial 48.

(60 mm) of mound make-up and the buried soil beneath it. The body was extended on its back, with the head to the west. A circular feature in the centre of the grave may have been animal disturbance or a later attempt to revisit the grave. (Excavated by I. Longworth and I. Kinnes.)

#### *Burial in Int. 44*

##### BURIAL 52 (FIGURE 153)

Grave F215 was situated between Mounds 5 and 6, but no stratigraphic relationship was observed with either. Body F220 was in a very poor state of preservation, and its posture was rendered almost illegible by animal burrows. The excavators reported the right forearm behind the back (vertebra), and they believed that the body lay on its back with one hand tied, or coincidentally bent, behind. However, the body could well have been on its front, with the right arm folded up beneath the chest. The head had been severed and replaced face up, but the wrong way round with respect to the neck (i.e. rotated by 180°). Five additional body pieces, F216, were encountered c.50–100 mm above the body-mass of F220 in the north-west half of the grave. The vertical separation of F220 from F216 is not so large as to disallow transportation by small mammals from the one to the other, but the small mammal activity actually observed was at the other end of the grave. Alternatively F216 could represent the remains of a second body, perhaps one already decomposed at the time of burial. (Excavated by M. Hummler and R. Jerromes.)

#### *Burial in Int. 48*

##### BURIAL 53 (FIGURE 153; PLATE 51: B AND C)

Burial 53 was recorded as the burial of a body (F351) with patches of wood under the head (F352) and over the body (F348) in a rectangular scoop (F349) at the base of a quarry pit (F287 = F5 = F58 in Int. 41). Other organic decay products (F347) were also present.

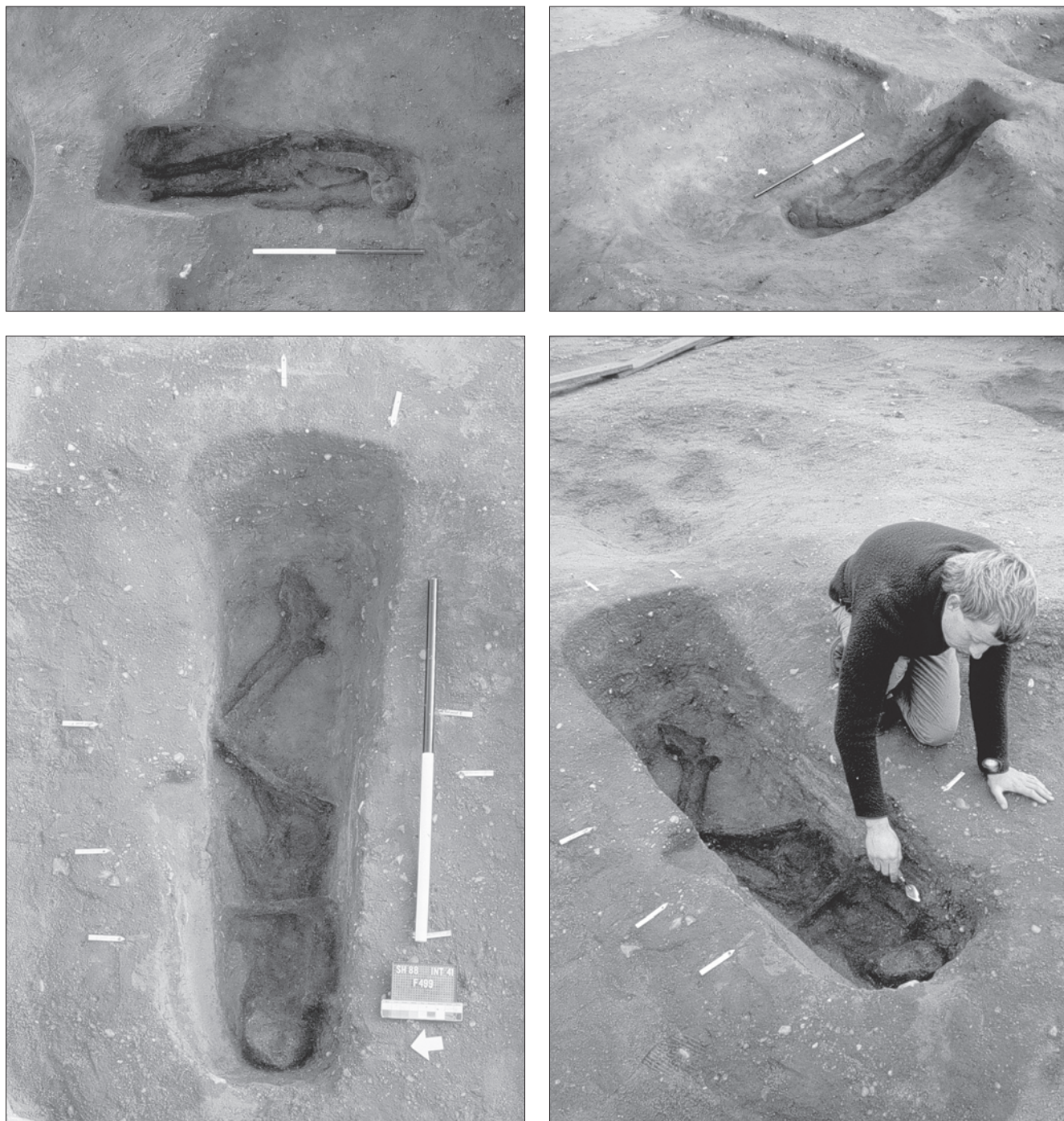
Working mainly in plan, the excavator encountered a complex series of layers in the quarry pit, amongst which he saw

no cut for a grave. The body was associated with, and could be distinguished from, a number of wood pieces. The stratigraphic sequence was read as follows (note that the section in Figure 153 relates only to the east side of the quarry pit):

- 1 A human body (F351) was laid face down on the quarry-pit base, the head coincidentally or deliberately coming to rest on a shapeless piece of timber (F352). The corpse was immediately covered with wooden pieces (F348) which, from their thickness, were probably planks rather than branches. There may, however, have been branches, undergrowth or more planks placed over the head area (F347).
- 2 A thin sand layer (Context 1569) arrived on the timber by erosion from the quarry-pit edge and from the mound.
- 3 Pebbles from the mound also rolled onto the boards. Slippage of turf and sand from the mound covered the pebbles (Contexts 1548–9). After an interval, turf grew on the west side (Context 1525) and loose sand entered (Context 1524).
- 4 A new turf layer (Context 1523) grew and was covered with more sand from erosion or slippage (Context 1522).
- 5 An interval followed when turf formed freely over the quarry pit (Context 1520, also Contexts 1510 and 1515).
- 6 A large amount of silty sand filled the overgrown quarry pit, to give the characteristic pinky-brown fill (Context 1008).

None of these episodes can be substantiated with any great certainty. As no trace of a cut for a grave was seen, it was concluded by the excavator that the body and the associated organic matter lay on the base of the empty quarry pit.

Two controversial uncertainties remain in the matter of Burial 53: whether the body was human, and whether it was placed on the quarry floor (with the implication, if so, that it was contemporary with the construction of Mound 5). The highly decomposed state of the body raises the possibility of its being the carcass of an animal, rather than that of a human. In



**Plate 50** Group 2 burials: (a) Burial 49; (b) Burial 49 in quarry pit F129; (c) Burial 46 under excavation; (d) Burial 46 in quarry pit F130.

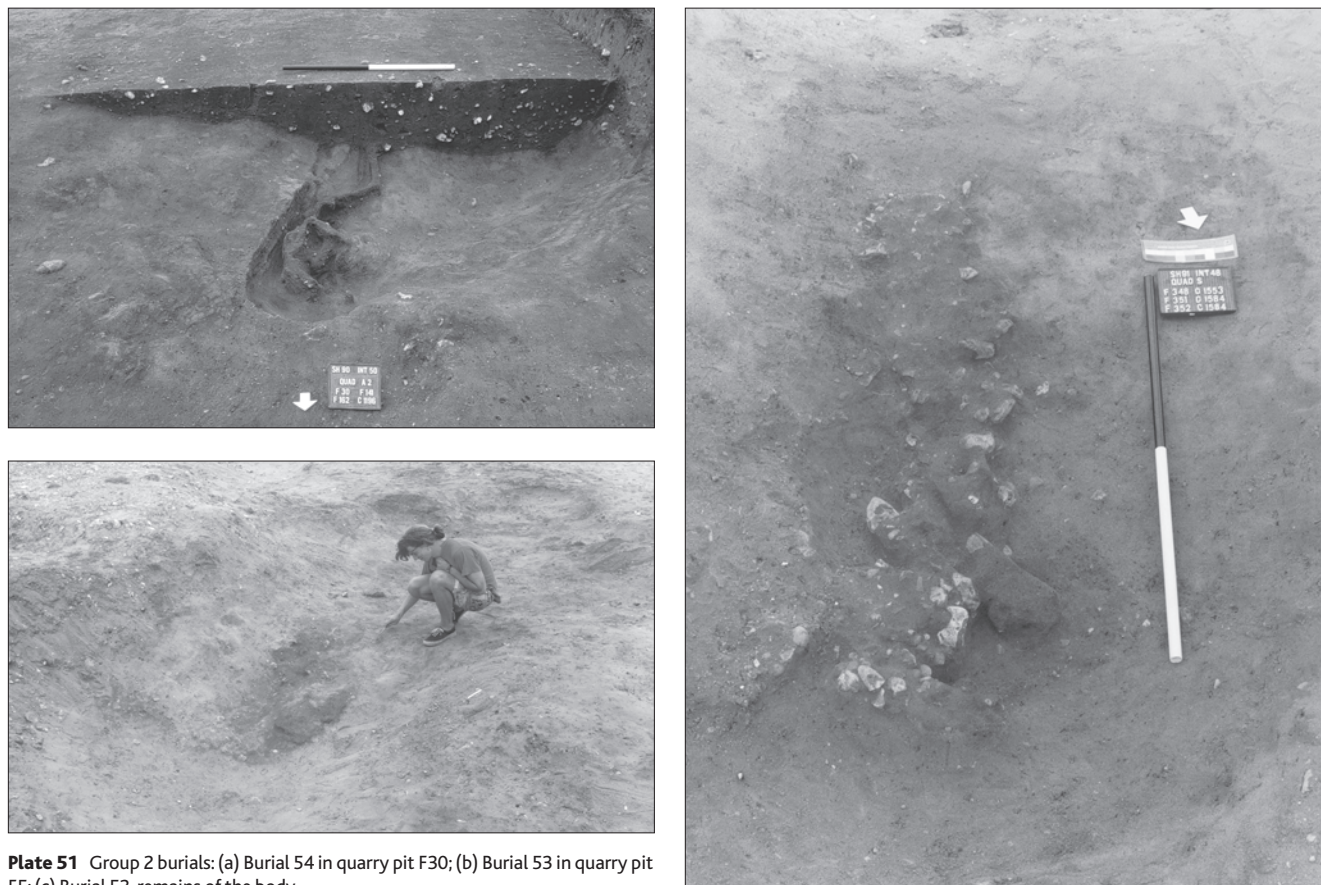
this case an analogy is provided by the deposition of the upper jaws in quarry pit F129, later disturbed by Burial 49 (above, and see Chapter 4, p. 83). If, as the excavator deduced, the body was human, it would be expected that it would be buried in a grave about 500 mm deep, on analogy with the other burials of Group 2. These other burials also show how elusive the cuts are for the graves within quarry pit fills. Nevertheless, Burial 53 is unusual in the amount of wood associated with it, so it might have been exceptional in other ways (for example being the earliest and/or following a different rite to the other graves in Group 2). The excavator's verdict on the absence of a cut might be reconciled with the pre-existence of a grave by supposing a later disturbance of the quarry pit. This is implied by its complex fill which included at least three turf lines (Contexts 1520, 1523 and 1525) as opposed to the usual one. Elsewhere (for example

Burial 55), the break up of the turf layer was attributed to its disruption for a burial. Here, the pit may have been disturbed more extensively, causing turf to be both broken up and re-deposited. Another context for such disturbance at Sutton Hoo is mound robbing, and it is not inconceivable that this quarry pit was the target of exploratory digging for the adjacent Mound 5 (as in the case of Mound 6, p. 94). It is also notable that the robber pit of Burial 56 (see Chapter 5, p. 144) contained a re-deposited skull, one explanation for which is that it was displaced from an execution grave. (Excavated by S. Timms.)

*Burials in Int. 50*

BURIAL 54 (FIGURE 154; PLATE 51:A)

Grave F141 was found at the base of quarry pit F30. The body (F162) was encountered before the grave, during the removal of



**Plate 51** Group 2 burials: (a) Burial 54 in quarry pit F30; (b) Burial 53 in quarry pit F5; (c) Burial 53, remains of the body.

quarry-pit fills. The body material was badly preserved, but it clearly represented the remains of an individual lying on its right side, with neck to the north and feet to the south. The knees were slightly flexed, and the arms were bent. There was no head, but an organic patch to the west of the shoulder area (F188/1261) may have indicated where the head had lain. The patch measured 20 × 30 mm in plan, and contained traces of bone, two teeth, a molar (Find 2952) and a premolar (Find 2953). The sand-stained locus was not sufficiently well-defined to suggest whether or not the head was attached. The excavators felt that the sand body had been affected by the burrowing of small mammals.

There was slight evidence for a cut around the body where it lay level with the base of the quarry pit. There was even slighter evidence (observed retrospectively in section) for a cut about 200 mm above the body. This allows the interpretation that the grave was originally cut through the primary fill (Context 1079), and perhaps also through Context 1047/1108, which was identified as turf growing on a partially refilled quarry pit. (Excavated by M. Hummler, J. Garner-Lahire, D. Mauskopf and A. Stewardson.)

#### BURIAL 55 (FIGURE 154)

Grave F341 (1471) was cut into the base or fill of quarry pit F2 (F59 in Int. 44) before, or at the same time as, F342, the burial of a bull. The human body F379 was very mutilated. A bent arm and the head were found at the east end, beneath two lower legs; a further bent arm lay detached at the west end. The head rested on its left ear, facing north. A femur was missing. The fully articulated bull also lay in a pit cut into the quarry pit floor (Plate 59).

The quarry pit F2 was excavated in two segments, with a balk between them. The west segment, F59, was in Int. 44, and the east segment, F2, in Int. 50. Feature 2 was excavated in two quadrants, north and south, the more southerly first. The base of the topsoil was marked by a lens containing many shells, probably a marling or fertilising of a ploughsoil with crag or coprolite. Beneath this, the highest intact deposit was Context 1007, a layer of stony silt that may have been ploughed. Beneath it, in the centre of the pit, lay Context 1483, a pale grey-brown silt which contained four groups of fractured sherds of Medieval pottery (dated to the later twelfth century, see Chapter 12, p. 461) surround by blackened soil. Context 1483 lay on top of Context 1008, which was attributed to an old turf line.

The cuts for the burials were first seen on the base of the empty quarry pit, although above the burials the turf line was retrospectively noted as being interrupted. The bull pit cut both the human grave F341 and the quarry pit; this latter relationship was retrospectively observed where it had been captured in the surviving balk section along easting 122. It was observed that the latest context in the quarry pit (Context 1007) sealed the cut of the bull burial.

The bull burial and the human burial have similar vertically sided pits, which have flat bases at roughly the same level (31.87–9 m AOD), slightly below the base of the quarry pit. Although it is stated that F342 cut F341, this is not an unambiguous relationship. In plan the pits appear to touch rather than cut. If it can be accepted that F342 (the bull) was cut through the turfed-over pit, the same should be allowed as a possibility for F341 (the human burial), giving a grave 0.59 m deep. The twelfth-century pottery, Context 1483, lay on the

same turfed-over shoulder of the quarry pit. Although the human burial, the pottery and the bull burial could not be stratigraphically distinguished, it is likely that they represent a sequence in that order. The dates of the other executions suggest the human burial to be eighth to tenth century, while the pottery is dated to the twelfth century (see p. 461), and the radiocarbon date on the bull places it around the middle of the seventeenth century (see p. 55). It is likely that the human burial was cut through the old turf line, which later carried a hearth in which the pottery was deposited. The bull burial was cut from an unknown height. The quarry pit was refilled with ploughsoil (Context 1007). If ploughing into the quarry pit continued, this would account for the disturbance of the Medieval hearth. Continued ploughing would also have rubbed out the upper part of a cut for the bull burial. (Excavated by M. Hummler, E. Hooper and M. Holst.)

### **The Group 2 burials – analysis**

#### *Geography of the cemetery*

Group 2 comprised sixteen graves clustered together and spatially related to Mound 5 (mainly around its eastern and southern sides; see Figure 149). In nearly one hectare of excavation, there were no unfurnished burials other than those of Groups 1 and 2. The position of the centre of Mound 5 was determined by the target of the robber trench that had been cut through it (see Chapter 4, p. 72; Figure 28). The original perimeter of Mound 5 was determined from surface indications (Colour Plate 5). On this basis, the nearest surviving burial to the centre was Burial 50, which was cut through mound make-up and buried soil alone. Burials 40, 42/23 and 48, and Burials 44, 45, and 51, form two arcs of graves cut through the remains of the buried-soil platform on the NNW and SSE edges of the mound, respectively. Beyond these were a further seven graves. Burial 52 was probably also cut through the buried-soil platform or through a shallow quarry pit that had been ploughed away between Mounds 5 and 6. Five further graves (Burials 41, 46, 49, 54 and 53) were cut into quarry pits associated in plan with Mound 5, and one (Burial 55) into a quarry pit associated in plan with Mound 6. Burial 47 appeared to have been a grave cut into quarry pit F133, but the evidence for a body was very slight (Figure 151).

In addition to the identified graves, a further fourteen features were examined because they might have been graves or other Early Medieval features. Six of these proved to be slit trenches from the Second World War. Four were animal burrows. One (F426, Figure 28) was a robber pit for Mound 5, dug during the secondary robbing, which is supposed to have been served by an east–west trench. Only one, F123, may have been intended as a grave, but contained no trace of a body.

#### *Sequence*

Since the graves are apparently focused on the centre of Mound 5, it is possible that the earliest are nearest, and the later further away from, that centre. On these grounds, the order of burial would be:

- 1 Burial 50
- 2 Burials 44, 45, 51, 43 and 48
- 3 Burials 53, 40, 41, 46, 49, 54 and 52
- 4 Burial 55

The graves had no stratigraphic relationships with each other, but it was possible to propose a sequence for those in the quarry pits, based on the relationship between the grave and the quarry pit backfill (see above). As argued in Chapter 4 (p. 82), the quarry pits of Mound 5 refilled in three phases:

- 1 An immediate filling of mixed soils, thought to derive from surplus quarried soil trodden into or returned to the pits.
- 2 A layer of turf, formed by grass growing on this first backfill.
- 3 A fine pale sand thought to have been pushed in when the area (then heathland) was ploughed before the later sixteenth century.

The relationship between this sequence and the graves was not always easy to establish (see above), but was deduced to be as follows: one grave (Burial 53) is thought to have been laid directly on the surface of a freshly cut quarry pit; three graves (Burials 41, 46 and 54) were cut through quarry pits that had been partially refilled with soil surplus to mound-building; and two graves (Burials 49 and 55) were cut through turfed-over quarry pits. Given the character of the strata, it can be judged that whereas no grave is likely to have been cut through the final filling of a quarry pit (Phase 3 above), all might have been cut through levels equivalent to the turf of Phase 2 without being detected. Burials 46 and 49 appear to oversail the edges of their pits as defined at Horizon 2, adding to an impression that though the pits were visible as earthworks, they were overgrown at the time the graves were dug.

The exception to this general proposition is Burial 53 (Plate 51:c; Figure 153). Here the argument, based on carefully excavated strata, comes down in favour of the body being laid in an empty quarry pit, which must have taken place during or immediately after the construction of Mound 5 (see below and FR 6/7). However, it should be noted that this verdict does depend on negative evidence, in this case the absence of a visible cut for a grave at a higher level. Therefore, Burial 53 might also have been cut into a grassed-over pit (see below).

A combination of these suggests the following model:

- 1 Burial 53, the only burial on the west side, is cut into a quarry pit, possibly soon after its excavation.
- 2 An inner ring is formed, of Burials 44, 45, 51, 50, 40, 42/43 and 48.
- 3 An outer ring is formed, of Burials 41, 46, 49 and 54 in quarry pits and, perhaps, Burial 52.
- 4 Burial 55 is added in a Mound 6 quarry pit to the south.

#### *Date*

The burials are later than Mound 5 (seventh century AD), on which they are focused. Burial 55 is later than Mound 6, which is also seventh century AD. The burials are earlier than the first robbing and ploughing of the mound cemetery, argued on map evidence to have taken place before the late sixteenth century (see Chapter 12, p. 465). Burial 55 is earlier than the burial of a young bull, which has been radiocarbon dated to a period that most probably lies in the seventeenth century (Ambers in Chapter 3, p. 54).

Radiocarbon dating was undertaken on all samples that contained sufficient bone, and this resulted in three successful determinations: Burials 40, 42 and 45 (see Chapter 3, p. 54). These allow for dates between AD 640 and 1160.



**Table 48**  
**Group 2 graves**

Burial no.	Cut (mAOD)	Base (mAOD)	Depth (m)	Length (m)	Width (m)	Area (m <sup>2</sup> )	Volume (m <sup>3</sup> )
40	33.06	32.46	0.60	1.61	0.51	0.82	0.51
41	32.50	31.88	0.62	1.99	0.63	1.25	0.78
42	•33.05	32.35	0.70	1.88	0.80	1.44	1.07
43	•33.05						
44	32.64	32.37	0.27	1.90	0.50	0.95	0.68
45	32.98	32.37	0.61				
46	32.70	32.19	0.51	1.50	0.48	0.72	0.37
47	32.52	32.31	0.21	1.50	0.50	0.75	
48	32.01	32.61	0.40	1.73	0.61	1.06	0.51
49	32.71	32.20	0.51	1.80	0.60	1.08	0.65
50							
51							
52	32.70	32.12	0.58	1.95	0.45	0.88	0.51
53	32.06	31.74	0.32	1.70	0.93	1.58	0.51
54	32.38	32.19	0.19				
55	32.45	31.86	0.59	1.40	0.60	0.84	0.50

•Burials 42A, 42B and 43 are in the same grave

#### *Orientation*

Orientation was diverse and seems to have been guided by earthworks rather than ritual (Figures 146 and 149). The inner group (Burials 44, 45, 52, 51 and 50) align tangentially with the mound perimeter. Outside these, Burials 48, 42, 46 and 49 were radial to the mound. Burials 41, 54 and 53 appear to follow the axis of the quarry pit they were buried in.

#### *Size and form of graves*

The height of the buried soil under Mound 5 was about 33.00 m AOD (see Chapter 10, p. 377), but graves in quarry pits were naturally cut from a level below this. Where the cut was observed at the surface of the buried soil, the depth was about 0.6 m (Burials 40, 45 and 52; see Table 48). This same depth was recorded for Burial 55, which was probably cut from the turf line in a quarry pit. While it would be dangerous to regard this as a norm, many of the Group 1 graves were dug to a similar depth. On this basis, Group 2 Burials 44, 53 and 54 were unusually shallow at 0.3 m deep or less, raising the possibility that they had actually been cut from higher up. Burial 44 is explained by the fact that it was originally cut through the buried soil, which would add some 0.4 m to its depth. Burials 53 and 54 were graves within quarry pits, and it must be suspected that these graves were cut from higher up within the quarry pit fill. The extant depth of Burials 48, 42 and 45 implies that the mound had not spread by the time these graves were dug.

The unusually large grave Burial 42 is explained by its being dug to contain three people buried simultaneously. There was no good evidence for grave markers, but all the graves avoided each other.

#### *Coffins*

There was no evidence for coffins in Group 2, but in Burial 53 substantial traces of organic material interpreted as wood remains were found. A body (F351) was laid face down on the base of a quarry pit, with the head coincidentally or deliberately coming to rest on a shapeless piece of timber (F352). The corpse

was immediately covered with wooden pieces, which from their thickness were probably planks rather than branches (F348). There may, however, have been branches, undergrowth, or more planks placed over the head area (F347). Preservation was not good enough to indicate whether this might have been a grave lining like that in Burial 34 (in Group 1, above), or whether they were merely planks used to cover and, possibly, to rest the body on.

#### *Posture*

Of the sixteen certain burials in Group 2, the position of one body was uncertain and another was apparently disarticulated (Burial 55; see Table 49). Five burials were in the 'normal' position – supine with legs extended (Burials 42b, 44, 49, 52, 53) – but in two of these, the head position suggested the possibility of decapitation (see below). The position of the right arm by the head in Burial 53 is unusual. Four bodies were laid on the right side with the legs slightly flexed (Burials 40, 41, 50 and 54). One was on its left side (Burial 46). Four bodies (Burials 42a, 43, 48 and 53) were buried face down. There were no fully flexed or folded bodies like those in Group 1.

Four bodies (Burials 40, 42b, 48 and 52), from the position of the head in relation to the body, had been probably or certainly decapitated. One (Burial 49) had apparently been hanged, and it is argued that a fragment of rope remained around the neck (above). The disarticulated body (Burial 55) may have been dismembered. In the multiple grave, Burial 42/43, a mature male lay on his back, his severed head repositioned near the neck, and the two females lay face down on top of him.

The position of the hands and feet in a number of these burials was thought, possibly, to indicate that their limbs had been bound. In Burial 49 both arms were behind the back, with the hands together. In Burial 52 the right arm was bent up behind the body, but the position of the left arm was not clear. In Burial 41 the arms were extended in front of the body with the hands, but not the wrists, together. Binding is one possible interpretation of the position of the feet in Burials 40 and 48.

**Table 49**  
**Group 2 bodies**

Burial	Sex	Age	Body length /stature (m)	Bone preservation	Body posture	Leg position	Arm/hand position	Head position	Other organic matter	Marker	Orientation of head end of grave	Stratification	Comment
40	male?	young adult	1.65	poor to fair	right side	semi-flexed; right foot under left foot	right arm bent to shoulder; left arm uncertain	face up, rotated c.130° from norm		F80, a post, or possibly a rabbit hole	west		decapitated?, with feet bound?
41	?	adult?	1.85	none	right side	semi-flexed	arms extended in front, with hands together	on right side	extra body parts in fill		south-south-west	cuts quarry pit F508; cut by F82A	arms bound?
42A	female?	young adult	?	good	prone?	?	?	face down			north-north-east		much disturbed by rabbits
42B	male	middle to mature adult	est. 1.80	poor to fair	supine	extended?	extended?	Cut off and replaced face down		north-north-east		decapitated? and damaged by rabbits	
43	female?	young adult	1.35	poor	prone	semi-flexed	extended by side?	face down		F86A, a post (?) socket for marker or possibly a rabbit hole	north-north-east		head on arm of Burial 42b
44	male?	adult (probably mature)	1.75+	poor	supine	extended	extended by side	turned to right			north-west		
45	male?	young to middle adult	c.1.65	poor	uncertain	semi-flexed	extended	turned south-south-east			west		head/body position uncertain
46	?	?	c.1.70	none	left side	semi-flexed	left arm extended; right arm bent across waist	on left side, looking down			west-north-west	cuts part-filled quarry pit F130	
47	?	?	?	none	?	?	?	?			west-north-west		stain of longbone only; probably not a burial
48	male	middle to mature adult	c.1.60	parts good	prone	extended; feet together	left arm extended; right arm detached under left arm	detached, over left leg			north-east		decapitated; right arm detached; feet probably bound
49	?	?	c.1.60	none	supine	extended	bent behind back, hands together	neck bent, head forwards	rope (?) neck collar		west-north-west	cuts animal deposit in quarry pit F129	arms bound?
50	?	?		none	on right side	semi-flexed	bent up?	on right (?) side			south-south-east		Longworth and Kinnes 1980
51	?	?		none	supine	extended	?	?			west-south-west		Longworth and Kinnes 1980
52	?	young to middle adult	c.1.70	poor	supine	extended	right arm bent up behind body	cut off and replaced face up, crown against neck			west-north-west		decapitated? arms bound?
53	?	?	?	none	prone	extended, left leg slightly flexed	right arm up by head; left arm extended by side	face down	timber under and over body		north-east		plank cover, with head on timber
54	?	young (?) adult	to measure?	one tooth only	on right side	slightly flexed	?	?			north-north-east		
55	?	adolescent to young adult	?	poor	?	?	?	?			west		dismembered?

### *Animal burials*

The skulls or upper jaws of cattle and horses had been deposited in a quarry pit (F129), which was later to be disturbed by Burial 49 (see Chapter 4, p. 83). The layer in which they were contained is likely to have been back-filled soon after the construction of Mound 5, and the bones are residual from that episode, rather than being from the period of the execution burials. The long bone in quarry pit F133 ('Burial 47') may also have been animal, and may represent an animal or part of an animal deposited ritually. A complete cow was buried in a Mound 6 quarry pit, adjacent to Burial 55, but this has been dated to the seventeenth century (see below).

### *Evidence from human bone*

Age and sex were determined as far as possible from the exiguous remains (see report by Lee, p. 358). Burial 42b was a mature male in the same grave as two young women. Burial 48 was also a mature male. Burials 40, 45, 52, 54 and 55 were young adults. Stature could only be calculated for one burial, 42b (c.1.80 m tall), but judging by the lengths of the bodies in the ground, there were no children, although one of the women in the composite grave Burial 42/43 was very short at 1.35 m.

### *Conclusions*

The Group 2 burials seem to be victims of killing by hanging or beheading. The graves are focused on Mound 5, which is therefore the likely place of execution. They were buried beside the mound or in its grassed-over quarry pits. There may also have been burials within the body of the mound itself, but these were lost when the mound was ploughed.

Although one burial (Burial 53) was thought to be lying on the base of a freshly dug quarry pit, the remainder are thought to have been cut through the turf which formed on the mound and quarries – that is some years after the mound's construction. However the jaws disturbed by Burial 49 were still transportable, implying that the time between the digging of the quarry pit and the digging of the grave was not very much greater than a decade or two. Burial 53 may also have been cut through a grassed-over quarry pit. In this case, the group as a whole would belong in the period between the mid seventh century and the twelfth century, as suggested by the three radiocarbon dates. Burial seems to have ceased before the late sixteenth century, when the mound was first reduced by ploughing and the quarry pits filled in.

### **Interpretation – the context of execution at Sutton Hoo**

There were two separate groups of burials: one in the centre of the mound cemetery, focused on Mound 5 (Group 2); and one on the eastern periphery, focused on a central space that appeared to contain a gallows (Group 1). Both groups included examples of bodies that had suffered decapitation or hanging. The postures in the graves were often irregular, and suggested that some dismemberment or decomposition had taken place prior to burial. The orientation of the graves was also irregular, influenced mainly by the pre-existing earthworks – Iron Age and Bronze Age banks in the case of Group 1; Mound 5 in the case of Group 2. Radiocarbon dating places both groups between the seventh and thirteenth centuries AD. Both these groups may be interpreted as execution cemeteries, but their context needs further examination. Were these killings contemporary with the

mound-burials, or later, or much later? Are these the result of rituals associated with aristocratic burial, or are they the relics of judicial processes of the Late Saxon period and later? Do the burials reflect aspects of pagan or a Christian ideology? Why were there two places of execution?

### **Dating**

The stratigraphic records only place the Group 1 and Group 2 burials after the mounds and before the late sixteenth century, when the mounds had been ploughed and the quarry pits filled in. How early did execution start? With one exception, all the burials may belong to a period that begins after Mound 5 and its quarry pits had grassed over. The one exception, Burial 53, relies on the fuzzy stratification of the quarry pits. The burial was seen only on the floor of the pit, and thus could be contemporary with the construction of Mound 5. It was not seen on the surface of the turf. However, it has to be accepted that it could still have been a grave cut through the first fill of the quarry pit. There were clear difficulties in recognising cuts through the turf, as there was through the buried soil where the grave did not dig into the subsoil and turn up characteristic lumps of bedded sand. It should be noted that the cut for the cow burial (see Burial 55), which was seventeenth century, was not seen until the base of the quarry pit F2; yet it cannot have been contemporary with Mound 6. The case that Burial 53 was contemporary with the construction of Mound 5 is no better and no worse than the case for it being later. The execution burials did not begin before the construction of Mound 5, nor, probably, before its quarry pits had grassed over. This could already have happened in the seventh century.

How late was execution burial practised? With one exception, the burials of Group 2 were sealed by the pale sand that is designated as a ploughing of the later Middle Ages, which had happened before a track crossed the back-filled quarry pits, which, on map evidence, was before 1601 (see Chapter 12, p. 461). The exception, Burial 54, was less certainly sealed. The evidence of Norton's map of 1601 shows that by that time a place of execution was sited on Gallows Hill, next to Wilford Bridge (Colour Plate 13). It also mentions that the building of Wilford Bridge had superseded a route via a ferry and the Sutton Hoo mounds. The site of the gallows on the Norden Map coincides with *Harrough pightle*, a temple place-name noted by Peter Warner (1996: 22) near the hundredal meeting place at Wilford Bridge. The gallows at Sutton Hoo should thus have been redundant by 1601 at the latest.

The dating can be tightened further. At the stratigraphic level of the turfed-over quarry pits, pottery was found that has been dated to the late twelfth century. It occurred at the turf layer in a Mound 6 quarry pit (see Chapter 4, p. 94) and in association with a hearth in the Mound 14 quarry pit (Chapter 5, p. 113), and in a 'warreners' pit' in the Mound 2 quarry (see Chapter 6, p. 171). The case of the Mound 6 quarry pit, which also contained an execution (Burial 55), at least, provides a hint that the execution should have occurred before the late twelfth century.

The probabilities accorded to the radiocarbon dates (Ambers in Chapter 3, p. 54) suggest that it would be legitimate to compress the range from its extremities. While the radiocarbon dates allow three burials (22, 35 and 42) to be as early as the seventh century, only one (Burial 42) must be as early as the late eighth. Similarly, although one burial may be as late as the

thirteenth century, no burial must be later than the eleventh century (see Chapter 3, p. 54). The radiocarbon dates thus allow all the dated burials to occur within the eighth to eleventh century period, and do not require continuity with the Mound cemetery. It is not inconceivable that these burials are spread over the three or four centuries that followed the end of mound burial, and represent executions of felons from Sutton Hoo's hinterland at the rate of one every ten years or so.

### ***Punitive, ritual or sacrificial killings?***

When first encountered in 1984, the Group 1 burials were thought to be Medieval, and to mark a place of execution on a moorland site beside an old mound cemetery. The arrival of the first radiocarbon dates (for the seventh century), the excavation of the 'ploughman' and the discovery of the Mound 5 burials prompted a serious consideration of whether such 'deviant' burials could be ritual or sacrificial, and it was duly decided that they could (Carver 1992b: 355). Two factors strongly influenced the association of the deviant burials with the mound cemetery: the apparent occurrence of the burials early in the stratigraphic life of the quarry pits in which they were found, and the fact that the burials were grouped around Mound 5, which was thought to be among the earliest mounds (and still is, see p. 310). It was argued that, at the latest, the first burials would have to be undertaken within a generation of the construction of Mound 5 for its significance to be remembered (Carver 1998a: 142).

Hilda Ellis Davidson (1992) doubted that the Anglo-Saxons practised human sacrifice, and David Hill (pers. comm.) has suggested that Sutton Hoo should be identified as a *cwealmstow*, an execution site of the later Saxon period. Since then, the interpretation of the Sutton Hoo execution cemeteries has been greatly enriched by the studies of Andrew Reynolds, who has reviewed the evidence for deviant burial in Anglo-Saxon England, and has found a secure context for it in judicial punishment (1998). He found that the form of burial was a signal of the mode of death, and that the mode of death could be attributed, using laws and other documents, to behaviour that was considered socially deviant. Of the 150 examples collected in his research (39 from Sutton Hoo), 99 had the hands behind the back, as if tied, 93 had been decapitated, 40 were prone (lying face down), 8 had the feet laid as if tied, 10 corpses were folded and 10 graves contained only half a corpse. These effects are deemed to be the results of binding, hanging, beheading or leaving a body to rot on a gibbet. The documents also mention 'head-stakes' for the display of the heads of victims. A number of examples featured double or triple burial, which were interpreted as being of perpetrators of a common crime. Capital crimes, at least in the tenth century, included theft, falsely swearing, sexual deviance and treason. Reynolds found evidence for only four coffins at execution sites, one from South Acre (Norfolk) and three from Sutton Hoo. He suggests that this would be appropriate for those who had been convicted of an offence that precluded burial in consecrated ground, but who had later died from natural causes; or perhaps for suicides (ibid.: 162). Burial under a plank or a pile of stones might be a gesture to protect the living: he notes that a victim of judicial execution with the hands and feet removed was found buried under a plank in Denmark in c.1000 AD (ibid.: 166). Double-post gallows of the type defined at Sutton Hoo have also been reported at South Acre (Norfolk), Ashted (Surrey) and Stockbridge Down (Hampshire) – ibid.: fig. 90.

Sacrificial practice would be hard to distinguish on the ground. Body positions similar to those in the Sutton Hoo groups have been noted at the Maya site of Cuello (Hammond 1991: 219 et seq.), including that of Burial 12, (head replaced) and Burial 10 (detached head, tied hands), and these burials were interpreted as sacrificial. Clarke (1979) also believed that Roman decapitations at Lankhills, Winchester, were sacrificial. In a review, Harman *et al.* (1981: 168) suggested that beheading and burying prone could be final indignities inflicted on an offender, but were perhaps more intended to affect the role in the afterlife. No decisive evidence was found for whether the observed decapitation was pre- or post mortem.

Reynolds could find no convincing evidence that any of his examples were sacrificial, and found a satisfactory context for all of them in the realm of crime and punishment (1998: 223). The earliest examples of executions identified by Reynolds were included in Anglo-Saxon communal cemeteries of the fifth to sixth century. The most numerous examples are tenth to eleventh century, when they are found in special isolated execution cemeteries, often located on parish boundaries. A significant number of these late cemeteries are sited on burial mounds or linear earthworks. Twelve execution cemeteries are associated with mounds, and seven with linear earthworks (ibid.: 174); at four places (Meon Hill, Roche Court Down, Barn Ditch and Bokerley Dyke) the earthwork alignment had influenced the orientation of the graves (ibid.: 172). Place-name evidence suggested that linear earthworks as well as mounds had supernatural associations (ibid.: 254). These sites, which equate with the *cwealmstow* or killing place, were designated, under Christian laws, as suitable places to bury society's outcasts (ibid.: 242).

The evidence for special execution sites between the seventh and tenth centuries was harder to find, the two main candidates being Sutton Hoo and the Old Dairy Cottage site, 2 km north of Winchester (Reynolds 1998: 128–30, 241). Reynolds considered that it was possible that a princely cemetery could be the scene of contemporary executions to reinforce the rule of law at a place that may otherwise have functioned as a place of assembly or of ceremonies associated with social control (ibid.: 236). The idea that executions could have begun at Sutton Hoo during the life of the mound cemetery is thus not in contradiction with Reynolds' overall thesis. However, the evidence is not decisive that they did (see above).

It could be argued that, for spectators, judicial killing is sacrificial (and vice versa). Clearly, a society that killed horses and sheep for inclusion in burial rites, and which enslaved humans, was quite capable of killing humans too. Archaeologically (and arguably for contemporary spectators) there is little distinction to be drawn between ritual and judicial killing. For Sutton Hoo the real point at issue is whether any of the execution burials can be shown to have been contemporary with the use of the princely burial ground. The conclusion offered here is that they might have been, but probably were not. Execution most probably began at Sutton Hoo after the mound cemetery had ceased to be used for mound burial, but while it remained in the popular memory. The context of execution would therefore not have been sacrifice, but the rule of the Christian kings of East Anglia, and the resulting change of ideology, the imposition of orthodoxy and priorities of social control in the later seventh or early eighth century.

**The two execution sites**

Following the discussion above, the location of each of the Sutton Hoo execution sites has its own rationale. The eastern site centred on some earthworks and reflected the position of established routes. An Iron Age track ran through this site (see Chapter 11, p. 458), and could have still functioned as a route, as the earthworks that defined it were still visible. In contrast, the Mound 5 site actually stood inside the burial ground, and its gallows presumably stood on top of the mound. A track passed nearby, to the east, during the Middle Ages, although not at the time of the executions, as the quarries had yet to be filled in. There may have been a track to the west (subsequently Track 4, see Chapter 12, p. 466). Mound 5 is neither the largest nor the smallest of the mounds, nor is it the mound nearest to any known route. It remains possible, therefore, that it was a remembered monument, which it seemed appropriate to adopt as a site of execution. If, as suggested in Chapter 8 (see p. 310 and Chapter 14, p. 490), it was a burial of one of the earliest pagan leaders, such an adoption by a later Christian authority might seem appropriate.

However, the reason for having two execution sites at Sutton Hoo is now lost. From dating evidence, they do not seem to be consecutive. Group 1 had three coffins and a possible cairn, while Group 2 had little to dignify the dead. The two groups may have reflected the status of the felon or the nature of their offence (Carver 1998a: 142–3). It could be proposed, for example, that those buried near Mound 5 (Group 2) had some family link to the earlier pagan dynasty. On the other hand, those permitted coffin burial, who were in Group 1, may have had influential relatives. Prone burial, the position of shame, might be appropriate for those who deviate sexually from the new Christian ethos; suspension on a gibbet might indicate treasonable behaviour towards the new authority. However none of these speculative attributes successfully distinguishes the Group 1 from the Group 2 burials, and the existence of two contemporary execution cemeteries remains unexplained.

From the evidence of these execution burials as a whole, it is difficult to escape the conclusion that whatever the stress of early Christian leadership in East Anglia, its net consequence was unimaginable cruelty, routinely practised.

**Report on human bone**

Frances Lee

**Methodology**

*Age and sex*

The age and sex of individuals were determined from the widest possible criteria, following the recommendations published in Prashma (1980), in conjunction with those of Krogman (1978) and Phenice (1969).

**SEX**

An indication of sex can only be attempted for the adults, because the definitive traits used in sexing skeletal remains are not present until the onset of puberty. The determination of sex relies on the differences in robusticity between the sexes, and on the adaptation of the female skeleton for childbearing. The skull and pelvis are therefore the most reliable indicators.

**AGE**

The estimation of age in skeletal remains employs characteristics that depend upon the developmental phase of the individual. The age given refers to the biological age, and the chronological (or real age) is assigned to a particular developmental stage from studies on recent populations. The dental development is the most accurate method for ageing children up to fourteen years. When taken in conjunction with the appearance and ossification of the epiphyseal centres, which appear and fuse at determined developmental ages, the individuals may be aged to within a couple of years.

The problems involved in ageing adult skeletons have been widely discussed in recent literature (Molleson and Cox 1993, Suchey, Brooks and Katz 1988, Iscan and Loth 1986). The outcome of these studies is that osteologists and physical anthropologists are now more acutely aware of the pitfalls in assigning a finite age for specific skeletons, and now employ age categories for adults with caution. Sutton Hoo is no exception; the skeletons it proved possible to age were simply placed in broad groups of young, middle and mature adults. The poor preservation of the bodies have resulted in many of the criteria routinely employed becoming inapplicable; only the degree of dental attrition (after Brothwell 1981) and cranial suture closure (Meindl and Lovejoy 1985) were used.

The age categories were as follows:

- Infant: 0–2 years
- Child: 2–5 years (early); 5–10 years (late)
- Subadult: 10–15 years (early); 15–18 years (late)
- Adult: 18+ years (young, middle or mature)

*Dentition*

The dentition was recorded according to the FDI system outlined in Hillson (1986), but is given in the following manner in the text:

**Table 50**  
**System for recording dentition**

<i>Permanent dentition</i>																	
Right Upper Jaw	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8	Left Upper Jaw
Right Lower Jaw	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8	Left Lower Jaw

*Deciduous dentition*

Right Upper Jaw	e	d	c	b	a	a	b	c	d	e	Left Upper Jaw
Right Lower Jaw	e	d	c	b	a	a	b	c	d	e	Left Lower Jaw

- \* Loss before death (ante-mortem)      A Abscess
- / Loss after death (post-mortem)      U Unerupted
- Jaw missing      O Erupting
- C Caries      NP Not present
- Cr Root caries      R Root only

*Physical and general characteristics*

Stature was estimated from the long bone measurements using the formulae employed by Trotter (1970). Robusticity indices follow Bass (1981), while the cranial and the infracranial indices are after Bass (1981) and Brothwell (1981). Epigenetic variations in the cranium were recorded according to Berry and Berry (1967), and in the post-cranial skeleton the procedure was as described by Finnegan (1973). Individual summaries are listed

below for Groups 1 and 2 burials, and for the inhumations associated with the mounds (see above, Chapter 7).

*Preservation*

The preservation of the burials at Sutton Hoo is unusual (see above). Although many bodies were clearly visible during the excavations, very little of this was represented by bone. That which did survive was fragmentary and extremely friable, and more often than not crumbled on lifting. Various techniques were employed to maximize the data available, these included the use of PVA, moulds and lifting the bodies en bloc. On excavation the burials appeared, quite clearly, as a dark stain in the sand. This stain was of a more compact material and on excavation the bodies were three-dimensional. Occasionally bone had survived within the stain, but this was of poor quality. An attempt was made to compare the state of preservation for the Sutton Hoo burials (see catalogues of skeletal material, below), but this comparison was subjective and not quantifiable. Compared to other cemetery populations, the skeletal assemblage rates as poor to unidentifiable. The human bone reports record the limited information from the bone that did survive sufficiently well to be looked at in the laboratory, in conjunction with information from field notes. The catalogue summarizes the burial information, but more detailed listing have been left in the archive.

**Report on the skeletal material from Group 1 (Burials 17–39)**

*Evaluation of material*

A total of twenty-three graves were excavated from the eastern periphery, and form the Group 1 inhumations (Burials 17–39). Eighteen graves were excavated in Int. 32, of which three (Burials 28, 31 and 34) were present as a body stain only. The remaining fifteen bodies contained variable amounts of osseous material, these include Burials 23–27, 29, 30, 32 and 33. Five graves were excavated from Int. 52. Of these, Burial 38 was a body stain. Nineteen bodies from Group 1 containing osseous material are discussed in this study. The bone surviving in these graves was all in a poor state of preservation. For the purposes of this study the bone condition was graded throughout the sample as good, fair or poor, see Table 51. Table 52 shows the proportion of the skeletons represented.

**Table 51**  
**Preservation of the skeletons in Group 1**

	Good	Fair	Poor	Unidentifiable
No. of individuals	0	5	10	3

**Table 52**  
**Proportion of the body represented by osseous material in Group 1**

	100%	75%	50%	25%	10%	5%	<5%
No. of individuals	0	1	0	2	2	9	4

\*Burial 17 omitted from Tables 51 and 52

*Sex*

Three of the burials were male (Burials 23, 30 and 39), and a further four were probable males (Burials 17, 24, 25 and 27). Twelve individuals proved impossible to sex, either because the relevant parts of the body were not present, or because they were too fragmentary and weathered.

*Age*

Six individuals were young adults, one of whom, Burial 37, was aged subadult to young adult (15–21 years). A further three individuals were in the young to middle adult age range, and only two were middle to mature adults (see Table 53). Finally, eight individuals were so poorly preserved that they could only be aged as adult (estimated to be over the age of 18 years) (including 3374).

**Table 53**  
**Age of individuals in Group 1**

Young	Young–Middle	Middle	Middle–Mature	Mature	Adult
6	3	0	1	1	8

*Stature*

Only one individual had any of the long bones sufficiently well preserved for an estimation of stature or height to be made. Burial 30 was a young male measuring 172.3 cm ± 3.27.

*Epigenetic and non-metrical variations*

These measure the biological distance between members of the population by multivariate analyses of the metrical and non-metrical traits (minor variations in the skeleton). These are not so much pathological as anatomical anomalies, and result from normal but varied developmental processes. Their exact relevance is as yet incompletely understood, however the effect of the environment and genetics are considered to be determining factors. The non-metrics for this study were simply recorded where present (Table 54). No attempt was made to interpret the results, as the incomplete nature and small size of the sample would invalidate the results.

*Dentition*

Fourteen individuals had fragments of the upper or lower jaws present, with a total of 217 permanent teeth represented: 111 from the upper jaw and 106 from the lower jaw (Table 55).

Caries were only present in one individual, Burial 39, with seven of the teeth affected: the maxillary right canine, right first molar, and left and right second molars; in the mandible, the right second and third molars; and a root caries to the left lateral incisor. Dental caries result from the progressive and irreversible decay of the dental hard tissues exposed to the oral fluids. It is one of the commonest of all dental pathologies and is also the main route through which bacteria reach the deeper tissues, opening the way for infection and inflammation of the dental pulp and periapical tissues. Burial 35 has a large developmental pit in the buccal aspect of the second left mandibular molar, the site for an early carious lesion.

Three individuals (Burials 23, 24 and 39) have evidence for apical abscesses. These are localized areas of infection that result in a build-up of pus, with the formation of an osteolytic, bone destructive, lesion. Abscesses may be secondary to dental caries, or may result from infection through the pulp cavity as a result of severe attrition. Table 56 shows the site of these lesions.

In Burial 23 the abscess occurs to the left mandibular first molar and drains buccally, while in Burial 24 there is an apical abscess contained in the socket of the right, lateral, maxillary incisor. Burial 39 has three such lesions, one to the right maxillary first molar and one to the second left maxillary molar,

**Table 54**  
**Cranial and postcranial non-metrics for skeletons from Group 1**

Burial no.	23	24	26	30	35	39
<i>Cranial</i>						
Lambdoid ossicle			P			
Ossicle at lambda						
Metopism		A				
Mastoid foramen exsutural						
Mastoid foramen absent				P		
Parietal foramen						P
Zygomatico-facial foramen		S				S
Frontal foramen		P				A
Auditory tori				A		
Mandibular torus				A		
Torus maxillares				A		
Palatine torus				A		
Precondylar tubercle				A		
Anterior condylar canal	S			S		
Condylar facet double				A		
Posterior condylar canal				P		
Supra-orbital foramen	A	A		P		A
Supra-orbital notch	P	P				A
<i>Postcranial</i>						
Sacrum open hiatus	A			A		
Atlas facet (single)				S		
Septal aperture	A					
Hypotrochanteric fossa						P
Third trochanter						A
Trochanteric fossa exosuture				A		
Tibia distal foramen					P	
Anterior calcaneal facet double					P	

Key: A is absent; P is present; S is single

**Table 55**  
**Teeth present from skeletons in Group 1**

Tooth position	Maxilla								Mandible							
	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
No. present	11	19	17	14	15	13	11	11	10	11	11	14	15	16	17	12

**Table 56**  
**Position of abscesses in the dentitions of skeletons from Group 1**

Tooth position	Maxilla								Mandible							
	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
No. present		1	1	1?			1								1	

**Table 57**  
**The distribution of enamel hypoplasia in the dentitions of skeletons from Group 1**

Tooth position	Maxilla								Mandible							
	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
No. present	2		1	1	1	4		1	7	2	1		pit	2		

with a probable third lesion developing at the right maxillary second premolar.

Calculus, a hard deposit that forms on the teeth through the calcification of bacterial plaque, was noted on the teeth of six or seven individuals. In six cases, the degree was very slight, however in Burial 39 there was a moderate deposit. Clinical studies have shown that relatively low deposits of calculus may be the result of dietary factors influenced by the acidity of the mouth, which is in turn dependant upon the amount and type of carbohydrate in the diet. Plaque grows faster in the mouth when sucrose is added to the diet than when other sugars, such as fructose or glucose, are added (MacPhee and Cowley 1975). An alternative reason for the absence of calculus may be post-mortem loss, perhaps due to failure to preserve in the adverse soil conditions.

Alveolar recession was noted in seven individuals. This is associated with periodontal disease, a disease of the supporting tissues of the teeth that results in their loosening and eventual loss. The most common cause is a build up of calculus that instigates an inflammatory response. In Burial 39, which had the moderate deposit of calculus, alveolar recession and periodontal disease were marked.

Enamel hypoplasia, a defect that occurs during the enamel forming processes of the teeth and is caused by a cessation of enamel production, was recorded in six individuals, and in a large developmental pit in a single tooth of Burial 35. Enamel hypoplasia may be due to a variety of causes, including nutritional deprivation, disease and parasitic infection. Macroscopically, defects are visible as lines or pits on the surface of the teeth. The most commonly affected tooth, seven teeth in four individuals, was the mandibular canine; the maxillary canine was the second most commonly affected tooth (See Table 57).

One or more teeth had failed to develop (hypodontia) in two individuals (Burials 17 and 19). In both cases the third molar were absent. In Burial 17, the left mandibular molar was affected, and in Burial 19 all three of the third molars available for analysis were absent. There is some indication that the absence of the third molar may be directly related to tooth size, and contain an inherited characteristic (Hillson 1986: 256).

Brothwell *et al.* (1963) estimated that between 0.2 per cent and 36.6 per cent of jaws may have the absence of one or more of the third molars, while Banks (1934) suggests that as many as 20 per cent of the population may be affected.

Finally Carabelli's cusps and shovel-shaped incisors, both considered epigenetic or non metrical traits, were recorded on single individuals (Burials 24 and 25).

*Dental pathology*

The dental pathology is shown in Table 58.

*Dental summary*

Although dental pathologies were recorded, they give little insight into the dental and oral hygiene of the population because of the poor degree of preservation. The absence of the dentition from many of the skeletons, or the presence of the enamel only (as in the case of Burial 17), provides a very incomplete and biased picture of the dental pathology for this group.

*Skeletal pathology*

DEVELOPMENTAL

Burial 19 has a small developmental pit in the centre of the left superior apophyseal joint of the fourth cervical vertebra.

INFECTION

Pitting and erosion to the left incus, the result of chronic inflammatory disease of the middle ear, were recorded for Burial 27.

Burial 39 had subperiosteal reactive bone, linear in appearance and merging with the cortical bone, on the medial aspect of the mid shaft of the right tibia, suggesting an old inflammatory reaction.

*General Health*

Cribra orbitalia was visible as pitting to the roof of the left orbit of Burial 24; this is in the process of being remodelled, suggesting a healing lesion. Cribra orbitalia is thought to result from iron deficiency and/or intestinal blood loss through chronic intestinal parasitic infection (Stuart-MacAdam 1982).

**Table 58**  
**Dental pathology for Group 1 skeletons**

Burial no.	Calculus	Alveolar recession	Periodontal disease	Caries	Abscess	Ante-mortem tooth loss	Enamel hypoplasia	Third molar not present	Over crowding	Shovel shaped incisor	Carabelli's cusp
17								*			
18											
19	1	1						*	*		
23		2	*		*						
24	1	1			*		*			*	
25											*
26											
27	1	1					*				
30	1	1					*				
33											
32	2	2					*				
35				?			?				
37							*				
39	2	3	3	*	*	*	*				
<b>Total</b>	<b>6</b>	<b>7</b>	<b>2</b>	<b>1/2</b>	<b>3</b>	<b>1</b>	<b>6/7</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>

Key: 1 is slight; 2 is moderate; 3 is severe/extreme; \* is present



*Degenerative*

The degenerative diseases of the body result, in part, from continued or successive trauma of a very mild nature sustained over a period of years. They reflect everyday wear and tear on the body, which is inseparable from a normal but vigorous life, and consequently appear to be closely associated with advancing age. Secondly, there is known to be an increased local prevalence in certain occupations, where a single joint is exposed to unusual stress (Dick 1972: 12). The only evidence for

degenerative change was noted on the left acetabula of Burials 26 and 39, which had lipping and early pitting to the joint margins suggestive of incipient degenerative joint disease.

*Miscellaneous*

Burial 39 has an osteolytic lesion to the left fibula immediately above the attachment of the interosseal ligament. This is most probably the result of a cyst, and there is no evidence for any bone reaction.

## Catalogue of skeletal material from Group 1 burials

BURIAL 17

**Body F254 (1049)**

Ints 20/F9 and 32/F118

Age: Adult (young: 17–25 years)

Sex: Probable male

Bone preservation: Poor. When found the body was well represented, but only the skull fragments of the right upper body and right lower leg have been recorded. The rest was sent to Harwell for C<sup>14</sup> dating during the evaluation programme.

**Table 59**

**Dentition of body F254**

	R								L								
Maxilla	8	7	6	5	4	3			1	2	3	4	5	6	7	8	
Mandible	8	7	6	5	4				1	2	/	/	/	6	7	NP	
									*	*							

\* enamel crown only survives

There was slight calculus; much was probably lost post-mortem.

BURIAL 18

**Body F246 (1067)**

Ints 20/F39 and 32/F101

Age: Adult

Sex: Unknown

Bone preservation: Very poor. Only fragments of the right femur, left temporal bone of the skull and maxillary premolar survive.

BURIAL 19

**Body F247 (1069 and 1062)**

Ints 20/F40 and 32/F102

Age: Adult (young to middle)

Sex: Unknown

Bone preservation: Good to fair. Comprising the right side of the skull, in particular the facial region, cervical vertebrae and a single carpal bone. Skeletal pathology: There was a developmental pit on the left superior apophyseal joint of the fourth cervical vertebrae.

**Table 60**

**Dentition of body F247**

	R										L							
Maxilla	NP	7	6	5	4	3	2	1	/	/	/	/	/	/	5	6	7	-
Mandible	NP	7	6	5	4	3	2	1	1	2	3	4	5	6	7	NP		

There was slight to moderate calculus. The anterior mandibular teeth were slightly overcrowded.

BURIAL 20

**Body F249 (2009 and 2091)**

Int. 32/F106

Age: Probably adult

Sex: Unknown

Bone preservation: Poor to unidentifiable. There was a very badly weathered long bone, probably from the upper leg.

List of Bones recovered

2772 L. leg, probably tibia

BURIAL 21

**Body F251 (2000)**

The head of the body (2002) was redeposited on the body above (Burial 22).

Int. 32/F108

Age: Adult

Sex: Unknown

Bone preservation: Very poor. There were only weathered fragments of the innominate and legs present. The underside of the bone survives best, the rest of the body presents as a stain.

BURIAL 22

**Body F252**

Int. 32/F109

Age: Adult

Sex: Unknown

Bone preservation: Poor. There are fragments of the lower body only, in particular long bones of the lower leg.

BURIAL 23

**Body 2023**

Int. 32/F137/1

Age: Adult (middle to mature)

Sex: Male

Bone preservation: Good to fair. For Sutton Hoo, the preservation was exceptional. The left side of the skull, right arm, lower trunk and upper legs have a substantial amount of bone. The lower legs and left arm are represented only by a stain.

**Table 61**

**Dentition of body 2023**

	R								L								
Maxilla																	
Mandible																	

The calculus was lost post-mortem. There was periodontal disease and alveolar recession present.

BURIAL 24

**Body 2059**

Int. 32/F137/2

Age: Adult (young to middle)

Sex: Probable male

Bone preservation: Good to fair. There are only remains of the skull, predominantly the left side.

Skeletal pathology: Cribra orbitalia – a healing lesion to the left orbit.

**Table 62**

**Dentition of body 2059**

	R										L							
Maxilla	7	5	4	3	2	1	1	2	3	4	5	6	7	8				
Mandible		5	4	3	2	-	1	2	3	4	5	6	7	8				

There was slight calculus, mostly lost post-mortem, and a slight alveolar recession. Enamel hypoplasia was present.

BURIAL 25

**Body: F258 (2060)**

Int. 32/F146.

Age: Adult (young)

Sex: Probable male

Bone preservation: Very poor. Only very small fragments of the body remain, including the skull, right lower leg and unidentifiable long bone fragments. The teeth were represented only by fragments of enamel.

**Table 63**

**Dentition of body F258**

	R						L									
Maxilla	8	7	6	5		1										
Mandible			5						4	5	6	7	8			

The laterality of the teeth is unknown.

BURIAL 26

**Body F259 (1080)**

Int. 32/F154

Age: Adult

Sex: Unknown

Bone preservation: Poor. A cranium and fragments of the innominate and upper leg.

Skeletal pathology: There was early osteoarthritis in the left acetabulum.

**Table 64**

**Dentition of body F259**

Maxilla	7 or 8
---------	--------

BURIAL 27

**Body F260 (2065)**

Int. 32/F161

Age: Adult (young to middle)

Sex: Probable male

Bone preservation: Poor. There were fragments of skull, upper cervical vertebrae and right clavicle only.

Skeletal pathology: Evidence of infection visible as pitting to the left incus.

**Table 65**

**Dentition of body F260**

	R										L							
Maxilla	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8		
Mandible	8	7	6	5	4	3			/	/	/	4	5	6	7	8		

The calculus was slight, most probably lost post-mortem. There was enamel hypoplasia.

BURIAL 28

**Body 1096**

Int. 32/F163

Age: Adult (from author's examination of the *in situ* body stain)

Sex: Unknown

Bone Preservation: No bones survived into the laboratory. However, some vertebrae were observed in the field.

Skeletal pathology: There was disc degeneration to the mid lumbar vertebrae (noted by the author in the field).

BURIAL 29

**Body 1089**

Int. 32/F166

Age: Adult

Sex: Unknown (though it is robust)

Bone preservation: Poor. There are fragments of skull and lower limb.

BURIAL 30

**Body F264 (2038)**

Int. 32/F173

Age: Adult (young)

Sex: Male

Stature: 172.3 cm ± 3.27 (5' 7")

Bone preservation: Good to fair. Most of the body is represented. The skull and lower body are the best preserved elements. The upper part of the skull (left side) was preserved with PVA, and consequently the dentition could not be examined. This allowed only superficial observations.

**Table 66**

**Dentition of body F264**

	R										L							
Maxilla	8	7	6	5	4	3	/	-	1	2	3	4	5	6	7	/		
Mandible	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	?		

The calculus was slight to moderate. The alveolar recession was slight and there was enamel hypoplasia.

BURIAL 31

**Body F237 (1107)**

Int. 32/F231

This was a body stain only. No bone was recovered.

BURIAL 32

**Body F238 (1112)**

Int. 32/F227

Age: Adult (young)

Sex: Unknown (robust)

Bone preservation: Poor. The dentition was well preserved. Of the bones, there was the left upper arm and upper leg only.

**Table 67**

**Dentition of body F238**

	R										L							
Maxilla	8	7	6	5	4	3	2	1			2	3	4	5	6	7	-	
Mandible	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8		

There was slight to moderate calculus. The alveolar recession was slight, and there was enamel hypoplasia.

BURIAL 33

**Body F239 (1113)**

Int. 32/F227

Age: Adult

Sex: Unknown

Bone preservation: Poor. There were fragments of the occipital bone, atlas and axis.

**Table 68**

**Dentition of body F239**

	R						L								
Maxilla	8	7	6												
Mandible	8	7	6										6	7	8

BURIAL 34

**Body F240 (1114)**

Int. 32/F235

There was a stain only. No bone was recovered.

BURIAL 35

**Body F34 (1039)**

Int. 52/F4

Age: Adult (young: 18–21 years)

Sex: Unknown, but the general appearance is robust

Bone preservation: Poor. There was a fragment of left side of the skull, and also fragments of upper and lower limbs.

**Table 69**

**Dentition of body F34**

Mandible	6	7	8
		c?	

BURIAL 36

**Body F71 (1086)**

Int. 52/F37

Age: Probable adult

Sex: Unknown

Bone preservation: Very poor. There were fragments of right lower arm, pelvis and upper legs only. The size and robusticity of the bones suggest an adult.

BURIAL 37

**Body F72 (1087)**

Int. 52/F25

Age: Subadult to adult (young: approximately 15–25 years)

Sex: Unknown

Bone preservation: Very poor. There were fragments of the skull and right tibia only.

**Table 70**

**Dentition of body F72**

Maxilla	6	7	8
---------	---	---	---

**Report on the Group 2 skeletons**

*Evaluation of the material*

Sixteen graves were excavated from around Mound 5, around which they were arranged radially or tangentially. These Group 2 skeletons were found in Ints 41, 44, 48 and 50, and comprised a minimum of seventeen individuals. Burial 47 is described as a body piece. However, given the nature of the preservation, it is impossible to identify it positively as human, thus actually giving a minimum of sixteen individuals with another possible part of an unidentified skeleton.

Six of the graves contained body stains (Burials 41, 46, 49, 50, 51 and 53) without any bone preservation whatsoever. In the ten graves where bone survived, it was in variable states of preservation: ranging from relatively good to almost unidentifiable or simple bone splinters (see Table 72). The proportion of the skeletons present is shown in Table 73.

**Table 72**

**Preservation of the skeletons in Group 2**

	Good	Fair	Poor	Unidentified	Stain
No. of individuals	0	2	5	3	7

BURIAL 38

**Body F75 (1090)**

Int. 32/F35

There was a stain only. No bone was recovered.

BURIAL 39

**Body F74 (1089)**

Int. 32/F36

Age: Adult (mature?)

Sex: Male

Bone preservation: Fair. The skull condition was exceptional for Sutton Hoo. Only the posterior aspect of the right lower limb was preserved, the left lower limb was in good condition.

Skeletal pathology: There was subperiosteal reactive bone on the midshaft of the right tibia, the result of well-healed or old inflammatory change. An osteolytic lesion to the left fibula above the attachment of interosseal ligaments is the result of a bone cyst.

There was early degenerative joint disease on the left acetabulum.

**Table 71**

**Dentition of body F74**

	R							L								
	A			C				A?				A				
	C	C		R	R	3	2	1	1	2	3	4	5	6	7	C
Maxilla	-	7	6	R	R	3	2	1	1	2	3	4	5	6	7	
Mandible	8	7	X	5	4	3	2	1	1	2	3	4	5	X	X	8
	C	C									CR					

There was moderate calculus. Alveolar recession and periodontal disease were marked. The dental health was poor, with caries, abscesses and enamel hypoplasia all present. The anterior teeth had marked attrition.

**Table 73**

**Proportion of the body represented by osseous material in Group 1**

	100%	75%	50%	25%	10%	5%	<5%
No. of individuals	0	0	1	1	5	0	10

*Sex*

An attribution of sex could be suggested for six of the individuals. Of these, two were positively sexed as male (Burials 42B and 48), three were probable males (Burials 40, 44 and 45) and one was a probable female (Burial 43). A further eleven proved impossible to sex.

*Age*

Seven individuals proved impossible to age at all, as there was little or no bone preservation. Of the other ten, all were adult, with the majority (five) in the young adult age range, one of which was aged between adolescence and young adulthood. A further two were in the young to middle age bracket, and two were in the middle to mature range (see Table 74).

**Table 74**  
**Age of individuals in Group 2**

Adolescent	Young	Young–Middle	Middle	Middle–Mature	Mature	Unknown
1	4	2	0	2	1	7

**Table 75**  
**Cranial and postcranial nonmetrics for skeletons from Group 2**

Burials	40	42a	42b	43	45	48
<i>Cranial</i>						
Lambdoid ossicle			A			
Ossicle at lambda			A			
Metopism						A
Mastoid foramen exsutural			P			
Mastoid foramen absent	A		P			
Zygo-facial foramen	/					S
Frontal foramen		P				
Auditory tori	A		A		A	S
Mandibular torus						A
Torus maxillares						A
Palatine torus						A
Anterior condylar canal double	S			S	S	
Cond. facet Double	A					
Post cond. canal	/					
Supra-orbital foramen		P				
Supra-orbital notch						P
<i>Postcranial</i>						
Os acrominale			A			
Atlas facet single						S
Transverse foramen bipartite			A			
Septal aperture			A			
Hypotrochanteric fossa			P			
Third trochanter			A			
Medial tibial squatting facet			A			
Lateral tibial squatting facet			P			
Inferior talar articular surface double			P			
Medial talar facet			P			
Lateral talar extension present			A			
Talar squatting facet			P			
Anterior calcaneal facet double			P			
Navicular accessory facet			P			
Cuboid accessory facet			P			

Key: A is absent; P is present; S is single; D is double

**Table 76**  
**Teeth present in the permanent dentition of Group 2 skeletons**

Tooth position	Mandible								Maxilla							
	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
No. present	7	8	9	7	8	7	5	5	4	4	6	8	8	10	12	7
Erupting												1	1			1
No. of individuals	9															

**Table 77****Dental pathology for Group 2 skeletons**

Burial no.	Calculus	Alveolar recession	Periodontal disease	Caries	Abscess	Ante-mortem tooth loss	Enamel hypoplasia	Third molar not present
40	1						x	x
42a	1	1					x	
42b		2	x		x			
43	1							x
44				x				
45	1/2	1						
48	2	2	x	x	x		x	
52								
54								
55							x	
Total	5	4	2	2	2		5	1

**Table 78****Position of enamel hypoplasia in the dentitions from Group 2 skeletons**

Tooth position	Mandible								Maxilla							
	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
No. present	1		1	1	3	4		1	1		3	4	3			1
No. of individuals	3															

*Stature*

An estimation of height was possible for Burial 42B, which was an adult male who was calculated to be 179.9 cm  $\pm$  3.37 (5' 10").

*Non-metrics in Group 2*

See Table 75.

*Dentition*

Parts of the dentition from ten individuals were present. A total of 119 permanent teeth were recorded (Table 76: 116 fully erupted and 3 in the process of erupting). Of these, sixty-two were recorded from the upper jaw, and fifty-seven from the lower jaw. A summary of the dental pathology is recorded in Table 77. Apical abscesses were evident at the position of the first maxillary molar in Burial 42B, and at the second maxillary molar in Burial 48. A single caries was noted in the third left maxillary molar of Burial 48, and a possible early caries or enamel defect was seen on the occlusal surface of the third mandibular molar in Burial 44. Enamel hypoplasia (Table 78) was recorded in five of the dentitions, while in Burial 40 the right maxillary molar had failed to erupt. Burial 42A has no evidence for the mandibular third molars, and it is felt, given the age of the individual, that they may not yet have erupted. Five of the dentitions have evidence for slight to moderate degrees of calculus, but the preservation of the bodies may account for much of its absence.

Alveolar recession and periodontal disease were scored, but little emphasis is placed on the significance of the results, due to the poor condition of the bone. Four individuals had evidence for alveolar recession, and two for periodontal disease.

*Skeletal Pathology*

Two individuals (Burials 42B and 45) have pathological lesions. A developmental pit was recorded in the right acetabulum of Burial 42B. Schmorls nodes, depressions on the surface of the vertebral body, were noted in Burial 42B on the fifth to seventh thoracic, and eleventh thoracic to first lumbar vertebrae, and to the third lumbar vertebra of Burial 45. These arise during childhood and adolescence, and result from the protrusion of the disc into the adjacent body. Intervertebral osteochondrosis, a condition resulting from pathological changes to the intervertebral disc with age, was recorded in the third and fourth lumbar vertebrae of Burial 45, associated with marginal vertebral osteophytes, and also in the sixth thoracic vertebra of Burial 42B.

In Burial 42B osteoarthritis was present in both the apophyseal joints of the fifth to seventh thoracic vertebrae. There was incipient degenerative change to the right femoral head, to the distal articular surface of the left humerus, to the tubercle facet of two left ribs and to the head of one right rib. Early degenerative change was present as early pitting to the left temporomandibular joint, and osteophytic lipping suggesting incipient change was recorded on the right glenoid cavity and intercondylar fossa of the left femur. Finally, enthesopathies, areas of increased muscle attachment, were noted to the left ulna at the insertion of the triceps and to the right ribs at the attachment of the lateral costo-transverse ligaments.



BURIAL 46

**Body F499 (1917, 1928)**

Int. 41/F424

This was a body stain only. No bone was recovered.

BURIAL 47

**Body piece F418 (1827)**

Int. 41/F435

There was an organic stain that may derive from a body, possibly part of a long bone. It may or may not be human. No bone was recovered.

BURIAL 48

**Body F555 (2033)**

Int. 41/F486

Age: Adult (middle to mature)

Sex: Male

Bone preservation: The left side of the skull was very well preserved. There were also fragments of the pelvis and lower limbs.

**Table 85**

**Dentition of body F555**

	R					L							
						A	C						
Maxilla						1	2	3	4	5	6	7	8
Mandible	5	4	3	R	R	1	2	3	4	5	6	/	

There was moderate calculus. Periodontal disease was marked on maxilla and mandible. The alveolar recession was moderate to considerable.

BURIAL 49

**Body F524 (1990)**

Int. 41/F517

This was a body stain only. No bone was recovered.

BURIAL 50

Int. 41/F588; Int. 12/Grave 1 in Area C (Longworth and Kinnes 1980)

No bones were available.

BURIAL 51

Int. 41/F590; Int. 12/Grave 2 in Area C (Longworth and Kinnes 1980)

Chemical analysis by M. J. Hughes (SHSB I: 60–2) found a concentration of calcium phosphate. The pH of the soil was not found to account for the different states of preservation of bone in the burials.

BURIAL 52

**Bodies F219 (3090) and F220 (1396)**

Int. 44/F215

Age: Adult (young to middle)

Sex: Unknown

Bone preservation: Poor. The calvarium and fragments of the right upper limb and left lower limb are all that survive.

**Table 86**

**Dentition of body F219**

Maxilla	6	7	8(side unknown)
---------	---	---	-----------------

BURIAL 53

**Body F351 (1583)**

Int. 48/F349

This was a body stain only. No bones were recovered.

BURIAL 54

**Bodies F162 (1196) and F188 (1261)**

Int. 50/F141

Bone preservation: All that survived were a fragment of mandibular molar (first?) and a fragment of maxillary premolar, both with very little attrition, which suggests a young age.

**Table 87**

**Dentition of body F162**

Maxilla	4/5			
Mandible	8	7	6	

BURIAL 55

**Body F379 (1535)**

Int. 50/F341

Age: Adolescent to young adult

Sex: Unknown

Bone preservation: Poor. There were maxilla and fragments of skull, along with a stain of right (?) tibia. There were also four fragments of tooth crown, and a mandibular (?) molar.

**Table 88**

**Dentition of body F379**

	O O			
Maxilla	7	6	5	4

The laterality is not known. The maxillary premolar showed enamel hypoplasia. The maxilla were very poorly preserved. There was no wear to the teeth, and some bone around premolars, suggesting unerupted or erupting teeth and an age of 12+ years.

