

HOOK, WARSASH, HAMPSHIRE EXCAVATIONS, 1954

By PAUL ASHBEE

with contributions by Henry Cleere, Simon Davis, Andrew Fitzpatrick, Sarah Jennings, Helen A H Macdonald, G C Morgan, Georgina Shaw

ABSTRACT

Continuous occupation was revealed on the Solent's eastern 50ft gravel terrace. Excavation disclosed part of a Later Bronze Age rectilinear enclosure, with Iron Age ditches aligned upon it and cut into its ditch infill. A Romano-British enclosure was close by. Parallel Medieval ditches cut across the LBA and IA remains.

In the infill of the LBA enclosure was pottery, and more had been found during gravel digging. IA pottery, also from ditch infills, was of the Worthy Down series. There were also a pony's teeth, iron slag and a Dressel amphora fragment betokening contact with the European mainland. R-B pottery, mostly coarse, was at the base of the humic ditch infills.

Medieval cooking pot, jug, jar and curfew fragments, as well as hearth tiles, were also in ditch infills.

The rectilinear enclosure has counterparts in Wessex, and the IA ditches recall Worthy Down. Land reclamation might explain the Medieval ditches.

Especially studies report upon the pony teeth, the slag, the amphora fragment and the Medieval (post-Roman) pottery.

INTRODUCTION

Over the years, gravel removal in the vicinity of Warsash (Fig 1) had brought to light a

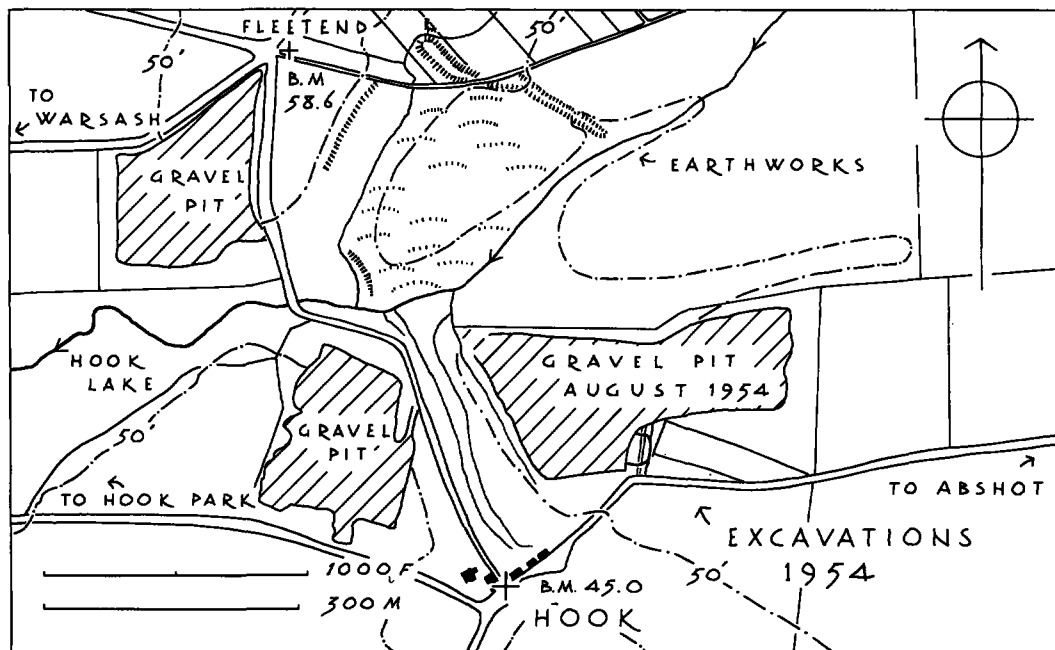


Fig 1. Location map, the excavations and the neighbouring gravel pits.

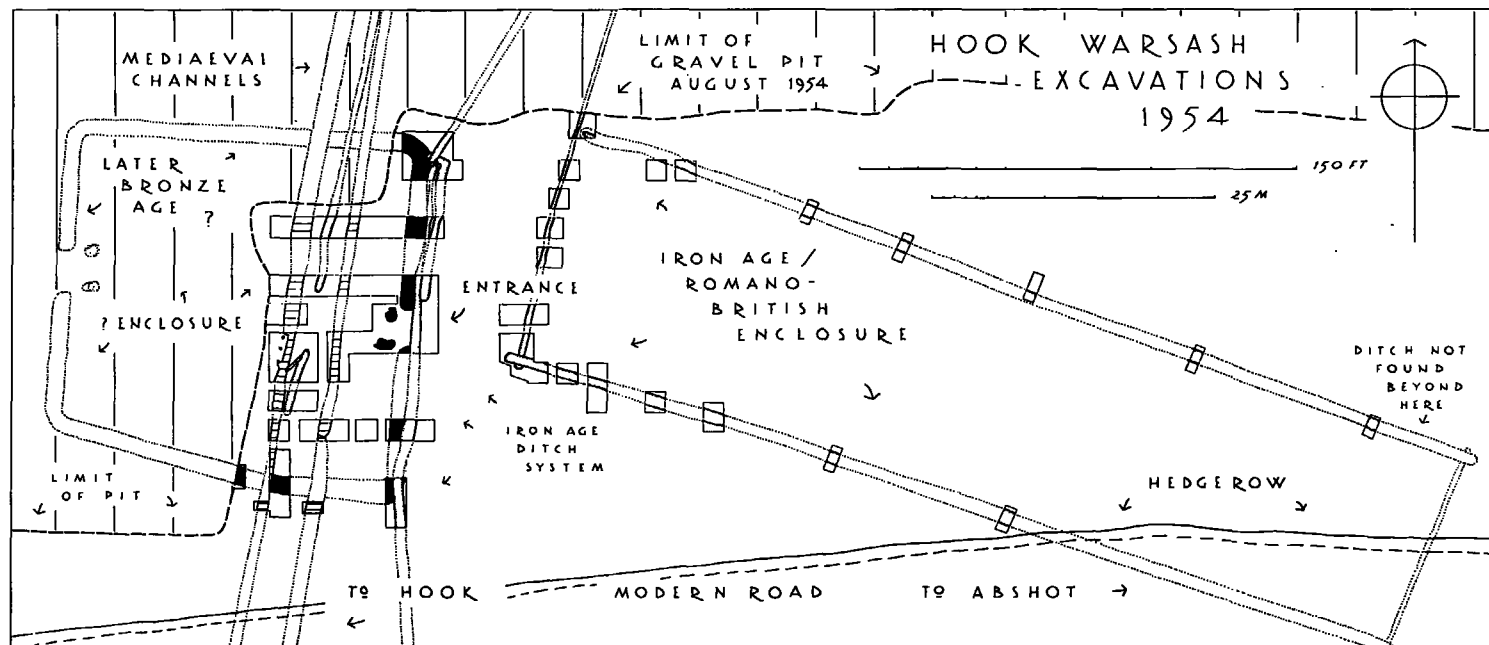


Fig 2. The character of the site and the nature of the excavations.

miscellany of material, largely of Later Bronze Age and Iron Age affinity (Parkes 1945). Visits to the pits, made by Mr A Corney of Portsmouth City Museums, early in 1954 revealed that a gravel working extension was proposed in an area (NGR SU 511 055) between the hamlet of Hook and Abshot Manor. Various cavities and ditches had been exposed in the gravel working face and it was thought that a part of a Later Bronze Age settlement might be destroyed. Mr Corney gave details to the Ancient Monuments Inspectorate of the Ministry of Works (later the Department of the Environment and now English Heritage, the Historic Buildings and Monuments Commission for England) and excavations were decided upon. With the possible implications in mind (CBA 1948, 93), the work was directed by the present writer and was continuous from 26 July to 27 August 1954.

The site investigated was the remnant of the flint-gravel promontory, outlined by the 50ft contour (Fig 1), which had been almost entirely removed by extraction. It had been bounded upon its northern side by low ground and upon its western side by three streams which had their sources at Hook. About half a mile to the north the Hook Lake stream was dammed by a substantial earthen bank, while a deep artificial overflow channel severed adjacent high ground. These earthworks have been thought of as the remains of a large fish pond, perhaps associated with Titchfield Abbey, only 2½ miles distant (Crawford 1937). However, at about a mile to the southwest, and by the shore of Southampton Water (NGR SU 491 046), indications of an Iron Age and Romano-British salt-working system were encountered in 1930 (Fox 1935).

In the absence of surface indications, the area selected for excavation was delineated by the ditch sections and other exposures visible in the working face of the gravel pit. Prior to gravel extraction the area had been intensively cultivated for market gardening but in 1954 it

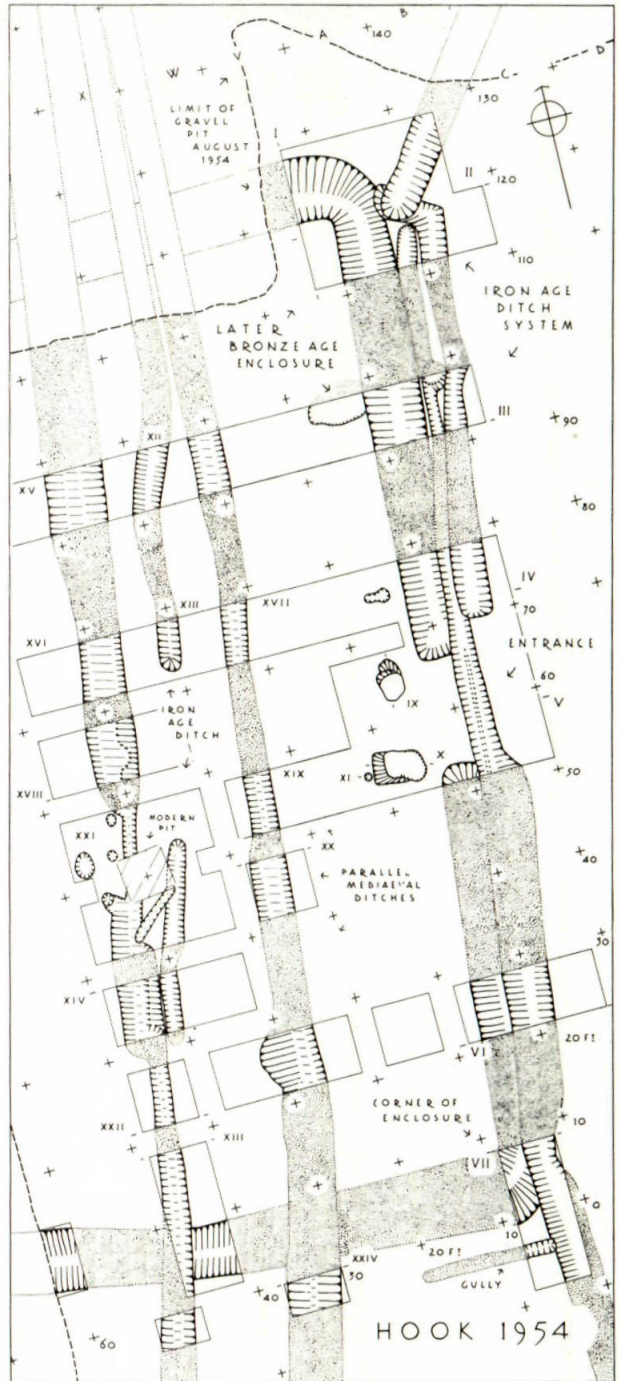


Fig 3. The western area: the Later Bronze Age, Iron Age and Mediaeval ditches.

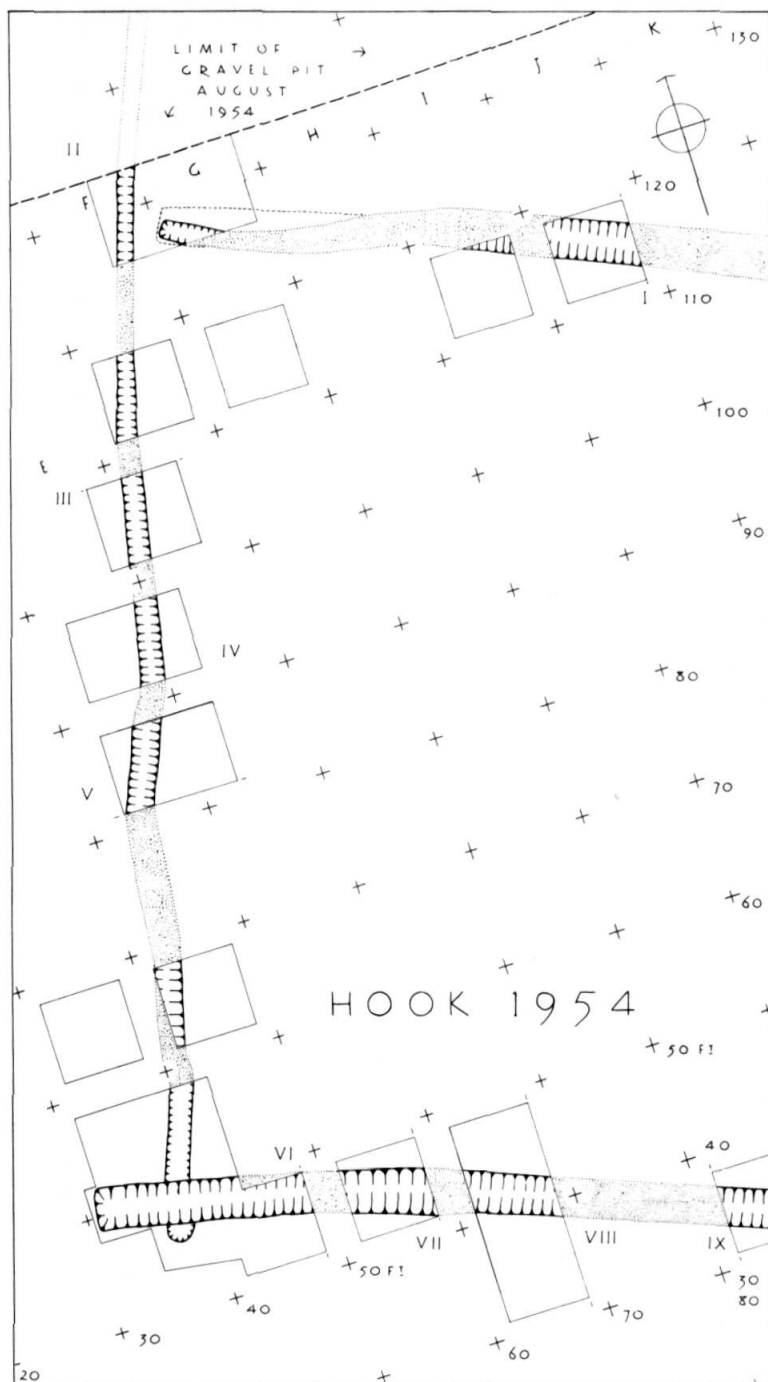


Fig 4. The western end of the eastern, Romano-British, enclosure.



Fig 5. The nature of the site and its excavation, looking westwards.

supported only rank grass and weeds. At the pit margins quantities of humus had been removed in order to bare the gravel before extraction.

A further visit was made to the site in April 1955, and some pits and hollows, encountered during the extension of gravel working, were examined. A summary account of the work was published (Ashbee 1955), notices having previously appeared in the local press (*Portsmouth Evening News* 16 August 1954; *Southern Daily Echo* 18 August 1954; *Hampshire Telegraph & Post* 20 August 1954).

THE EXCAVATION (Figs 2, 3, 4)

An approximate area for investigation, from which topsoil had in good part been removed, was delineated by gravel working-face sectional exposures. Thus it was possible to define and explore economically a palimpsest of channels and ditches, the subterranean remains of earlier occupation and land-use.

Cuttings, geared to a grid of squares 10ft by

10ft, designated alphabetically and by distance, were set out to emphasise any particular features and material that might be encountered (Fig 5). A succession of ditches was disclosed, upon the western side of the area available for examination, which lay apart from the slighter single enclosure detected and defined upon the eastern side. The work concentrated upon the ditches, their infill and correlation. They were planned at the surface of the natural gravel beneath the humus, a process which produced a record of their characteristics and relationships. Nonetheless, certain irregularities resulted from incidental reductions of this sub-humus surface or its paring in the vicinity of the pit-face.

Rather more than a half of the intricate western area was investigated, but the eastern, the ditches of a large enclosure, could only be defined in part. It was appreciated that only a small part of an erstwhile larger entity remained. Thus the objective of the work was, if possible, the resolution of the nature of the remains, particularly the ditches, for (in 1954)

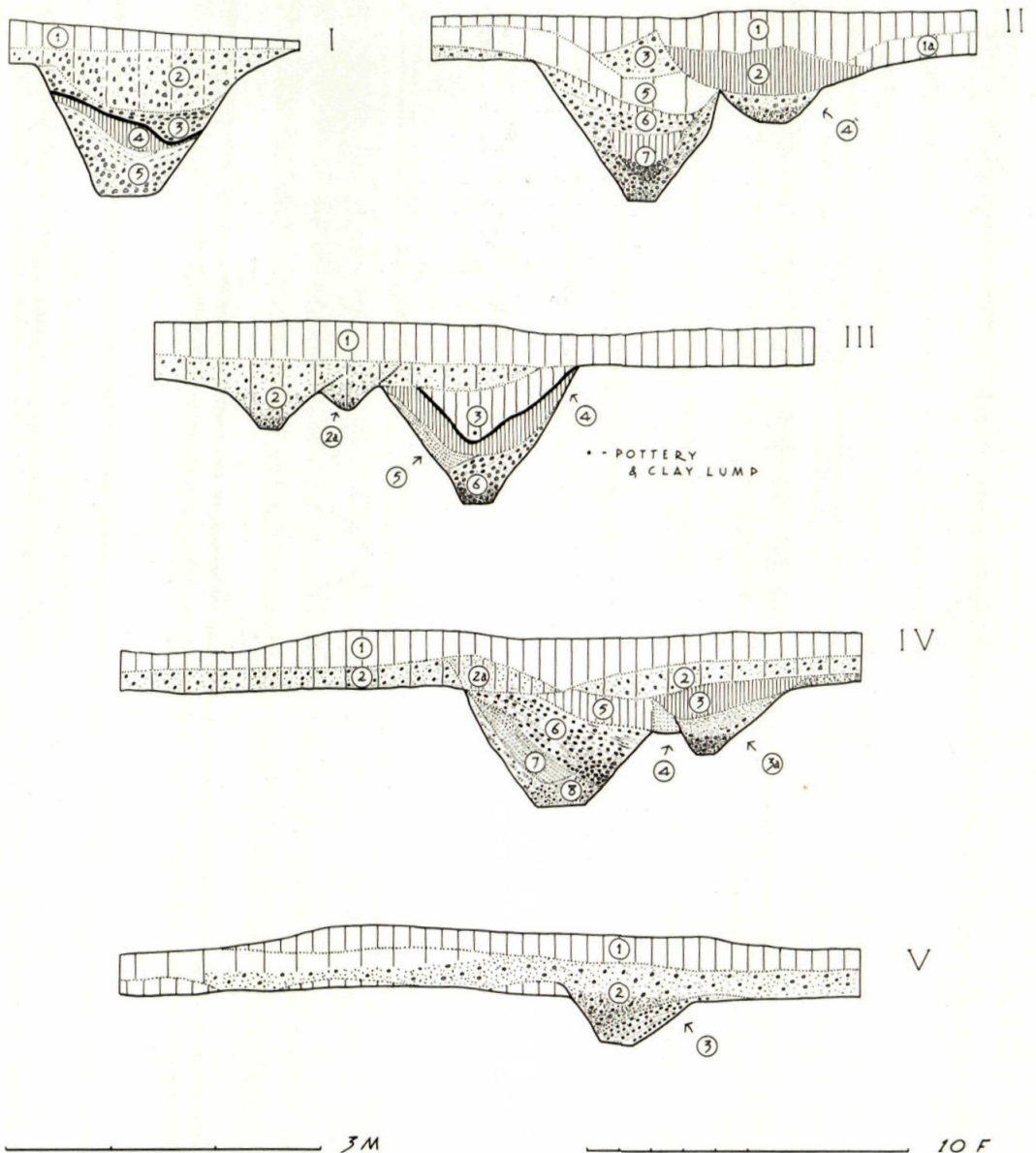


Fig 6. Sections I-V, the western area (see Fig 3).

such sites were largely known only from small-scale, partial, undertakings. Ditch systems, largely as earthworks (e.g. Pitt Rivers 1887; Cunington & Cunington 1913; Hooley 1929) were well-known but, although regularly recorded by aerial photography (Bradford &

Crawford (Edwards ed) 1984, 22, Fig 22), few levelled sites had been accorded excavation.

The Ditches, Channels and Other Features

The three variants of ditch and channel repre-

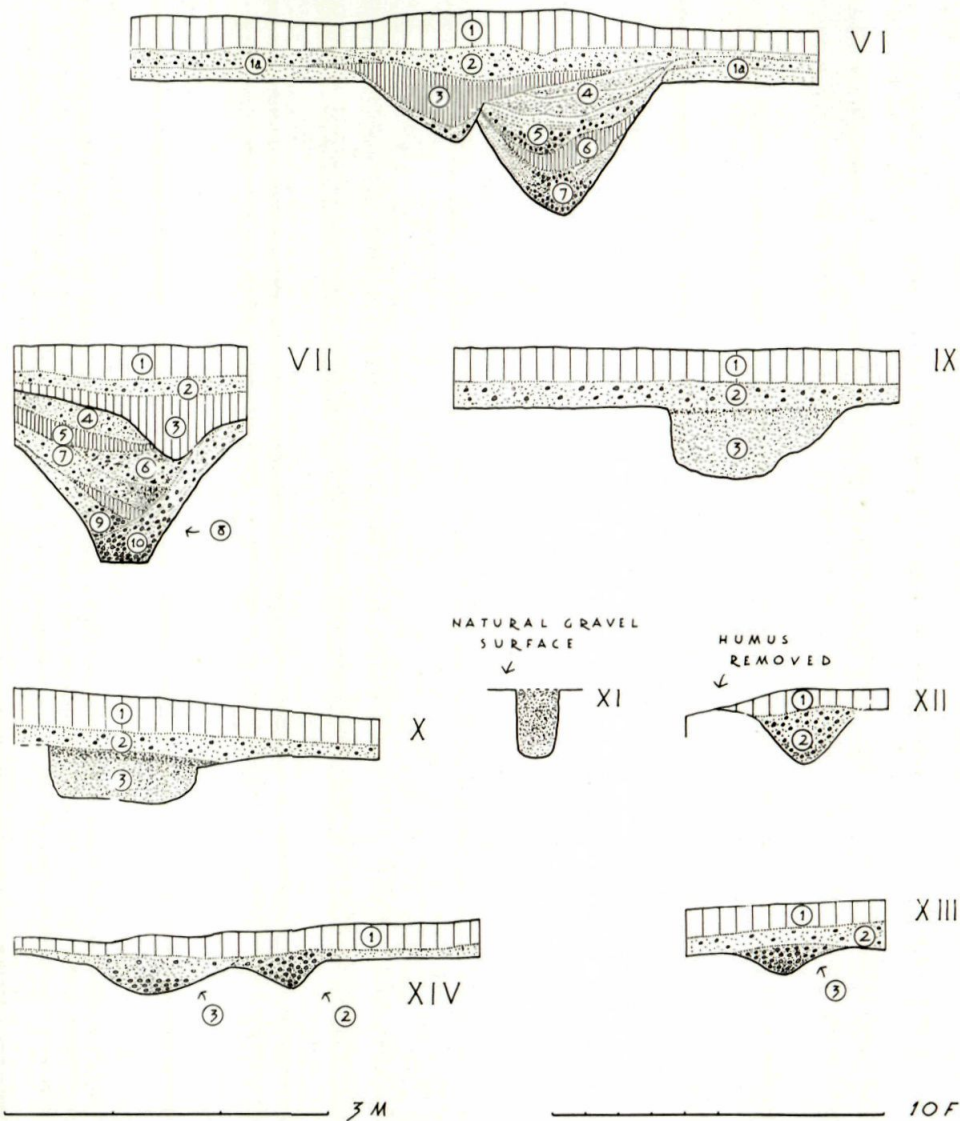


Fig 7. Sections VI-XIV, the western area (see Fig 3).

sented three phases of activity (Figs 2, 3, 4). They were:-

1. A substantial ditch of near 'V' section which had, as far as could be seen from the surviving remnant, delineated a rectilinear enclosure;
2. A series of ditches and channels aligned upon, and crossing, the rectilinear enclosure together with, at a distance from

its eastern side, a long, rectangular, enclosure;

3. Two parallel, shallow, channels, unrelated to the other ditches, of much the same size, which ran across the remains of the initial rectilinear enclosure.

Because of the pottery found in the large, initial, ditch (1), it would appear to have been of Later Bronze Age date. Those remnants of a

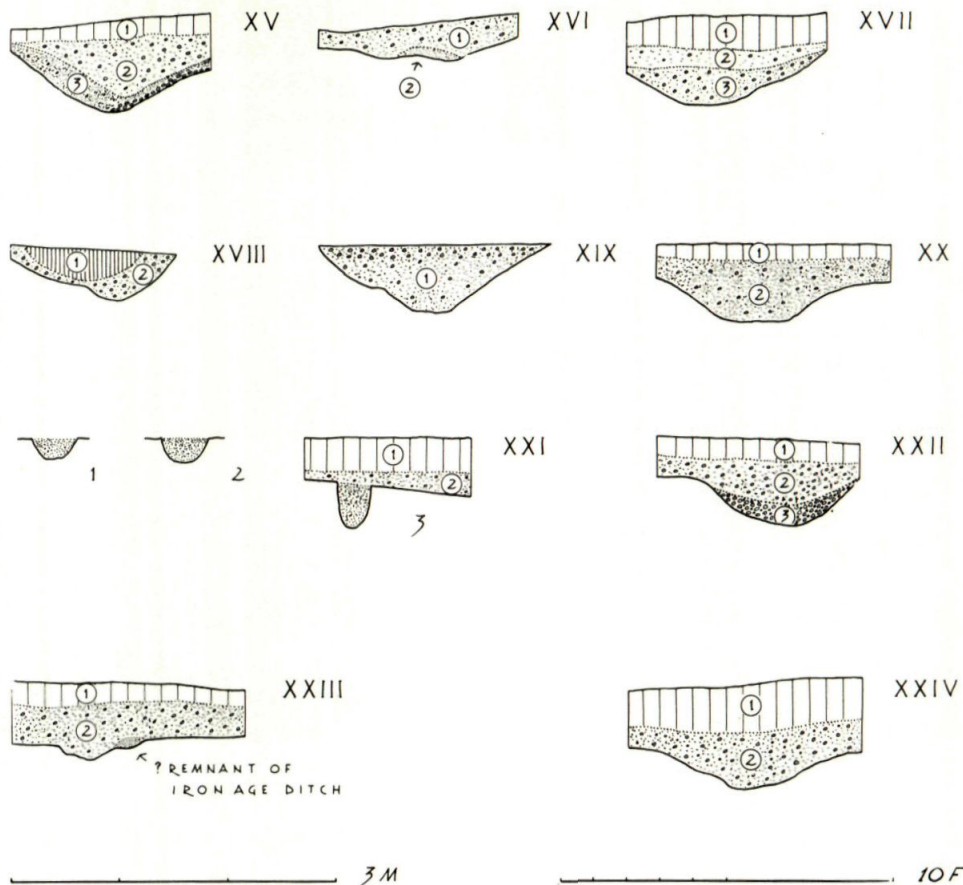


Fig 8. Sections XV-XXIV, the western area (see Fig 3).

more modest, but still extensive ditch system (2) had in them accumulations containing Iron Age pottery besides incidental pieces of Romano-British wares. Mediaeval pottery was associated with the infills of the parallel channels (3).

Besides the ditches and post-holes, there was a shallow pit displaying signs of burning (90V) in the gravel-pit working-face, while during 1955 some infilled hollows in the vicinity of the eastern enclosure (Fig 2) were noticed.

1) *The Rectilinear Enclosure* (Figs 2, 3)

Two sides, two corners, and one side with an entrance, flanked by substantial interior post-

holes, were all that remained of this enclosure ditch. The dimensions of this ditch, about 6ft across and 5ft in depth, and the character of a reasonable projection, permit this relict to be thought of as part of a rectilinear or square enclosure of the kind met with in southern England (Piggott 1942, 53; Cunliffe 1974, 14-15), sometimes without positive trace of habitation (Gingell 1979, 333; Barrett *et al* 1981). Their sizes range from about 120ft across, as in the present context, to almost twice that (Pitt Rivers 1898, 185-90, Pl 306; Piggott 1942, 50, Fig 2). They appear to have had one or more entrances, not all of which were flanked by posts. When undamaged they had a bank on the inner side, derived from the ditch.



Fig 9. The causewayed western entrance to the Later Bronze Age rectilinear enclosure. It has been superseded by the Iron Age ditches which can be seen in the foreground.

This Hook enclosure ditch was even in character, for the most part flat-bottomed, with sloping sides, possibly only in part due to weathering (Figs 6, 7, Sections I-VII). A number of sections (Figs 6, 7, I, II, III, VI, VII) exhibited modest ditch-bottom accumulations, topped by humus, which suggested some weathering of the sides. Above them were further build-ups (Appendix I for details) which did not conform to the observed patterns of natural weathering (Jewell & Dimbleby 1966, 314-18; Evans & Limbrey 1974, 177-83). These inclined, mostly from the interior to the exterior of the erstwhile enclosure, obliquely across the ditch and may well have been deliberate infilling, perhaps from the razing of the internal bank. Such infill would have been prior to the setting out and digging of the later Iron Age ditches, which were aligned upon it and cut into its infills, as well as across its entrance (Figs 2, 3, Sections

II-VII), although not necessarily the reason for it.

The infill of this major enclosure ditch proved to be near sterile, although some Later Bronze Age pottery (p.34) was found at one point in the upper silt. Whether similar pottery, recovered prior to 1945, was associated with it is uncertain, although Mr A Corney recovered a quantity from this ditch when it was exposed in section early in 1954.

Undisturbed gravel marked the entrance causeway through the ditch of the rectilinear enclosure and, upon its inner side, seemingly aligned upon the demolished bank, were a pair of irregular holes which could have been the sockets for massive posts (Figs 3; 9; 7, IX, X). To judge from an adjacent smaller hole, one of these had been supplemented by a smaller upright timber (Figs 3; 7, XI). No trace of posts was detected in these cavities and their even, but mottled, infill (Appendix I) was



Fig 10. South-eastern corner of Later Bronze Age rectilinear enclosure ditch. Its infill has been cut into when the Iron Age ditch was dug.

contemporary with their removal, possibly at the same time as the razing of the bank. These large holes had been recut at least once, which suggests post replacement and, perhaps, a lengthy use-life for the enclosure. Fragments of carbonised wood were, however, found in the small supplementary post-hole. Between these post-holes, and upon the causeway between the ditch ends, there was a greater concentration of even, stony, gravel than elsewhere at the base of the humus. This might remain from metalling of the way into this enclosure.

2) *The Iron Age and Romano-British Ditches and Channels*

There were two groups of ditches beneath this heading. The first was aligned upon the eastern side, partially crossing, the ditch of the Later Bronze Age rectilinear enclosure (Fig 3). The second was the end of a long rectilinear enclosure (Fig 4) which was contiguous to the first combination, although separate from it. In character the ditches of the first combination (Figs 6, II-V; 7, VI, VII, XII-XIV) were broad, had markedly sloping sides and concave or flat bottoms, while those of the

second (Fig 11, I-IX) were similarly broad, with sloping or convex sides which plunged steeply, indeed almost vertically, as they neared the bottom, to a narrow, flat floor.

Those ditches aligned upon the eastern end of the Later Bronze Age rectilinear enclosure (Fig 3) were the result of three distinct undertakings. First of all, the long ditch parallel to this enclosure's end, and partially dug into its infill (Fig 10), was laid out and cut so that the northern end more-or-less connected with its northeastern corner. Secondly, a part of this was infilled and a shorter length cut parallel to, and partially into, its northern end. The northern end of this second length of ditch was inturned around the end of the first. When this was infilled, a further ditch, laid out in a northeasterly direction, was cut into the inturned northerly end. Only a short length remained (Fig 3), it having been almost entirely destroyed by gravel extraction. Another, slighter, ditch (Fig 3) had been laid out and cut parallel to the first and about 25ft and more to the east of it. This had, presumably, crossed the northern side of the Later Bronze Age rectilinear enclosure and was found to terminate more-or-less in its middle, although there was, beyond this termination, another short, disconnected, length.

This Iron Age ditch system, like the rectilinear enclosure that it superseded, was eventually infilled. Although gravel covered their floors and, in places (Fig 6, II, IV), wholly or partially filled them, they had been largely topped-up with occupation soil. This was black, viscous, charcoal-laden loam, usually containing pieces of broken pottery, pieces of burned clay, quern fragments, burnt flint, mussel shells and small broken animal bones, besides pieces of iron slag (Fig 7, VI, VII). In general, the more massive concentration of domestic rubbish infilled the ditches adjacent to the northeastern corner of the earlier rectilinear enclosure. In places there was, however, an even infill of gravel in which tip-lines were visible (Fig 6, V), often with an admixture of loam, suggesting surface scraping. Ditch infills, even when predominantly of gravel, were readily detachable from

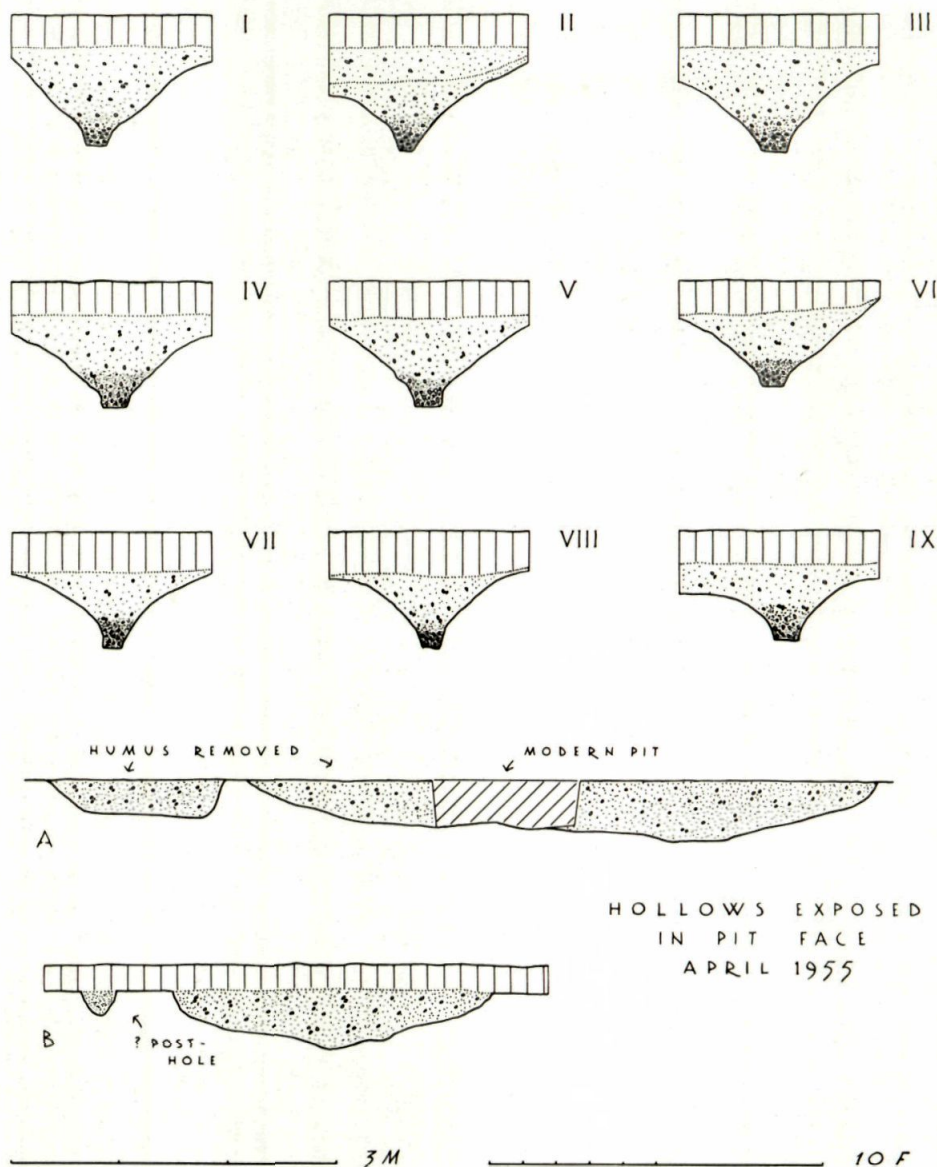


Fig 11. Sections I-IX, the eastern enclosure (see Fig 4); the hollows exposed in 1955.

ditch sides and floors, particularly in this series, because the interfaces were often marked by thin, but positive, spreads of that grain-sized grit, which has for long been colloquially termed dried- or split-peas, or, less frequently, by mats of fine roots.

That ditch system, the western end of which

was almost parallel to the western Iron Age ditches and which formed a long, rectilinear enclosure (Figs 2, 4) may also have been infilled. In every section investigated (Figs 4; 11, I-IX) there was an even, gravelly infill, varied only by the concentrations of large, worn and weathered flint nodules at their

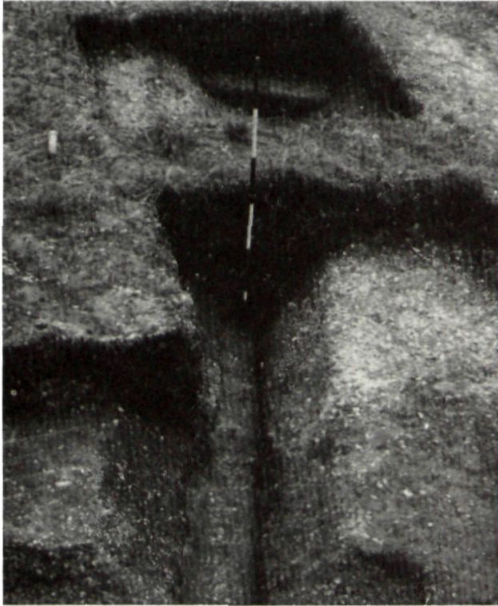


Fig 12. The south-western corner of the eastern Romano-British enclosure (see Fig 4)

bottoms (Fig 12). Nothing was found in these infills; the Romano-British pottery was at the base of the humus, although in the area of the ditches. No trace of a flanking bank was detected.

3) *The Parallel Mediaeval Ditches*

Two parallel, shallow ditches, about 12ft apart, crossed the Later Bronze Age rectilinear enclosure, from north to south, and were parallel to its eastern side and the Iron Age ditch system (Fig 3). At one point the westernmost of these ditches narrowed considerably and here it was flanked, upon its outside, by three post-holes (Figs 3; 8, XXI, 1, 2, 3). In section it was broad, irregular and shallow, with an ill-defined floor (Fig 8, XV-XXIV). The easternmost ditch was similar, although more regular, with a flat floor and sloping sides (Fig 8, XVII, XIX, XX, XXIV).

For the most part the infill of these ditches was loamy gravel (Appendix I), although at one point there was an upper loamy deposit and, at another, bottom layers of large gravel stones. The infill of the post-holes was undif-

ferentiated, no trace of posts being found. In one length of the western ditch (60Z) there was a mass of dark soil containing quantities of oyster and winkle shells with broken pottery, which included a jug-handle (Fig 21, 12) resting upon the bottom. A similar deposit occupied a length of the eastern ditch (App I, Sect XX, 40Z) and here about $\frac{3}{4}$ of a bushel (some 6 gallons) of oyster, cockle and winkle shells were found, the first being predominant.

Because these ditches were parallel and about 12ft apart, they were thought of as having flanked a trackway for lumps of burned clay, chalk blocks, a piece of tufa and a lump of sarsen stone were found (60Z) at the base of the humus where they might have been scattered by ploughing. Nonetheless, the surface of the gravel between them bore no trace of the ruts and pot-holes that might have resulted from traffic.

4) *The Other Features*

a) *The Pits and the Hearth*

A shallow, flat-bottomed scoop, one end of which had been cut by the inner edge of the ditch of the Later Bronze Age rectilinear enclosure (90V), and another smaller scoop, of similar character adjacent to the entrance to this enclosure (70V), were, although infilled



Fig 13. The character and infill of a Romano-British hollow (Fig 11, B) exposed in the gravel pit face, within the area of the eastern enclosure, April 1955.

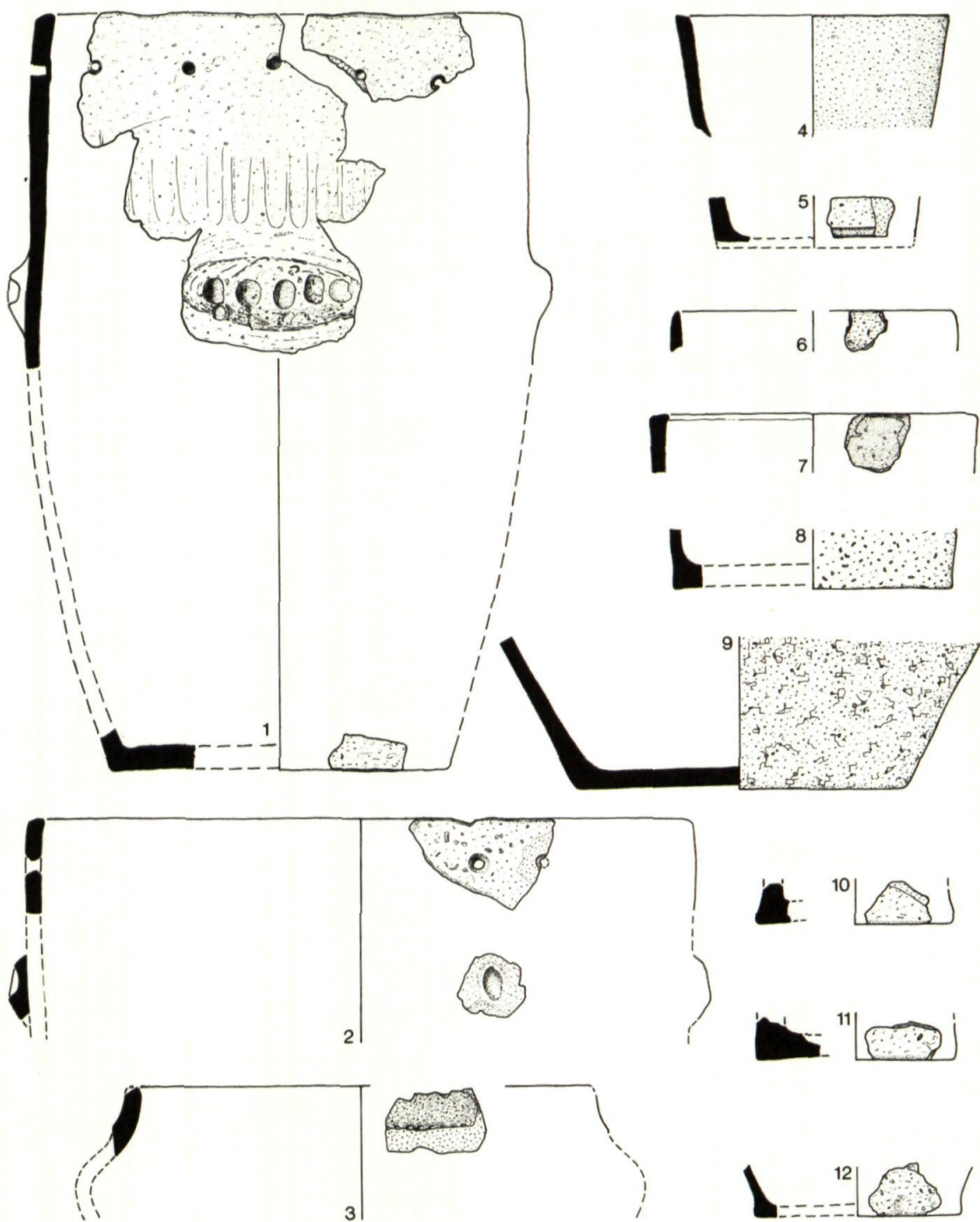


Fig 14. Later Bronze Age pottery from, and associated with, the rectangular enclosure remnant (Fig 3), 1-12. Scale 1:4

with clean gravel, marked by their reddened, sintered sides. This may have resulted from burning but charcoal was not present. An ovate, concave pit was close by the three post-holes flanking the westernmost mediaeval channel. It was filled with sterile, dark, loamy gravel.

In the face of the gravel-pit, outside the excavated area (approximately opposite K on the grid, Fig 4) there was a shallow scoop, about 2ft in diameter. It had reddened, sintered gravel all around it besides crushed charcoal. The remains of a piece of carbonised wood lay along its concave floor.

b) *The Hollows Exposed in 1955*

In April 1955 a visit was made to the site to ascertain what might have come to light when the excavated area was subjected to gravel extraction. Two cavities and two large shallow scoops (Fig 11, A, B) were visible in the pit face and their examination was permitted. This approximate location was about 160ft to the east of the Later Bronze Age rectilinear enclosure's entrance. The infill of the three hollows and the possible post-hole was dark, gravelly loam (Fig 13) and sherds of Romano-British pottery were recovered from it. They could be envisaged as back-filled, fossil pig-wallows.

THE LATER BRONZE AGE POTTERY

Almost all the later Bronze Age pottery, from the ditch of the rectilinear enclosure (Fig 14, 4, 5) or found during gravel digging (1-3; 6-12 and also pieces not illustrated) is of the Bucket urn variety (Calkin 1962, 29-40; Barrett *et al* 1978; Barrett 1980). Two pieces, a rim (3) and a base (9), could be referred to the southern plain ware assemblages (Barrett 1980, 304, fig 5). The fabric is for the most part characterised by heavy flint gritting and thick body walls and bases. Finer gritting and thinner fabrics are, however, present. Some pieces (particularly nos 4 and 5, from the ditch of the rectilinear enclosure) carry a cover of concretion. Decoration is by finger-tip impression (1, 2), in one instance upon an horizontal

elongated lug (1), shallow vertical finger-tip fluting (1) and holes below the rim (1, 2 and not illustrated), not all of which are perforations. As R C C Clay so long ago observed (of Barrel Urns), cracks with repair holes (usually in pairs) are common and the softness of the paste may have been the primary cause (Clay 1926, 318). Successive holes below rims, as can be seen in the present series, may be no more than recognition of the fact that laden bucket urns sometimes needed reinforcement, for they could have been used to lace the upper circumference with a cord or thong as a safety measure. Imperforate holes could have been drilled through if necessary. Larger and smaller vessels are represented in the assemblage and their proportions are not inconsistent with those of the series (Barrett 1980, 298-9).

Details of the Later Bronze Age Pottery (Fig 14)

4 and 5 are from the ditch of the rectilinear enclosure (4 Fig 3, 100VA; Fig 6, III, Layer 3. 5 Fig 3, 120/130VA; Fig 6, I, Layer 5). All the other pieces (1-3; 6-12) were found during gravel digging and may well have been associated with this enclosure.

1. Irregular rim, with a system of equidistant holes, some imperforate, vertical finger-tip smoothing impressions and an elongated, oval, applied lug bearing fine finger-tip fluting. The application of the lug left further, indistinct finger-tip impressions. A shallow groove encircled the base. Coarse reddish ware with ungraded fired-flint tempering, some pieces of which are 4mm in breadth. There are traces of sooting upon the smoothed interior which bears a square-ended tool impression.
2. Even rim with equidistant perforations and finger-tip ornament upon a flattened, shallow cordon. A massive base sherd and two body sherds are associated. The ware is red with fine, even, unfired flint grits. The five pieces are all worn and weathered, although the inner surface of the rim-herd, which has lost its grit, still retains traces of horizontal smoothing.
3. Fragment of a carinated vessel carrying close-set, circular impressions (? from the proximal end of a small bird or rodent femur) upon its shoulder. It is copiously tempered with even, unfired, fine flint grits, among which are a

- number of water-rolled fragments. The ware is buff, but bearing blackening, and the smoothed interior surface carries the traces of two pieces of grass or straw burnt out of it during firing.
4. Fine buff ware, with a sharp, even rim, evenly fired and containing only a few worn flint grits, some of which are crystalline. The smooth, dark interior surface displays traces of particles of organic material burnt out of it during firing. A cover of concretion, derived from the deposit in which it was found (Fig 6, III, Layer 3) has preserved its rim and surfaces in pristine condition.
 5. Base sherd with buff exterior and dark core and interior. In addition to fine worn crystalline flint grits, burned crushed pottery may have been used to temper the paste. The broken edges display differential weathering although they are sharp and unworn despite their incorporation in the initial gravel silt of the rectilinear enclosure (Fig 6, I, Layer 5).
 6. Fine buff, evenly fired, sandy ware with water-worn flint grits. Smoothing lines can be seen on both the exterior and interior surfaces from which fine organic material may have been burned out during firing.
 7. Coarse buff ware with large, gravelly, worn flint grits, some crystalline. Although irregular, the interior, below the rolled-over rim, has signs of smoothing while the worn exterior and rim are slightly sooted.
 8. Coarse buff ware with prominent, gravelly flint grits. There are traces of interior base blackening. Despite weathering, the exterior base angle is sharp, suggesting that, after drying, vessels were removed from a flat surface.
 9. A thin hard, dark brown ware with a darker band, 2mm broad, the wall at its junction with the base suggesting heating or differential firing. The large, worn flint grits, many of which are visible in the smoothed, unweathered inner and outer surfaces, include many that are crystalline. The interior is sooted.
 10. Buff ware with a darker interior and prominent flint grits, some crystalline, and traces of interior vesiculation. The rounded everted base is unweathered and, before firing, had picked up pieces of organic material which have been burned out of it.
 11. Buff ware with flint grits and traces of crushed pottery used as a temper. Although heavily weathered, this sherd is from a vessel that had a pronounced omphalic base.

12. Buff ware with large, worn flint grits, some crystalline, and a dark interior which is sooted. The everted base-angle bears smoothing lines.

Pottery Not Illustrated

These sherds were collected, from the vicinity of the rectilinear enclosure, during gravel digging. They are in groups, the remains of particular vessels.

1. Nine rim, and one body, sherds of a bucket urn of buff, reddish ware with worn flint grits, some large and some crystalline and crushed pottery as a temper. There are, at approximately 3–5cm below the irregular rim, equidistant imperforate, or only partially perforate, holes which appear as flat, circular, protruberances upon the inner surface.
2. Three thick, slightly abraded body sherds of buff reddish ware with angular flint grits, some large and a few crystalline. The interior surfaces, markedly, and the exteriors, partially, heat-crazed.
3. A massive, worn base sherd of buff, reddish ware with angular flint grits, some large. The interior bears a black residue.
4. Six body sherds, two large, of reddish ware with dark-faced interior surfaces bearing traces of a sooty residue.

THE IRON AGE POTTERY

Almost all the Iron Age pottery can be matched, specifically or generally, among the assemblages from Worthy Down (Hooley *et al* 1929, 182–92), St Catherine's Hill (Hawkes, Myres & Stevens 1930, 97–122) or Viabes Farm, Basingstoke (Millett & Russell 1984). Indeed, as on St Catherine's Hill, potsherds shaped as counters (Fig 16; 13, 14) were present (Hawkes, Myres & Stevens 1930, 113, fig 12). Thus for the most part the Hook Iron Age pottery can be considered as a component of what has been termed the *St Catherine's Hill-Worthy Down* style (Cunliffe 1974, 43, Figs 3 : 5; A:15). Notwithstanding, the capacious necked jars have their counterparts in form, if not in finish, among the series termed *Belgic* at Maiden Castle (Wheeler 1943, 238–40, Fig 75). The bead-rimmed jars with high shoulders and wide mouths, normally associated with simple, vertically rimmed bowls and

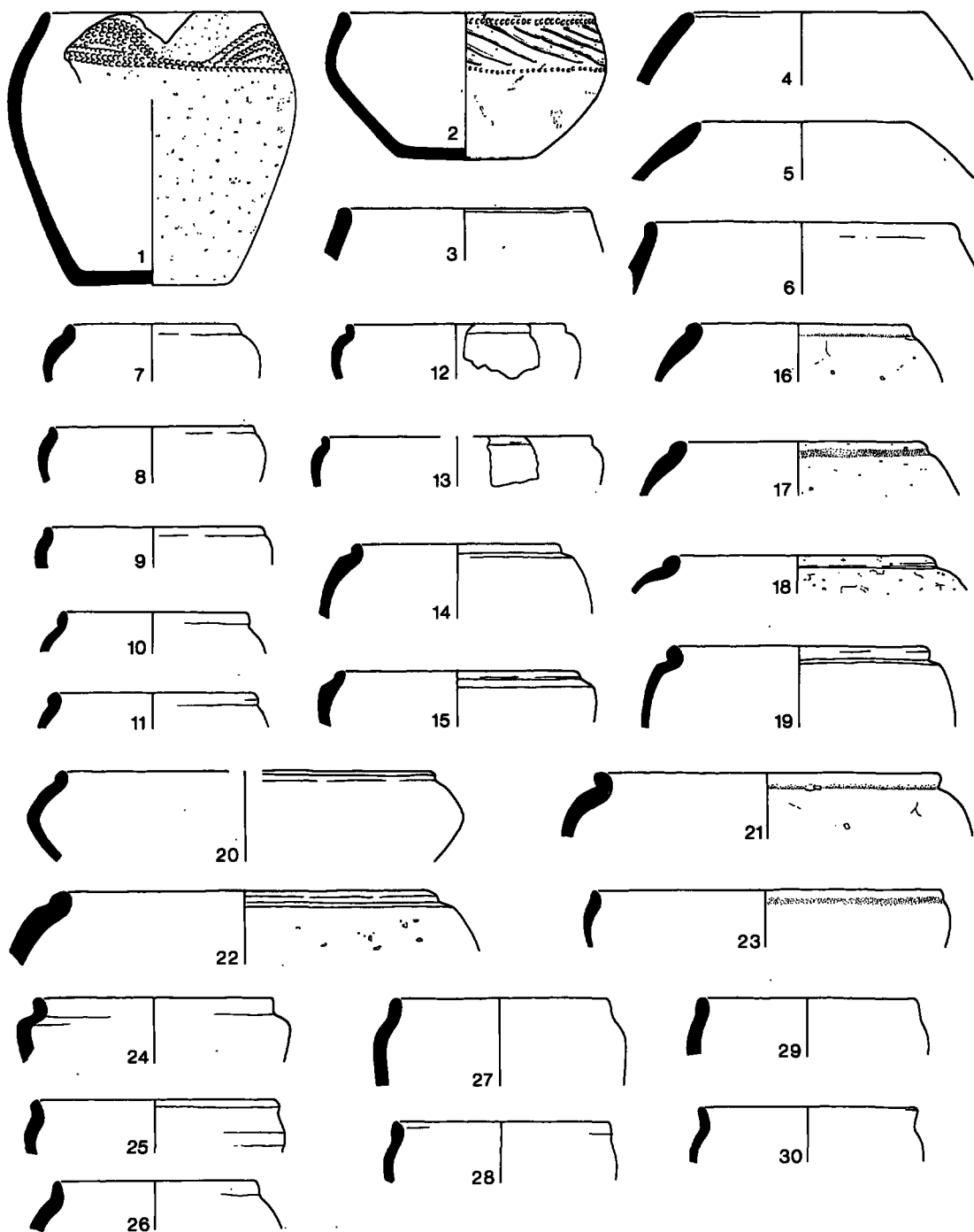


Fig 15. Iron Age pottery from, and associated with, the partially equidistant ditches (Fig 3), 1-30. Scale 1:4

cordoned necked jars, all wheel-turned, are characteristic of the southwestern Atrebatic ceramic style, of West Sussex and Hampshire (Cunliffe 1974, 92). This material is of late Iron Age date and may immediately precede the Roman wares.

Fig 15

This figure illustrates pottery notable because of its generally slack shoulders, plain rounded, incipiently beaded, or fully beaded rims. With exceptions, this was found in the black occupation soil which topped up the intersecting ditches adjacent to the northeastern corner of the relict part of the Later Bronze Age rectilinear enclosure (Figs 3, 110–130 VAB; 6, II, Layer 2). The exceptions are no. 2, found during gravel digging close by early in 1954; 9, 13 found in the stony humus sealing the infills of the ditch of the rectilinear enclosure (Fig 6, II, Layer 5); and 20 found, also in black occupation soil, in the Iron Age ditch which modified the initial layout (Figs 3, 80 WVA; 6, IV, Layer 3).

The pieces and sherds are of bowls (2, 6–9, 20, 23–25), jars (1, 3–5, 10–19, 21, 26–30) and a large storage jar (22). Their general colour is black or dark grey (1–5, 7–9, 11–13, 16–21, 23, 25–30) or brown and buff (6, 10, 15, 22, 24). There are plain, rounded rims (1, 4, 5, 25–28), rolled rims (3, 6, 7, 13, 15, 16, 19, 21, 22, 24), some of which might be thought of as incipiently beaded, and fully beaded rims (2, 10, 11, 14, 17, 19). Flint gritting (1–7, 9–14, 16–19, 23–25, 27–30), flint gritting with burned pieces (8, 22), flint gritting with crystalline content (2–9, 14, 18, 22–25, 27–30) and flint gritting with micas (15, 20, 21) tempered the fabrics which had been finished by smoothing or even burnishing which frequently imparted a lustrous finish (1, 2, 4–7, 9, 11, 13, 14, 17, 18, 20, 25, 29, 30). One piece (19) displayed a smooth zone in contrast with a matt zone. The features, some of which were the result of finish rather than decoration, were pointillé decoration (1; Fig 16), stroke and oval impression ornament (2; Fig 17), a channel below the rim (8), three grooves below the rim (9), a broad shallow groove below the rim (11), grooving below the rim (12, 13, 19, 22) and angular grooving below the rim (14, 15, 17). Some pieces were abraded (3, 8–10, 14–18, 23, 16), others had residues and signs of external sooting (3, 7–9, 14, 18, 19, 26), and one had been burned after breakage (8).

Fig 18

Pottery distinguished by shoulders, sometimes

acute, plain rounded, incipiently beaded and fully beaded rims, together with necks, is illustrated. Massive storage jars and a plate are present. With exceptions it was found in the same deposit as that illustrated in Fig 15. The exceptions were 35, 39, 44, 50, 53, 54, 55, found during gravel digging, and 40, 42, 43, 47, 51, which were from the stony humus sealing the infills of the ditch of the rectilinear enclosure relict (Fig 6, II, Layer 5). 51 comprises two sherds, one found in the black occupation soil in the Iron Age ditch and the other in the stony humus infilling the top of the rectilinear enclosure's ditch (Fig 6, II, Layers 2, 5). The wheel-made, high-shouldered bowls (31–36) are comparable with particular Worthy Down examples (Hooley *et al* 1929, Pl IV, 52, 53).

The pieces and sherds are of bowls (31–36, 51, 53, 58), jars (37–39, 41–48, 56, 57, 59–62), massive storage jars (40, 49, 50, 54, 55) and a plate or dish (52). Their general colour is black or dark grey (32, 33, 36–38, 40–52, 58, 61) or buff (31, 34, 35, 39, 53, 54, 57, 59, 60, 62). One piece has a dark, near black, slip (60) and another has a streaked grey-buff appearance (56). There are plain rounded rims (31, 33–35, 45, 49, 52, 53), everted and rolled rims (32, 35, 37–42, 44, 48, 54, 55), some of which might be thought of as incipiently beaded, and beaded rims (46, 47, 50, 51). Thirteen pieces were manifestly wheelmade (31, 33, 34, 36, 39, 43, 45–47, 49, 50, 54, 55). Flint grits (31–33, 35, 37, 39–44, 46, 47, 49, 51, 56–62), flint grits with burned flint (55) and crushed, burned pottery (50, 54) with crystalline (33, 35, 39, 40, 44, 45, 47, 50, 51, 53, 54, 59–62) and micaceous pieces (36, 38, 48) tempered the fabrics, a number of which were lustrously smoothed to the point of their having been burnished (32, 35, 36, 40, 41, 43, 46–49, 51, 52, 58, 61, 62). One piece bore



Fig 16. Jar: detail of dimpled curvilinear decoration (see Fig 15, 1). Scale 1:1



Fig 17. Bowl in Worthy Down style with elongated rouletted dimples (lip), circular rouletted dimples (girth) and lightly scored oblique strokes between (see Fig 15, 2). Scale 2:3 approx.

decorative finger-tip impressions below its rim (42) while the other notable features were grooving, below the rim (44, 45), a groove below the rim and others separating neck from body (46, 47, 50). There was also an example of a slightly extruding base having been emphasised and defined by grooving (59). One rim (48) was unusual because of concentrated, protruding, angular grits. A base (62) was well-worn at its periphery indicating, perhaps, prolonged use upon a hard, abrasive surface. Certain sherds were generally abraded (34–36, 44) while others had internal residues and external sooting (43, 44, 52, 54, 55, 57, 59, 62). Indeed, they may be from vessels discarded and deliberately broken because of fouling. Four sherds (42, 44, 52, 56) had been burned after breakage.

The Unillustrated Iron Age Pottery

In addition to the pottery illustrated (Figs 15; 18), 1527 other pieces of Iron Age pottery came to light during the excavation. These were as follows: 659 from the areas 100–130 VAB, 25 from the areas 80–100 VAB, 4 from the area 70–80 WVA, 11 from the areas 10–30 VA and 660 from these areas but in

topsoil and thus unstratified. Another 168 pieces, including many small fragments, were collected from the pit's topsoil dumps and the general area. Of the 659 pieces 117 were from Layer 2 (the black soil) and 368 from Layer 5, the upper infill of the rectilinear enclosure ditch (Fig 6, II, Layers 2, 5). The 25 pieces were from the gravelly infill of the Iron Age ditch (Fig 6, II, Layers 2, 5), the 4 again from the infill of the Iron Age ditch, close by the entrance to the earlier rectilinear enclosure (Fig 6, IV, Layers 2, 3). The 117 pieces consisted of 11 bowl, beaded rim sherds, 1 jar rim, 6 massive storage jar rim pieces, 92 body sherds and 7 base fragments; the 25 were 8 bowl, beaded rim sherds and 17 body sherds; the 4, two bowl, beaded rim pieces and 2 base sherds. The 11 were body sherds, while the 660 unstratified pieces were 36 bowl, beaded rim fragments, 7 jar rim sherds, 10 pieces of massive storage jar rims, 596 body sherds and 11 base fragments. To be added to the total are 2 pieces from lugs or, perhaps, kiln spacers and about 120 small pieces less than 0.5ins by 0.5ins in area. About a third of the total were abraded and about a sixth had traces of sooting and residues.

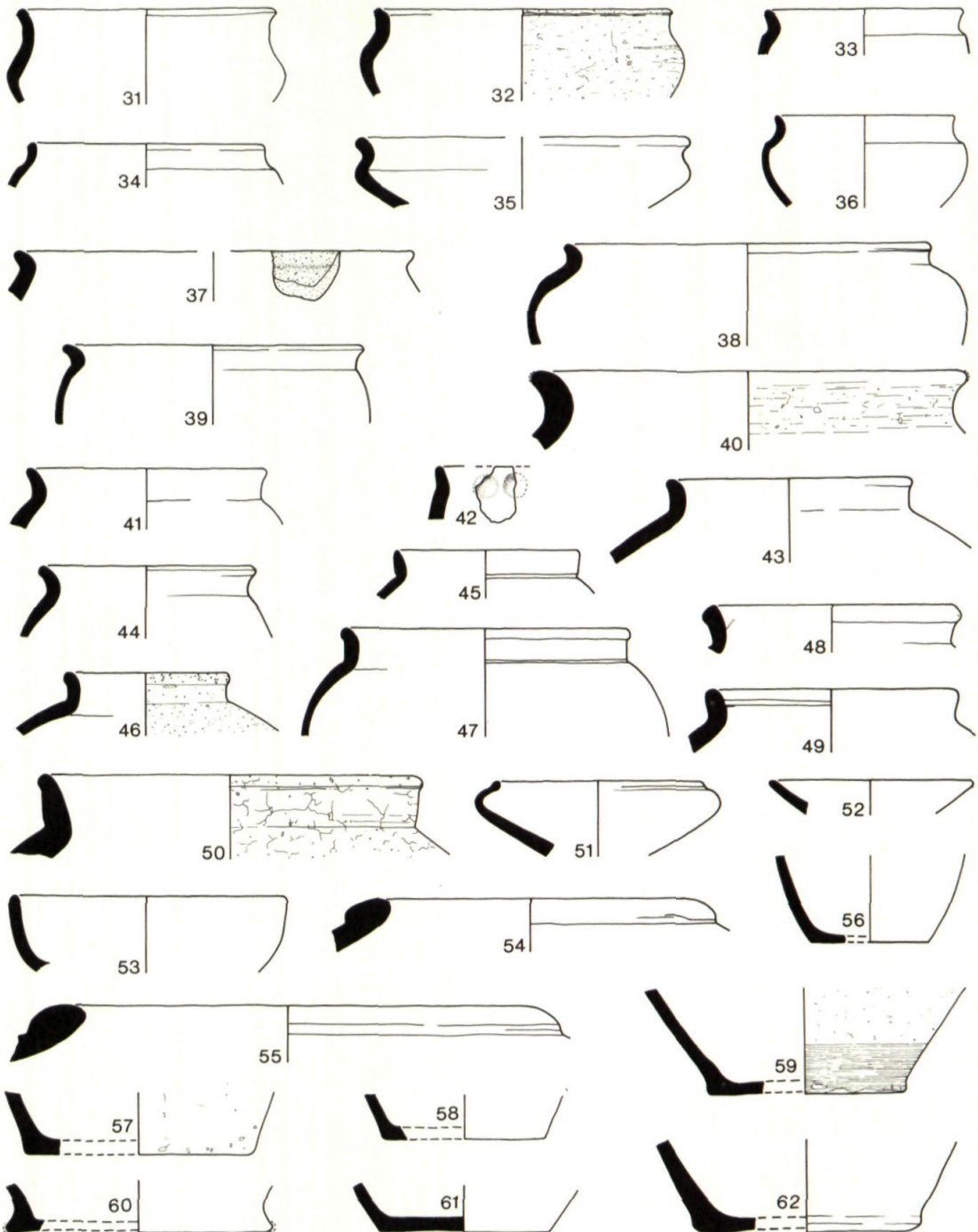


Fig 18. Iron Age pottery from, and associated with, the partially equidistant ditches (Fig 3), 31-62. Scale 1:4

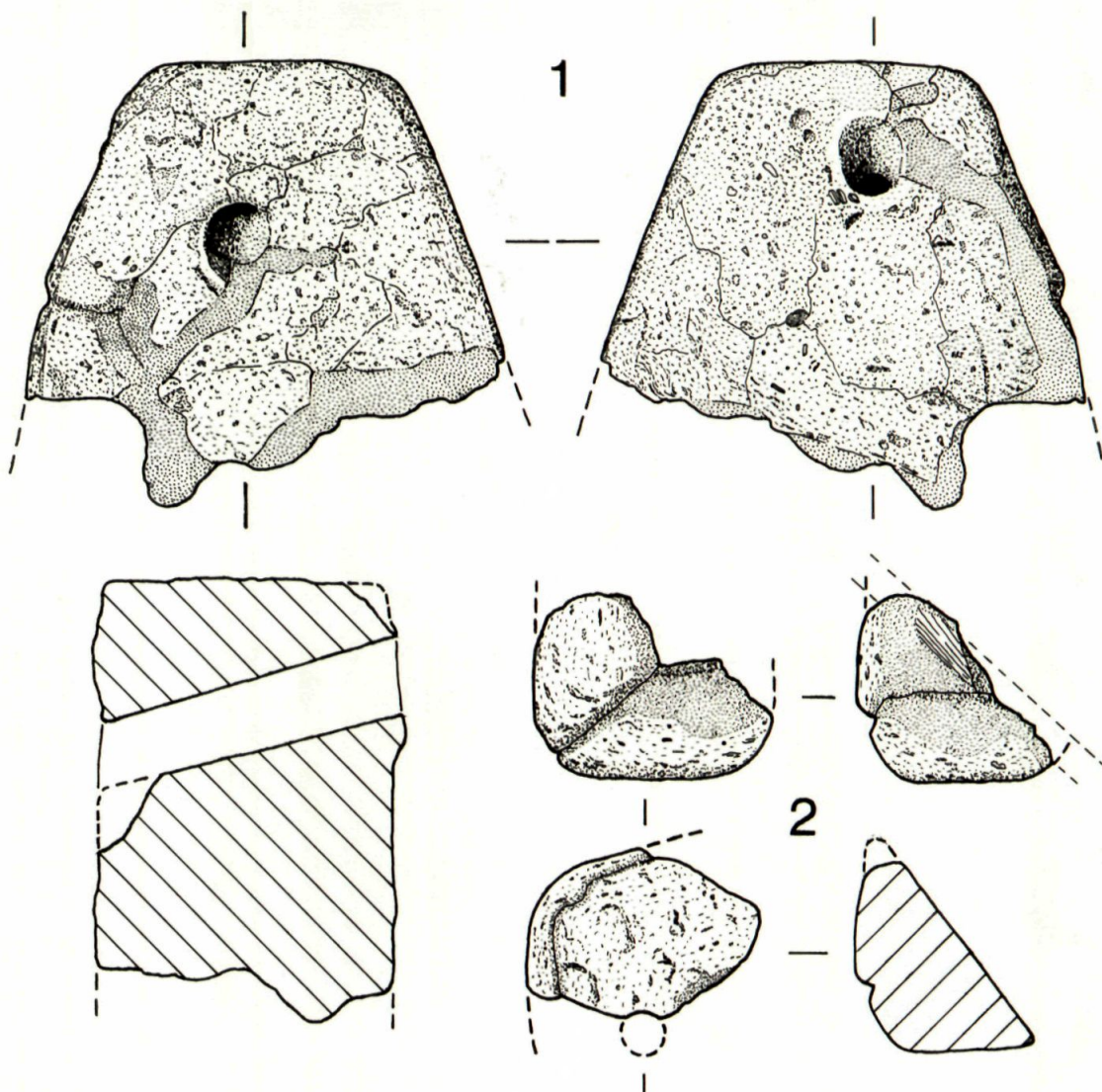


Fig 19. Objects of fired clay (1, 2) from the partially equidistant Iron Age ditches (Fig 3). Scale 1:2

The Amphora by Andrew Fitzpatrick

A single body sherd of a cylindrical amphora was found in VAB 100/130 Layer 2 (Figs 3; 6, II) weight 95g.

The sherd was thin sectioned. Ann Woods and Diane Robson comment; 'Thin sectioning revealed an anisotropic clay consisting of very small (0.1mm and less) subangular-subrounded quartz crystals with occasional (0.2 – 0.3mm) subangular quartz

crystals. Quartz comprises $\approx$ 30% of the slide. The mineral content is approximately 40%, clay 60%. Some polychrystalline quartz crystals (0.2mm and less) occur and cryptocrystalline silica mica (up to 2%) also occurs, primarily muscovite, but occasional biotite crystals are present. The mica laths range up to $\approx$ 0.1mm in size. Subangular plagioclase feldspars (3% of the slide) ranging up to 0.2mm occur and occasional orthoclase may occur. Pyroxenes occur, primarily clinopyroxene but with some orth-

opyroxene. These crystals comprise 2% of the slide and some display good crystal shape, the largest is 0.2mm in size. Very occasionally amphiboles occur. Heavy minerals include epidote (green), magnetite (black) and haematite (red), occurring as subrounded crystals, 0.1mm or less in size. An occasional clast of ferruginous sandstone occurs, consisting of angular quartz and cryptocrystalline silica. These clasts range up to 2mm in size. Voids lined with what may be soil also occur although the origin of the latter may be post-depositional. The thin section is housed in the Department of Archaeology, University of Leicester, reference no P 300(A).

It has not been possible to match this analysis precisely with published thin sections, but it is broadly similar to an Italian Dressel 2-4 amphora from Colchester, Sheepen (Williams 1985, 159, Fabric 7). Williams' Fabric 7 is a subdivision of Peacock's 1971 Dressel 1, Fabric 1. Vessels in Peacock's Fabric 1 were made in Campania, Etruria and Latium in central Italy (Peacock 1971; 1977).

On petrological grounds the Hook sherd could be from either a Dressel 1 or a Dressel 2-4 as they were both made in the same area and sometimes in the same kilns. Both types usually contained wine, c 24 and 28 litres respectively. The thickness of the Hook sherd varies from 13-22mm and averages c 16mm. Sealey (1985, 22) notes that the Dressel 2-4 at Colchester, Sheepen only exceptionally have a thickness of 16mm and the thickness of the Hook sherd suggests that it may be from a Dressel 1. Dressel 1 were probably traded to Britain from the later second century BC to the last decades of the first century BC when there was a period of overlap with the Dressel 2-4 (Fitzpatrick 1985, 307, 315). Dressel 2-4 continued to be traded until the second century AD. The Hook vessel may well be an Iron Age import but, along with some of the associated coarse pottery, it could be residual in the context in which it was discovered.

If the Hook sherd is from a Dressel 1, then it is of some interest as it adds to the rapidly growing body of evidence for the use of the Solent as a route of entry for foreign goods in the first century BC. This Solent axis may be complementary to Cunliffe's 'Wessex Contact Zone' in which Hengistbury Head may have played a central role (Cunliffe 1984a, 4-12; 1984b, 32-8). In addition to the eleven finds from Hampshire, Sussex and the Isle of Wight documented by Fitzpatrick (1985, 232 & Fig 4), Dressel 1 have recently been published from rural settlements Copse Farm, Oving, Sussex (Bedwin & Holgate 1985, 229, 236, M24), Fishbourne, Sussex

(type of site uncertain; *ibid* 229) and Winnall Down, Hampshire (Fasham 1985, 73), substantially extending the evidence for the importation of Roman wine into the Solent eastern hinterland in the first century BC.

Objects of Baked and Fired Clay

Besides the pieces of 'weights', pierced for suspension (Fig 19, 1, 2), two larger parts of longitudinally curved blocks (not illustrated), a corner of such a block, four fragments exhibiting two surfaces and 21 one surface, besides 53 surfaceless lumps, were found. Two such lumps bore the imprint of withies and are in the category of burned 'daub'. The two pieces illustrated were found at the base of the ploughsoil (Fig 3, 110-120 AB) and by workmen respectively. Material of comparable fabric was found, however, in the infills of Iron Age ditches (1 longitudinally curved block, Fig 3, 1020Z, Fig 7, VI, Layer 3; 1 corner, Fig 3, 1020Z, Fig 7, VI, Layer 3; 2 pieces with two surfaces, Fig 3, 1020Z, Fig 7, VI, Layer 3; Fig 3, 100ZYX, Fig 6, III, Layer 3; 13 pieces with one surface, Fig 3, 1020Z, Fig 7, VI, Layer 3 (8); Fig 3, 6080 WVA, Fig 6, IV, Layer 2 (2); Fig 3, 7080 WVA, Fig 6, IV, 2; surfaceless lumps, Fig 3, 1020Z, Fig 7, VII, Layer 3 (6); Fig 3, 5060ZY in the filling of the northern entrance post-hole, Fig 7, IX, Layer 3 (2); Fig 3, 6080 WVA, Fig 6, IV, Layer 2). The remainder of the pieces (1 block, 8 with one surface, 42 without surface) were found by workmen gravel digging or at the base of the ploughsoil during excavation. About a third of them had been burned, possibly by secondary processes, to an almost brick-like consistency, one being near-vitrified. The remainder were comparable with the fabric of the perforated 'weight', a light brown, flint and chopped organic material tempered *terra cotta*.

Fig 19

1. Pierced fragment of a baked clay so-called weight. The hole is oblique and there is no trace of the wear at its ends that might be expected had it been suspended for a period. It weighs 2lb 3oz (about 1kg) and thus when complete it could be weighed, if allowances are made for its original truncated triangular form, about 5lb (2.25kg). The fired clay is vesicular and is tempered with worn pebbles as well as angular burned flint and crushed pottery pieces. One side and the broader faces bear signs of secondary burning, which only

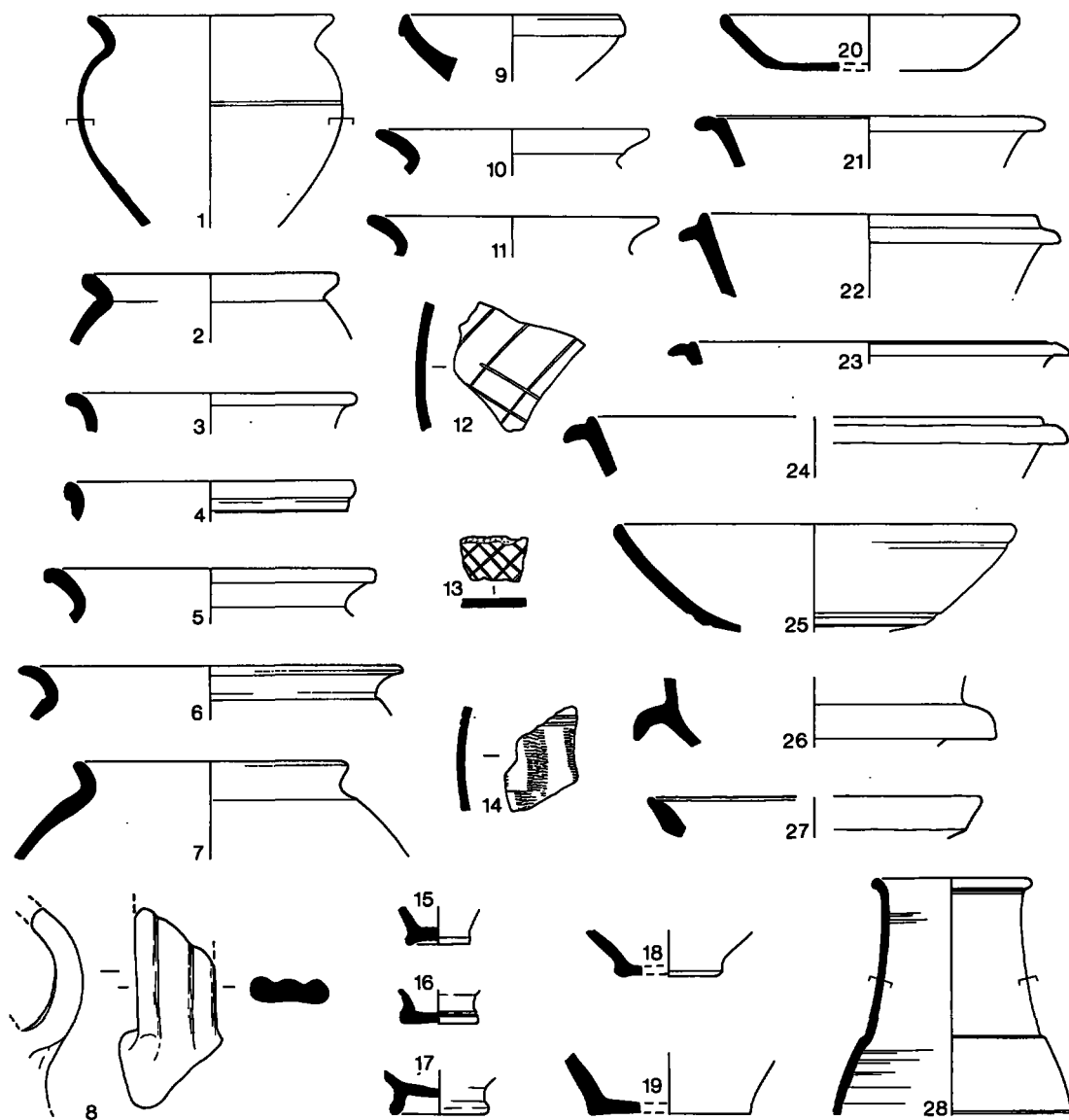


Fig 20. Romano-British pottery from the topsoil and the eastern enclosure (Fig 4), 1-28. Scale 1:4

partially reaches to the broken surface. Similar mediaeval fired clay objects have been considered as spit-rests (Heidinga & Smink 1982).

2. Corner of a ? multi-perforate baked clay

'weight'. This is abraded and may have been burned after its initial firing, for it has a brick-like consistency. It is vesicular and the temper is angular pieces of flint, some crystalline.

THE ROMAN POTTERY (Fig 20) by Georgina Shaw

Hook produced 6,040gm of Roman pottery which represented over 163 different vessels (Table 1). The majority of the pottery is coarse ware; 15 different fabrics were identified. Most of the pottery came from the topsoil or the upper levels of the ditches but that which came from the sealed contexts ranged in date from the early part of the second century to the fourth quarter of the third.

Table 1. Roman pottery: number of sherds, weight and MNV per fabric.

<i>Fabric</i>	<i>Sherd Count</i>	<i>Weight (gm)</i>	<i>MNV</i>
1	149	1200	44
2	108	1950	40
3	11	595	7
4	22	230	12
5	14	225	11
6	115	935	25
7	22	345	10
8	5	50	3
9	8	60	5
10	2	20	1
11	11	180	2
12	17	250	3
Total	484	6040	163

The Fine Wares

Only three examples of fine ware were recovered from the site.

Fig 20.26 shows a fragment of Oxford colour-coated ware. It is hard and sandy with small chalk inclusions. The fabric is buff with a grey core and the colour coat is reddy-brown. It is a flanged bowl copying Dr 38 and is of the most common Oxford colour coat type. Wares of this sort were made at most kiln sites throughout the production period of AD 240–400+ type C51.6 (Young 1977).

Fig 20.38 is an example of New Forest Ware. It is a medium hard fine paste with very occasional haematite grains of up to 0.5mm in diameter. It is cream in colour with a pinky cream core. The slip is dark reddish brown on the inside and dark brown on the outside. It is a plain globular beaker with a tall neck and narrow mouth, type 30 in Fulford's classification (Fulford 1975). This form has been dated as early as AD 300 although the plain beakers

become more common after c AD 340–350. Production continued to after AD 400.

The third fragment of fine ware (not illustrated) is a fragment of samian ware, form Dr 18 and probably comes from the workshops of Central Gaul. The fabric is hard, dense and orange pink, with a dull orange gloss. It can be dated to the second century.

The Coarse Pottery

Pottery Fabric Types:

Fabric 1: Black Burnished Ware

The fabric is coarse and heavily gritted with quartz sand and occasional inclusions of shale up to 4mm across. Immediately under the black surface there is often a thin brown layer. The three main forms of BB1 are present and the date range is throughout the production period of BB1.

Fabric 2

A coarse sandy fabric with very occasional flint inclusions. Its colour ranges from buff to dark red with an occasional grey core. The fabric is burnished and the outer surface ranges in colour from brown to black. Forms are bowls, cooking pots and jars. Two of the sherds show rouletting.

Fabric 3: Grey Ware

A hard, dark grey fabric with a grey core and inclusions of coarse quartz sand. The fabric is burnished on the outside with the exception of the middle zone. This is unburnished but has burnished obtuse angled lattice lines. The obtuse angle of the lines and the coarse fabric point to a date in the late second or third century. The range of forms is unknown as only a small number of sherds were recovered. The fabric is wheel thrown and has a smooth fracture.

Fabric 4: Grey Ware

A medium hard, light grey fabric with inclusions of fine quartz sand. The decoration comprises a zone of acute angled applied lattice strips, with an incised line at the top and bottom of the zone. The fabric has a sandy feel and a smooth fracture; it is wheel turned. The acute angled lattice and the fine fabric point to a date in the late first or second century. The recognisable forms present in this collection are jars with bead and everted rims.

Fabric 5

A hard, sandy buff fabric with a grey core and

occasional inclusions of quartz and red iron-oxide. The fabric is very badly abraded and although there are very slight traces of red on the outside it is unlikely that they represent the remains of a colour coat. The fabric is sandy to the touch, has a smooth fracture and is hand made. Forms include bowls and jars.

Fabric 6: Flint Tempered Ware

A hard, gritty fabric with numerous inclusions of crushed angular flint up to 6mm across. The colours range from orange to black and the vessels are hand made with an angular fracture. The forms are unknown.

Fabric 7: Local Sandy Ware

This is a smooth orange sandy ware with very occasional quartz inclusions. The fabric is smooth in fracture but is so badly abraded that it is not possible to tell the nature of the surface treatment. The forms are unknown.

Fabric 8: Wessex Grog Tempered Ware

A medium hard, black or brown grog tempered ware. Inclusions of grog are red or black and spherical in shape. The fabric is hand made and burnished on the outside. It ranges in date from the late third to the fifth century (Fulford 1975).

Fabric 9

A hard sandy fabric with visible quartz inclusions. Grey in colour with a wide orange red core. The fabric is burnished on the outside and is wheel thrown. Everted rims are present.

Fabric 10

A hard, black sandy fabric with inclusions of angular quartz. The fabric is black throughout and has a rough fracture. There are incised lines on the outside and they are probably caused by the fabric being clamp fired in a bonfire. The only form represented is a bowl. Date range unknown.

Fabric 11

A medium hard orange sandy fabric with a grey core. Very occasional inclusions of quartz and red iron-oxide. The only form represented is a bowl, hand made with no surface treatment. Date range unknown.

Fabric 12

This is oxidised BB1. The fabric is the same as 1 but is buff in colour with a chocolate red slip.

Fabric 13: Flagon

A soft, fine, buff-pink fabric with very occasional small quartz inclusions. Voids are present in the fabric which represent the remains of some organic material. It is very badly abraded and the surface coat has been worn away. Date unknown.

Fabric 14

A hard coarse grey fabric with small black inclusions and a dark red-brown slip. Smooth fracture, wheel thrown, date unknown.

Fabric 15

A smooth brown fabric with a grey core. Made with a fine paste and no visible inclusions. The ware has a black slip and is burnished on the outside.

Details of the Roman Pottery (Fig 20)

These are described by the fabric, form and position on site.

1 Jar with everted rim; 162/53 found by workmen 2 Everted rimmed jar; 90 EF 3 Jar with slightly outbent rim; 160 + 164/53 found by workmen 4 Bead rim; 100 VA 5 Jar with everted rim; 010 V, topsoil 6 Jar with everted rim; 160 + 164/53 7 Jar with simple stubby rim; 130 AB 2 8 Flagon handle; 30 VA 2 *9 Bowl; 101 V, top of ditch 10 Everted rim; 160/164/53, found by workmen 11 Everted rim; 50 F 1 12 Decorated body sherd; 010 V 1 13 Decorated body sherd; 120 AB 2 14 Rouletted decoration; 130 AB 2 15 Base of an enclosed vessel; 010 V, top of ditch *16 Base; 010 V, top of ditch 17 Foot ring; 120 AB 18 Base; 110 EF 1 19 Bowl; 120 J 20 Dish; 120/130 VAB 5 21 Dish or bowl with an everted profile and a slight flange 22 Bowl with a slight flange; 120 J 23 Bowl or dish with a slight flange; 101 V, topsoil 24 Bowl or dish with a slight flange; 160 + 164/53 found by workmen 25 Bowl; 50 F 26 Oxford Ware; 130 AB 27 Bowl; 120 AB 2 28 New Forest Ware; found by workmen.

*fabric unknown

Two body sherds bore graffiti, a cross and a grid.

THE POST-ROMAN POTTERY (Fig 21) by Sarah Jennings

Although limited in quantity, the pottery falls into two groups. The larger (1-19) dates to later medieval times and the smaller (20-1) to

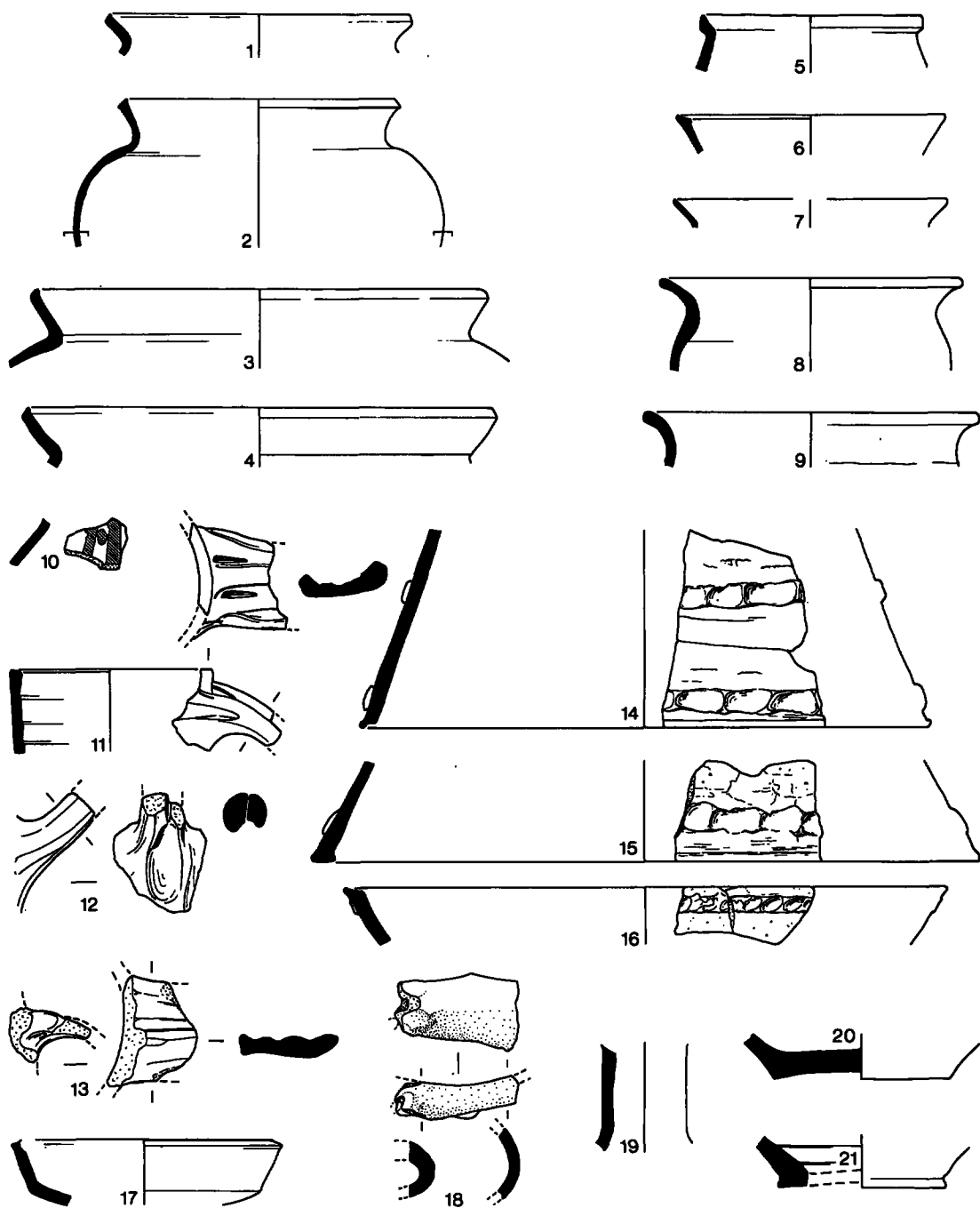


Fig 21. Mediaeval pottery from and found close by the parallel ditches (Fig 3), 1-21. Scale 1:4

the post-medieval period, probably the seventeenth century.

The vessels are mostly represented by single sherds. The exception to this is a jar (2), representing a secondary deposition of domestic refuse. A number of forms are present – jars, cooking pots, bowls and jugs – all typical of any late medieval assemblage, besides fragments of less common ones. These include an abraded sherd (18) which may be part of an aquamanile, and pieces of four vessels with applied, thumbled strips (14–16 and unillustrated). Certainly two of these have been used as curfews, or fire-covers, and have traces of sooting on their interior but not on their exterior. The other rim (16) shows no sooting on either surface, has a shallower angle from the rim, and was probably used as a bowl.

The fragments of four jugs (10–13) were all glazed. The body sherd (10) comes from a decorated jug and has applied strips and pellets detailed with iron oxide in addition to the copper-green glaze. 12 has copper spots in the lead glaze and, like 11, has deep stab marks in the handle. A number of the hollow-ware vessels (1–9) were used as cooking pots and have traces of sooting on their exteriors and at the top of their interior rims, suggesting that they were used in conjunction with lids.

The source of much of this late medieval pottery is uncertain but it is likely to have been of local manufacture. The jug handle (12) has been identified as Hampshire Sandy ware, and the remainder is of a similar sandy fabric. An unidentified kiln in the locality is the probable source.

The much smaller group of post-medieval pottery, fragments of only four vessels, may come from further afield. 20 is the base of a hollow-ware vessel, either a jar or chamber pot, and is typical of the Verwood potteries in Dorset. The others are all of the typical post-medieval glazed red earthenware. 21 is the base of a hollow-ware vessel; the other unillustrated base fragment is from a larger flatware form, such as a bowl.

The three fragments of hearth tiles (Fig 22, 1–3) possibly come from two sources as there are two different fabrics. The tiles were all

made on a sand bed with deep hollows formed by a circular implement from the back which only pierce the front of the tile in one example. The angle of these deep, narrow-diametered hollows is shallower on the smallest fragment; it is not possible to determine the form of this tile. The two larger fragments, with the same fabric, are both from wedge-shaped tiles. Similar tiles are known from Southampton (Platt & Coleman-Smith 1975, fig 220, nos 1480–2).

Acknowledgement

I am most grateful to Duncan Brown for looking at this material and suggesting possible sources.

Details of the Post-Roman Pottery (Fig 21)

The pieces of pottery in the infill of the parallel mediaeval ditches were: 11, 10Z, Fig 7, XIII; 16, 30XY, Fig 7, XIV; 6, 40Z, Fig 8, XVIII, Layer 1; 12, 18, Fig 8, XIX; 1, 7, 70YZ, Fig 8, XVI, Layer 2. The remainder, in the topsoil but presumably derived, were 9, 13, 14, 30XYZ; 8, 19, 50YZ; 4, 10, 21, 60X; 2, 80YZ; 17, 100VAB; 5, 130VA. Those pieces found in the gravel pit by workmen were 3, 15, 20.

1. Cooking pot of pinkish-buff sandy fabric with orange core. There is sooting on the exterior and the upper part of the interior rim edge.
2. Jar, late 14th or 15th century, possibly of New Forest Ware. It is of a fine light orange, sandy fabric with slightly paler surfaces.
3. Cooking pot of pale-buff sandy fabric with light orange margins and surfaces. There is sooting on the exterior and heavy sooting on the upper half of the interior rims.
4. Cooking pot of light brownish-orange sandy fabric with light pinkish-buff margins. There is a simple spot of greenish glaze on the interior and slight traces of sooting.
5. Jar of grey sandy fabric with brown surfaces.
6. Rim with edge of ? handle scar of a light orange sandy fabric. Early post-medieval.
7. Cooking pot of light orange sandy fabric bearing slight traces of sooting.
8. Jar of grey sandy fabric with occasional large angular quartz grits, brownish-orange margins and abraded grey surfaces.
9. Jar of creamy-buff sandy fabric.
10. Sherd from a jug of pale orange fine, slightly sandy fabric with a pale grey interior surface. It has a copper-green glaze, applied strips and pellets detailed with iron oxide.

11. Jug of early mid-14th century sandy ware. It has an orange sandy fabric with a patchy light grey core and a pale greenish-yellow glaze on the body to one side of the handle.
12. Jug of late 13th or 14th century Hampshire Sandy Ware. It has a light orange fine sandy fabric and a yellowish glaze with copper-green specks.
13. Jug, late 14th or 15th century, of orange sandy fabric with occasional iron-ore inclusions, light brownish-grey surfaces and a brownish-yellow glaze on top of the handle.
14. Curfew of pale grey sandy fabric with slightly pinkish margins and surfaces. The interior is sooted.
15. Curfew of dull orange fine sandy fabric with occasional iron-ore and white inclusions. The interior is sooted.
16. A bowl of the same fabric as No 15.
17. A bowl of grey, fine, slightly sandy fabric. There is slight sooting on the exterior.
18. A sherd possibly from an aquamanile. It is of cream sandy fabric with a light core, small red and black inclusions and abraded surfaces.
19. A neck of grey, flint-gritted fabric with darker grey surfaces.
20. A base of post-mediaeval Verwood type. It has a pale pinkish-buff fine sandy fabric with buff margins and surfaces.
21. A base of post-mediaeval glazed red earthenware. It has an orange slightly sandy fabric and a yellowish-orange glaze on the interior.

Hearth Tiles (Fig 22)

1 and 2 were found by workmen in the gravel pit and 3 was from the smaller gravel pit to the west of Hook (Fig 1).

- 1, 2. Brownish-orange sandy fabrics with iron-ore, white and small flint (3–6mm) inclusions. The upper surfaces are smoothed and bear traces of sooting.
3. Dirty buff sandy fabric with red iron-ore and small flint (3–6mm) inclusions. It has a buff lower surface. The upper surface is largely missing but the remaining part is burnt.

MISCELLANEOUS ARTIFACTS

Besides pieces of pottery vessels, artifacts of flint, glass, pottery, iron and bronze were recovered, incidentally and under controlled conditions, from the site. Because of their

variety they are separately described and their provenance indicated. When necessary, appropriate counterparts will be indicated.

Fig 23

1. Blade of grey mottled flint, struck from a prepared core. In near mint condition, it retains cortex upon one edge; the other has been blunted by retouch. An oblique edge, formed by the detachment of flakes upon the bulbar face, displays signs of wear and restricted gloss. This blade (see Appendix II, Mus No 63/54) was pulled out of the side of one of the ditches late in 1954, after the excavation's conclusion. Such blades were a component of local Mesolithic industries, especially where there was access to flint of good quality (Jacobi 1981, 17). Nonetheless, such flakes and blades are also a feature of later Neolithic industries in the region (e.g. Ashbee 1957, 154–7; Alexander & Ozanne 1960, 284–96) and are present on Later Bronze Age sites (Holleyman & Curwen 1935, 32–6). Flint implements, mostly scrapers, have been found, in a fresh sharp condition, upon Iron Age sites (Cunnington 1923, 27; Wheeler 1943, 175; Stanford 1974, 147, 188, 236).
2. Body fragment of a pillar-moulded bowl in natural green glass. Parts of two raised, exterior ribs remain and wheel-polishing marks are visible on the interior, plain surface. This form is common on Romano-British sites of the first century AD. Most are in pre- or early Flavian context. The pieces are robust and often survive amid rubbish and, in this instance, topsoil. Comparable bowls come from Fishbourne (Cunliffe 1971, 325, fig 137, Nos 17, 18, 19) and Verulamium (Frere 1983, 198, Fig 74, 4).
- 3–7, 9. Iron nails: 3 and 4 are chisel-pointed; 5, corroded and concreted, is more robust and has a bulbous head; 6 and 7, because of their square heads, may be horse-shoe nails; 9 is a slighter, shorter version of 3 and 4. Its point has been clinched, a process to which the tapering, chisel-ended form would readily lend itself. 3 was unstratified, 4, 5 and 7 were from upper Iron Age ditch filling at the base of the humus (Fig 3, 90VA), as were 5 and 7 within the eastern enclosure (Fig 4). 9 was, however, from the infill of the eastern mediaeval channel (Fig 3, 50X). Nails square in section and

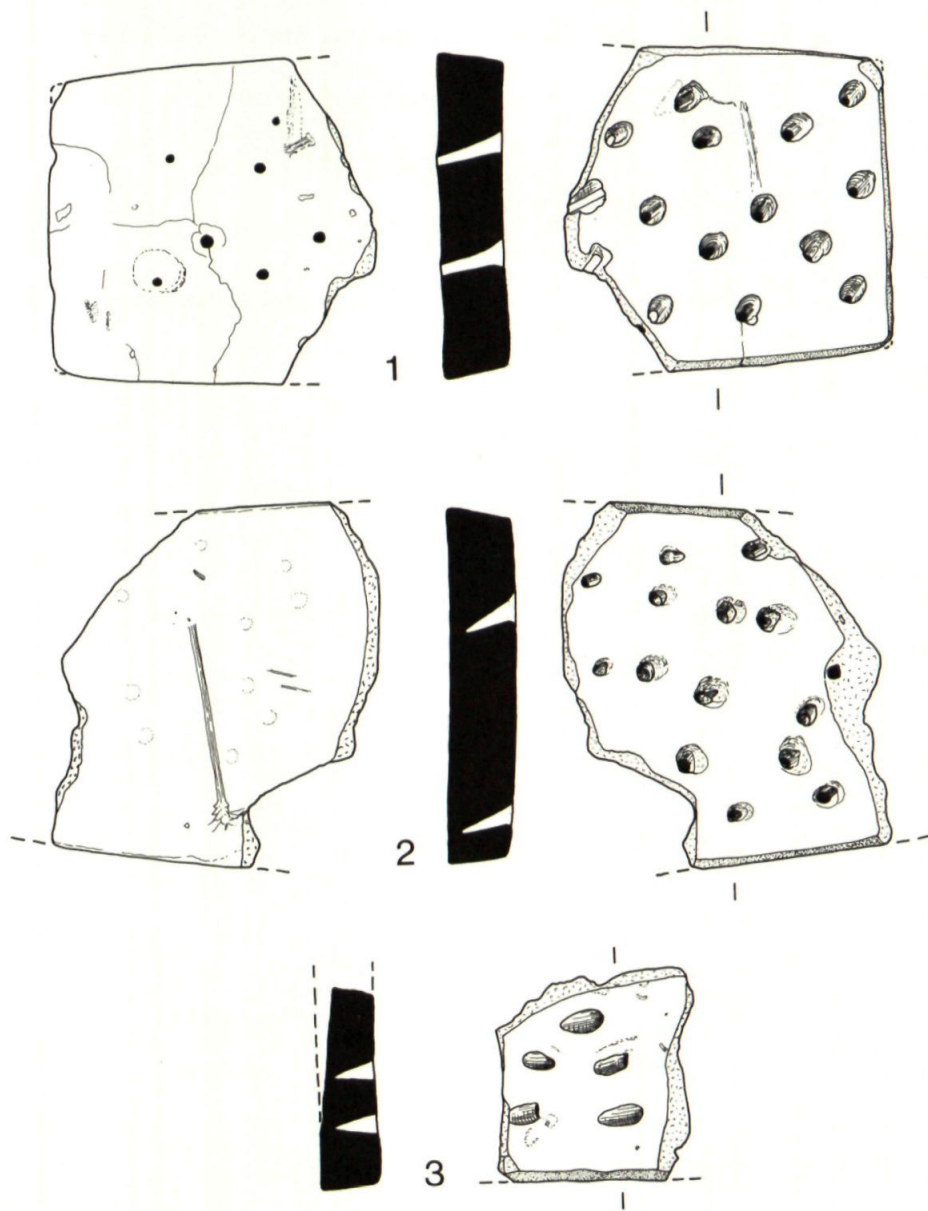


Fig 22. Mediaeval perforated hearth tile fragments, 1-3. Scale 1:3

with disc-heads are of a recognised Romano-British form. A number were found on Worthy Down (Hooley *et al* 1929, 191, Pl VI, fig 93).

- 8, 10. A much corroded iron ? hobnail. Found at the base of the humus (Fig 3, 30VA; Fig 7, VI). At Woodcutts (Pitt Rivers 1887, 98, Pl XXXI,

8-12) such nails were thought to have been components of leather greaves. 10 is heavily corroded, concreted and has been clinched. It would appear to be a similar, slighter iron hobnail.

11. An iron chain link, found at the base of the

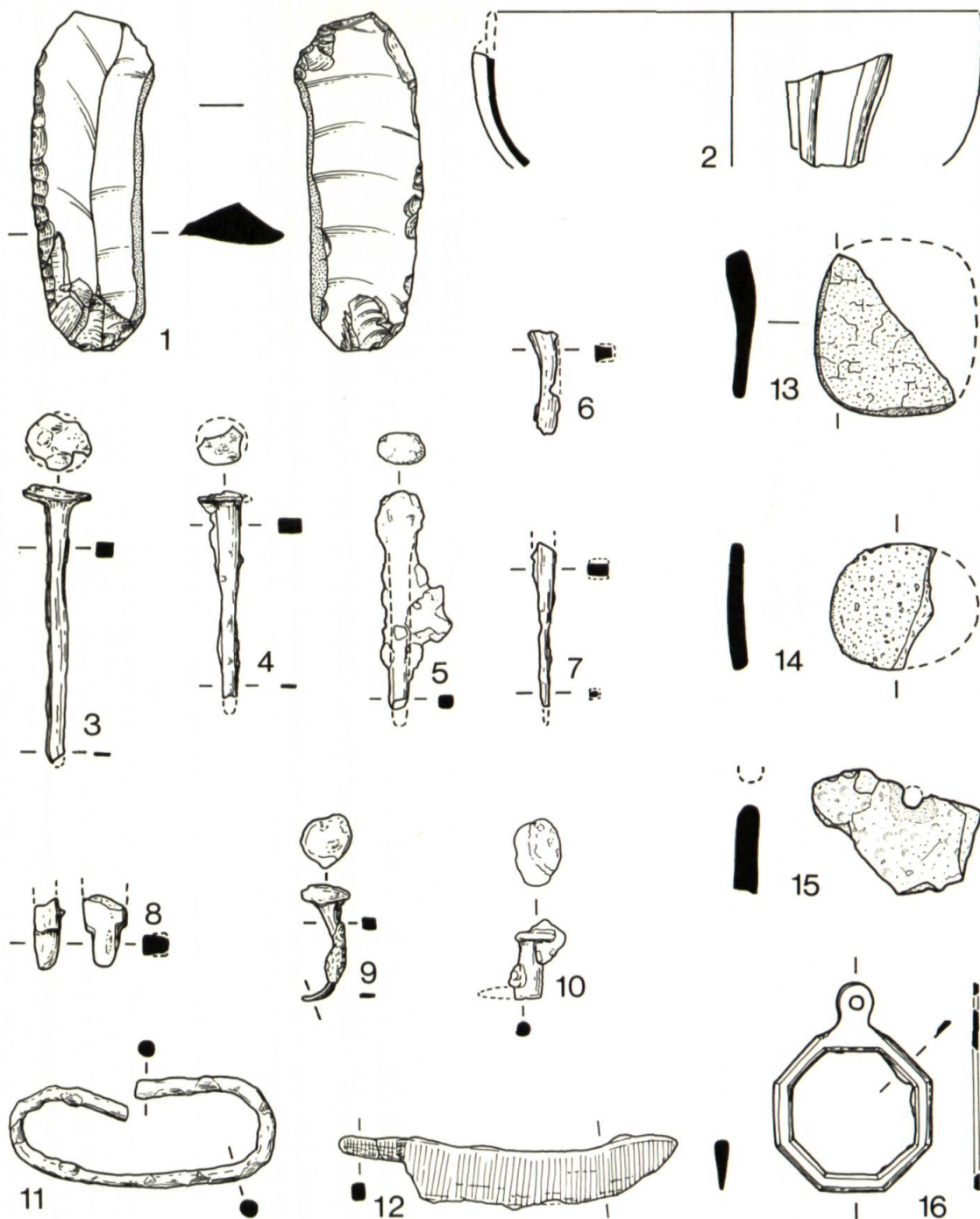


Fig 23. Flint, glass, pottery, iron and bronze artifacts from the site, 1-16. Scale 1:2

- humus (Fig 3, 90W). A length of chain, employing similar links, was found at Woodcuts (Pitt Rivers 1887, 97, Pl XXXI, 1).
12. Iron knife blade from the base of the humus (Fig 3, 30VA). This is a common Iron Age and Romano-British form. The tip of such a blade was found on Worthy Down (Hooley *et al* 1929, 189, Pl VI, 83), at All Cannings Cross (Cunnington 1923, Pl 20, 11–16) and Woodcuts (Pitt Rivers 1887, 71, Pl XXIII).
 - 13–15. Pottery discs, broken, shaped by edge-grinding, from buff and dark grey sherds. 15 has been perforated. They were found in the black soil infilling the Iron Age ditch (Fig 3, 120–130 VAB; Fig 6, II, Layer 2). Such discs, termed counters, are widespread and have been found on St Catherine's Hill (Hawkes, Myres & Stevens 1930, 113) and at Maiden Castle (Wheeler 1943, 292, Pl XXXII, A).
 16. Octagonal cast bronze object with loop. The bevelled octagonal frame shows no sign of finish, the ragged feather-edges from the casting process are present, while the loop perforation shows no sign of wear, although it is highly polished upon its countersunk side. Found unstratified in humus (Fig 3, 40X) close by the eastern mediaeval channel. This unfinished object could be thought of as a pendant, for such objects are frequently found upon Iron Age and Roman sites (e.g. Wheeler 1943, 285, Fig 95, 7) while their use continued, especially as frames, into later times (Dalton 1924, 146–7). The countersunk perforation of the loop could allow the object to be one of a series designed for the adornment of a wooden tankard, bucket or tub (Corcoran 1952). As the countersinking of the perforation does not coincide with the bevelled side of the octagonal frame, this example may have been discarded.

Iron Slag

Fragments (see Especial Study 4 for details) were collected from the ditch of the rectilinear enclosure as well as from the later ditches impinging upon it (Fig 3, 80–130 VAB, 130V; Fig 6, I, II, III, Layers 2, 3, 5). The pieces, waste from the forging of semi-finished iron, are 2lbs 10oz in total weight. They are not necessarily contemporary but are associated with the Iron Age phase of the site at a time before the ditch of the Later Bronze Age rectilinear enclosure was completely infilled.

GENERAL CONSIDERATIONS

The Ditches and Channels

The sherds of pottery from the ditch of the rectilinear enclosure are an indication of its affinities, although only approximately of its possible date (Calkin 1964; Barrett *et al* 1978). The ditch was, however, infilled when the later, Iron Age, ditches were aligned upon it, for they cut into and cross the accumulations (Figs 3; 6, I–IV; 7, VI). Although smaller, there is an acknowledged affinity (Barrett *et al* 1981, 219) with those quadrilateral earthwork enclosures well-known from the work of Pitt-Rivers in Cranborne Chase (Pitt Rivers 1898, 1–57, 185) and C M Piggott in North Wiltshire (Piggott 1942). Except for South Lodge and Martin Down in Cranborne Chase, every such enclosure has been levelled by ploughing (Fowler 1981, 238), making them comparable with the side and corners found at Hook (Gingell 1979, 333). They have for long been thought of as a part of an agrarian system; Martin Down is attended by ancient fields (Bowen 1961, 23, fig 39), constructed for human occupation or cattle impounding. The structural remains found inside the enclosures on Thorney Down (Stone 1941), at South Lodge (Barrett *et al* 1981, 220) and in North Wiltshire (Gingell 1979, 333) substantiate the notion of human occupation, a reasonable contention when the quantities of pottery are taken into consideration. Nonetheless, not all rectangular enclosures need be of a utilitarian nature for they were widely used to demarcate shafts and shrines (Piggott 1975, 62–72).

An entrance, with substantial internal post-holes, in the middle of the intact eastern side, was a distinguishing feature of the remains of the Hook rectilinear enclosure (Figs 3; 7, IX, X). Substantial gate-posts, such as these paired socket-holes could have housed, led to the expectation of an internal palisade. Although two large cavities, one displaying traces of burning, were found inside the ditch, no trace of any regular palisade was found. Investigations of comparable enclosures have not disclosed comparable remains of entrance

dispositions except on Harrow Hill in Sussex. Here the inward continuation of the Iron Age rectangular enclosure's causeway was flanked by two pairs of large post-holes, joined by a palisade trench, the remains of a gate through, apparently, a retained rampart (Holleyman 1937, 234, fig 1). Two larger post-holes flanking a gap in the bank of the Late Bronze Age enclosure on New Barn Down, also in Sussex, are similarly comparable (Curwen 1934, 153, Pl IV, left). On Thorney Down, in Wiltshire, however, J F S Stone (1941, 117) noted an apparent absence of gateways.

Although appreciably smaller and dug into gravel, the ditch of the rectilinear enclosure is not unreminiscent of that cleared by Pitt Rivers at South Lodge (Pitt Rivers 1898, Pls 235, 236, 237). The lower 3ft of chalk rubble in this ditch corresponds with the deep, regular, gravel accumulation in the Hook ditch. This regularity, despite weathering, of sloping sides and flat bottom may result from scouring, a necessary process if, like some of the Wessex linear ditches which it resembles (Bowen 1978, 120, fig 3), it was to be an effective barrier.

Besides the sherds dug from the ditch filling in 1954 (Fig 14, 4, 5) a number of substantial pieces, presumably to be associated with the rectilinear enclosure, were recovered from time to time during gravel digging. Some of these are large and unabraded, a quality which elicited the idea that an urn cemetery might have been encountered. However, it was thought unlikely that such large pieces would have been entirely divorced from their contents when found or that burned bones would not have been seen. In this context it should not be forgotten that Pitt Rivers observed, of the part of the large urn found beneath the chalk rubble infilling the ditch of the South Lodge enclosure, that it was similar to one found in a barrow (Pitt Rivers 1898, 4). In general, it is said of the rectilinear enclosures that their domestic repertoire is dominated by the large, straight-sided bucket urns, decorated with finger-tip impressions and that barrel and globular urns, as on Thorney Down (Stone 1941, 118, fig 2; 119, fig 3) are rarer (Barrett *et al* 1978, 137).

An Iron Age ditch ran across the, perhaps purposely infilled, northern ditch of the rectilinear enclosure. Further ditches coincide with, and cut into, its eastern side, indicating that they had been aligned upon it. Their character and dimensions (Figs 6, 7, 8), when compared with their chalkland compeers such as Worthy Down (Hooley *et al* 1929) and Twyford Down (Stuart & Birbeck 1936), at no great distance, where ditches served to define enclosures of various shapes and sizes, suggests that this was also their function at Hook. Here (Fig 3) a sequence of superposition can be seen and, had it been possible to examine a much larger area, a developmental order might have been apparent for it was, sadly, not possible to subdivide significantly such pottery as was recovered from their infills. The short length, and wide gap, in the western ditch is presumably one of the characteristics of a series, a break to allow easy access from one ditch-defined area to another. The Romano-British ditches, which proffered an essentially local sequence (Fig 4) and could have enclosed a long field (Bowen 1961, 24; Taylor 1975, 52), displayed a western end parallel to the earlier, Iron Age, arrangement. Nonetheless, it should not be forgotten that large rectangular enclosures are an element of the local sequence (Champion 1981, 40-41).

The parallel Mediaeval ditches, broad, relatively shallow, rubbish-strewn, and manifestly the last phase of activity on the site, might mark the reclamation of a long-neglected landscape by ditching, a practice attested elsewhere in comparable circumstances (Taylor 1975, 103). They might have bounded fields, the space between being a track.

Within the small area examined at Hook, it was possible to see four surviving remnants of what may have been, before destruction, an extensive and intricate apportionment which had, over more than a millennium, been subjected to shifts, changes and even major modifications. The ditches and absence of overt traces of tillage might point to drainage to improve grazing on the forbidding gravels and then, perhaps, a largely pastoral economy.

The Pottery and Other Artifacts

Deverel-Rimbury

Bucket urns, allegedly local products (Barrett *et al* 1978, 137), may derive from Grooved Ware (Ashbee 1960, 127). This proffers many similarities and recent radiocarbon dates have assuaged the chronological problems (Barrett 1980, 309). Their forms, cordons and finger-tip impression embellishment show them to be a component of a wide European series (e.g. Gersbach 1974, Abb 1, 2) which has its own ancestral wares. *Ornament Horizon* bronzes are sporadically and indirectly associated (Smith 1959; Lawson 1979). A major component of domestic assemblages, they appear as *skeuomorphs* (Childe 1956, 13) of hooped wooden or leather containers (Coles *et al* 1978, 16). Their coarse fabric was neither robust nor flawless; cracks were stitched and vessels bound (Clay 1926, 318; Holden 1972, 107, fig 9, 9, 10).

Iron Age

The two decorated Iron Age vessels (Figs 16; 17; 15, 1, 2), one bearing oblique lines between rows of dots, reminiscent of stitching, are, like the burnished wares, *skeuomorphs* (Childe 1956, 13) of leather vessels. These are all characteristic of the *St Catherine's Hill-Worthy Down style* (Cunliffe 1974, 43).

It has been thought that the abraded potsherds found in and upon ancient fields were incidentally spread upon them with manure from domestic middens (Fowler 1981, 167). The deposit in the Iron Age ditch may have remained from occupation material, destined for the fields, which tempered farmyard accumulations or the droppings of penned animals. A humus conducive to satisfactory plant growth normally has a high ratio of carbon to nitrogen. Indeed, in the sandy, gravelly Hook area a satisfactory humus would have had to have been created. In dry, sandy or gravelly soils sherds could have enhanced their moisture-retentive capacities. At Hook and elsewhere potsherds may have been neither incidentally nor accidentally included in

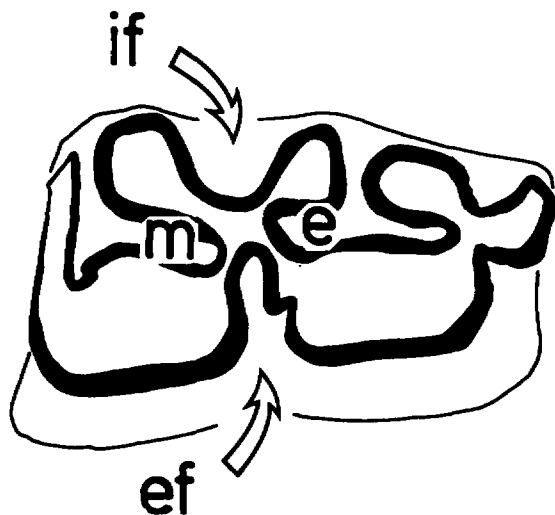


Fig 24. The enamel fold pattern in occlusal view of a lower left horse molar to explain the terms used: *if* = internal or lingual fold, *ef* = external or buccal fold, *m* = metaflexid, *e* = entoflexid.

manure, as they had a particular role in fruitful tilth maintenance.

Romano-British and Mediaeval

The Romano-British pottery, broken tile and other debris was unstratified. Only in the hollows exposed in the gravel-pit face (April 1955, Fig 11, A, B) were there sealed deposits. These, of gravelly loam with pottery, suggest the infill of inconvenient cavities. The debris in the parallel mediaeval ditches, with pottery (Fig 21) and other objects (Fig 22) betokens the demolition of a building in the vicinity.

ESPECIAL STUDY 1

The Dentition of an Iron Age Pony by Simon Davis

24 cheek teeth of an equid, a single pony, were studied. They were found, with pottery and other debris, in the black soil (Fig 6, 11, Layer 2) infilling the Iron Age ditch aligned upon the north-eastern corner of the Later Bronze Age rectilinear enclosure (Fig 3, 120–130AB). They will be housed in the City Museum at Winchester.

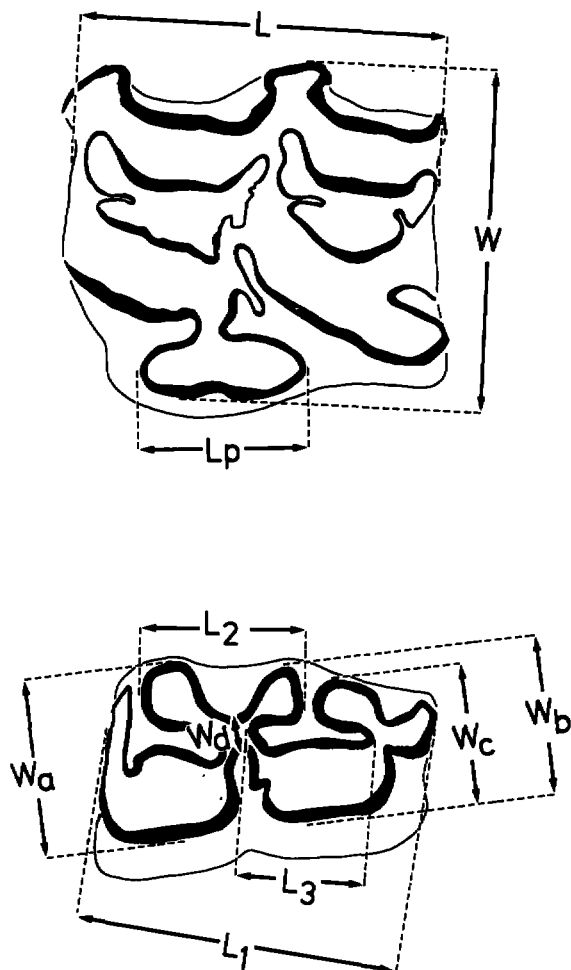


Fig. 25. Equid upper left cheek tooth above and lower left cheek tooth below in occlusal view to show how the measurements in this note were taken. L_p is the protocone. L is the mesio-distal length and is taken between the approximate mid-points of the mesial and distal faces of the tooth. W is measured approximately at right angles to L . W_a , W_b and W_c are all measured approximately in the same axis – perpendicular to the external surface of the tooth. L_1 is approximately parallel to the internal surface of the tooth.

Material

The collection consisted of 24 separate equid cheek teeth. There were no incisors. Some much fragmented bone was also present, presumably the

remains of maxillae and mandibles. The teeth themselves were well preserved, although some of the crown cementum had flaked off. The set of teeth comprised 6 left and 6 right mandibular teeth; and 6 left and 6 right maxillary teeth. I was able to assemble them into complete tooth rows, and felt confident that they all belonged to one individual.

Method

Fossil equid teeth are usually identified by the complicated patterns which the enamel folds form on the occlusal surface of the worn cheek teeth. The upper and lower molars are especially useful (see for example Davis 1980).

Figs 24 and 25 show the terms used here and how the measurements were taken. Fig 26 shows the enamel folds of the left upper and left lower cheek tooth rows of the Hook equid. These were drawn by laying each tooth, occlusal surface face down, on a magnifying xerox machine, and tracing off from the resulting prints. Enamel folds are depicted black. Measurements (Table 2) are in millimetres

Description and Identification

In distinguishing between teeth of different species of equids the most useful criteria are (1) the shape of the protocone in the upper pre-molars and molars, (2) the shape of the internal fold (lingual valley) in the lower pre-molars and molars, and (3) the degree to which the external (buccal) fold penetrates between the metaflexid and entoflexid in the lower molars (see for example Eisenmann 1980; 1981).

(1) In the Hook equid note that the protocone is somewhat elongate, tapering gradually in the posterior direction, as in the horse, *Equus caballus*. (It is usually triangular in the zebras and *Equus hydruntinus* – the south European/Near Eastern extinct equid – and it tends to be oval in the ass and onager.)

(2) In the Hook mandibular teeth the internal fold is U-shaped (especially M_1 and M_2), again characteristic of *Equus caballus*; note, however, that in P_3 and P_4 the internal fold is not markedly U-shaped but more open V-shaped. (It is V-shaped in the ass, onager, zebras and *Equus hydruntinus*.)

(3) In the Hook mandibular molars (but not the pre-molars) the external fold shows partial penetration between meta- and entoflexids. This is typical of *Equus caballus* whose pattern is usually intermediate between the 'no penetration' of ass and onager and 'complete penetration' of zebras and *Equus hydruntinus*. (In zebra and *Equus hydruntinus* lower molars external and internal folds may even touch.)

Table 2. Upper and lower cheek teeth from Hook, measurements taken as shown in Fig 25 in millimetres. ACH is the approximate crown height measured up the external side from root 'saddle' to occlusal surface, as shown in Levine (1982). Measurements in parenthesis are approximate values.

Upper Teeth								
	Left Side			Right Side				
	L	Lp	W	L	Lp	W		
P ²	32.8	8.4	23.6	33.8	7.8	24.2		
P ³	26.1	11.2	25.4	26.4	12.0	21.9		
P ⁴	24.4	11.3	23.9	24.5	11.5	24.6		
M ¹	23.1	10.6	24.6	23.3	10.6	25.1		
M ²	23.3	11.7	23.9	23.3	11.6	23.4		
M ³	23.1	12.1	18.4	22.1	11.5	18.5		

Lower Teeth								
	Left Side							
	ACH	L ₁	L ₂	L ₃	W _a	W _b	W _c	W _d
P ₂	38	28.5	11.5	15.1	10.6	12.4	12.0	6.8
P ₃	55	25.0	15.0	12.2	14.4	14.3	13.3	4.4
P ₄	66	25.6	14.0	11.3	14.2	13.7	12.7	4.6
M ₁	56	23.3	13.1	8.0	13.6	12.7	11.8	2.7
M ₂	62	23.1	11.8	9.0	12.7	12.2	11.5	3.1
M ₃	(55)	26.4	11.3	9.9	11.0	9.6	9.3	2.6
	Right Side							
	ACH	L ₁	L ₂	L ₃	W _a	W _b	W _c	W _d
P ₂	37	28.1	8.8	14.2	10.2	12.4	12.3	8.4
P ₃	54	25.3	15.3	11.9	(14.4)	14.4	13.1	4.6
P ₄	63	25.1	14.2	11.2	14.2	13.7	12.2	4.7
M ₁	56	23.5	12.8	8.2	13.6	12.6	11.8	2.8
M ₂	62	23.6	11.5	9.1	13.0	12.1	11.4	3.0
M ₃	(52)	27.5	11.3	9.8	11.5	10.2	9.5	2.6

The Hook equid is therefore identified as *Equus caballus*; probably a pony, in view of the rather small size of the teeth. What of its age at death? Equids, like most grass-eating mammals, have high-crowned teeth. These wear down gradually in the course of the animal's life, and since new crown is not added at the roots, an inverse crown-height/age relation exists (Spinage 1972). Levine has provided an approximate guide to the relationship between crown-height and age in New Forest ponies. The crowns of the Hook equid are all 'in wear', so that death must have occurred after the fourth year of life when the third molar becomes worn (Levine 1982). Comparison of the Hook crown-height values (see Table 2) with data given by Levine (1982) for the New Forest ponies suggests an age at death of between six and nine years. Since ponies may live for fifteen to twenty years, the Hook pony must have died in the prime of its life.

It is not possible to determine whether or not the Hook pony was bridled. The influence of bit wear (if any) is poorly understood and is a topic which merits a detailed general investigation.

General Considerations

Zeuner (1963) and Bökönyi (1978) consider that the horse was originally domesticated from its supposed wild ancestor, the tarpan, in an area which encompasses southern Russia, the Ukraine and the steppes of western Asia, in the fifth or fourth millennia BC. A wild horse was present in England in early post-glacial times, but was absent from Ireland (Grigson 1981), so the presence of horse in a Beaker context in Ireland at c 2000 BC no doubt reflects its domestic status at that time in the British Isles. Wijngaarden-Bakker (1974) suggests that the domestic horse was a Beaker introduction into western Europe. Thus it could have been

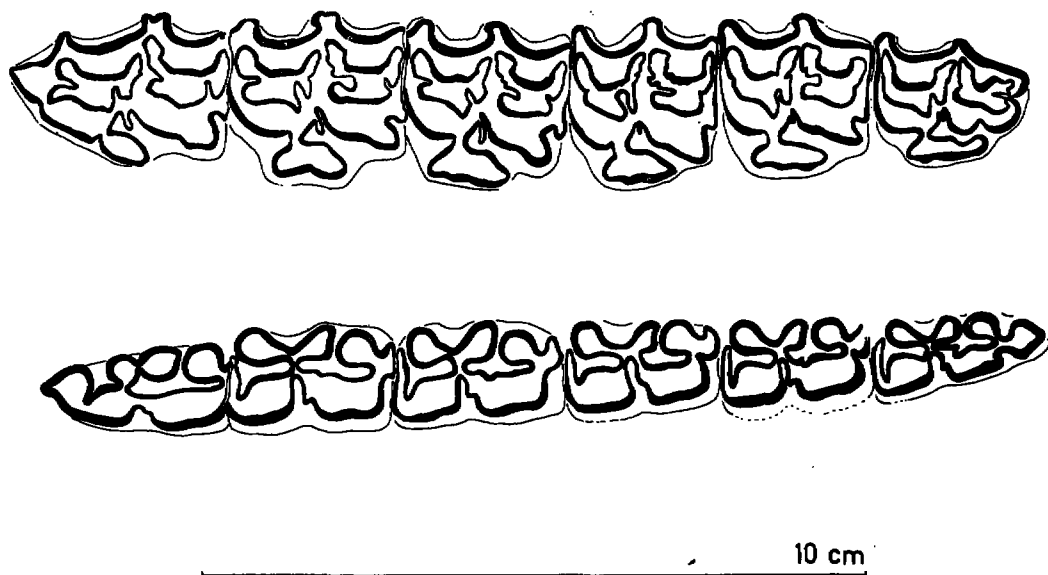


Fig 26. The Hook pony. The upper left cheek teeth (above) and lower left cheek teeth (below) in occlusal view to show the enamel folds.

brought into Britain by the same agency (Harrison 1980).

Grant (1984a) has summarised the archaeofaunal evidence from Iron Age sites in southern central England, and horse bones account for 3–15% of animal bones. She suggests that the horse 'had some importance in the Iron Age' and that it may have enjoyed a degree of special status demonstrated by: (a) 'the craftsmanship and expertise expended in the production of chariot and harness fittings and bridle bits'; and (b) the common finds of complete unbutchered horse skeletons or even isolated skulls, suggesting separation of the head from the rest of the body (Grant 1984b).

In the absence of criteria for distinguishing wild from domestic horse teeth, it is not possible to determine whether the Hook equid was wild or domestic.

Acknowledgments

I am grateful to Juliet Clutton-Brock, Caroline Grigson and Sebastian Payne for useful discussions concerning these remains, for their criticism of an

earlier draft of this study and to Vera Eisenmann who first helped me unravel the complexities of equid taxonomy and identification.

ESPECIAL STUDY 2

The Carbonised Wood and Charcoal Samples by G C Morgan

Samples of carbonised wood and charcoal (Table 3) were recovered from what may have been a pit filling incidentally exposed during gravel working at the northern end of the excavated area, from a stakehole in the southernmost of the large entrance post-holes (X) of the rectangular enclosure (Fig 3, 5060V), from the top of this enclosure's ditch filling at the base of the ploughsoil, at its south-eastern corner (Fig 3, 010V), from the mass of the dark soil, containing broken pottery and animal bones, which infilled the Iron Age ditches at the north-eastern corner of the western area (Fig 3, 130AB, Layer 2) and from the infill of the Iron Age ditch on the western side (Fig 3, 5060, ZY, Layer 2).

Table 3. Carbonised Wood and Charcoal Samples

Feature	Coordinates (Fig 3)	Species	Diameter	Rings and Growth	
Gravel working Stakehole	5060V	<i>Quercus</i> sp (oak)	100mm	12	25yrs (fast growth)
Top of en- closure ditch filling	010V	<i>Quercus</i> sp (oak) <i>Fraxinus excel- sior</i> (ash)	25mm 10mm		8yrs 8yrs (slow growth)
Iron Age ditches	130AB layer 2	<i>Quercus</i> sp (oak)			
Iron Age ditch	5060ZY	<i>Acer campestre</i> (field maple)	50mm	10	15yrs

Dimensions in millimetres on Table 3 are the estimated diameters. The number of rings present are shown as: 12 rings with the probable number of years' growth for that diameter shown, e.g. 18 years. When the growth rate is notable this is shown as fast, wide rings or slow, narrow rings. This sample, if of one phase, generally denotes open woodland although the ash from the top of the rectangular enclosure's ditch filling if of rather slow growth.

ESPECIAL STUDY 3

The Rotary Quern Fragments

These were examined in 1960 by Dr Helen A H Macdonald. She reported that the four fragments are of the same rock type, a medium-grained glauconitic sandstone. In thin section this contains numerous grains of quartz and glauconite set in a slightly iron-stained opaline cement. It is similar to a specimen from the Hythe Beds, at Limpsfield Common, Kent, in the Geological Museum's collection.

ESPECIAL STUDY 4

Iron Slag Specimens by Henry Cleere

The specimens examined may be classified as follows:

- Concavo-convex or plano-convex roughly circular 'furnace bottoms'. One was c 3¼in (9.5cm) dia by 1in (2.5cm) thick and the other measured 2½in (6cm) dia by ½in (1.2cm) thick. The slag itself was relatively dense and heavy, but the bottom two-thirds (i.e. towards

the convex surface) was vesicular, with pores not exceeding 1mm in diameter.

- Irregular fragments of heavy slag, vesicular in structure, one or two with adherent burnt sandy clay containing fragments of flint.
- Irregular fragments of vesicular light slag, grey in colour, by contrast with the blue-black of a and b. Several revealed small prills of oxidized iron, not exceeding 1mm in diameter. The largest fragment had a section that was vitrified to a green glass (olivine?).

This assemblage is typical of the waste material from the forging of semi-finished iron. During the later Iron Age, iron ores were smelted in a number of regions, including the Forest of Dean, the Jurassic Ridge in Northamptonshire, and the Weald. In the Weald, which is the most likely origin of the iron being worked up at Hook, it seems most likely that iron was forged into portable blooms for use as trade goods (Cleere & Crossley 1985, 47-8, 52-6). These semi-products would then be worked up into implements, tools and weapons by the smiths whose activities are attested on the majority of Late Iron Age settlements in southern Britain.

The smithing of iron involves heating the metal to high temperatures (1,000°C and above). This requires prolonged holding in a forging hearth fire in conditions that would result in the oxidation of the metal surface and the formation of a magnetite (iron oxide) scale. This would be tapped or knocked off by the smith when he withdrew the iron from the fire, to prevent it being hammered into the surface of the artefact, and would fall into the hearth. The operation of a forging hearth over a long period would result in a considerable build-up of this scale, which would melt and settle to the base of the hearth, where it would take up the concave profile of

the hearth bottom. Periodically such material would be cleared from the cold hearth and thrown away; in so doing the smith would often dislodge part of the lining of the hearth which adhered closely to the slag. Contact with the alkalis of the wood ash would result in sections of the slag being vitrified. Scale that had been subjected to these conditions for a relatively short period would form amorphous lumps, often much more vesicular than the material that had been subjected to prolonged heating. It is not easy to distinguish slag of this kind from the slags produced by the smelting of iron ore. They are indistinguishable by chemical analysis and petrography is of only limited value. The positive identification of such materials must always rely upon the examination of a complete assemblage, and on the absence of certain characteristic forms of slag that can only result from smelting. In the present case there is a complete absence of such slags, and also of iron ore, and so it may reasonably be assumed that this assemblage of material resulted from iron working rather than iron smelting. This view is reinforced by the absence of iron ores in the immediate vicinity of the site.

APPENDIX I

The Infills of the Ditches and Other Features (Figs 6, 7, 8, 11)

(Roman numerals refer to sites of sections upon plans (Figs 3, 4); humus (1) is omitted)

Western Area (Fig 3)

I Rectilinear Enclosure Ditch, 130VAB Western Face

(2) loamy gravel with some sherds of Iron Age pottery; (3) clean, large gauge gravel; (4) dark loam, with a darker, possibly incipient soil, cover; (5) gravel with large rolled and weathered nodules of flint, possibly a natural weathering accumulation.

II Rectilinear Enclosure Ditch Partially Cut by the Subsequent Iron Age Ditch, 120VAB Northern Face

Rectilinear Enclosure Ditch: (3) dark soil and yellow gravel; (5) stony humus; (6) a fine gravel accumulation overlaid by an incipient soil; (7) an accumulation of humus upon coarse gravel.

Iron Age Ditch: (2) dark, greasy, charcoal-laden humus containing sherds of Iron Age pottery, pieces of burned clay and animal bones.

III Rectilinear Enclosure Ditch and Parallel Subsequent Iron Age Ditches, 100VAB Southern Face

Rectilinear Enclosure Ditch: (3) sand and gravel containing sherds of Iron Age pottery and pieces of burned clay; (4) dark loam; (5) fine gravel; (6) coarse gravel containing numerous worn and weathered nodules of flint.

Iron Age Ditches: (2) and (2a) dark loam containing gravel and some large worn and weathered flint nodules.

IV Rectilinear Enclosure Ditch and Subsequent Iron Age Ditches, 80WVA Southern Face

Rectilinear Enclosure Ditch: (2) and (2a) gravel and humus mantling the lower, undisturbed gravel; (5) grey loam; (6) gravel with numerous large worn and weathered flint nodules; (7) fine grey loam; (8) fine gravel.

Iron Age Ditches: (3) fine, black, greasy, charcoal-laden soil; (3a) fine, black, greasy, charcoal-laden soil and gravel.

V Rectilinear Enclosure Entrance and Iron Age Ditch, 60VA Northern Face

Iron Age Ditch: (2) humus and gravel; (3) fine gravel

VI Rectilinear Enclosure Ditch and Subsequent Iron Age Ditch, 30VA Southern Face

Rectilinear Enclosure Ditch: (4) loam and fine gravel; (5) coarse gravel with large worn and weathered flint nodules; (6) humus; (7) gravel with numerous worn and weathered flint nodules.

Iron Age Ditch: (2) humus and gravel; (3) black, greasy, charcoal-laden soil with loose gravel beneath.

VII Rectilinear Enclosure Ditch with Subsequent Iron Age Ditch Cut into its Infill, 010V Northern Face

Rectilinear Enclosure Ditch: (4) loam and fine gravel; (5) brown, sandy loam; (6) loam and coarse gravel; (7) fine gravel; (8) fine, grey loam; (9) coarse gravel with numerous worn and weathered flint nodules; (10) coarse gravel with numerous large worn and weathered flint nodules at its base.

Iron Age Ditch: (2) gravelly loam, the sub-humus; (3) loam infill.

IX Large Post-Hole of Rectilinear Enclosure Entrance, 70WVA

(2) gravelly sub-humus; (3) grey, adherent loam with dark patches but grainy and sandy at centre.

X Small Post-Hole Supplementary to Rectilinear Enclosure Entrance, 60VA

Dark, coarse loam infill containing few stones. Fragments of carbonised wood were present.

XII Iron Age Ditch, 100XYZ Northern Face
(2) uniform coarse gravel.

XIII Iron Age Ditch, 80XYZ Northern Face
(2) sub-humus, brown loam and gravel; (3) dark loam with numerous large, worn and weathered flint nodules.

XIV Iron Age and Mediaeval Ditches, 40ZY Northern Face
Iron Age Ditch: (2) loamy coarse gravel.
Mediaeval Ditch: (3) fine gravel with large flint pieces at its base.

XV Mediaeval Ditch, 100XYZ Northern Face
(2) coarse gravel; (3) dark loam and gravel with a base accumulation of loose, small stones.

XVI Mediaeval Ditch, 80XYZ Northern Face West
(1) coarse gravel; (2) loose fine gravel.

XVII Mediaeval Ditch, 80XYZ Northern Face East
(2) loose fine gravel; (3) gravel with numerous worn and weathered flint nodules of medium size.

XVIII Mediaeval Ditch, 70Z Southern Face
(1) dark loam; (2) gravel with numerous worn and weathered flint nodules of medium size.

XIX Mediaeval Ditch, 60X Northern Face
(1) compact loam and gravel.

XX Mediaeval Ditch, 50X Northern Face
(2) dark brown-grey loam containing gravel and mainly oyster shells; cockle and winkle shells were also present.

XXI Mediaeval Post-Holes, 1, 2 and 3, 5060ZY
1, 2 and 3 dark, stone-free loamy infill.

XXII Mediaeval Ditch, 30YX Southern Face
(2) coarse gravel with numerous worn and weathered flint nodules of medium size; (3) large worn and weathered flint nodules.

XXIII Mediaeval Ditch with Adjacent Remnant of Iron Age Ditch Fill, 20Z Northern Face

XXIV Mediaeval Ditch, 010Y Northern Face
(2) gravel with numerous worn and weathered flint nodules of medium size.

Eastern Area (Fig 4)

I-IX Sections Across Ditch of Long, Rectilinear Romano-British Enclosure

All sections exhibited ditch infills of identical character, loamy gravel with a marked concentration of worn and weathered nodules of flint upon the ditch floor.

A, B Hollows Exposed in the Gravel Pit's Working Face, April 1955

They were within the area of the Romano-British rectilinear enclosure. Their infill was of compact, brown-grey loamy soil, with gravel and numerous sherds of Romano-British pottery.

APPENDIX II

Details of Material Found at Hook Before and After the Excavation

Mr A Corney of the Cumberland House Museum, Portsmouth, kindly provided details of the pottery and other artifacts found in the Hook gravel pit before and after the excavation. Although these have been examined, commented upon and, in some instances, illustrated, together with pottery and other artifacts recovered in the controlled circumstances of the excavation, they are listed below with the numbers and details entered into the Museum's Register.

Found by Workmen Before the Excavation (1953 and 1954)

Museum number	Museum Register Details
158/53	Roman jar (6 sherds)
160/53	Miscellaneous sherds -rims only
161/53	Oven frag, 8 pieces
162/53	Roman pot (3 sherds)
163/53	Base of large Iron Age pot, 4 pieces
164/53	Frag, Bronze Age urn
167/53	Perforated tiles (2) found with Roman Roofing Tiles
171/53	Sherds Iron Age pot
193/53	Coarse Red-ware sherds
21/54	Frag, Bronze Age urn
23/54	Belgic Bead-rim jar

Found After the Excavation (1954)

<i>Museum Number</i>	<i>Museum Register Details</i>
35/54	Sherds and oven frags from Bronze Age enclosure ditch filling
36/54	Flint 'knife' from Belgic enclosure ditch
37/54	Base of Roman or Mediaeval Pot

Mr Corney made the following observations regarding two items. They are:—

- (a) 167/53. These perforated tiles were with a mass of roofing tiles. A very large tile (20" x 14" x 2") with 'combing' marks was found with them.
- (b) 36/54. The flint 'knife' (a substantial blade, see above) was pulled out of the side of the Belgic enclosure ditch (? one of the Iron Age ditches) by the late Mr J C Draper.

In general, all the material was found within a hundred yards of the enclosure revealed by excavation.

ACKNOWLEDGEMENTS

It is a pleasure to acknowledge the help and support, with every aspect of the work, given by Mr A Corney, of the Cumberland House Museum, Portsmouth, back in 1954. His interest and enthusiasm, following upon the material brought to him, by Mr S Mott of Fleet End, Warsash, the gravel-excavator driver, secured the excavation. Indeed, whenever his duties allowed him, he worked on the site and it is undoubtedly due to his genial cooperation that so much was done in the time available.

Permission to excavate was given by Messrs F Dyke of Fareham, the pit operators, and the work was carried out under the supervision of the present writer by workmen supplied by Southampton building contractors. Bernard Roud and John Sutton, then lately of King Edward VI School and about to go up to the University of Keele, were among them and, faced by the situation, they materially assisted with survey, measurement and

the maintenance of records. Colin Morris of Titchfield rendered sterling assistance as did the contractor's foreman of works. The excavation was visited by Dr G C Dunning of the Ancient Monuments Inspectorate of the then Ministry of Works, while Mr J G Hurst was the conduit for the facilities of that body.

Post-excavation work was substantially aided by Richmal Ashbee, who painstakingly check-read the entire text, by Sarah Jennings (Norwich Survey, the University of East Anglia, now the Trust for Lincolnshire Archaeology) who drew the line illustrations of the pottery and other artifacts, by Georgina Shaw (Department of Archaeology, the University of Leicester) who ordered the many boxes of material besides studying pottery, and by Ann J Clark (Inspectorate of Ancient Monuments) who did so much to make the support of the Historic Buildings and Monuments Commission for England effective, rational and congenial.

Henry Cleere (Director, Council for British Archaeology) studied the iron slag, Simon Davis (Department of Zoology, University College, London) the pony teeth, Andrew Fitzpatrick (Department of Archaeology, the University of Leicester) the Deverel-Rimbury and Iron Age pottery, besides documenting the material for storage, Sarah Jennings the post-Mediaeval pottery, Helen Macdonald (Geological Survey and Museum, London) the rotary quern fragments, G C Morgan (University of Leicester) the carbonised wood and charcoal samples and Georgina Shaw the Roman pottery. John A Johnston (Keeper of Archaeology, City Museum and Art Gallery, Portsmouth) combed his records for errant Hook material, while David Ball (Royal Commission on Historical Monuments (England), National Monuments Record, Southampton) provided a wealth of detail pertaining to the Warsash area.

Accounts of excavations, which inevitably involve intricate processual and especial studies, are the outcome of the skilled investigations and aid of contributors and colleagues. Certain formulae sometimes obscure, rather than stress, one's sincere appreciation and gratitude for all that has been done.

REFERENCES

Alexander, J, Ozanne, P C, & Ozanne, A 1960 Report on the investigation of a round barrow on Arreton Down, Isle of Wight *Proc Prehist Soc* 26 263–302.

Ashbee, P 1955 Excavations at Hook in Hampshire, 1954. An Interim Note *Proc Hampsh Field Club Archaeol Soc* 19 70–72.

— 1957 The Great Barrow at Bishop's

- Waltham, Hampshire *Proc Prehist Soc* **23** 137-166.
- 1960 *The Bronze Age Round Barrow in Britain*, London.
- Barrett, J 1980 The pottery of the Later Bronze Age in lowland England *Proc Prehist Soc* **46** 297-319.
- Barrett, J, Bradley, R, Cleal, R & Pike, H 1978 Characterisation of Deverel-Rimbury pottery from Cranborne Chase *Proc Prehist Soc* **44** 135-42.
- Barrett, J, Bradley, R, Green, M & Lewis, B 1981 The Earlier Prehistoric Settlement of Cranborne Chase - the First Results of Current Fieldwork *Antiq J* **61** 203-37.
- Bedwin, O & Holgate, R 1985 Excavations at Copse Farm, Oving, West Sussex *Proc Prehist Soc* **51** 215-45.
- Bökönyi, S 1978 The earliest waves of domestic horses in East Europe *Journal of Indo-European Studies* **6** 17-76.
- Bowen, H C 1961 *Ancient Fields*, London
- Bowen, H C 1978 'Celtic' fields and 'ranch boundaries', in Limbrey, S & Evans, J (ed) *Wessex The Effect of Man on the Landscape: the Lowland Zone*, London, 115-22.
- Bradford, J S P & Crawford, O G S (with Riley, D N & Edwards, D A) 1984 Discovery from the Air by the late Major G W G Allen *Aerial Archaeol* **10** 1-99.
- Calkin, J B 1964 The Bournemouth Area in the Middle and Late Bronze Age, with the 'Deverel-Rimbury' problem reconsidered *Archaeol J* **119** (1962) 1-65.
- CBA 1948 *A Survey and Policy of Field Research in the Archaeology of Great Britain*, London.
- Champion, T & S 1981 The Iron Age in Hampshire, in Shennan, S J & Schadla-Hall, R T (ed) *The Archaeology of Hampshire*, Hampshire Field Club Archaeol Soc Monogr **1**, 37-45.
- Childe, V G 1956 *Piecing Together the Past*, London.
- Clay, R C C 1926 The Woodminton Group of Barrows, Bowerchalke *Wiltshire Archaeol Natur Hist Mag* **43** 313-324.
- Cleere, H & Crossley, D 1985 *The Iron Industry of the Weald*, Leicester University Press.
- Coles, J M, Heal, S V E & Orme, B J 1978 The use and character of wood in prehistoric Britain and Ireland *Proc Prehist Soc* **44** 1-45.
- Corcoran, J Y W P 1952 Tankards and Tankard Handles of the British Early Iron Age *Proc Prehist Soc* **18** 85-102.
- Crawford, O G S 1937 A Minor Earthwork near Warsash *Proc Hampsh Field Club Archaeol Soc* **13** 262-63.
- Cunliffe, B W 1971 *Excavations at Fishbourne*, Soc Ant Lond, Reports of Research Committee **27**.
- 1974 *Iron Age Communities in Britain*, London.
- 1984a Relations between Britain and Gaul in the First Century BC and Early First Century AD, in Macready, S & Thompson, F H (ed) *Cross-Channel Trade between Britain and Gaul in the pre-Roman Iron Age*, Soc Ant Lond Occas Pap new series **4** 3-23.
- 1984b Iron Age Wessex: Continuity and Change, in Cunliffe, B W & Miles, D (ed) *Aspects of the Iron Age in Central Southern Britain*, Oxford Univ Cmte Archaeol Monogr **2** 12-45.
- Cunnington, M E 1923 *The Early Iron Age Inhabited Site at All Cannings Cross*, Devizes.
- Cunnington, M E & Cunnington, B H 1913 Casterley Camp Excavations *Wills Archaeol Natur Hist Mag* **38** 53-105.
- Curwen, E Cecil 1934 A Late Bronze Age Farm and a Neolithic Pit-Dwelling *Sussex Archaeol Collect* **75** 136-70.
- Dalton, O M 1924 *A Guide to the Mediaeval Antiquities and Objects of Later Date*, British Museum, London.
- Davis, S 1980 Late Pleistocene and Holocene equid remains from Israel. *Zool J Linnean Soc* **70** 289-312.
- Evans, J & Limbrey, S 1974 The Experimental Earthwork on Morden Bog, Wareham *Proc Prehist Soc* **40** 170-202.
- Fasham, P J 1985 *The Prehistoric Settlement at Winnall Down, Winchester*, Hampshire Field Club Archaeol Soc Monogr **2**.
- Fitzpatrick, A P 1985 The Distribution of Dressel 1 Amphorae in North-West Europe *Oxford J Archaeol* **4** 305-40.
- Fowler, P J 1981 Later Prehistory, in Piggott, S (ed) *The Agrarian History of England and Wales I*, 1 63-298.
- Fox, C Fred 1935 Salt Works at Hook, Warsash, Hants *Proc Hampsh Field Club Archaeol Soc* **13** 105-109.
- Frere, S S 1983 *Verulamium Excavations II*, Soc Ant Lond, Reports of Research Committee **41**.
- Fulford, M G 1975 *New Forest Roman Pottery Manufacture and Distribution with a Corpus of the Pottery Types*, British Archaeological Reports Brit Ser **17**.

- 1975 The Pottery in Cunliffe, B *Excavations at Portchester Castle I: Roman*, Soc Ant London, Reports of Research Committee **32**.
- Gersbach, E 1974 Ältermittelbronzezeitliche Siedlungskeramik von Esslingen am Neckar *Fundber Baden-Württemberg* **1** 226–250.
- Gingell, C 1979 Dean Bottom, Ogbourne St Andrew; Burderop Down, Chisledon/Ogbourne St George, Department of the Environment Summary Reports *Proc Prehist Soc* **45** 333.
- Grant, A, 1984a Animal husbandry in Wessex and the Thames Valley, in Cunliffe, B, & Miles, D (ed) *Aspects of the Iron Age in Central Southern Britain*, University of Oxford, Committee for Archaeology, 102–119.
- 1984b Survival or sacrifice? A critical appraisal of animal burials in Britain in the Iron Age, in Grigson, C & Clutton-Brock, J (ed) *Animals and archaeology: 4, Husbandry in Europe*, British Archaeological Reports Int Ser **227** 221–227.
- Grigson, C 1981 Fauna, in Simmons, I G & Tooley, M J (ed), *The Environment in British Prehistory*, London, Duckworth, 110–124.
- Harrison, R J 1980 *The Beaker Folk*, London.
- Hawkes, C F C, Myres, J N L & Stevens, C G, 1930. St Catherine's Hill, Winchester *Proc Hampsh Field Club Archaeol Soc* **11**.
- Heidinga, H A & Smink, E H, 1982 Brick supports in the Netherlands (13th–16th century), in Renaud, J G N (ed) *Rotterdam Papers IV*.
- Holden, E W 1972 A Bronze Age Cemetery-Barrow on Itford Hill, Beddingham, Sussex *Sussex Archaeol Collect* **110** 70–117.
- Holleyman, G A 1937 Harrow Hill Excavations, 1936 *Sussex Archaeol Collect* **78** 230–51.
- Holleyman, G A & Curwen, E C 1935 Late Bronze Age Lynchet-Settlements on Plumpton Plain, *Sussex Proc Prehist Soc* **1** 16–38.
- Hooley, R W, Dunning, G C & Tildesley M L 1929 Excavations of an Early Iron Age Village on Worthy Down, Winchester *Proc Hampsh Field Club Archaeol Soc* **10** 178–95.
- Jacobi, R M 1981 The Last Hunters in Hampshire, in Shennan, S J & Schadla-Hall, R T (ed) *The Archaeology of Hampshire*, Hampshire Field Club Archaeol Soc Monogr **1**, 10–25.
- Jewell, P A & Dimbleby, G W 1966 The Experimental Earthwork on Overton Down, North Wiltshire *Proc Prehist Soc* **32** 313–42.
- Lawson, A 1979 A late Middle Bronze Age hoard from Hunstanton, Norfolk, in Burgess, C & Coombs, D (ed) *Bronze Age Hoards: some finds old and new*, British Archaeological Reports Brit Ser **67** 42–92.
- Levine, M A 1982 The use of crown height measurements and eruption-wear sequences to age horse teeth, in Wilson, B, Grigson, C & Payne, S (ed) *Ageing and Sexing Animal Bones from Archaeological Sites*, British Archaeological Reports Brit ser **109** 223–250.
- Millett, M J & Russell, D 1984 An Iron Age and Romano-British Site at Viabes Farm, Basingstoke *Proc Hampsh Field Club Archaeol Soc* **60** 49–60.
- Parkes, A 1945 Recent Discoveries at Warsash *Proc Hampsh Field Club Archaeol Soc* **16** 190–91.
- Peacock, D P S 1971 Roman Amphorae in pre-Roman Britain, in Jesson, M & Hill, D (ed) *The Iron Age and its Hill Forts* Southampton Univ Monogr Ser **1** 161–188.
- 1977 Recent Discoveries of Roman Amphorae Kilns in Italy *Antiq J* **57** 262–9.
- Pitt Rivers, A H L-F 1887 *Excavations in Cranborne Chase I*, privately printed, London.
- 1898 *Excavations in Cranborne Chase IV*, privately printed, London.
- Platt, C & Coleman-Smith, R 1975 *Excavations in Medieval Southampton, 1953–1969*, Leicester University Press.
- Piggott, C M 1942 Five Late Bronze Age Enclosures in North Wiltshire *Proc Prehist Soc* **8** 48–61.
- Piggott, S 1975 *The Druids*, London.
- Sealey, P R 1985 *Amphorae from the 1970 Excavations at Colchester Sheepen*, British Archaeological Reports Brit Ser **142**.
- Smith, M A 1959 Some Somerset Hoards and their place in the Bronze Age of southern Britain *Proc Prehist Soc* **25** 144–208.
- Spinage, C A 1972 Age estimation of zebra *East African Wildlife Journal* **10** 273–277.
- Stanford, S C 1974 *Craft Ambrey*, Hereford.
- Stone, J F S 1941 The Deverel-Rimbury Settlement on Thorney Down, Winterbourne Gunner, S Wilts *Proc Prehist Soc* **7** 114–33.
- Stuart, J D M and Birbeck, J M 1936 A Celtic Village on Twyford Down *Proc Hampsh Field Club Archaeol Soc* **13** 118–207.
- Taylor, C 1975 *Fields in the English Landscape*, London.
- Wheeler, R E M 1943 *Maiden Castle, Dorset*, Soc Ant Lond, Reports of Research Committee **12**.
- Wijngaarden-Bakker, L H 1974 The animal remains

- from the Beaker settlement at Newgrange, Co Meath: first report *Proc Roy Ir Acad* 74C 313-383.
- Williams, D F 1985 Petrological Examination of Amphorae from Colchester Sheepen, in Sealey 1985, 153-66.
- Young, C J 1977 *The Roman Pottery Industry of the Oxford Region*, British Archaeological Reports Brit Ser 43.
- Zeuner, F E 1963 *A History of Domesticated Animals*, London, Hutchinson.

Authors: Paul Ashbee MA D Litt FSA, The Old Rectory, Chedgrave, Norfolk NR14 6ND; Henry Cleere, Director, Council for British Archaeology, 112 Kennington Road, London SE11; Simon Davis, Dept of Zoology, University College, London WC1; Andrew Fitzpatrick, G C Morgan & Georgina Shaw, Dept of Archaeology, University of Leicester; Sarah Jennings, Trust for Lincolnshire Archaeology; Helen A H Macdonald, Petrographical Dept, Geological Survey and Museum, London SW7.

© Hampshire Field Club and Archaeological Society