

# A Dark-Age Settlement at Maxey, Northants.

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## SUMMARY

*A dark-age settlement was discovered at Maxey during gravel-quarrying and partly excavated before destruction to reveal at least seven rectangular buildings ranging from 30 ft. to 50 ft. in length and 16 ft. to 20 ft. in width. They were all of post-hole construction but there were instances of post-holes in trenches, post-holes joined by wall-trenches, and, once, a central beam-slot. Near by were smaller ancillary structures including pits surrounded by post-holes, perhaps storage-huts. Open hearths, pits of various types and boundary-ditches were also found. The pottery was of an unusual type, but the small finds suggest that both it and the settlement are of the middle Saxon period.*

## INTRODUCTION

MAXEY, six miles north of Peterborough and east of Stamford, lies on a broad, low gravel ridge about half a mile south of the R. Welland (FIG. 1). The dark-age site lies between the present village and the isolated church along the ridge to the west.

The Fen Margin Gravels, upon which Maxey lies, are probably later than the last undoubted glaciation of the area. Layers of early neolithic peat have been found resting sometimes, if rarely, on them and they are at a level which would seem to have been habitable since early neolithic times at least. There is no evidence of any significant subsequent change. The presence of clay seams in the gravels leads to drainage impedance producing locally high water-tables and hence a ready water-supply. Drainage at lower levels is made slow overall by the underlying Kellaways Beds and Cornbrash. These facts would clearly have to be taken into account by early builders in considering both stability and comfort.<sup>1</sup> The gravels, perhaps because of their level surface and even grading, give rise to particularly clear archaeological crop-marks, the number and complexity of which emphasize the suitability of the area for settlement.<sup>2</sup>

The distribution of alluvium on the surface geological map (FIG. 1) suggests

<sup>1</sup> These remarks are based on information kindly supplied by Dr. J. E. Prentice, Dept. of Geology, King's College, London, and Mr. L. Biek.

<sup>2</sup> Discussed in *A Matter of Time* (R. Commission Hist. Mons., H.M.S.O., 1960), pp. 33-7.

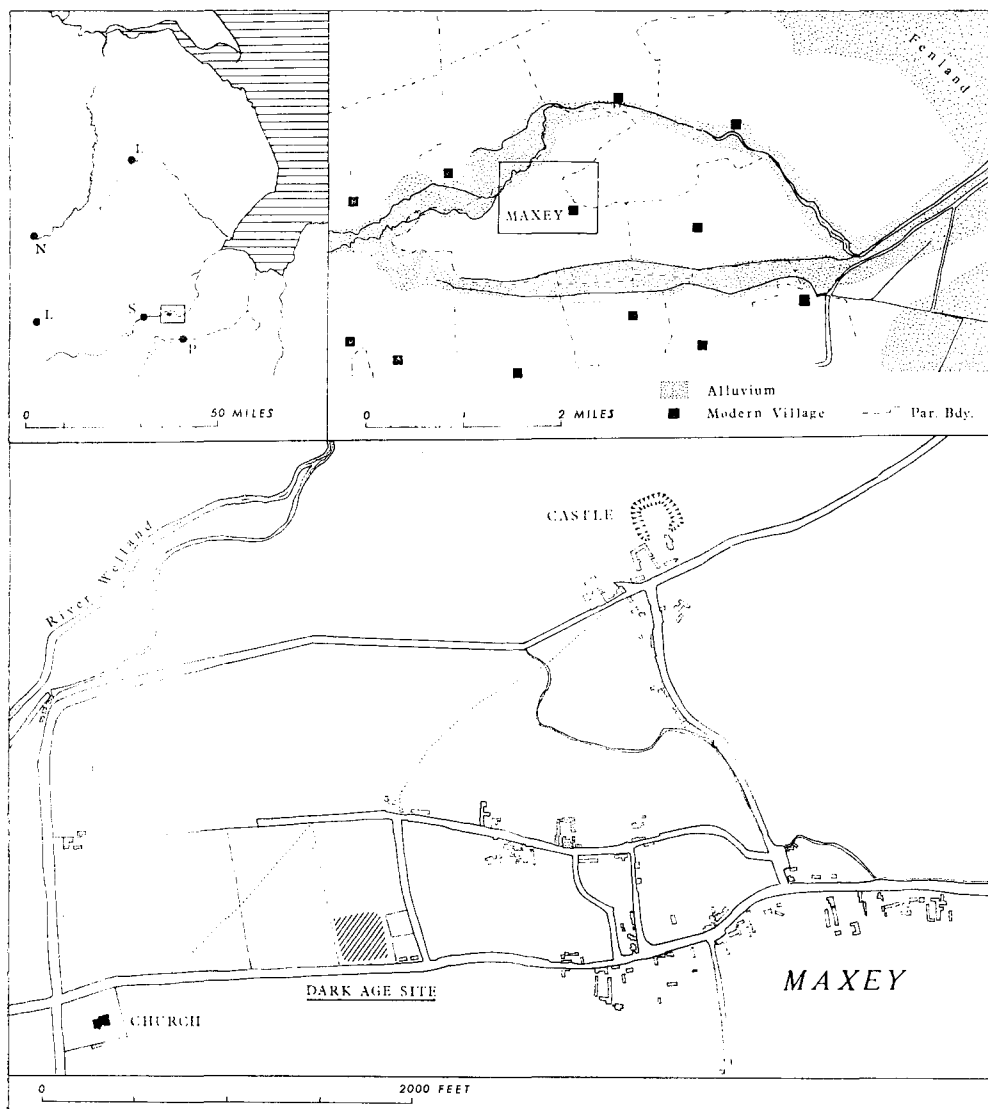


FIG. 1  
MAXEY, NORTHANTS.

Maps showing position of the dark-age settlement. The second map shows Maxey's position as an 'island' surrounded by alluvium (pp. 20 ff.)

a possible topographical explanation for the early form of the place-name, *Macuseige*=Maccus's Island.<sup>3</sup> It emphasizes the former importance of the water-course to the south now rationalized as North Drain which, with the R. Welland to the north, would effectively have rendered the present parishes

<sup>3</sup> Eng. Place-Name Soc., x, *Northamptonshire*, p. 233.

of Maxey and Northborough an island. Archaeological features of all periods recorded by aerial photography congregate upon the 'island' and it is further emphasized by the way pit alignments seem to divide it into three.<sup>4</sup> It is also approximately defined by the present parish boundaries. The dark-age settlement is at its centre and highest point, some seven feet above the surrounding plain.

The settlement was first recognized as a scatter of dark spots, presumed to be pits, on the aerial photograph. These were seen to spread from the site excavated towards the church, though whether any of the extensive crop-marks in this area are Anglo-Saxon can only be settled by excavation. Speed's *Map of Northamptonshire* (1611) shows the present village as *Maxey East* and it is probable that the village had a second nucleus round the church, the presence of a road and wall near which can be inferred from a twelfth-century document.<sup>5</sup> The church contains twelfth-century work and has presumably always been on this site. The village has, however, been where it now is at least since the eleventh or twelfth century, as is shown by finds of Saxo-Norman pottery.<sup>6</sup>

There is no specific reference to Maxey in Domesday Book, as the places forming the demesne of the abbot of Peterborough are not enumerated. Peterborough had held Maxey for some time before the Norman conquest and of the several references in pre-conquest documents those in B.C.S. 1128, *The Gifts of Bishop Aethelwold to Peterborough*, about 963, seem to refer to two manors at Maxey. In a tithe list for six manors in the 'two hundreds out on which Medeshamstede stands' (Nassaborough Hundred) enumerations are given for *Macuseige* and *the other Macuseige*. If these two manors are equated with the present village and the former settlement round the church the excavated site may either be a third manor, or ancestral to both of them.

Danish influence appears to have been strong in Maxey and the surrounding area in the later tenth century, as appears from the personal names of proprietors at Maxey in c.963 (2 English, 2 Danish, 2 probably Danish and one uncertain), and of those who stood surety for them (2 English, 10 Danish, 1 probably Danish, and one uncertain).<sup>7</sup> Evidence for settlement of the local Fen Edge Gravels in the middle and early Saxon period is relatively meagre, but the seventh-century dedication of St. Paega's at Peakirk (3 miles away) and the middle Saxon hut at Castor (7 miles), together with the pagan cemeteries at Woodstone (7 miles), Stamford (6 miles) and Baston (4 miles), indicate that the area, always a preferred one for settlement, was certainly occupied.

Gravel-quarrying has proceeded in the fields north of Maxey High Street since the war. Most of the archaeological features encountered were destroyed without record, but excavation by A. Warhurst<sup>8</sup> showed that monument no. 43<sup>9</sup>

<sup>4</sup> *Op. cit.* in note 2, fig. 6.

<sup>5</sup> *Vict. County Hist., Northamptonshire*, II, 505.

<sup>6</sup> Extensive deposits were found in Stepping Lane by W. G. Simpson in 1962.

<sup>7</sup> B.C.S. 1128. Identifications by J. Braidwood, Dept. of English, Queen's University of Belfast, who notes that two brothers mentioned have English and Danish names respectively, emphasizing pitfalls of the method.

<sup>8</sup> Minutes of the Welland Valley Research Committee.

<sup>9</sup> Monument numbers refer to maps in *A Matter of Time* (*op. cit.* in note 2).

was probably of the early iron age. As quarrying reached the east end of this area (FIG. 1; PL. I, A) pits were encountered which produced early Saxon pottery and a number were excavated by the Peterborough Museum Society and by K. R. Fennell in 1959. Some were thought to be sunken-floored huts of the normal Anglo-Saxon type and in the hopes of finding larger buildings between them what remained of the area in 1960 was, on the suggestion of the Welland Valley Research Committee of the Council for British Archaeology, excavated by the Ministry of Works. An area about 800 ft. by 150 ft. was examined, but attention was concentrated on the southern half of this, where the settlement lay. Topsoil was removed from about 75,000 sq. ft. by drag-line excavator kindly lent by Messrs. Crowson the quarry operators, without whose cooperation such large-scale work would have been impossible. The second natural layer thus exposed, a brown stone-free sandy soil, was skimmed with flat-bladed shovels and repeatedly trowelled. The post-holes, pits and ditches of the settlement were visible at this stage, though often only in certain conditions of light and humidity. They were planned, and excavated by the quadrant technique so far as time allowed. PLS. I, B, and II, A-C, show the excavation after two quadrants of each feature had been removed.

Though it allowed a large area of the settlement to be examined, this technique involved the loss in many instances of the vital few inches below the plough soil in which alone the shallower post-holes could have been found. This is perhaps the reason for the absence of internal structures in the houses, and for the lack of floor-levels, though ploughing may have long since removed these.

### THE 1960 EXCAVATION

In addition to the dark-age settlement the excavation revealed three parallel shallow ditches between 50 and 60 ft. apart containing finds of the twelfth to the sixteenth century. They presumably form part of the open-field system which is at present being studied by W. G. Simpson in an adjacent area on behalf of the Welland Valley Research Committee. The significance of the present find will be discussed in his report.

The area of the dark-age settlement was apparently defined by three narrow ditches to the north, beyond which no features were found. Within the ditches there were six or seven rectangular timber buildings, with smaller structures, hearths and pits around them.

#### STRUCTURE A (FIGS. 2-3; PLS. I, B, and II, C)

Structure A, a rectangular building on a N.-S. axis, was about 48 ft. by 20 ft., and lay at the south end of the area examined. The west side had been completely destroyed by a later ditch. The end walls consisted of circular post-holes; the north wall had seven, grading outwards in size from a large central one, and the south wall six. The precisely set out post-holes of the east wall were regular and oval with their long axes across the line of the wall. The 10-ft.-wide entrance at the middle point was flanked by contiguous triple round post-holes.

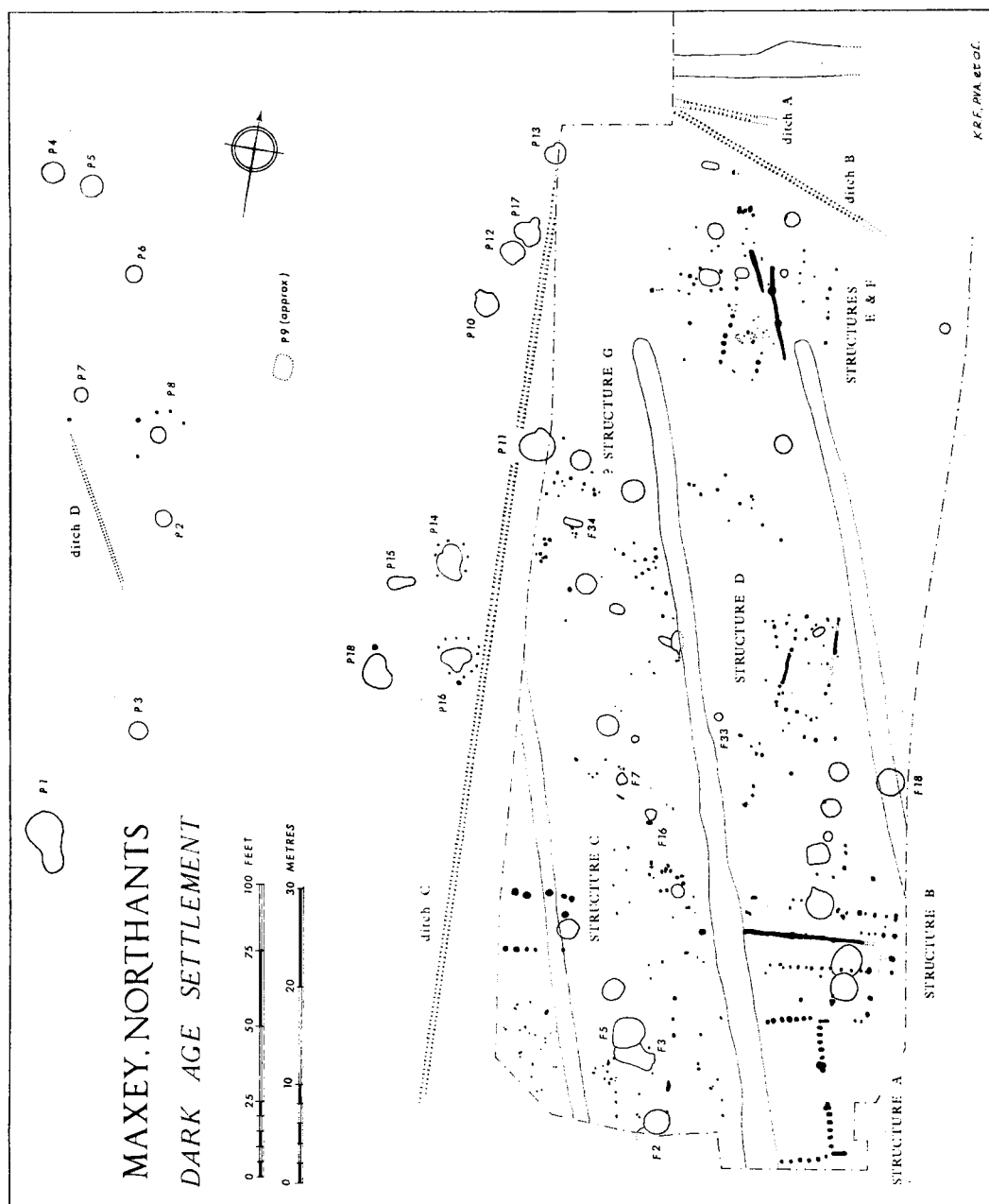


FIG. 2

MAXEY, NORTHANTS.  
General plan of the excavations

In each instance one projected into the entry while two abutted on the wall. Careful excavation of these holes revealed a homogeneous darkish brown stone-free filling with an occasional packing stone, but no indication of the posts themselves. There was no indication that the triple post-holes were other than contemporary. At the two remaining corners of the building, short narrow flat-bottomed straight-sided trenches continuing the line of the end wall, but slightly inside it, were found. Their filling was similar to that of the other post-holes. Of the other post-holes in the area, none seemed necessarily to be part of Structure A.

The only internal features were two short lengths of a narrow straight-sided flat-bottomed trench running parallel to, and about 13 ft. from, the side wall. The trench may have been continuous at a higher level. There was also a stake-hole just within the entrance.

Careful sections were drawn along the wall-lines and through the ditch cutting the building. From these it was seen that the structure must have been at least 20 ft. wide, for, if not, the bottoms of the west side wall posts would have been found. Equally, however, if the large centre-post of the north wall is taken as the centre-line of the building it cannot have been much wider.

There were no finds from Structure A apart from a few specks of charcoal in the post-holes.

#### STRUCTURE B (FIGS. 2 and 4; PL. II, A)

Structure B, also rectangular, and also partly cut away by a later ditch, appears to have been about 50 ft. by 20 ft. It lay about 30 ft. north of Structure A and approximately at right angles to it. The walls were of post-holes, usually round, sometimes rectangular, and occasionally very slight. Running up the centre of the building was a narrow flat-bottomed vertical-sided trench constructed in lengths varying from 7 to 11 ft., the different lengths being indicated by drops in depth corresponding with sudden constrictions and widenings. The trench was interpreted as having held beams varying slightly in width and thickness placed end to end. The beams presumably provided the footings for vertical posts and otherwise unexplained bulges of the trench in plan may indicate the emplacement of two of these. The west end of the building was partly destroyed but from what remained it seemed to have been closed, like the east end, by four large posts. The two remaining at the west end were rectangular, but those at the east were too deeply disturbed by an accommodation-road for the quarry for their shape to be recovered exactly. Within the building at the east end were traces of two large posts, and there was a line of smaller posts running parallel to the central trench from one of the end-posts. Apart from these the only internal features were four irregularly-disposed holes near the centre.

To the south of the building were a number of post-holes, some of which seemed to be part of Structure B, but some, almost certainly part of another structure, were more massive. Of these, one was cut into by a post of Structure B, and all may have been set around either F8 or F10. They presumably represent a small hut earlier than the main building. Structure B was certainly later than

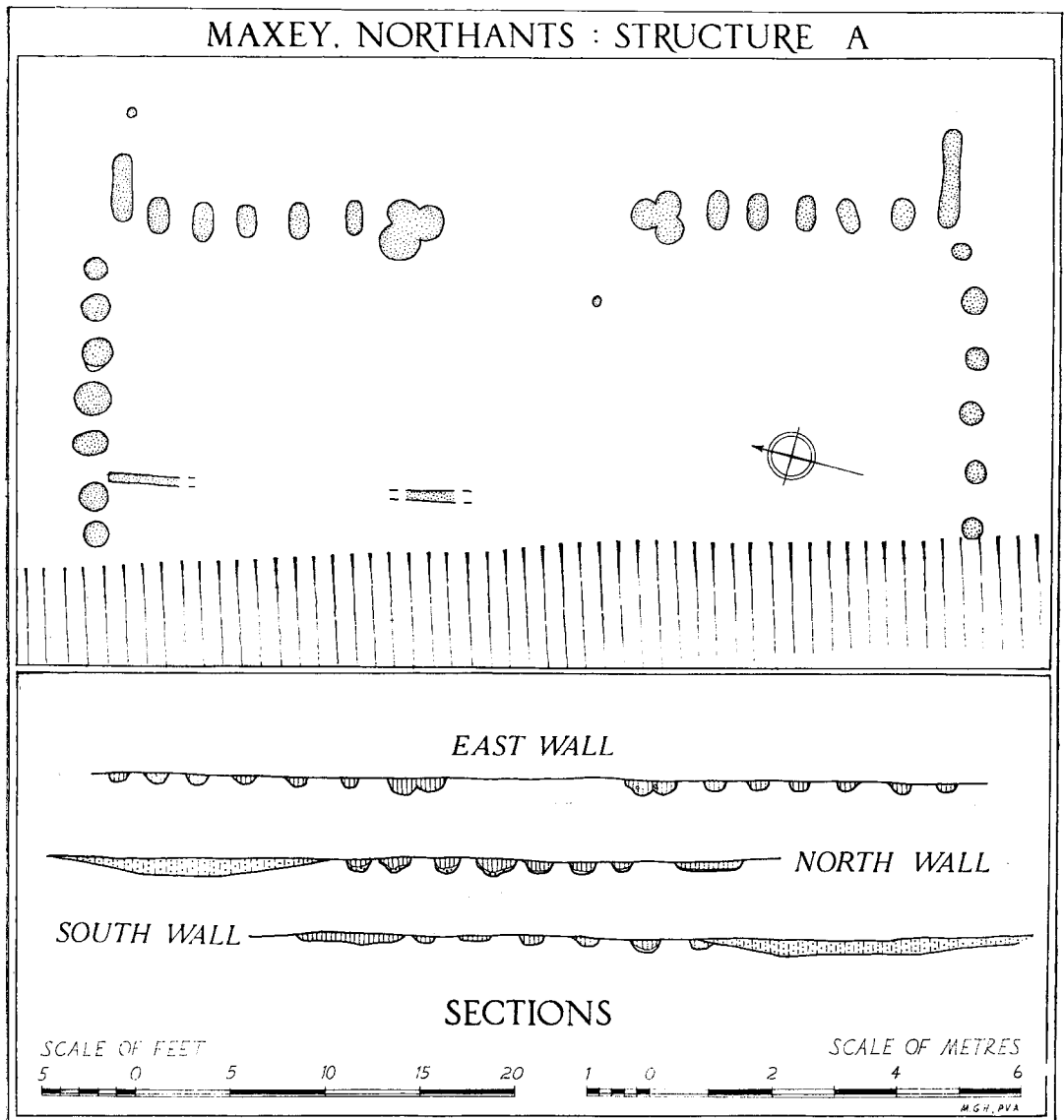


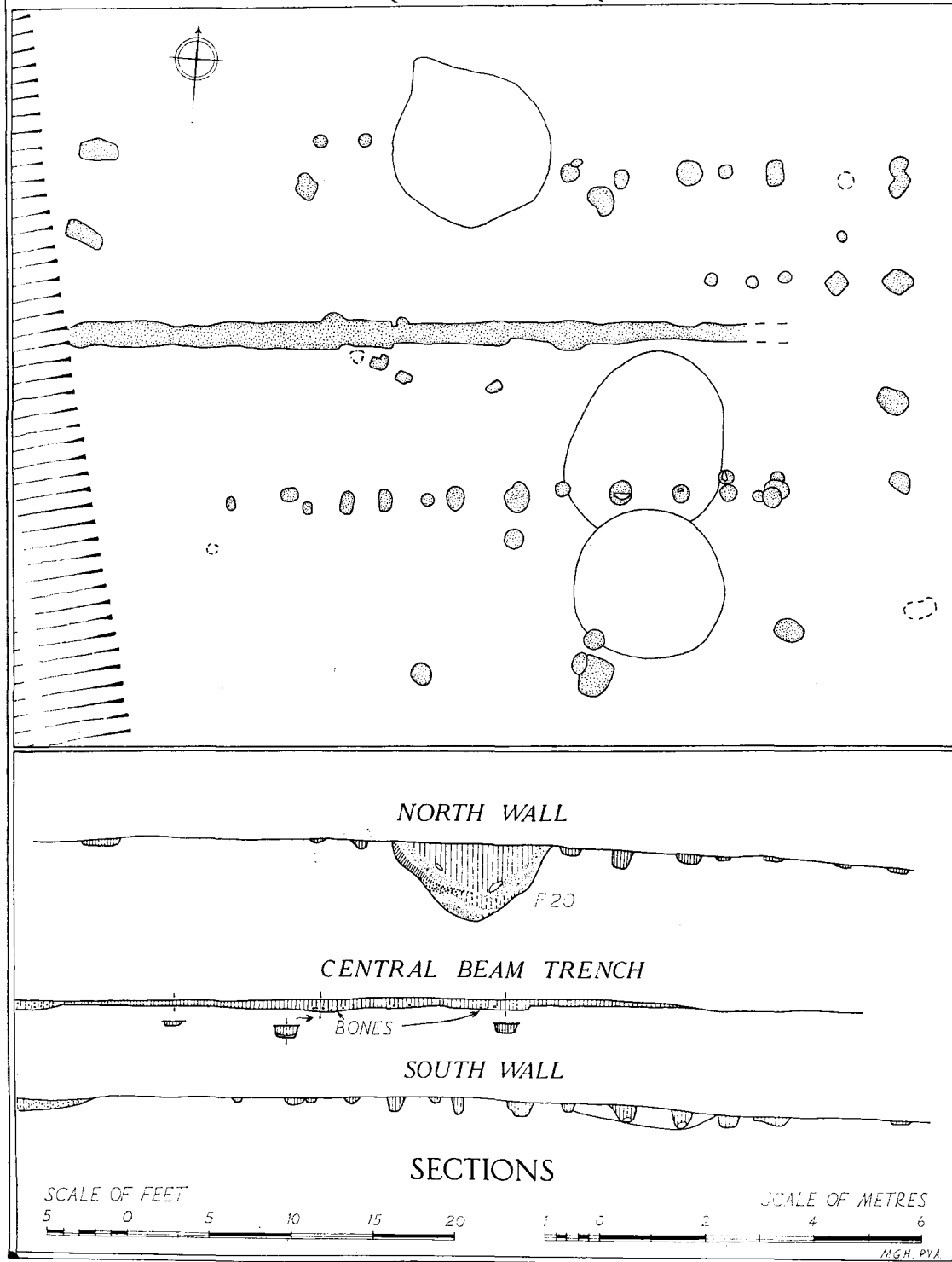
FIG. 3

MAXEY, NORTHANTS.

Plan and sections of Structure A (pp. 23, 25)

pit F10. The builders, presumably having noticed the softness of the ground here, had packed the post-holes with limestone. Pit F20 occurred on the line of the north wall; the dark soil forming its upper filling was identical with the filling of the near-by post-holes and it is questionable whether any post-holes cut into it would have been visible. A most careful search was, however, made for packing

# MAXEY, NORTHANTS : STRUCTURE B





stones or any other indication of posts crossing, and since none was found it is tentatively assumed that F20 was later than the building. Structure B, therefore, is probably earlier than the finds from F20 and later than those from F8. F10

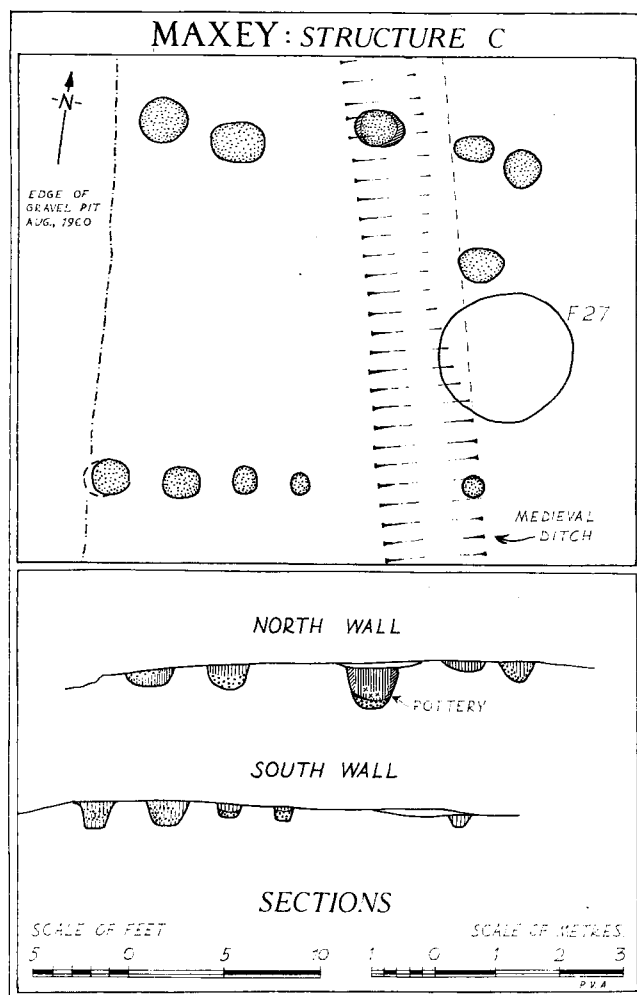


FIG. 5

## MAXEY, NORTHANTS.

Plan and sections of Structure C (p. 28 f.)

contained no finds, and, apart from a number of chopped-up animal bones scattered the length of the central trench, a lava quern and a third-century Roman sherd, nothing was found in Structure B itself.

## STRUCTURE C (FIGS. 2 and 5; PL. II, B)

Structure C, a rectangular building about 20 ft. wide, lay 120 ft. west of Structure B on approximately the same axis, though it seemed unlikely that they

could be part of the same building, partly on grounds of length and partly because of the absence of post-holes between them. The west end of Structure C had been destroyed by gravel-quarrying before the excavation started, and so much of the gravel surface had been removed over the rest of the building that only the bottom of the shallower post-holes remained. In general the oval and circular post-holes of this structure were much larger and deeper than those encountered anywhere else on the site. One of them retained the clay packing for the post, which was thus seen to have been circular and about 2 ft. in diameter. Some of the others would have been commensurate. The fillings of all showed gravel layers in section, presumably representing silting after the posts had been withdrawn. The end wall of the building was partly cut away by a later ditch and partly confused by Pit F27, which had a dip in its filling perhaps attributable to the weight of a post, though no clear indication of a post-hole was found. The disposition of the posts, especially in the north wall, was somewhat irregular.

Small abraded sherds of Romano-British pottery and some specks of burnt clay were found in one of the post-holes.

#### STRUCTURE D (FIGS. 2 and 6)

The roughly rectangular Structure D, some 32 ft. by 16 ft., lay 60 ft. north of Structure B at right angles to it. The walls were basically of post-holes, some squared. In the west wall, however, particularly deep holes had been sunk into the bottom of a narrow trench. The filling of both holes and trench was fairly homogeneous dark soil with some gravel layers in the top. The continuous trench was presumably cut to facilitate the digging of deep post-holes and was back-filled round the posts, though there was no indication of this in the restricted section obtained. At the north end of the east wall two post-holes were also joined by a trench, but this was of different character, being shallow with flat bottom and straight sides, almost certainly for a beam. The post-holes at either end were wider and deeper than the trench, and thus held free-standing posts not mortised into the beam, which presumably took intermediate studs. In the part of the wall adjacent, to the south, a number of small stake-holes were found, perhaps for wattle cladding for the wall.

At the north-west corner the lack of a corner-post and proliferation of posts outside the building is confusing: some sort of porch or annex may be indicated. Within the building here were two rows of small posts interpretable as roof-supports, and in the centre at this end was a small oval pit, F41. The vertical sides of this were bright yellow clay and the filling was of very dark ashy material and included a heavily-burnt stone slab. On top of this were a number of animal bones, potsherds and an egg-shell, apparently unburnt. The feature may have been a hearth, presumably for Structure D in view of its position. Apart from the finds in F41 Structure D produced a sherd of pottery from the east wall-trench, and a bronze pin from the most southerly post-hole of this wall.

#### STRUCTURES E and F (FIGS. 2 and 7)

At least two, and possibly more, phases of occupation are represented by the E-F complex. One consisted of four approximately parallel lines of post-

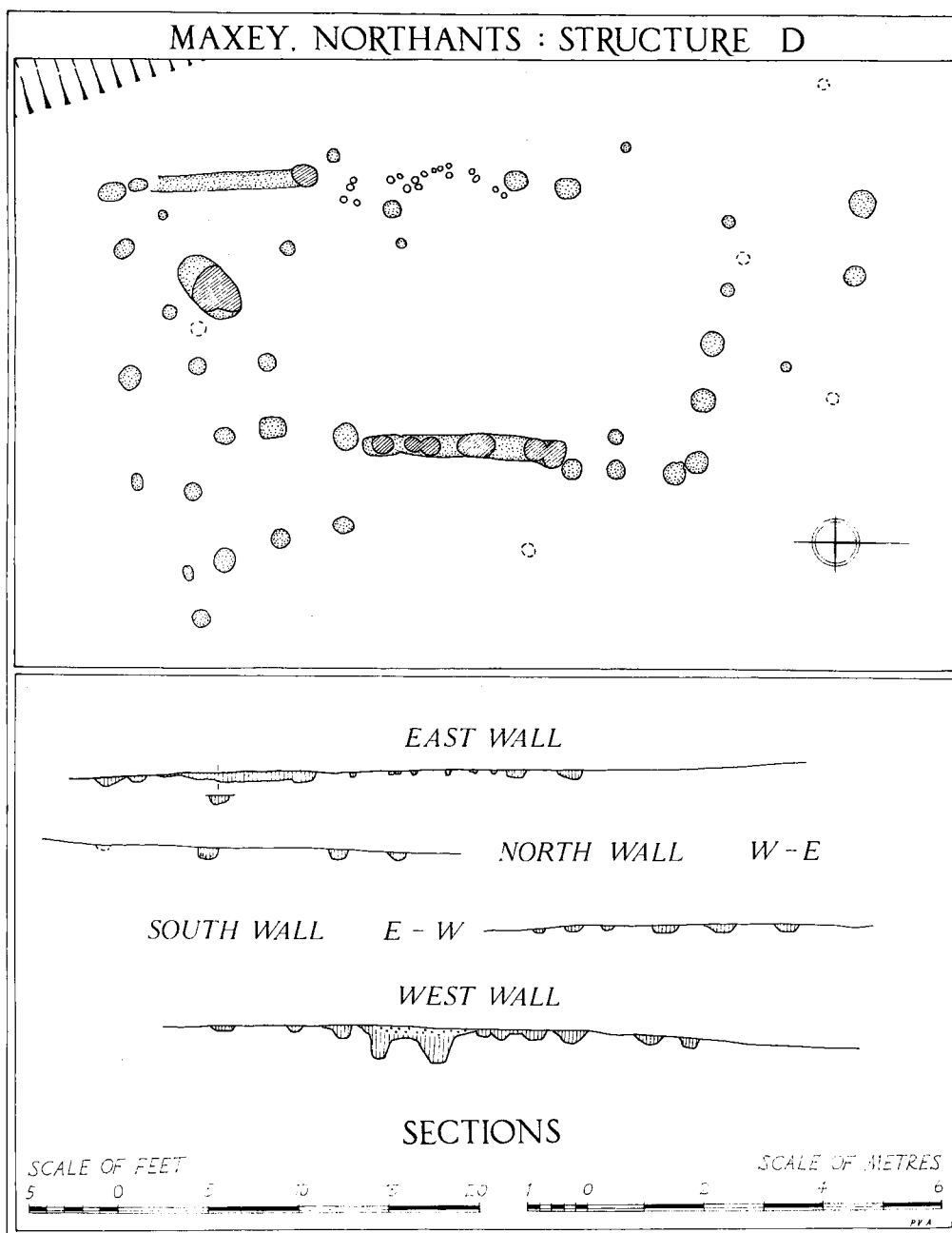


FIG. 6

MAXEY, NORTHANTS.

Plan and sections of Structure D (p. 29)

holes running N.-S., of which the outer were about 30 ft. apart. Of the inner lines the north part of one and the south part of the other were absent. The outer line on the west was of relatively large round post-holes and terminated at

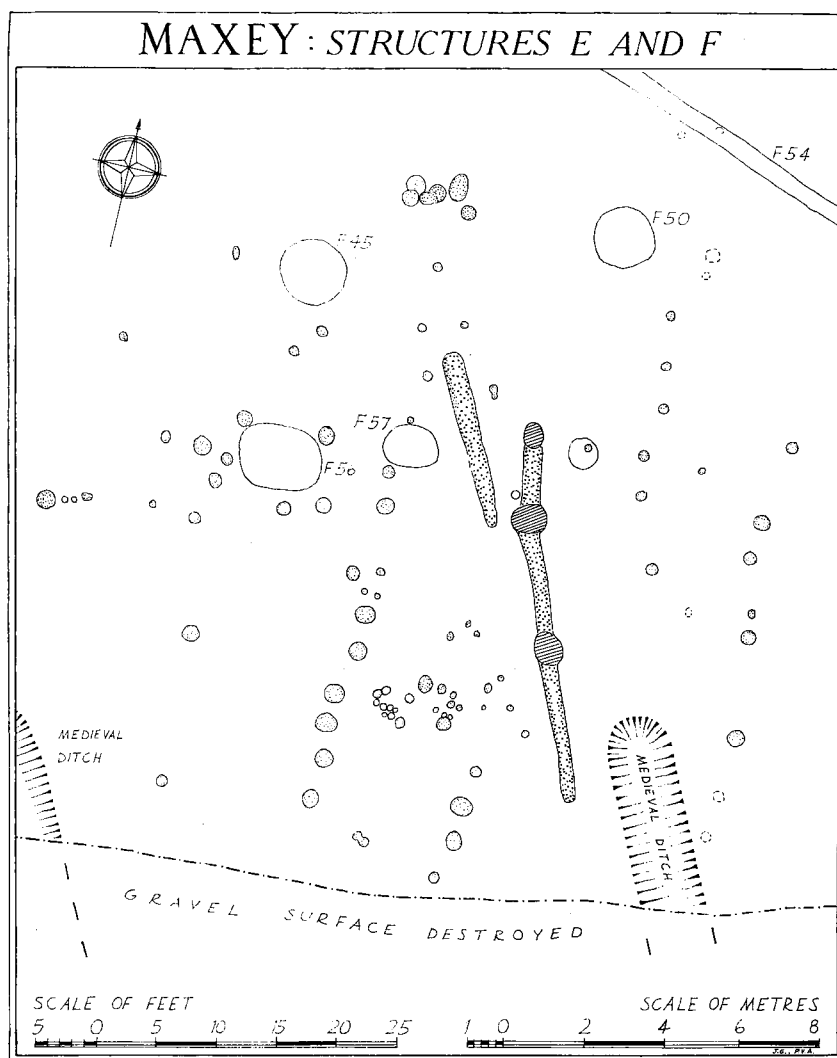


FIG. 7  
MAXEY, NORTHANTS.  
Plan of Structures E and F (pp. 29, 31 f.)

the north in a remarkable group of six large round or oval holes. Since two of these are demonstrably replacements, probably only three of these posts stood at any one time. Within the structure, if such it be, are a number of scattered post-holes including a concentration of stake-holes in its south-west quarter.

Running athwart these post-hole alignments are two flat-bottomed trenches, one being in three lengths separated by post-holes. These features may be the heavier elements of another building of which the lighter did not penetrate to the level examined. They provide another instance of the technique noted in Structure D, of post-holes with a wall-trench between.

Some of the other post-holes in the area of Structures E and F may be related to Pit F56, apparently a covered storage-hut.

#### STRUCTURE G (FIG. 2)

About 65 ft. south-west of Structures E and F were seven post-holes making a right angle, some 25 ft. from which were two groups of three post-holes reminiscent of those flanking the entrance of Structure A. 'Burnt daub' was found in their dark charcoally fillings. Between the corner and the post-holes was a deep vertical-sided shaft, F34, also containing charcoal and daub. Similar triple post-holes and shafts have been found on other Anglo-Saxon occupation-sites, and they are here seen to be part of a rectangular building, though their specific function cannot be established. All trace of the lighter elements which would presumably have completed the plan has gone.

#### OTHER POST-HOLE CONCENTRATIONS (FIG. 2)

Post-holes which formed no clear structure were found in all parts of the site. It is possible that when comparable sites are excavated the function of some groups will be recognized, and attention is here drawn to four particular concentrations. South of Structure C and the near-by pits was a scatter of post-holes in which at least one alignment and a possible corner can be seen. They may be part of a light building, or of a rack. To the north-east of Structure C was a close grouping of post-holes around an area of heavily-burnt gravel. Samples of the gravel tested at the Cambridge laboratory for remanent magnetism proved to have been insufficiently fired to give results. East of Structure G was a group of substantial and regular round post-holes. Some of these formed an obtuse angle and may have been a drying rack. Finally to the south of Structures E and F an extended scatter of round post-holes occurred. Any or all of these groups may be part of quite large buildings, but if this is so the settlement would lose its present aspect of spacious and complementary planning.

Five huts approximating to the sunken-floored type are described below (p. 36) in the section on pits.

#### THE PITS (FIGS. 8-10); PL. III, A)

55 pits were examined, 33 during the Ministry of Works excavation (numbers prefaced by F) and 22 during the earlier work (numbers prefaced by P). They fall broadly into four types and a fifth miscellaneous group.

*Type I.* These were circular or oval pits of U-shaped profile, occasionally with a slight step in the side. The range of depth and size is shown in FIG. 8. These pits were usually filled with layers conforming approximately to the sides,

containing various proportions of brown humic soil, sandy soil, clayey material and gravel. Many had a 'clayey' layer, sometimes bright yellowish brown, near the base and sides. The gravelly layers tended to occur near the base and were sometimes direct slips from the sides. The dark humic soil occurred higher up the fillings, often in a deep hollow in the top, where it was often stone-free. Most pits contained a small amount of domestic rubbish, bones, ironwork, pottery, lava and limestone fragments. If these occurred in recognizable layers they were usually near the top of the pits, and very limited in extent. Sometimes, however, finds were distributed throughout.

Sections of F2 and F18, both pits of type I, are shown in FIG. 8. In an attempt to establish the origin of the clay layer found near the base and sides of some pits a mechanical analysis was carried out on samples of various layers in these two pits. Three possible sources were considered: as intentional clay lining, as slip from the natural second layer below the topsoil, and as the result of natural *levissage* or leaching from the overlying layers after the pit was filled. The results (pp. 65 ff.; FIG. 18) were inconclusive, though the material seems unsuitable for an intentional clay lining. The layers in the pit bottom, damp on discovery and considered on inspection to be clayey, were shown in fact to contain less clay than some others. There was no clear indication of enrichment with fine clay either in these or in layers higher up such as would occur after *levissage*, though this cannot be ruled out without further analysis, and a hypothetical situation is suggested, in the report on soils, in which some separation might have occurred (p. 68).

The mechanical analyses also show that there is nothing in the pit-fillings to suggest they could not have been derived from the surrounding topsoil, second layer, or gravel, or a mixture of them. This, and the conformation and order of the layers, make it likely that the pits were left to silt up naturally when disused; the lack of finds in the predominantly gravelly lower layers suggests a rapid primary silting, and the occasional rubbish layers in the top ones are such as accumulate in suitable hollows. The pits thus seem to have been dug and left open. Except for the specialized P1 (FIG. 9) and P14 (FIG. 10) they do not seem to have been lined. Without this the sides were probably too unstable for use as storage-pits, for which purpose some would have been too damp; moreover there was no trace even in those where bark had been preserved of anything having been stored. They can scarcely have been wells, as some did not reach the water-table, which iron pan deposits suggest has not been above its present level, and the fillings were clearly not laid down in deep water. The nature of the fillings also suggests they were not dug primarily as rubbish-pits or latrines though clearly rubbish accumulated in them. It may be, therefore, that the pits were not dug for use in themselves, but to provide soil and gravel perhaps to build banks, or even house platforms (but see p. 68). A similar suggestion has been made<sup>10</sup> to explain the pit alignments which abound in this area, and in the 'aligned' pits, F20 to F23, the gravel constituent of the filling appeared to have come predominantly from the east, where it may have been piled in a bank.

<sup>10</sup> *Op. cit.* in note 2, p. 28.

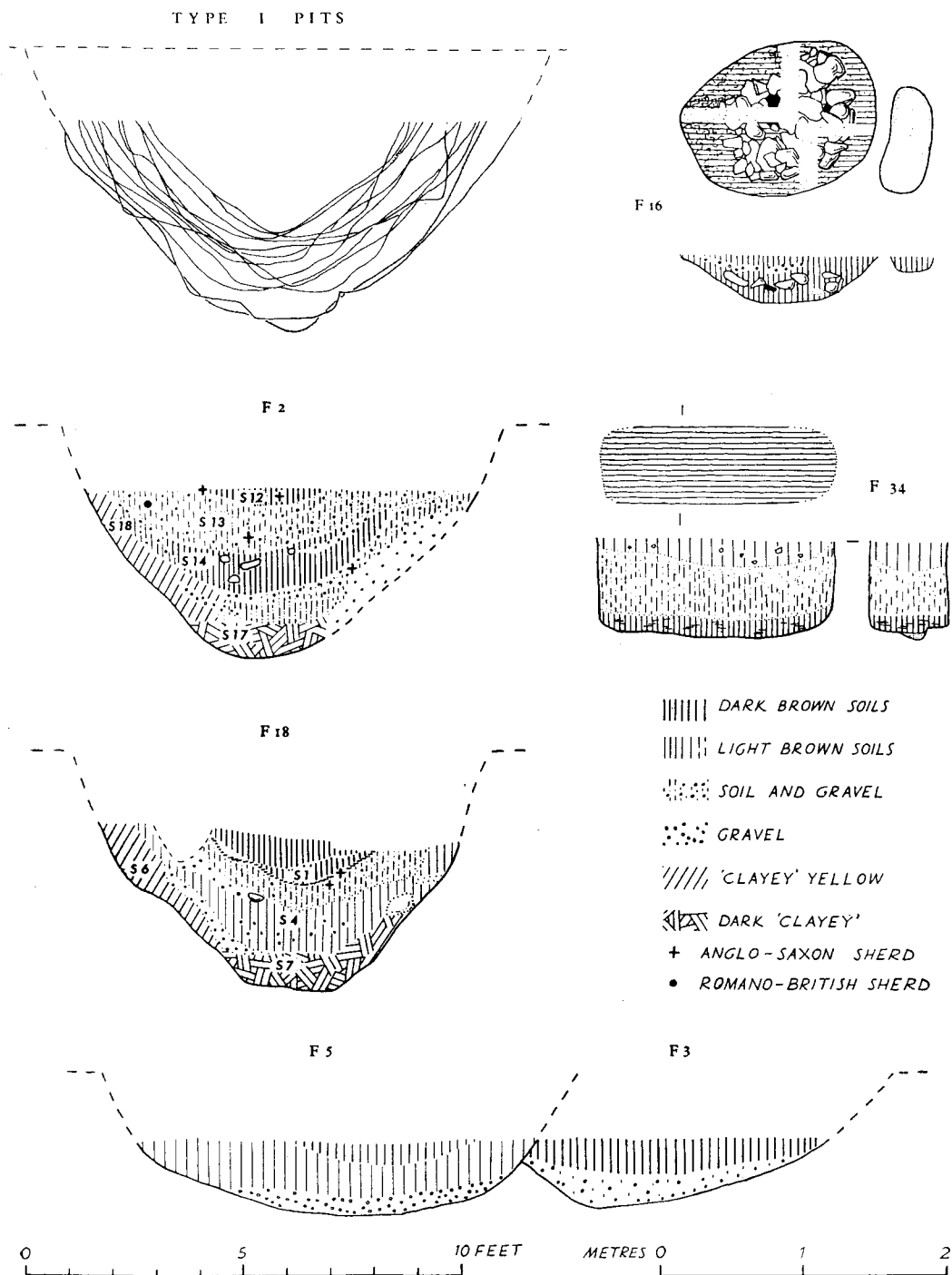


FIG. 8

MAXEY, NORTANTS.

Superimposed profiles of some type-I pits, and sections of pits, showing examples of type I (F2 and F18), type III (F3 and F5) and type V (F16 and F34, with plans) (pp. 32 ff., 65 ff.)

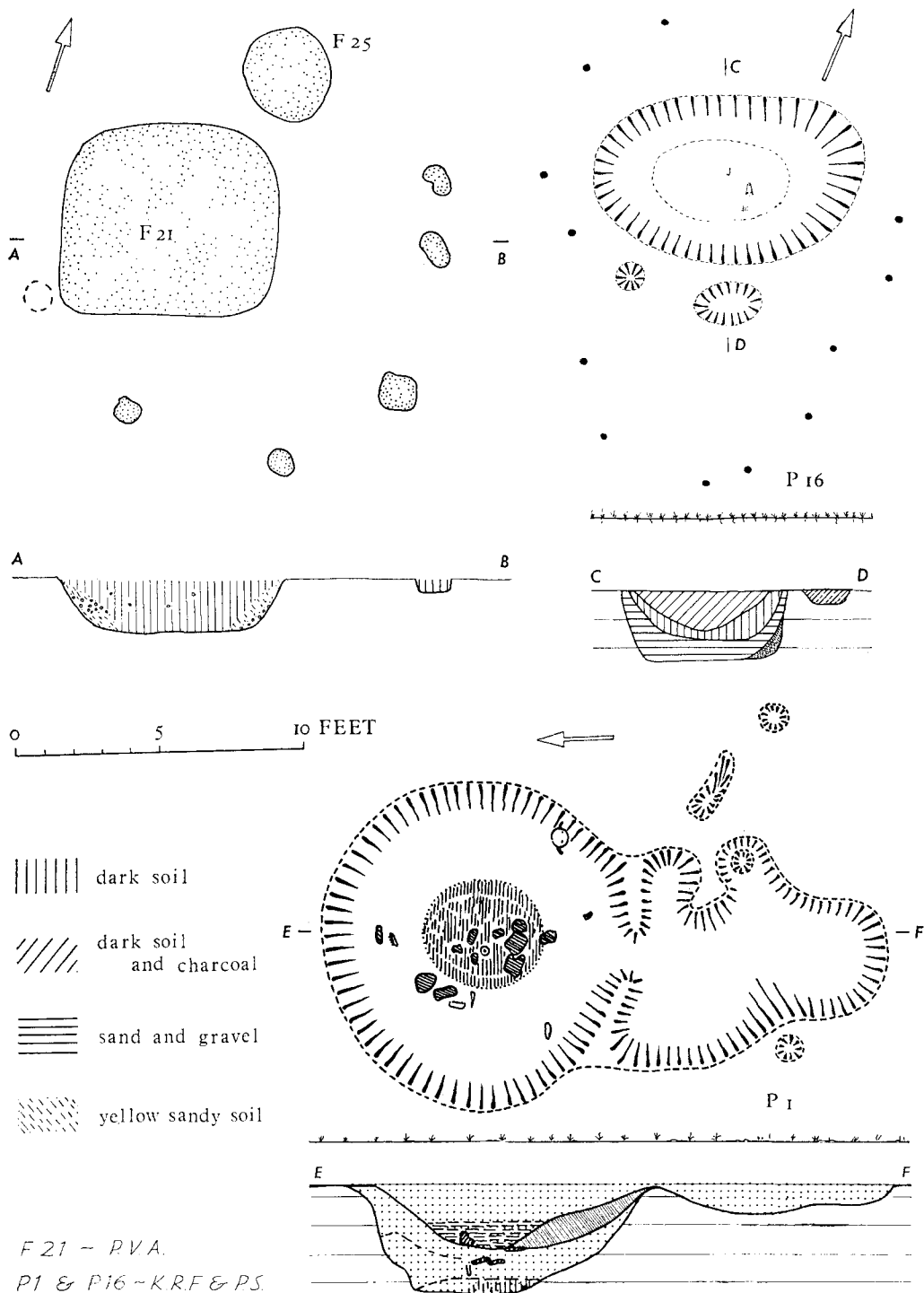


FIG. 9

MAXEY, NORTHANTS.

Plans and sections of type-II pits (F21, P1 and P16) (pp. 36, 38, 40)



No such banks and platforms except that associated with F49 were noticed before excavation, though they may have been ploughed away.

F12 was provisionally included among type-I pits though it had a wider and shallower profile, with filling-layers nearer the horizontal, and with Anglo-Saxon pottery of an early type. It was the only pit which even approached the norm for a sunken-floored hut.

P2, a type-I pit, produced a characteristic sherd of Fengate iron-age pottery,<sup>11</sup> and it seems thus possible that other type-I pits may belong to the early iron age.

Fifteen pits fell clearly into type I, with six approximating to it.

*Type II.* These were sub-rectangular or oval pits with post-holes around them, or wicker structures within. Two, F21 (FIG. 9) and F56 (FIG. 7), were sub-rectangular with flat bottoms and vertical sides, and were 2 ft. deep from the gravel surface. Their fillings were of even dark brown loam with some sand and gravel, and in F56 charcoal, near the base. Neither had a recognizable floor-level and there were very few finds. In F21 the post-holes, though up to 8 ft. away from the pit, appeared to follow its south and east sides. The substantial post-holes around F56 were set more closely in relationship to it with a possible entrance at the south-west corner; some or all of them, however, may be part of the adjacent Structures E-F. The similarities between F21 and F56 suggest that they represent a type, perhaps of small covered cellars for the storage of commodities of which no trace remains, and which did not necessitate a trampled floor-level.

A setting of post-holes earlier than Structure B at its south-east corner appears to be related to F10, otherwise a pit of type III, or possibly to F8, otherwise a type-I pit.

*Type III.* These were oval or circular pits never deeper than 2 ft. from the gravel surface, with gently sloping sides and fillings of fine brown sandy soil somewhat like the natural second layer, but sometimes rather darker. Some pits had small gravel lenses in the filling and all had a gravel layer at the bottom. No pottery, bones or charcoal came from pits of this type in the Ministry excavation but examples in the earlier excavation did produce bones and other finds. This, and the consideration that F5 and F3, both of this type (FIG. 8), intersected (F5 containing a nail) demonstrates that the features are not natural, as seemed possible.

Eight pits clearly fell into type III and seven approximated to it.

*Type IV.* These were small oval or amorphous pits with fairly upright sides, scooped bases and a maximum depth of 1½ ft. They were filled with ashy soil varying from dark to light grey consisting partly of calcareous tufa (p. 68) containing charcoal, burnt stones, pottery, bones and small finds. The sandy soil around them was more yellow than usual. These small pits may have been fire-pits either within buildings, F41 in Structure D, or without, F7 and F15.

There were three pits of this type, with traces of two or three other open hearths.

<sup>11</sup> See p. 39 below; similar pottery from Fengate, Peterborough (*Archaeol. J.*, c (1943), 197, fig. 1, A 2) was found with a swan-necked disk-headed pin.

*Group V.* These were miscellaneous in type. F16 (FIG. 8; PL. III, A), round-bottomed and oval, 5 ft. long and 1½ ft. deep, contained a large number of limestone pieces, some burnt, fragments of lava and of Roman *tegulae*, and light brown soil. The function of this pit is obscure, but it may have been a soak-away or latrine. All the stones must originally have been brought from some distance though perhaps immediately from a local Roman building.

F34 (FIG. 8) and Post-hole 483 were oval, vertical-sided pits, both 5½ ft. long and about 2 ft. wide. F34 was 2½ ft. deep with a flat bottom and filling of dark soil containing in places much charcoal and some stones and 'burnt daub' fragments. It appeared to be part of Structure G. Post-hole 483 was 8 in. deep and had a brown loam filling. Similar pits have been found on a late Saxon settlement-site at Little Paxton, Hunts.,<sup>12</sup> and the type must have had a specific, but as yet unrecognized, purpose.

F33 was a circular shaft, 3 ft. in diameter and 2 ft. deep, with charcoally dark soil at the top and brown soil beneath. It was perhaps a large post-hole, but it seems to be isolated from all structures on one side of an open area. Though single large post-holes have been considered from their position to have held standards at the Anglo-Saxon royal palaces of Yeavinger and Cheddar and T. C. Lethbridge has suggested that maypole sites might be recognized archaeologically, there is nothing to confirm a special function for F33.

#### THE DITCHES (FIG. 2)

Three ditches were found to the north of the settlement of which the outer, very shallow and wide, was probably part of the open-field system. Ditch A to the south of this was apparently the E.-W. element of the R.C.H.M. crop-mark no. 57. Before excavation a marked eminence was noticed running across the field approximately on the line of this feature, and in the plough furrows a distinct line of lighter gravel was seen. These features may have indicated a bank. The ditch itself was of U-profile, 4 ft. wide and 2 ft. deep, with a dark soil filling. Ditch B, to the south of Ditch A, was more a narrow V-profiled soil-filled trench about 1 ft. deep; it approached Ditch A at an angle. These two ditches seem effectively to define the northern limits of the site, and the aerial photograph (PL. I, A) shows that most of the pits destroyed before excavation were within the extension of Ditch A. It seems probable that this was a bank and ditch and the less substantial inner ditch may have been part of some other system of definition. Ditches of both types were found defining enclosures and a driveway at the late Saxon settlement at Little Paxton, Hunts.

The N.-S. element of R.C.H.M. 57 was found during the earlier excavations, together with a short stretch of ditch to the west of it (Ditches C and D, p. 38). Ditch E is visible on the air-photograph some way to the west and, though the ditch was destroyed before the excavation began, its section was recorded in the quarry face.<sup>13</sup> The east ditch of the enclosure, also visible on the air-photograph

<sup>12</sup> *Proc. Cambridge Antiq. Soc.*, forthcoming.

<sup>13</sup> This section and other records, published and unpublished, are deposited with the Ministry of Public Building and Works, London.

straddling the road some way to the west, was sectioned where it was still preserved near the hedgerow. A broad irregular ditch about 3 ft. deep was revealed with pottery similar to that from the early Saxon pits in its upper levels; the enclosure itself could be earlier.

## THE 1959 EXCAVATION

*By K. R. Fennell*

The original investigation of ditches and pits to the west of the main excavated area was made after topsoil and subsoil had been removed by drag line, in the interval available before the features were destroyed by getting gravel, by temporary lorry tracks or by dumping gravel. Often the upper layers of the features had been destroyed leaving only between 7 in. and 12 in. of depth in some pits and obliterating post-holes and other features seen later in the adjoining upper levels.

To the east of the pits was a long ditch (C) running north and south, on the line of which P11 and P13 impinge (FIG. 2). Of a shorter ditch (D) to the west only some 50 ft. remained; it was 2 ft. wide at the gravel surface with V-shaped sides and a dark clay filling 12 in. deep.

P1 (FIG. 9) was an exceptional feature consisting of a circular pit between 10 and 12 ft. in diameter and 4 ft. deep. To the south was a shallow oval extension 9 ft. long. The pit may have had at least two periods of use, the first for storage of clay and the second possibly for some domestic purpose during which the southern portion may have acted as an annex or entrance with which at least three large post-holes were associated.

The circular pit was full of rich dark soil containing much charcoal and burnt matter, particularly at the centre in the upper levels. Quantities of animal bones, mainly ox and sheep, were found throughout, together with sherds of plain Anglo-Saxon cooking-pots. A number of large, flat limestone slabs were also in the centre of the pit. The south-west quadrant had a layer of reddish gravel sandwiched between layers of the dark filling as if some intermediate silting had taken place from this direction between two periods of occupation, although similar pottery was found at upper and lower levels. In the upper layers a bone needle, 4½ in. long and pointed at both ends, was found (FIG. 16, no. 21). The lowest levels, below the water-table at the time of excavation, contained sherds of plain cooking-pots, and many wooden fragments, including a short length of a silver birch post, 2 in. in diameter and about 2½ in. long, and portions of twigs and stakes together with some fragments of what appeared to be part of a wooden handle. In the centre of this area was a very dark clay filling with some carbonaceous matter and from the length of the twigs, which were not above 3 in. in length, it seems possible that at this lowest level a puddling-hole with walls of interlaced twigs may have been constructed for the storage of clay in a condition fit for use—a comparable example, P14, is discussed below. The extension to the pit had a clean dark filling which was sterile apart from a small group of sherds at about its middle point.

P2-8 are all circular pits of type I and are not remarkable except that P2 produced several contiguous sherds of the upper part of a Fengate iron-age-A type urn with a finger-nail decorated cordon.

P9 also appeared exceptional but was not investigated before destruction. It was sub-rectangular in plan and had a burnt area at the southern end with a large fragment of plain black cooking-pot of Saxon type. This pit may have been

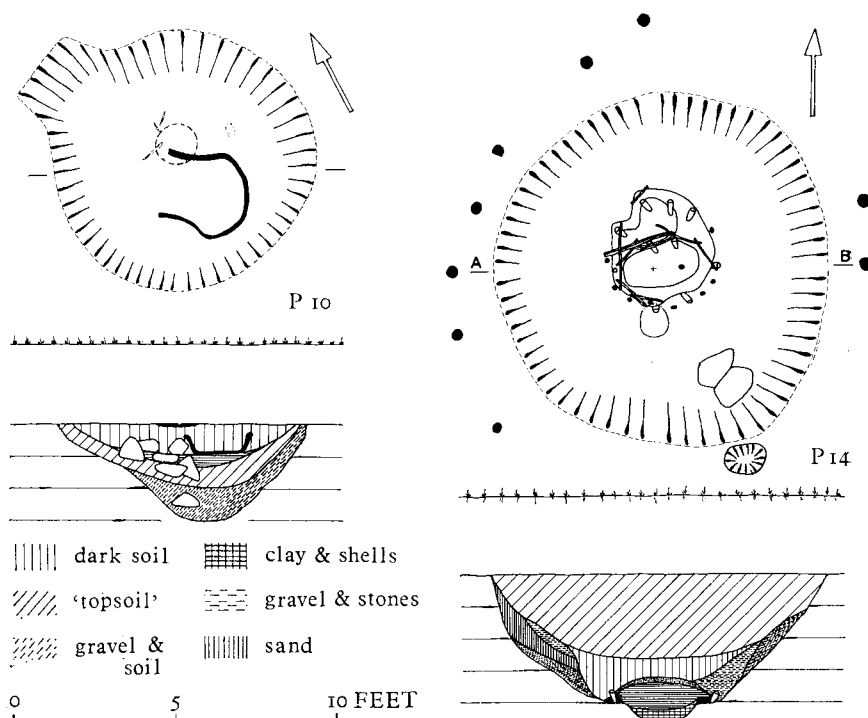


FIG. 10  
MAXEY, NORTHANTS.  
Plans and sections of pits P10 and P14 (p. 39 f.)

roofed, since there was some evidence of stake-holes along the edges of the pit in the dark filling.

P10 (FIG. 10) was a pit of type I, 8 ft. in diameter and 3½ ft. deep. It contained much domestic rubbish including large fragments of burnt clay, perhaps part of a kiln structure, which had been disturbed and were not *in situ*. The upper layers contained much burnt wood and stone with potsherds, a fragment of a bone comb and an iron knife. Many animal bones, slag and charcoal were also present.

P11 was oval in plan, 12 ft. by 10 ft. and 3 ft. deep. The domestic rubbish in it included mainly Romano-British tile and pottery fragments and bones, including the skull of a dog.

P12 was circular in plan, 8 ft. in diameter and 3 ft. deep, and was also

largely filled with domestic rubbish and animal bones, including the skulls of two oxen and one bone needle similar to that recovered from P1.

P14 (FIG. 10) was an irregular oval in plan, about 12 ft. by 10½ ft., and appears to have been covered over since there were a number of stake-holes surrounding it with a large post-hole at the south. The pit was deep, its base being 5 ft. below the gravel surface and below the water-table. At the bottom was an oval puddling-hole with sides of interlaced birch twigs, the uprights being between 1½ in. to 2 in. in diameter and about 7 in. long, sharpened to drive into the gravel and interlaced with twigs and branches to form a wicker container. Within this enclosure was a quantity of dark blue clay which had been covered with layers of bark and gravel which had hardened to a crust. The construction and general impression of this pit very closely resemble that in hut XXI at Sutton Courtenay.<sup>14</sup> Throughout the upper filling were fragments of Romano-British tile and pottery, small iron implements and several large sherds of pottery of pinky shell-gritted ware with flat, thinned rims, characteristically a group-III assemblage (p. 49). Half a spindle-whorl (FIG. 15, no. 4) also comes from this pit.

P15 was a small pear-shaped pit 8 ft. by 4 ft. In the upper layers were some fragments of a rough Romano-British amphora. At the bottom of the pit was a small area of burning on the gravel and there were an iron knife and fragments of iron, bronze and pottery of a fabric similar to that from P2, and a spindle-whorl (FIG. 15, no. 5).

P16 (FIG. 9) is the only other pit which demands any notice. It was again oval in plan, about 10 ft. across at its maximum diameter, and contained the usual domestic rubbish including animal bones and a dog skull. It also appears to have been roofed since there were the remains of stake-holes surrounding it together with two larger post-holes immediately to the south.

## INTERPRETATION

### GENERAL

The interpretation of the settlement as a whole turns on how we interpret the associated finds. Group-I assemblages (see p. 48 f.) are evidently of Anglo-Saxon tradition and of late pagan or middle Saxon date, but they largely occurred outside the area in which details of the structures were recovered. Group-II assemblages also exhibit features of Saxon tradition, and are apparently later than group I. These assemblages were rare and although found in the area of the structures do not seem to represent intensive occupation. The group-III assemblages are almost certainly contemporary with the excavated structures; the majority of pits in the excavated area produced this material and occasional finds in the houses and post-holes were comparable. It is doubly unfortunate therefore that the cultural affinities of the material are obscure. It is assumed to be of middle Saxon date in interpreting the structures as a whole, and in alternative working hypotheses it is considered either to be a development from the earlier Saxon material, or a fusion of cultures as a direct result of Danish penetration of the area.

<sup>14</sup> *Archaeologia*, XCII (1947), 81.

The layout of the excavated structures, parallel and complementary, suggests they are in the main contemporary, with a few instances of rebuilding and superimposition. Finds of group-III cultural material west of the excavated area indicate that there may have been further buildings of this date there though they probably did not extend far. The centre of the settlement during the currency of group-I assemblages was also to the west, and the distribution of pits on the aerial photographs suggests that it may have extended at least 600 feet. Such pottery as was recovered from this area is of group I. Doubtless large timber buildings of this phase would have been found had the area been examined before destruction. Group-I material was also found in the upper levels of the rectangular ditched enclosure straddling the road. It is possible that the settlement extends south of Maxey High Street, where a few pits and various complicated crop-marks may be part of it.

If the finds are regarded as a direct sequence, group I followed by group III, the village might be regarded as having had a centre to the west at the time of group-I assemblages, and undergoing a gradual shift eastwards while group-III were current. If the group-III material is, however, regarded as of Danish affinity then the picture might be one of a Danish settlement, initially on the edge of the village, but in time, and apparently fairly quickly, superseding it. Such a situation has been suggested from the historical and place-name evidence for settlements in Danelaw in general, but the suggestion is controversial.<sup>15</sup>

Whatever the cultural affinity of the associated material, the excavated structures seem to represent a large portion, possibly as much as one third, of a dark-age settlement at one period of its life. Unfortunately not enough was recovered to justify generalizations about the plan of the settlement, the functions of the individual buildings, or the system it represents, but a few points seem clear. The buildings in this part of the settlement were ranged round a relatively unoccupied, elongated space where activities, at least those recoverable by excavation, seem to have been limited to the building of small huts, installations, hearths, etc., and the centre of which was completely clear. The interpretation of this space depends on whether the settlement is regarded as a single farm-complex in which each building has an individual function and the space is a farmyard area, or as a village of the later English medieval type, in which each building would be a peasant toft and the space a wide street or green. The former possibility gains support from the apparently specialized plan of Structures A and B, Structure A with its wide door and heavy construction being reminiscent of the later medieval barn. Against this must be set the known size of at least one estate at Maxey in the later tenth century, which consisted of '24 acres of woodland and 22 of arable land, apart from other land held in common'.<sup>16</sup> This is far too small to justify an estate headquarters of this size, though it appears to be about the norm for the area. The settlement is perhaps best regarded as a peasant village with some individual buildings of special function, perhaps communal or manorial.

<sup>15</sup> *Univ. of Birmingham Hist. J.*, VI, (1957-8), 14.

<sup>16</sup> B.C.S. 1128.

It is not clear why the settlement was abandoned. The various structures do not seem to have lasted even their useful life, for there are very few instances of posts being renewed. It seems probable, however, that the settlement was replaced either by one on the site of the present village, or by one in the area of the church, and it will be of interest to see whether excavation in either or both of these areas shows a continuity in cultural material from the present settlement.

The economy of the settlement, as represented by the finds, appears to have been mixed. At least some grain production is indicated by the lava querns. Of the animal bones, cattle and sheep or goat together make up almost three-quarters, in equal proportions. Pig and horse bones are relatively few, but significant. The bird bones suggest supplementation of the diet by wild-fowling, as would be expected on the Fen edge, and egg-shells were also found.

#### THE STRUCTURES

Until the last decade Saxon timber buildings apart from sunken-floored huts and the 'stave-church' at Greensted, Essex, were almost unknown from England, and those excavated since then do not form a good basis for the evaluation of the Maxey structures. The Linford, Essex, settlement is of the fifth century, while the Yeavinger and Cheddar palace-complexes, besides being geographically distant from Maxey, can hardly be typical of vernacular buildings. Nor do the several recently excavated late Saxon timber buildings provide good comparative material, for building techniques were apparently undergoing major changes by this time. This leaves the eighth-century building from Sedgeford, Norfolk, and the Northolt, Middlesex, Saxon hut as the sole comparable structures.

The Sedgeford building,<sup>17</sup> rectangular, 50 ft. long and perhaps about 20 ft. wide, with daub-filled trenches for the wall-footing and a 7-ft. entrance in the side, resembles Maxey Structure A in dimensions and in the position of its entrance. The expanded ends to the wall-trench flanking the door suggest that it had heavy door-posts, but there is no suggestion that these were triple, as in the Maxey building. The wall-construction in the two buildings is different, the Maxey building having closely-set posts, and Sedgeford presumably wattle-and-daub wall-panels in a footing trench. Sedgeford is dated by Ipswich and some Thetford ware, and a bronze pin (from the adjacent cemetery) similar to FIG. 17, no. 2.

The Northolt building,<sup>18</sup> about 16 ft. wide and probably no more than 20 ft. long, is smaller than the Maxey buildings, and with its 'beam-slot' construction does not resemble closely any of the Maxey structures. The use of trenches or slots with slightly larger post-holes at the end is, however, reminiscent of the technique in Structures D and E-F. The isolated groups of three post-holes at Northolt in Period I B (900-1050)<sup>19</sup> are similar to those found in Maxey Structure G, but neither at Northolt nor at Maxey are these readily explained as door-posts (as in Structure A). Triple post-arrangements holding planks are

<sup>17</sup> *Med. Archaeol.*, III (1959), 298.

<sup>18</sup> *Med. Archaeol.*, VI-VII (1962-3), fig. 97.

<sup>19</sup> *Med. Archaeol.*, V (1961), 231.

known from Southampton and Hamburg,<sup>20</sup> though the examples in Structure G have wattle-and-daub in the filling.

These two buildings hardly form illuminating comparisons. Some light, however, is perhaps shed by considering the various constructional techniques used at Maxey, even if close parallels are not forthcoming for the buildings as a whole. Whereas most of the buildings seem to have had walls of individual posts with wattle-and-daub panels between, Structures D and E-F make sporadic use of the variation of this technique in which the wattle panels are set in trenches in the ground, and possibly even in beams. Structure A, however, can hardly have had wattle panels between its closely-set posts and the walls are likely to have been composed entirely of closely-set upright timber, in fact palisade-construction, although the infilling timbers may here have been no more than planks. The posts of Structure A are not set in the continuous trench usual in palisade-construction, but Hope-Taylor has recently pointed out<sup>21</sup> that such a trench is merely the preferable alternative to single post-holes; Maxey might thus be an early as well as a simple example of palisade-construction. A third technique present at Maxey is the use of the ground-sill, present in Structure B not as a wall-foundation beam but apparently as a footing for centre-posts.

Rectangular buildings with post walls and wattle cladding are found in NW. Europe from the early iron age onwards (Feddersen-Wierde, Tofing, etc.<sup>22</sup>) while the setting of wattle panels in trenches is frequent in dark-age buildings, particularly sunken-floored huts (*Grubenhäuser*), as for instance at Bremen-Grambke;<sup>23</sup> in larger Germanic timber buildings, as in the example of the Roman period at Haldern, Niederrhein;<sup>24</sup> and at the Roman fort at Valkenburg (Z.H.), Holland, where examples both with and without sole-plates were found.<sup>25</sup> The technique is still current in Scandinavia in the eleventh century. The use of simple palisade technique much akin to that of Maxey Structure A is seen at Warendorf, Westphalia, in the late seventh- to early ninth-century settlement (building types II and VIII).<sup>26</sup> The more developed palisade technique current in northern Europe and Scandinavia of the ninth and succeeding centuries culminates in the Scandinavian stave-church series of the twelfth century. The use of ground-sills has been noted several times in England in the late Saxon period<sup>27</sup> although less frequently on the continent. In each instance they are used as wall-foundations, and none of the buildings concerned has central elements. Indeed such buildings as Maxey B are also unknown in contemporary continental settlements, though rectangular buildings of similar proportion, in which posts on the centre-line occasionally occur, seem to have a

<sup>20</sup> Southampton: *Med. Archaeol.*, III (1959), 310, fig. 103. Hamburg: R. Schindler, *Ausgrabungen in Hamburg* (1957), p. 49, fig. 13.

<sup>21</sup> *Proc. Cambridge Antig. Soc.*, LV (1962), 18.

<sup>22</sup> W. Krämer (ed.), *Neue Ausgrabungen in Deutschland* (1958), pp. 215-28 and 234-9 respectively.

<sup>23</sup> *Germania*, XXXVI (1958), 206, e.g. hut no. VI.

<sup>24</sup> *Bonner Jahrb.*, CXLIX (1949), 105 ff.

<sup>25</sup> A. van Giffen, *Jaarverslag xxv-xxviii van der Vereniging voor Terpenonderzoek*, figs. 41, 43.

<sup>26</sup> *Op. cit.* in note 23, p. 500, fig. 5.

<sup>27</sup> Old Windsor: *Med. Archaeol.*, II (1958), 185; St. Neots: *id.*, VI-VII (1962-3), 308, fig. 96.



place in the north German *Burgwälle* of the eighth and ninth centuries. The one centre-post at Emsbüren<sup>28</sup> in house A could represent an internal division, but the line of posts in house III at Altencelle<sup>29</sup> are almost certainly roof-supports, and the structure resembles Maxey B in having extra internal posts within the end wall. Although no buildings with centre-posts have been found in the Saxon period in England, it has been suggested by J. T. Smith, in a hypothesis endeavouring to explain a thirteenth-century building with a row of centre-posts at Huttons Ambo, Yorks.,<sup>30</sup> that such buildings should exist. He sees the highland zone ridge-purlin type of roof with king-posts deriving from a primitive type of building with centre-posts. He notes that the Sutton Courtenay huts are basically of the type using ridge-purlin and supporting posts. Maxey Structure B, which is certainly reconstructible as having a ridge-purlin with centre-posts, and apparently of middle Saxon date, would not be out of place in the hypothetical development. Structure A, which was almost certainly trussed, could be reconstructed with ridge-purlin and king-posts to represent a further stage.

Though convincing individual parallels are difficult to find, it is clear that the buildings as a whole do not fall into the long-house class, with livestock and dwelling under the same roof-line, with which is associated in northern Europe the so-called three-aisled plan. They seem rather to belong to a class in which separate buildings have separate functions, and to a system in which multiplication of households takes place. The Warendorf, Westphalia, settlement, and the earlier phases of that at Lindholm Hoje, Denmark,<sup>31</sup> exemplify systems to which Maxey must be related.

#### RECONSTRUCTION OF THE STRUCTURES

The evidence for the reconstruction of the Maxey structures is restricted almost entirely to the ground traces and in most cases several interpretations are possible. Those proffered here (FIG. 11) are tentative in the extreme and are presented largely to stimulate others.

Negative evidence, the lack of nails, building-stone, tiles and slates, indicates timber, wattle, clay and thatch as the main materials. Apart from this the usual series of near contemporary sources, Anglo-Danish hog-backed tombstones,<sup>32</sup> the St. Gall manuscript,<sup>33</sup> and the (later) Bayeux tapestry, have been used to supply details. The reality of the tradition of roofing with wooden shingles apparently shown in all these is emphasized by the recent find of shingles in an eleventh- or early twelfth-century context at Winchester.<sup>34</sup> Thatch is perhaps a more likely roofing material at the Fen edge, and roof-pitches appropriate to this are used, but have been made rather less than the 51° indicated for the

<sup>28</sup> *Germania*, xxvii (1943), 170, fig. 2.

<sup>29</sup> *Germania*, xxi (1937), 118.

<sup>30</sup> *Archaeol. J.*, cxiv (1957), 86-91. Note also the recently excavated building at Chapel Haddelsey, Yorks.

<sup>31</sup> *Acta Archaeologica*, xxviii (1957), 193-201.

<sup>32</sup> *Antiquity*, xxviii (1954), 68-77.

<sup>33</sup> *Brit. Mus., Guide to Anglo-Saxon Antiquities* (1923), p. 90, fig. 109.

<sup>34</sup> *Archaeol. J.*, cxix (1962), 192-4.

tenth-century building with narrower span at the Husterknupp, Niederrhein, by the notched joint discovered there.<sup>35</sup>

*Structure A* (FIG. 11). The interpretation of the corner-slots is basic to the reconstruction. They recall the buttresses found all along the walls of the larger buildings at Warendorf, but they were not exactly opposite, and probably too near, the end walls, and can hardly be so interpreted. In the reconstruction, FIG. 11, they are seen as taking short horizontal beams, the footings for structural timbers. The 20-ft.-wide building is assumed to have been trussed. Taking the corner-slots as the line of the end trusses, and the inner of the triple post-holes flanking the door as the bases for intermediate tie-beams, a three-bayed building with bays of precisely  $14\frac{1}{2}$  ft. each is achieved. The end trusses are seen as long beams, saddle-jointed at the top and into a wall-plate on top of the end-posts, which acts as a brace. The roof-construction is quite hypothetical but could have been of the king-post and ridge-purlin type (see p. 44) shown here, perhaps supported at the ends by the crossed truss, or by additional king-posts on the wall-plate.

The entrance presumably had double doors hanging on jambs represented by the post-holes immediately flanking the door. The remaining triple post-hole, being in line with the side wall, could support the wall-plate.

The spaces between the side-wall posts were about  $1\frac{3}{4}$  ft. and between the end-wall posts from 1 to 2 ft. and seem too narrow to have been filled with anything but vertical planking or timbers.

*Structure B* (FIG. 11). The heavy central beam-trench seems the key to the reconstruction of the superstructure. It presumably indicates a row of central posts, for which several functions are possible, the most likely being as supports for a ridge-purlin. They could, however, merely be central supports for the floor of a loft, as shown here, with joists resting on tie-beams from the admittedly rather light, but approximately paired wall-posts. Almost any roof-structure could follow. The door seems to have been in the end, and if the centre-post/ridge-purlin interpretation is correct the posts within may represent an alternative method of supporting the ridge-pole over it. The side-wall alignments are sufficiently exact to suggest a wall-plate. A fragment of daub in the beam-trench suggests that the walls may have been clad with wattle-and-daub.

*Structure C*. No reconstruction is attempted as there are no clearly indicated possibilities. It is of fairly closely-set post-construction and may again have had palisade-type walls. Some small specks of burnt clay in one of the post-holes may be 'burnt daub', which would, however, suggest wattle walls. There was perhaps an entrance in the north side, where there is a marked kink in the alignment.

*Structure D* (FIG. 11). The structure is so irregular as to make reconstruction difficult. The side walls can, however, be resolved into three straight sections making bays of about 11 ft. Each 'bay' has a post-hole at each corner and seems structurally independent, and it has been thus reconstructed here, which explains

35 A. Herrnbrod, *Der Husterknupp* (Cologne, 1958), p. 141, figs. 68-9.

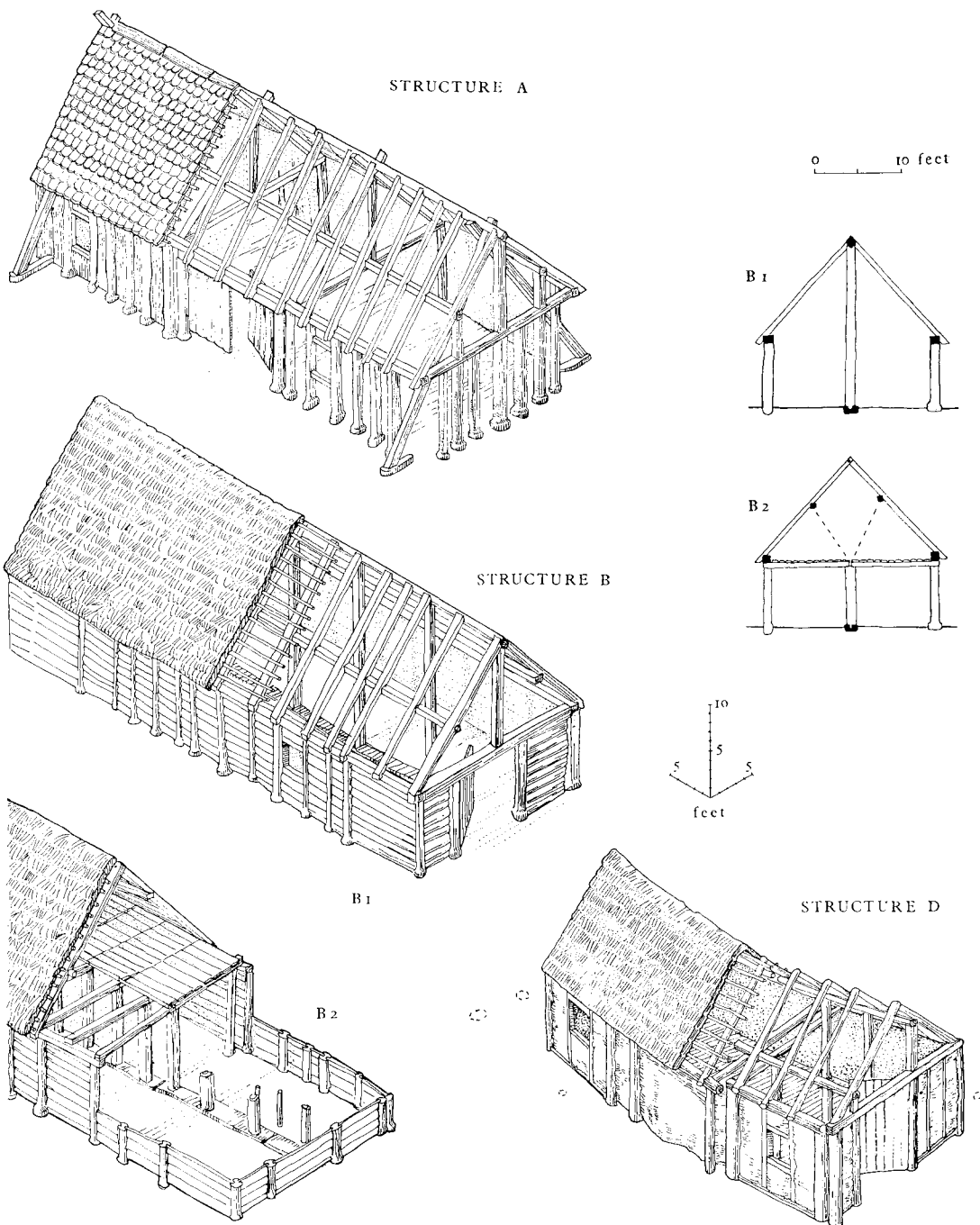


FIG. 11

MAXEY, NORTHANTS.

Reconstructions of Structures A, B and D. In detail most points are debatable; there is for instance no evidence for the use of purlins in early vernacular building (pp. 44 ff.)

the apparently curved walls in the drawing. There is no evidence for the roof-structure, shown here as a simple frame, but the span is not large and almost anything is possible. The walls were apparently of wattle-and-daub, sometimes with a bedding trench, perhaps for a sill-beam taking the intermediate studs.

*Structures E and F.* No reconstruction is possible. One phase had fairly closely-set post walls in some ways comparable to Structures A and C; and the other, post and wall-trench construction as in Structure D.

*Structure G.* The plan is difficult to interpret and no reconstruction is possible. The smaller posts within the wall-line are not found in the other structures, and may be an internal bench, or an internal facing for a thick wall-cladding. The triple post-holes cannot be door-posts in the same manner as those of Structure A, and 'burnt daub' in their fillings suggests they were part of a wattle-and-daub clad wall. Even so the whole complex may not represent a rectangular building at all but various racks and other installations.

## THE FINDS

The pottery and small finds from the settlement came largely from the various pits, mostly pits of types I and IV. Only one pin (FIG. 17, no. 2), a lava quern fragment (FIG. 15, no. 2) and a few sherds were found in post-holes, ditches and other features. Surface collection on the ploughed field before excavation produced only a dozen sherds. An amount of pottery recovered unstratified at various times during quarrying<sup>36</sup> was presumably derived from destroyed pits.

### POTTERY (FIGS. 12-14; PL. III, B)

Most of the Anglo-Saxon pottery was in associated pit-groups, usually with Roman tiles or pottery stratified above, among and below the rest, and showing among themselves a number of marked differences. They have been subdivided into three distinct groups (assemblage groups I-III) on the basis of fabrics and forms, though they are almost certainly chronologically overlapping and to some extent an evolutionary series. All the major pit-groups and some selected sherds are described below.

The pottery, with the exception of the Roman sherds, is hand-made and though almost every piece has its own individuality, seven broad classes of fabric have been recognized.

A. Hard, of uneven texture, harsh within but smooth without, varying in colour from light grey to black, and containing numerous angular grits up to 4 mm. and micaceous particles. The outer surface is usually smoothed by final washing.

B. Hard but not too harsh grey ware with some angular grits though no micaceous or white inclusions; smoothed surfaces.

C. Medium-hard, fairly even-textured and fairly smooth with some white inclusions and some grits; the fabric is tooled on the outside to give the characteristic grey-brown or brown leathery appearance.

D. Medium-hard, or hard, even, though with varying degrees of harshness; there are numerous very small white inclusions, visible, however, only in fracture, as the surfaces are burnished or closely-tooled to give a somewhat shiny grey to black finish.

E. Medium-hard or hard, lumpy, but by no means harsh ware, varying from buff to grey with elongated pittings probably from burnt-out straw-tempering.

F. Much as B, but with more small grits, harsher feel and somewhat pimply surface.

<sup>36</sup> Recovered by Mrs. A. Crowson and Prof. S. S. Frere, who have kindly allowed me to examine it.

G. Hard or medium-hard, very even-textured with numerous white inclusions up to 8 mm., some clearly crushed shells; the fabric has a quite soft and sometimes even soapy feel; the outer surface has usually been carefully finished by washing to obscure most of the inclusions and often to give a very high-quality surface.

Table I, showing the occurrence of these fabrics and associated objects in the various pits, demonstrates that fabrics A-D occur predominantly in group-I assemblages, while fabric E occurs occasionally in both groups I and II. Fabric F is characteristic of group II, while in group-III assemblages by far the majority of the sherds are of fabric G. It is significant, however, that in some pits fabric G occurs together with sherds which would otherwise be characteristic of group I.

TABLE I  
Fabrics and associated objects in assemblages of the three groups

Group	No.	A	B	C	D	E	F	G	R/B	Associated objects
I	P1	17	11	2	1	1		1		'thread-picker'
	P20	40	99	8	7	4		1	3	hone
	F12	4	11	7	2					
II	F2		6	1		2	2		3	
	F18						3	2	3	iron hook
	F27						1	1		
III	P15							9	5	spindle-whorl, iron knife, loom-weight, bronze sheet
	P16				2			16		
	F8		3				1	1		loom-weight, hone, 3 knives
	F15							18	5	loom-weight, iron pin
	F20		2					15	5	2 lava querns, bone pin
	F41							10		iron pin

The three assemblage-groups also have their own distinctive pot-forms. Group-I assemblages (e.g. P20, FIG. 12, nos. 1-8; P1, FIG. 13, nos. 17-24; F12 and P9, FIG. 13, nos. 31 and 32) contain:

- (a). Very large cooking-pots with thick walls (up to 1.7 cm.), upright slightly pulled out and usually flattish rims, rounded bodies, flattish bases and rounded basal angles.
- (b). Smaller upright-rimmed cooking-pots with medium to fairly thick walls (up to 1.2 cm.).
- (c). Smaller vessels, including bowls (nos. 5 and 19) and beakers (nos. 6 and 7).

There are no closely-comparable assemblages from Anglo-Saxon domestic sites in the area, and, until even approximately datable local deposits are found, the position of group-I assemblages in the early and middle Saxon ceramic series cannot be established. The bowl (no. 5) and the only decorated pot (no. 6) resemble vessels from pagan Saxon cemeteries,<sup>37</sup> but both are simple types which must have had a long life.

<sup>37</sup> No. 5 resembles a vessel from the Woodstone cemetery in Peterborough Museum; no. 6 has parallels for form and decoration, though not close ones, at South Elkington, Lincs., *Archaeol. J.*, cviii (1952), 25-64.

The unstratified stamp-decorated sherd (no. 16) in a group-1 fabric may equally deserve a date in the middle Saxon period, though superficially having resemblances with pagan material (p. 54). The coarser pottery does not, however, resemble pagan-cemetery material in ware, form or treatment, nor has it close parallels in known Anglo-Saxon domestic sites. Pots almost as large as nos. 1, 2, and 17 were found at the fifth-century settlement at Linford, Essex,<sup>38</sup> (75 miles) and in a sunken-floored hut at Harston, Leics.,<sup>39</sup> (23 miles) assigned to the early Saxon period, but possibly middle Saxon.<sup>40</sup> The assemblage in general resembles less that from Sutton Courtenay, Berks.,<sup>41</sup> (80 miles, early and middle Saxon) than that from Whitby, Yorks., (120 miles, A.D. 657–867) where forms such as 3 and 31, at least, have approximate parallels.<sup>42</sup> Such long-range comparisons are, however, of little value in what is essentially a domestic industry and, until a local sequence is established, the Maxey group-1 assemblages can only be dated by their lack of distinctive early or late Saxon features, making any date between 550 and 850 possible.

Group-II assemblages are less well represented numerically. They are characterized by medium-sized cooking-pots with upright and slightly or sharply everted rims (nos. 25, 27 and 29 respectively). Such rims are familiar from late middle Saxon and late Saxon deposits in the south of England, as at Medmerry,<sup>43</sup> Wareham,<sup>44</sup> Northolt,<sup>45</sup> and Oxford.<sup>46</sup> Here they must have an early rather than late date as in no case were they found with the wheel-thrown late Saxon wares common in the district from perhaps the tenth century. Grass-tempered wares are notably the exception rather than the rule at Maxey though they are frequent into the eleventh century at Old Windsor (80 miles) and Northolt (75 miles).

Group-III assemblages (FIG. 14), coming mainly from pits in and around the excavated buildings, contain a preponderance of medium-sized flat-bottomed bucket- or barrel-shaped pots with flat or slightly flrilled rims, two of which had pierced suspension-holes, one with a slight vertical lug above. Two small vessels of similar form were also found. The pot-forms of group-III assemblages are unusual for the Anglo-Saxon period, and superficially the pots have more resemblance to those of the early iron age, but that they are not of that date is demonstrated by the repeated occurrence of Roman tiles and third-century pottery stratified among and below predominantly group-III deposits, and from the occurrence in them of loom-weights, lava querns, the copper alloy tag, the shears and several of the knives. The three loom-weights found in group-III deposits, all made as rings rather than as pierced disks, approximate to the 'intermediate' form<sup>47</sup> at present considered to be of middle Saxon date. Such a date would also be acceptable at present for all the associated objects. If, as seems probable, all the Maxey groups are late pagan or middle Saxon, it is extraordinary that no wheel-thrown wares of Ipswich type were found, for these occurred in the middle Saxon hut at Castor only 7 miles away.

The two major innovations which distinguish group-III assemblages from groups I and II are the shell-tempered fabric (analyses, facing p. 50) and the flat-bottomed flat-rimmed forms. The fabric has been noted in prehistoric, Roman, early and late Saxon

<sup>38</sup> *Trans. Essex Archaeol. Soc.*, 3 ser. 1, pt. 2 (1962), 36, fig. vi, nos. 15 and 18.

<sup>39</sup> *Trans. Leics. Archaeol. Soc.*, xxviii (1952), 52, fig. 6, no. 1.

<sup>40</sup> *Med. Archaeol.*, III (1959), 17.

<sup>41</sup> *Archaeologia*, LXXIII (1922–3), 147–192; *Archaeologia*, LXXVI (1926–7), 59–80; *Archaeologia*, xcii (1947), 79–93; henceforth referred to as *Sutton Courtenay*, 1, 2, and 3 respectively.

<sup>42</sup> *Archaeologia*, LXXXIX (1943), 77, fig. 25, nos. 10 and 13.

<sup>43</sup> *Antiq. J.*, xiv (1934), 392.

<sup>44</sup> *Med. Archaeol.*, III (1959), 132–3, figs. 48 and 49.

<sup>45</sup> *Med. Archaeol.*, v (1961), 255–6, fig. 66, nos. 2 and 3.

<sup>46</sup> Wheel-thrown pots from under the castle mound, *Oxoniensia*, xvii–xviii (1952–3), 101, fig. 33, no. 9, and from the Clarendon hotel site, parallels suggested to me by Prof. E. M. Jope.

<sup>47</sup> *Med. Archaeol.*, III (1959), 24–5. Although the classification is used at Maxey as dating evidence the group-III assemblages would seem to corroborate J. G. Hurst's suggestions.

pottery in the Fenland area, and need occasion no surprise at Maxey, where the shell-tempered St. Neots ware occurs together with Stamford ware in late Saxon deposits.<sup>48</sup> The new forms, though in their context unusual, are almost universal in cultures using hand-made pottery because of their simplicity. In Britain alone they occur in the neolithic (Rinyo-Clacton),<sup>49</sup> early-iron-age (Glastonbury,<sup>50</sup> Caburn II,<sup>51</sup> Wheel-house culture<sup>52</sup>) and early medieval periods (Irish 'Souterrain ware';<sup>53</sup> Jarlshof 'late-Norse' pottery;<sup>54</sup> and 'bar-lip' pottery of the south-west<sup>55</sup>). In addition contemporary Scandinavian cultures can also provide parallels in form, fabric and technique.<sup>56</sup> Speculations on the stimuli provoking the innovations could be diverse, and even independent evolution is not impossible. It is evident, in this respect, that all the technical features of group-III assemblages are present in group I (see below). It is, however, tempting to regard Danish settlement of the area as a reason for the change. With Maxey only six miles from Stamford, one of the Five Boroughs, this may have been complete here in the late ninth century.

The Maxey group-III assemblages, whatever their cultural affinities, are an unexpected addition to the spectrum of Saxon pottery, and repeat, though with a new emphasis, the lesson that much Saxon pottery lurks in museums, labelled 'iron age'. This is perhaps the reason why it was possible to say in 1959 that 'no middle Saxon hand-made pottery is known in Lincolnshire and the midlands'.<sup>57</sup>

#### POTTERY TECHNOLOGY

The pottery, all hand-made, is built up in every instance where the construction is visible in fracture or surface irregularity by the coiling technique.<sup>58</sup> In a number of instances pots of group-I assemblages have the coils smoothed down the outside, while in group-III pots they are invariably smoothed up. A comparison of the relatively complete pots nos. 32 and 38 reveals, apart from this, a very similar technique for the two groups. In each coils have been added to a flat basal pad, though in no. 32 the basal angle has been rounded and an additional coil used within as strengthener. In no. 38 and other group-III pots the extra strength has been achieved by an accumulation of clay at the angle, which often had to be removed (e.g. no. 41) by knife-trimming. Group-III pots appear to have been constructed on a flat stone, impressions of which are visible on the base. Pressure at the angle is apparently the reason for the slight lift all the bases exhibit at the centre. The rims are always carefully flattened, and although no. 38 has tilted bodily sideways in making, both base and rim are still quite flat. The outer surface of most group-III pots has been carefully finished, apparently in a very wet state, often achieving a surface of excellent quality showing no sign of the extensive shell-tempering visible in fracture, and in the less well-finished inner surface. Some show traces of vertical wiping, and most have a final finger-wide wipe just below the rim.

A variety of local clays could be used, with little preparation, to make pottery with

<sup>48</sup> As in an eleventh-century assemblage from Stepping Lane, Maxey; information from Mr. W. G. Simpson.

<sup>49</sup> S. Piggott, *Neolithic Cultures of the British Isles* (Cambridge, 1954), p. 340, fig. 57.

<sup>50</sup> A. Bulleid and H. St.G. Gray, *The Glastonbury Lake Village* (Glastonbury Antiq. Soc., 1911), II, 508, pl. lxxvi.

<sup>51</sup> *Sussex Archaeol. Coll.*, LXXX (1939), 244, fig. J.

<sup>52</sup> J. R. C. Hamilton, *Excavations at Jarlshof, Shetland* (H.M.S.O., 1956), pp. 82, fig. 41, and 90, fig. 43, pl. xvi.

<sup>53</sup> *County Down* (Archaeological Survey of Northern Ireland, H.M.S.O., forthcoming), pt. II.

<sup>54</sup> *Op cit.* in note 52, pl. xxxvi.

<sup>55</sup> *Med. Archaeol.*, III (1959), 46, fig. 20, no. 4.

<sup>56</sup> D. Selling, *Wikingerzeitliche und Frühmittelalterliche Keramik in Schweden* (Stockholm, 1955), *passim*.

<sup>57</sup> *Med. Archaeol.*, III (1959), 26.

<sup>58</sup> That is, probably by *successive* rings; for a general discussion of coil construction, see A. O. Shepard, *Ceramics for the Archaeologist* (Carnegie Institution of Washington, 1956), pp. 57 ff.

TABLE II  
Results of the examination of raw, baked and fired clay samples; associated wood and comparable sherds from various sites and periods are included

A.M. no.	Material	Dry colour (relative)	Iron* (relative)	Visible inclusions (bulk)	Site	Reference	Date	Remarks
600385	Wood	Dark grey	High	Absent	Maxey	F 20 (bottom)		Tough portion fairly well preserved; hence mostly but not permanently water-logged
620215	Pottery	Red	"	Calcareous (disintegr.)	"	F 20 (2)	Coarser ware in later pits 8th-10th c.	
620216	"	Dark grey	Medium	Calcareous	"	F 18 (3)	Finer ware in later pits 8th-10th c.	
620217	"	Black	Low	Non-calcareous (disintegr.)	"	F 12 (3)	Finer ware in earlier pits 8th c. or earlier?	
620218	"	Dark grey	Medium	Non-calcareous (disintegr.)	"	F 12 (3)	Coarser ware in earlier pits 8th c. or earlier?	
620219	"	"	High	Calcareous	Little Paxton	F385	9th-10th c.	
620220	"	Warm grey	"	Calcareous (part-disintegr.)	"	F458 (basal layer)	9th-11th c.	
620221	"	"	Medium	Calcareous	St. Neots	F 49 b	9th-11th c.	
620222	"	Light grey	High	Calcareous (part-disintegr.)	"	F 48 c	9th-11th c.	
620223	"	Red	Medium	"	Eaton Socon	Castle	Common jug ? 12th c.	
620224	"	Warm grey	"	Calcareous	"	"	Cooking-pot or storage-jar—? 12th c.	
620981	Clay	Dark grey	"	Absent	Maxey	Pit 14 around	'Puddling-hole'	Vivianite present; hence largely water-logged, probably continuously
620982	"	Medium grey	High	"	"	Pit 14 inside	"	
620983	"	Light grey	"	"	"	Pit 14 over	"	
620984	Wood	Medium grey	Medium	"	"	Pit 14 around	"	
620985	"	"	"	"	"	Pit 14 inside	"	
620986	Burnt clay	Red and buff streaky	"	"	"	Pit 10	'Burnt daub'	
620987	Burnt sandy clay	Dark red	"	"	"	Pit 14	"	
620988	'Slagged' burnt clay	Pale pinkish buff matrix	Low	"	"	Pit 16	"	
620989	'Slagged and glazed' burnt clay	"	"	"	"	"	"	
630170	Pottery	Red	Medium	Calcareous	Tallington	P.A. 36	Iron age A	Moderate working, radiopaque grains (? iron-stone) impressions of ? straw and other ? veg. Similar but small indeterminate 'voids' only
630171	"	"	"	"	"	West Deeping	"	
630172	"	Red to warm grey	High	"	"	A.M.T. no. 51	"	
630175	"	Red	Medium	"	Maxey	Boundary ditch GV/D2/A	"	
630176	"	Warm grey	"	"	"	Boundary ditch GIII/T2	"	
630177	"	Buff	"	"	"	Ditch of square encl. GIII/D4	"	
630178	"	Red	Low medium	Calcareous (disintegr.)	"	Claudian/Neronian	cf. Water Newton early 1st c. A.D.	
630179	"	"	"	Calcareous	"	Village, building site P.H.339 (Structure G)	Saxo-Norman	
630184	Burnt clay	Pale pink	Low	Non-calcareous	"	"	8th-10th c.	
630185	"	"	"	"	"	F 50 (2-3)	8th-10th c.	
630186	"	"	"	"	"	F 19 (Structure B)	8th-10th c.	Similar to 630185 but more sandy
630187	Clay	Dark grey	High	"	"	Pit 14 bottom	'Puddling-hole'	Vivianite: as for 620981-5; radiopaque grains; one fragment not unlike 630186 in X-radiograph

\* Iron content based on visual comparison of depth of colour of acid solution after digestion of calcareous matter



the general type of fabric found (p. 47 f.), and were evidently so used in the iron age,<sup>59</sup> by the Romans,<sup>60</sup> and later.<sup>61</sup> Clays from iron-free 'white'-firing strata found in the Estuarine beds are manufactured into highly refractory materials at the present day.<sup>62</sup>

The nature of the inclusions in some of the fabrics has been investigated and compared with similar fabrics from other sites. Mr. L. Biek reports:

'At the Ancient Monuments Laboratory, E. S. Cripps and W. E. Lee studied the effects of hydrochloric acid on selected sample sherds, "burnt daub" and related material, and samples of "clay from a puddling-hole" (p. 38), and provided X-radiographic cover. The results are shown in Table II. Where present in sherds, white inclusions appeared to be predominantly, though not exclusively, calcareous. This means, and the examination of the shell fragments tends to confirm it, that the pottery was fired at a temperature which did not exceed about 900° C. for any length of time, if at all, and probably not even 850° C. The "soft, soapy texture" may largely be the result of this, and subsequent burial. In the other types of material, little if any calcareous matter was present and the isolated white inclusions remained unaffected by acid. Differences in iron content, and hence colour (judged on an "oxidized" basis) whilst sometimes striking, were not considered to be significant, between various sherds or between sherds and "burnt daub" etc., on account of possible variation in the local clay. No reliable and consistent distinguishing features were immediately apparent between the sherds with white inclusions from Maxey (various periods), Tallington,<sup>63</sup> Eaton Socon, St. Neots, and Little Paxton, except that the inclusions in "earlier Saxon" pots from Maxey (group-1 assemblages) were non-calcareous.

'A superficial examination of the material (at  $\times 25$ ) was kindly undertaken at the Geological Survey and Museum by Dr. H. Ivimey Cook and Mr. J. D. D. Smith, who report:

"The shell fragments in the sherds seen had a very fresh appearance and were considered to be geologically recent; although the presence of small amounts of fossil shell cannot altogether be excluded. The bulk of the calcareous inclusions cannot be definitely identified but probably came from large shells such as oyster or mussel. The former is more likely though the latter cannot entirely be ruled out. Fragments of a few other (unidentified) lamellibranchs were also present together with a single echinoid spine fragment in one sherd specimen. No other major animal groups were represented except for abundant calcareous polyzoa. Some of the latter were actually on shell fragments and their presence points to an original marine source for the shell. There is no definitive evidence in favour of a freshwater origin for the shell material. The clay matrix is silty and contains isolated large quartz grains.

"On balance, though collection of a natural segregation of oyster-shell fragments from a shelly sea sand is possible, the evidence is largely against such an origin. The inclusion, in a local clay such as that represented (presumably) by the 'burnt daub' and the 'clay from puddling-hole' and containing isolated fragments of white quartz, of oyster shell selected from a beach or from food remains<sup>64</sup> and then broken up (pounded), would seem to account for all the observed facts."

<sup>59</sup> *Archaeol. J.*, c (1943), 201, B 2 and 214, Y 2.

<sup>60</sup> B. R. Hartley, *Notes on the Roman Pottery Industry in the Nene Valley* (Peterborough Mus. Soc., 1960), p. 25, fig. 3, no. 1.

<sup>61</sup> *Proc. Cambridge Antiq. Soc.*, XLIX (1956), 44 ff.

<sup>62</sup> Based on information kindly supplied by Dr. Vernon Wilson, Geological Survey and Museum.

<sup>63</sup> Comparative sherds of iron-age, Roman and Norman date from Maxey and Tallington were kindly provided by the Welland Valley Research Committee through Mr. W. G. Simpson. Sherds from Eaton Socon, St. Neots and Little Paxton came from recent Ministry of Works excavations.

<sup>64</sup> No oyster shells occurred amongst food remains from the site, though fossil oyster and other shells are found locally.

Several though not all of the group-III pots were fired to a deep pinkish black within, while being pink or lighter grey without, and one (no. 43) had a pink interior with a black zone near the rim. While some of these effects may be the result of secondary firing, Mr. Biek suggests that at least some of the ware throughout its thickness, and all surfaces, were probably oxidized during the main firing stage (pink/red surfaces all over and all organic material fired out). Some damping may well have occurred during the shut-down and given the ware a black coating. Further oscillations in the kiln atmosphere could remove such organic material from the surface and then produce a pale grey exterior by reduction of the iron oxides present. A totally (pinkish) black section might be caused by sooting up of permeating organic vapours.

There is no clear evidence for pottery manufacture on the site at Maxey. No sherds which could be considered to be wasters were found, and no certain kilns, though these were recently shown to have been used in the manufacture of early Saxon pottery at Cassington, Oxon.,<sup>65</sup> and the burnt clay structure from P10 may have been something of the sort. The pits P1 and P4, apparently storage-holes for clay, could have held clay for wattle-and-daub walls or other clay structures.

#### POTTERY CATALOGUE

##### *Group I*

FIG. 12, no. 1, from P20. Large cooking-pot, fabric c, with heavy flat rim, slight shoulder and rounded body; there is pronounced tooling on the upper part of the body.

FIG. 12, no. 2, from P20. Very large cooking-pot in fabric A/c with micaceous inclusions. The flat rim has a slight beading in places outside.

FIG. 12, no. 3, from P20. Upper part of cooking-pot in fabric B, with very short upright rim.

FIG. 12, no. 4, from P20. Rim of cooking-pot in fabric E; the rim is sharply everted.

FIG. 12, no. 5, from P20. Upper part of vessel, probably a bowl, in fabric B, with a few straw marks within.

FIG. 12, no. 6, from P20. Upper part of small vessel, perhaps a beaker, probably of biconical shape in fabric D. It has an everted rim and incised-line decoration and has been burnished without and tooled within.

FIG. 12, no. 7, from P20. Upper part of small globular vessel in fabric c. It is interesting that the simple bevelled rim would have been 'everted' had not the strengthening coil been added outside.

FIG. 12, no. 8, from P20. Upper part of small vessel, perhaps a beaker, in fabric c, roughly tooled within and well tooled without. The top of the rim is decorated with small oval impressions.

FIG. 12, no. 9 and no. 10, from P21. Small rim sherds in fabric A. No. 9 is bevelled within and has a line drawn below the rim outside suggesting beading.

FIG. 12, no. 11, from P21. Rim of small or medium-sized vessel in fabric G; the rim is flat-topped with a light incision below externally.

FIG. 12, no. 12, from P21. Part of small bowl in fabric G, with simple, slightly incurving rim. The fabric compares well with that of pots in what are obviously group-III assemblages.

FIG. 12, no. 13, from F15. Annular weight in fabric G with pink to black surface, having compression ripples on the inside caused during formation, and slight faceting on the outer edges. It seems small for a loom-weight, but too big for a spindle-whorl. A similar problem occurred with early-iron-age examples from Maiden Castle, Dorset.<sup>66</sup>

FIG. 12, no. 14, from F8. Annular loom-weight in hard-fired fabric B with a few grass marks on the exterior. Only a small fragment was found, but the weight seems to

<sup>65</sup> *Med. Archaeol.*, vi-vii (1962-3), 1 ff.

<sup>66</sup> R. E. M. Wheeler, *Excavations at Maiden Castle* (Soc. Ant. Res. Rept., xii, 1943), p. 294, pl. xxxiii, 42.

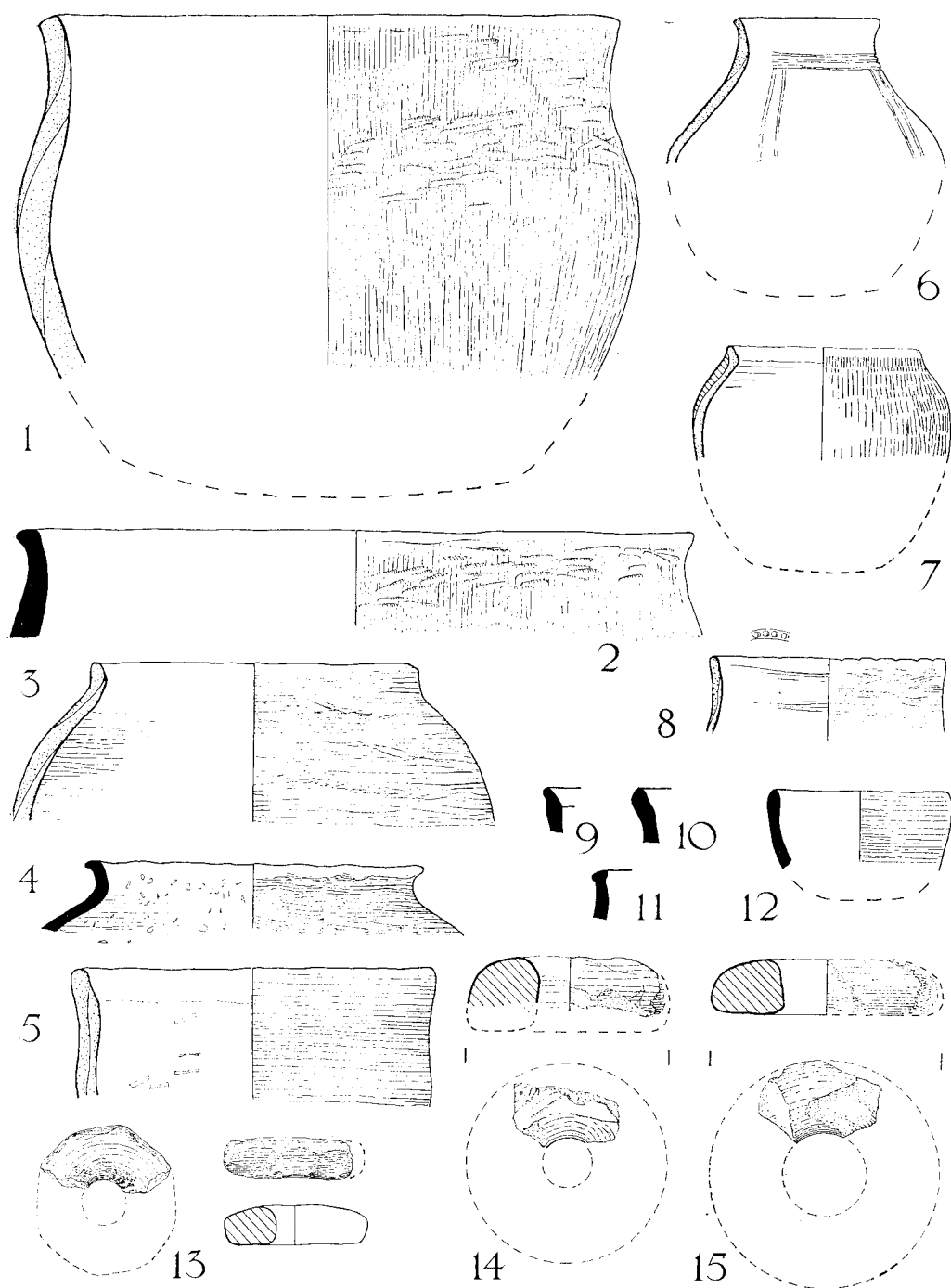


FIG. 12  
 MAXEY, NORTHANTS.  
 Pottery and loom-weights from group-1 assemblages (pp. 52, 54). Sc.  $\frac{1}{4}$

be fairly thick, tending perhaps towards the late Saxon bun-shaped types, though clearly itself of the 'intermediate' type.

FIG. 12, no. 15, from P15. Annular loom-weight in poorly-fired light grey fabric F (straw-tempered). Though small, this fragment is clearly of the 'intermediate' type.

FIG. 13, no. 16, found unstratified during quarrying. Rim and upper part of a vessel, perhaps biconical, in typical fabric A, slightly tooled below the rim but otherwise very rough; decorated with a combed line below the rim, from which hang pendent triangles, the spaces between being filled with small circular stamps of a simple cross pattern. Pendent triangles and similar stamps are seen on a burial urn from Sleaford<sup>67</sup> (24 miles), but the motifs are common in pagan Saxon urnfields in eastern England. The Sleaford urn, with shoulder bosses, is dated, by analogy, first half of the sixth century. A closer general parallel is provided by a cinerary urn from Pagham, Sussex, dated, by analogy, late sixth or seventh century, which also has comb decoration and pendent triangles.<sup>68</sup> The Maxey sherd is so similar in fabric to the domestic pottery considered possibly middle Saxon that it may be of that period, the pendent triangle and stamp motifs anyway being known on pitchers of Ipswich ware<sup>69</sup> and other middle Saxon pottery.

FIG. 13, no. 17, from P16. Rim of large cooking-pot in fabric B; there is a slight shoulder, but the rim is very uneven. The rim diameter (11.5 in.) is larger than that of most Anglo-Saxon pots, though two slightly smaller otherwise identical examples were found during gravel-quarrying (not illustrated).

FIG. 13, no. 18, from P1. Rim of large thick-walled cooking-pot in fabric B, though tooled externally to resemble fabric C in its leathery quality.

FIG. 13, no. 19, from P1. Bowl in fabric B with many small sparkling quartz-like inclusions. The form is common in most early and middle Saxon domestic deposits.

FIG. 13, nos. 20 and 21, from P1. Rims of small vessels in fabric B, no. 21 being lightly burnished. The simple upright rim-form, again, is common in Saxon domestic deposits.

FIG. 13, no. 22, from P1. Rim of cooking-pot in a fabric approximating to F, with small sparkling quartz-like grits. Finger-mouldings caused in making the slightly everted rim are visible without; comparable in form to group-II assemblages (*cf.* no. 29).

FIG. 13, no. 23, from P1. Rim of cooking-pot in fabric B with slight external tooling, everted and related in form to no. 22.

FIG. 13, no. 24, from P1. Base in fabric B with sparkling grits.

FIG. 13, no. 31, from F12. Rim of vessel in fabric B with tooling externally; in fabric and form comparable to nos. 20 and 21, and related to the much more massive no. 18, which is reminiscent of shapes found at Linford<sup>70</sup> and Whitby,<sup>71</sup> and thus from early and middle Saxon times.

FIG. 13, no. 32, from Pg. Medium-sized cooking-pot in fabric B though harsh, and tending towards F. Slightly everted simple rim, rounded shoulder and flattish base with rounded basal angle.

## Group II

FIG. 13, no. 25, from F27. Rim of upright-sided vessel in fabric F, with very slightly everted rim and slight scoring below it externally.

FIG. 13, no. 26, from F2, layer 6. Rim of Romano-British necked jar in very hard

<sup>67</sup> *Archaeol. J.*, CVIII (1952), 81, no. 5, fig. 5, no. 5.

<sup>68</sup> *Sussex Notes and Queries*, xiv (1954-7), 123-5. Mr. J. G. Hurst has seen the Maxey sherd and agrees with the present suggestions. Dr. J. N. L. Myres kindly comments that the sherd is from a large biconical cremation-urn likely to have been without bosses. The type descends from continental unstamped examples from East Holstein. An English example with stamps is Loveden Hill no. 57/44. The date of the sherd from Maxey should be 550+.

<sup>69</sup> *Med. Archaeol.*, III (1959), 22, fig. 5.

<sup>70</sup> *Loc. cit.* in note 38, nos. 2, 3, 4, 8, etc.

<sup>71</sup> *Loc. cit.* in note 42, nos. 1, 2, 10, 13, etc.

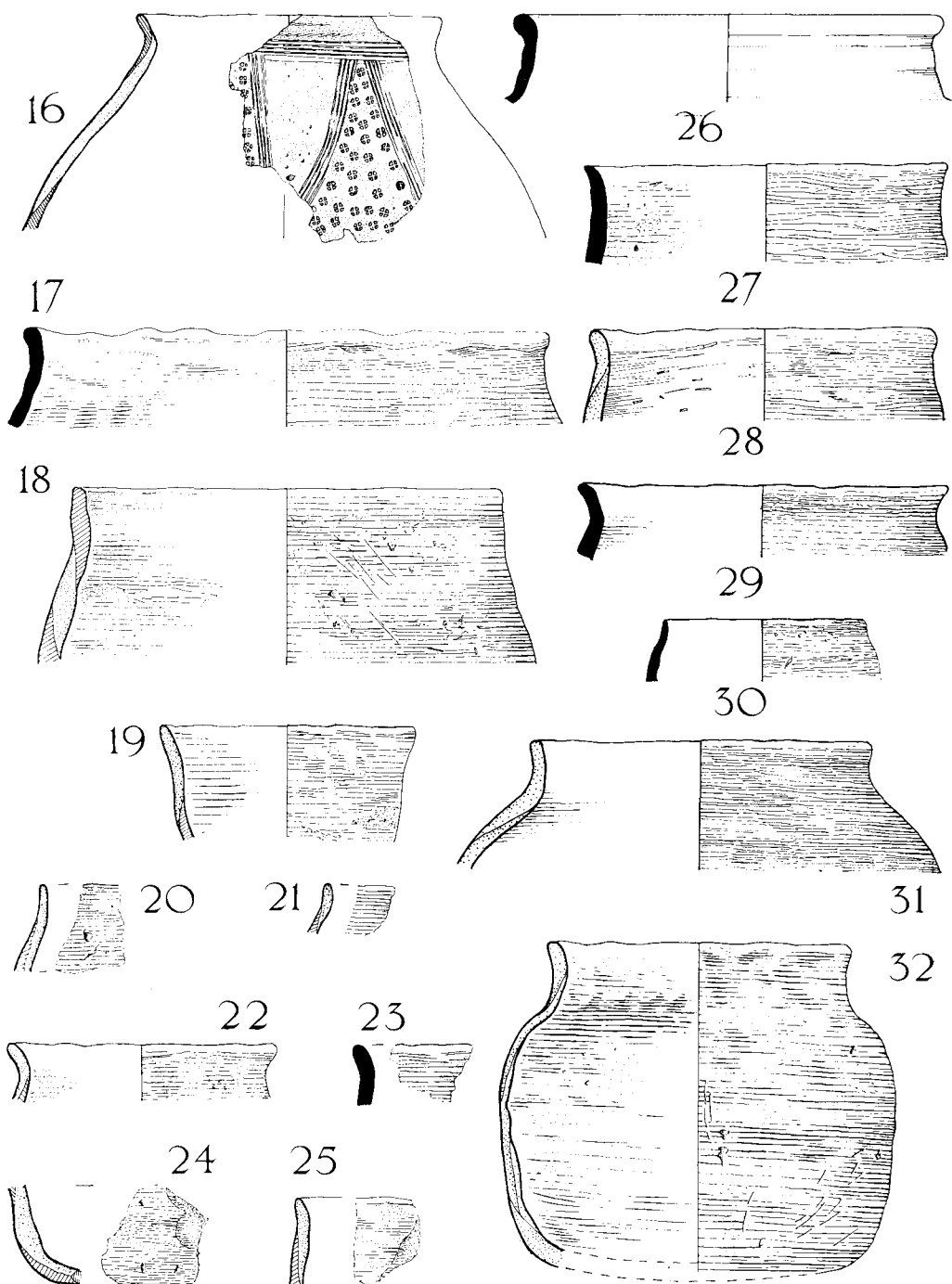


FIG. 13

MAXEY, NORTHANTS.

Pottery from assemblages of group I (nos. 16-24 and 31-2) and group II (nos. 25-30) (pp. 54, 56). Sc.  $\frac{1}{4}$

greyish white ware with thin surface of medium grey, largely worn. A type occurring from the first to the third century, but especially in the first half of the second century.<sup>72</sup> Perhaps from Castor.

FIG. 13, no. 27, from F2, layer 3. Rim of upright-sided vessel in fabric F; the rim is uneven and wavy.

FIG. 13, no. 28, from F2, layer 1. Rim of upright-sided vessel in fabric F (though apparently straw-pitted on the interior).

FIG. 13, no. 29, from F18, layer 3. Rim of medium-sized everted-rimmed cooking-pot in fabric F.

FIG. 13, no. 30, from F18, layer 4. Rim of small vessel in fabric F, though with buff outer surface.

### *Group III*

FIG. 14, no. 33, from P16. Rim of medium-sized vessel in fabric D with tooling or burnishing on the exterior.

FIG. 14, no. 34, from P16. Rim of medium-sized vessel in fabric G. The irregular and simple form of the rim is reminiscent of vessels in group-I assemblages, though this example is in the fabric associated with group III.

FIG. 14, no. 35, from P16. Rim of medium-sized bucket-shaped vessel in fabric G, with typical flat-topped rim slightly thinned at the top. Light pink without, dark grey within.

FIG. 14, no. 36, from P16. Rim of medium-sized barrel-shaped pot in fabric G, with flat-topped rim; traces of vertical finger-smoothing within.

FIG. 14, no. 37, from F7. Rim of vessel probably of globular shape in fabric G. The sides are much inturned but the rim is again flat-topped and undeveloped. Reddish within, greyish without.

FIG. 14, no. 38, and PL. III, B, from F41. Medium-sized barrel-shaped vessel in fabric F, with typical flat base, rising slightly at the middle, showing impression of stone on which it was made. The sharply-moulded basal angle has not been knife-trimmed. The rim is flat and level, though not horizontal as the pot is asymmetrical having tilted during construction. Grey within, pink without.

FIG. 14, no. 39, from F41. Rim of small vessel in fabric G. The vessel is rougher in finish, and the rim less flat and level than other vessels in group-III assemblages.

FIG. 14, no. 40, from F15. Rim of small upright-sided vessel, in fabric G, with flat-topped rim with small crimps along the overhanging outer edge. Black within, pink without.

FIG. 14, no. 41, from F15. Base of medium-sized pot in fabric G having vertical knife-trimming. Such knife-trimming occurs on a number of similar bases (not illustrated) in group-III assemblages.

FIG. 14, no. 42, from F55 (Ditch A). Base of medium or fairly large vessel in fabric F; though flat-bottomed, this is somewhat different in form and technique from the main series in fabric F. It and two Romano-British sherds were the only finds from Ditch A.

FIG. 14, no. 43, from F20. Upper part of barrel-shaped vessel in fabric G with flat top roughly frilled with the finger-tip on the overhanging outside edge. The exterior is heavily caked with soot and pinkish black, the interior pink with a black zone near the rim.

FIG. 14, no. 44, from F20. Part of low lug with a double perforation for suspension, fabric G. Such lugs are common in late pagan Saxon and middle Saxon contexts.<sup>73</sup>

FIG. 14, no. 45, from F20. Upper part of a bucket-shaped vessel in fabric G, with

<sup>72</sup> K. M. Kenyon, *Excavations at the Jewry Wall Site, Leicester* (Soc. Antiq. Res. Rept., xv, 1948), pp. 96-7, necked jars of type D.

<sup>73</sup> Discussed in *Med. Archaeol.*, III (1959), 16-17.

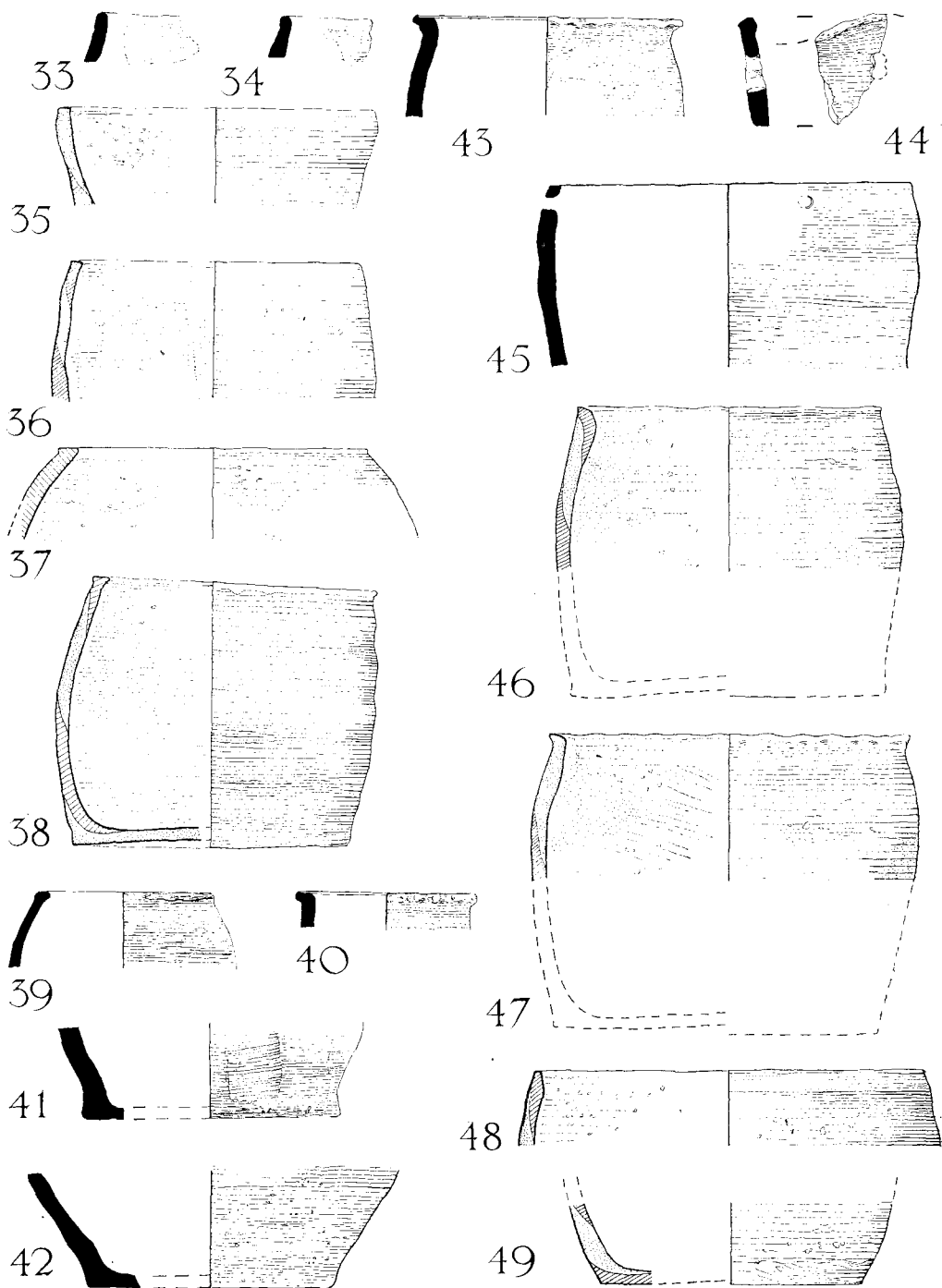


FIG. 14  
 MAXEY, NORTANTS.  
 Pottery from group-III assemblages (pp. 56, 58). Sc.  $\frac{1}{4}$

slightly thinned flat-topped rim with suspension-hole (broken). The pronounced ridges on the body betray the coil-building technique.

FIG. 14, no. 46, from P14. Upper part of bucket-shaped pot in fabric F with thinned flat-topped rim.

FIG. 14, no. 47, from P14. Upper part of barrel-shaped pot in fabric G; the flat-topped rim is slightly frilled with the finger-tip.

FIG. 14, no. 48, from P14. Rim of vessel in fabric G, with thinned flat-topped rim finished off with final horizontal wipe externally, as occurs on several others.

FIG. 14, no. 49, from P14. Base of medium-sized pot in fabric G.

## POTTERY OBJECTS

### LOOM-WEIGHTS

FIG. 12, nos. 13, 14 and 15, described above (pp. 52, 54).

### SPINDLE-WHORLS

FIG. 15, no. 5, from P15. Spindle-whorl with shiny black surfaces and incised lines on bottom and sides.

FIG. 15, no. 4, from P14. Spindle-whorl of soft, light grey pottery.

## BURNT CLAY

### DAUB

Small fragments of 'burnt daub' were found in F19 (central trench of Structure B), Post-hole 237 (Structure C), F41 ('fire-pit' in Structure D), Post-hole 339 and F34 (Structure G), and F50 (a pit north of the Structure E-F complex). None was large enough to give any indication of its origin. While the fragments may have come from fire-breasts, ovens, etc., there is no reason why they could not have been derived from wattle-and-daub walls of the various structures, which those from Post-hole 339 clearly were.

## STONE

A number of the pits contained rough pieces of limestone, ranging up to 18 in. in length, many burnt. Some occurred with fragments of Roman tile, pieces of lava presumed to be from querns, and, occasionally, with pottery and bones. A selection of the fragments was examined by Dr. J. E. Prentice of the Department of Geology, King's College, London, who has kindly identified these and other finds of stone, and provided information on which the following is based:

Most of the specimens are derived from one or other of the various types of Lincolnshire limestone (though none is sufficiently diagnostic to permit closer localization). Some fragments are of carboniferous quartzite, probably from the drift, and some of Cornbrash found locally between Glington and Werrington, two miles away. Lincolnshire limestone is a traditional building-stone and could have been obtained locally (nearest outcrop Helpston Heath, three miles away). In the absence of stone constructions, however, it is more likely to have come—like the tiles—from the robbing of existing Roman buildings or ruins near by. Some of it was perhaps brought in for hearths, but would not have been satisfactory for long periods and was soon perhaps discarded. For the unburnt majority, however, no explanation suggests itself.

### WHETSTONES

FIG. 15, no. 3, from F8. Whetstone of barrel-shaped section, broken at both ends, of metamorphic quartzite, perhaps obtained from the drift.

Not illustrated, from P21 (?). Whetstone of rectangular section, waisted at the middle through use; metamorphic quartzite.



## ROOF-SLATE

A rectangular roof-slate (not illustrated) of calcareous sandstone (Collyweston) was found as packing in a post-hole of Structure B where it crossed F10. It was  $10\frac{3}{4}$  in. by  $8\frac{1}{4}$  in. by  $\frac{1}{2}$  in. thick, and had a medially placed suspension-hole in the top end. It may, like *tegulae* found in the pits, have been brought from a local Roman ruin.

## LAVA QUERNS

A number of fragments of lava were found, some clearly parts of querns. All are derived from a fine-grained vesicular and probably basic lava, are likely to be of conti-

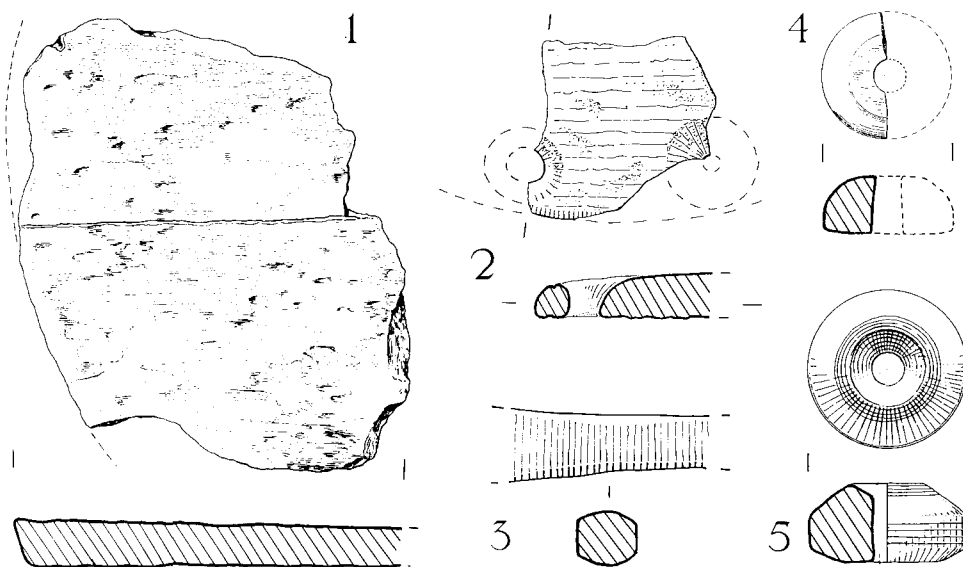


FIG. 15

## MAXEY, NORTHANTS.

Fragments of lava querns (nos. 1, 2), whetstone (no. 3) and pottery spindle-whorls (nos. 4, 5) (p. 58 f.).  
Sc. 1, 2:  $\frac{1}{4}$ ; 3-5:  $\frac{1}{8}$

nental origin, and may be from the Eifel. The specimens have been included in a general investigation recently undertaken to try to clarify the 'Mayen-Niedermendig' problem from a petrological standpoint.<sup>74</sup> Such querns are a common feature of English late Saxon assemblages.

FIG. 15, no. 2, from F19 (beam-slot of Structure B). The quern has a flat under side and rougher upper side, with two circular holes near the edge. The vessel is presumably part of an upper stone, c.16 in. diameter.

FIG. 15, no. 1, from F20. Large fragment, under side rounded, upper side flat, of a lower stone, c.22 in. diameter.

Lava was also found in features F14 and F16 (fragment  $2\frac{1}{4}$  in. thick). None was found in group-I or group-II assemblages.

<sup>74</sup> *J. Brit. Archaeol. Assoc.*, xxvii (1964), 82.

## METAL

## IRON OBJECTS (FIG. 16)

Eighteen of the 25 iron objects found on the site were identifiable either by visual examination or X-ray.<sup>74a</sup> Seven knives, all tanged, single-bladed and of wedge-shaped cross-section, ranged in length from 4 in. to 6 in. Four (nos. 1, 3, 5 and 7) had straight backs and blades angled near the tip, while three (nos. 2, 4 and 6) had straight blades and angled backs. The obtusely-angled back of no. 2, visible by X-ray, relates it to the scramasax series and presumably to the Honey Lane type,<sup>75</sup> fully developed by the late tenth century, though the knife is too slight to be a true scramasax and also lacks the characteristic groove along the blade (which is, however, present on no. 7). The simplicity of the remainder makes it difficult to assign them to a precise cultural context. Similar knives are found in most pagan Saxon cemeteries, and they also occur on many settlement-sites.<sup>76</sup> Two were associated with a presumptively late Saxon knife typified by long tang, drooping shoulders and curved blade, at Clifford Street, York.<sup>77</sup> This type, also found in late Saxon sites at Thetford, St. Neots and Great Paxton,<sup>78</sup> is perhaps significant by its absence at Maxey.

Three nails were found, one with the slanting face at the thick end (no. 8) characteristic of nails at Sutton Courtenay,<sup>79</sup> and two with flattened heads, one triangular (no. 9), and one rectangular (no. 10). The function of the three pins (nos. 15-17) is not clear, though they appear to have been made to a specific length and diameter. Others of the same length have been found on late Saxon settlements at Little Paxton and St. Neots,<sup>80</sup> and all may be some sort of specialized nail. Shears broadly similar to those from Maxey (no. 11) have been found in a number of pagan Saxon cemeteries in eastern England,<sup>81</sup> though apparently not with the slight looping at the junction of the two arms. This appears to foreshadow the later medieval pronounced looping first found in Scandinavia in the tenth century,<sup>82</sup> present at Whitby<sup>83</sup> and in the series of five from Trelleborg (950-1050),<sup>84</sup> and later becoming almost universal. No. 12 is perhaps an arrow-head or small spear-head; its socket, though heavily corroded, appears to have been beaten out on a mandril, a technique frequently found in similar Anglo-Saxon objects. This example, though smaller than most from pagan Saxon cemeteries, has close parallels in the sixth-century hoard from Buttsale, near Eastry, Kent.<sup>85</sup> Again it is a simple and presumably long-lived type. No. 13 is probably incomplete and may be part of a chain-link or binder. The hook, no. 14, is presumably an object of domestic use, though in consideration of the faunal evidence (p. 70), the possibility that it is

<sup>74a</sup> The find-spots of these 18 objects were: no. 1, 1959 excavation; no. 2, 1959 excavation; no. 3, F28 layer 2; no. 4, F8 layer 2; no. 5, F8; no. 6, F8 layer 3; no. 7, 1959 excavation; no. 8, 1959 excavation; no. 9, F41; no. 10, F5 layer 2; no. 11, F7 layer 2; no. 12, 1959 excavation; no. 13, 1959 excavation; no. 14, F18 layer 3; no. 15, Peterborough Museum Society's Pit 2 (?); no. 16, F15 layer 2; no. 17, F20 layer 2; no. 18, topsoil in area W. of Structures E and F.

<sup>75</sup> R. E. M. Wheeler, *London and the Saxons* (Lond. Mus. Cat., no. 6, 1935), p. 179.

<sup>76</sup> All types are represented at Sutton Courtenay (*Sutton Courtenay 1, 2 and 3, opp. cit.* in note 41).

<sup>77</sup> *Archaeologia*, xcvi (1959), 73, fig. 7, nos. 3 and 13.

<sup>78</sup> St. Neots: unpublished, in Cambridge Museum of Archaeology and Ethnology; Great Paxton: *Proc. Cambridge Antiq. Soc.*, xxxv (1935), 99, no. 7.

<sup>79</sup> *Sutton Courtenay 1* (*op. cit.* in note 41), p. 182.

<sup>80</sup> See *Proc. Cambridge Antiq. Soc.*, forthcoming.

<sup>81</sup> E.g. Burwell, grave 42: T. C. Lethbridge, *Recent Excavations in Anglo-Saxon Cemeteries in Cambridgeshire and Suffolk* (Cambr. Antiq. Soc., 4to publ., n.s. III, 1931), p. 55.

<sup>82</sup> *Medieval Catalogue* (Lond. Mus. Cat., no. 7, 1940), pp. 153-5.

<sup>83</sup> *Op. cit.* in note 42, p. 68, fig. 18, no. 1. These shears have a very much developed loop and are remarkable in a deposit dated 657-867. Similar shears are not found in pagan graves, as stated, though they do occur earlier (*Saalburg Jahrbuch*, XI (1952), pl. 35). It is possible that this pair, which is unstratified, is of later date, as has been suggested for the tweezers (fig. 13, no. 9) and some of the pottery (fig. 26, no. 34).

<sup>84</sup> P. Norlund, *Trelleborg* (Copenhagen, 1948), pl. xlix.

<sup>85</sup> G. Baldwin Brown, *The Arts in Early England*, III, 242, pl. xxxii, 1.

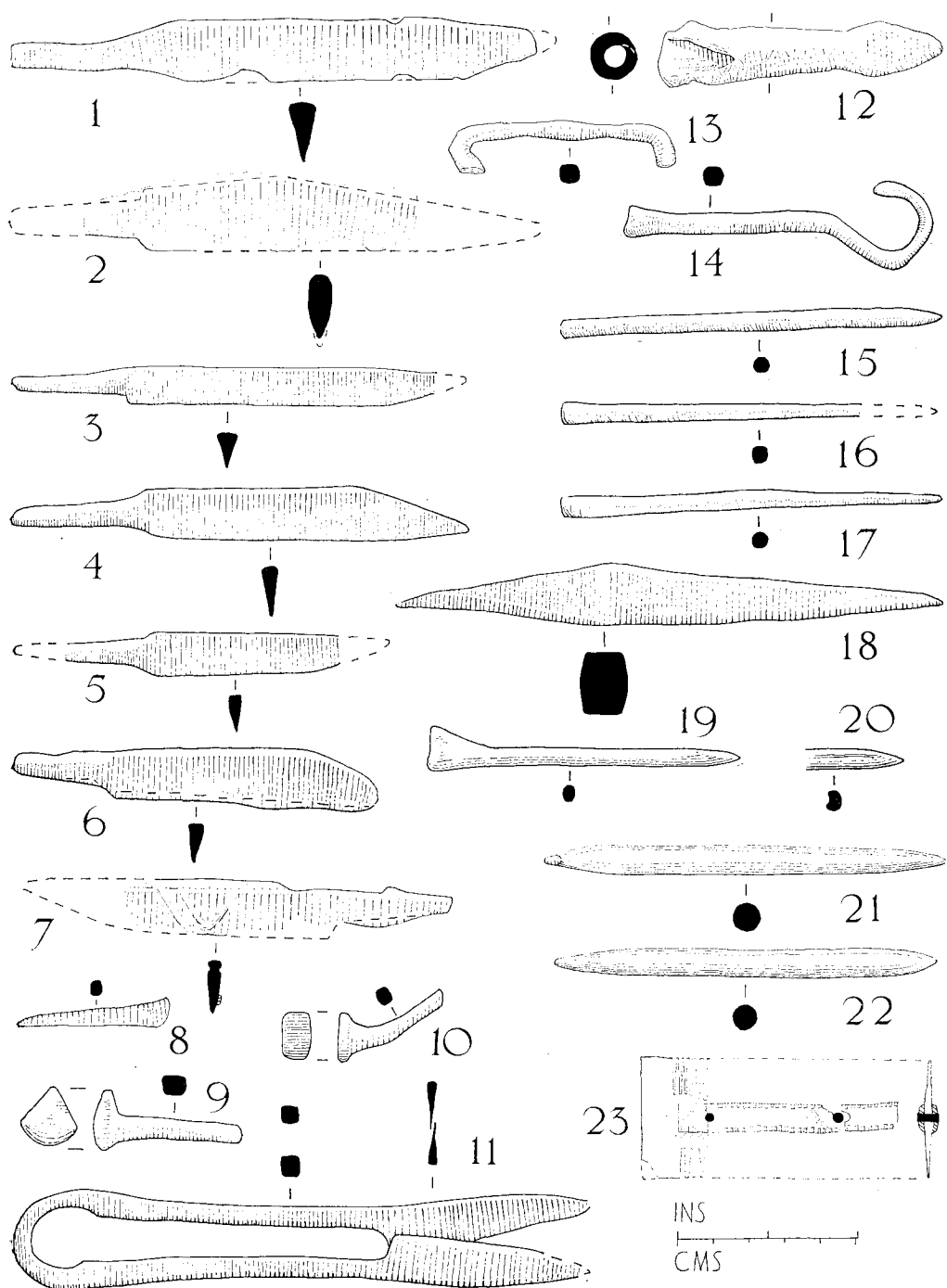


FIG. 16

MAXEY, NORTHANTS.

Objects of iron (nos. 1-18, pp. 60, 62) and bone (nos. 19-23, p. 64). Sc.  $\frac{1}{2}$

horse-gear cannot be disregarded. The heavy double-pointed object of barrel-shaped section, no. 18, found in the topsoil and therefore perhaps of more recent date than the settlement, may be a square reamer, bit or pick.<sup>86</sup>

Though none of these objects are sufficiently distinctive in themselves to be capable of a close dating they are clearly as a group not out of place in an Anglo-Saxon context.

#### COPPER ALLOY ('BRONZE') OBJECTS (FIG. 17)

Seven bronze objects were found of which two, at least, and probably three, are later than the settlement.

FIG. 17, no. 1, from F7. Tag-end with shaft of faceted section, decorated with three groups of three grooves, and split attachment-plate with two holes drilled separately from both sides of the plate. Tag-ends occur in England from early Saxon times onwards though predominantly in the later Saxon period. This example, however, only resembles the late Saxon ones in barest essentials, lacking their usual flat, decorated plate and zoomorphic terminals.<sup>87</sup> Simple tag-ends, closer to the Maxey type, from Chichester are undated, though one with split heart-shaped attachment-plate and ribbed and round-ended shank was found in a pit containing late Roman pottery but cut into late Roman levels and therefore possibly post-Roman in date.<sup>88</sup> Closer parallels are provided by a Scandinavian type of the late Roman iron age and early medieval period, considered to be pendants or tag-ends, of which a number were found in the Thorsbjerg deposit (third to fourth century)<sup>89</sup> and others come from Gotland and Birka.<sup>90</sup> The simple tag-end from Felixstowe (Norwich Castle Museum) is perhaps of this type. Another Scandinavian find reminiscent of the Maxey tag-end comes from a ninth-century context at Hedeby.<sup>91</sup> A Danish background for the object is not unlikely considering the Danish settlement of the Maxey area and the apparently middle Saxon date of the associated pottery and objects, though at present it has of itself no diagnostic value.

FIG. 17, no. 2, from Post-hole 254, Structure D. Pin with slightly spindle-shaped shaft, slight collar, and cubical head with chamfered corners and ring-and-dot ornament on the faces. A similar pin, unpublished, from a Saxon deposit at Hamwih, is in the Southampton Museum.

FIG. 17, no. 3, from topsoil at north-west corner of Structure B. Pin with oblong head with ring-and-dot ornament on the faces and two pairs of incised lines on the head. Pins with ring-and-dot ornament on rectangular heads occur sporadically in late Roman contexts,<sup>92</sup> but are a frequent feature of middle and late Saxon sites,<sup>93</sup> to which period these examples can with some confidence be referred.

FIG. 17, no. 4, from P15. Sheet bronze with indent in one side made by bending back the metal.

FIG. 17, no. 5, from F11 (medieval ditch). Stud of a form found from the early to late middle ages.<sup>94</sup>

FIG. 17, no. 6, from F11 (medieval ditch). Strap-end or belt buckle of late medieval type.

<sup>86</sup> cf. H. Arbman, *Birka* (Stockholm, 1940), pl. 185, no. 2.

<sup>87</sup> The type has recently been discussed in *Archaeologia*, xcvm (1961), 97-8.

<sup>88</sup> *Sussex Archaeol. Coll.*, forthcoming.

<sup>89</sup> C. Engelhardt, *Denmark in the Early Iron Age* (London, 1866), pl. 15, nos. 38-48.

<sup>90</sup> H. Arbman, *Birka*, 1, *Die Graber*, pl. 86, no. 6 (grave 1059).

<sup>91</sup> H. Jankuhn, *Haitabu 1937-39* (Berlin, 1943), p. 114, fig. 43 b.

<sup>92</sup> E.g. *Inventory of Historical Monuments in the City of York*, 1. *Eboracum, Roman York*, (R. Commission Hist. Mons. England, 1962), p. 143b, pl. 69.

<sup>93</sup> Whitby: *op. cit.* in note 42, p. 63, fig. 14; York: *op. cit.* in note 77, fig. 11.

<sup>94</sup> Good parallels dated 1426 to 1650 were found at Wolsey's Palace, the More (*Archaeol. J.*, cxvi (1961), 183, fig. 19, nos. 8-11).

FIG. 17, no. 7, from topsoil above F11 (medieval ditch). Strap-end or belt buckle, cast and roughly finished. This corresponds precisely with an example from London (Birmingham Museum). Both this and no. 6 are probably objects of a widespread trade, and to be dated fifteenth–sixteenth century.<sup>95</sup> Thirteenth- to sixteenth-century pottery was found in the ditch.

The metal objects have been examined in the Ancient Monuments Laboratory and the following is an extract from Mr. L. Biek's report:

'FIG. 16, no. 2. Both surfaces of the knife as examined carry copious fragmentary remains of vegetable origin, too disorganized for identification but probably from

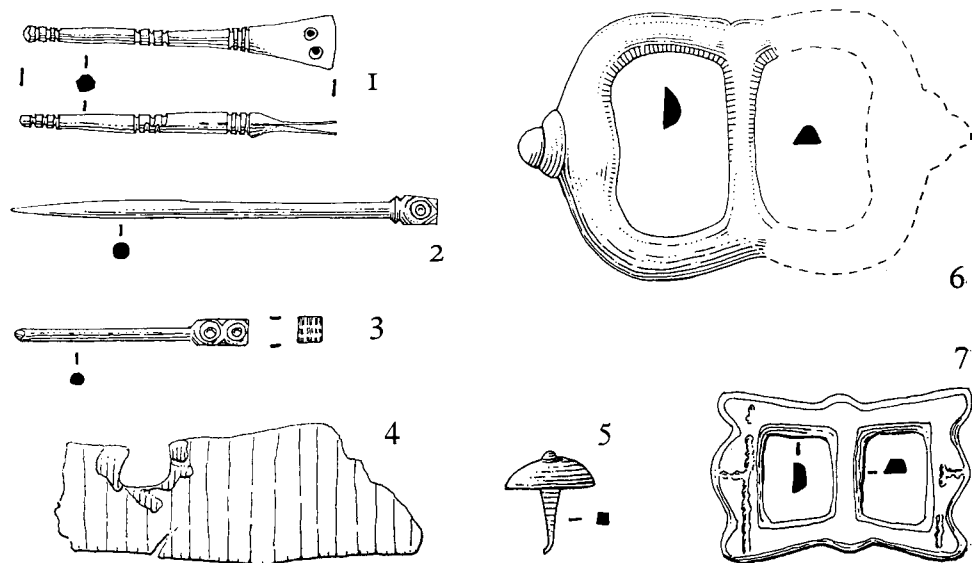


FIG. 17  
MAXEY, NORTHANTS.  
Objects of copper alloy (pp. 62 ff.). Sc.  $\frac{1}{4}$

lower plants, mineralized into the corrosion products. One small area near the shoulder, along the top edge of the side shown in the drawing, might possibly suggest wooden remains from a handle, but microscopical examination failed to support this, and merely confirms the general impression that this object was buried with vegetable debris surrounding it. There are some indications, from the nature of the corrosion products in certain areas, that the ambient conditions oscillated, at least during the period(s) crucial in this context, providing alternate water-logged, and merely moist or even dry, environments. Water-logging appears to have been of relatively short duration, though long enough (in each cycle?) to establish some degree of protection, the results being then disrupted by the following more aggressive period. This would account for the particularly poor state of preservation, and be consistent with conditions as observed in the gravel-pit during this excavation.

'Various amounts of charcoal and/or vegetable debris were noted on FIG. 16, nos. 1–7, 9, 11 and possibly 14, while there was no trace of it on no. 18. The state of preservation of no. 5 suggests slightly different conditions more favourable to

<sup>95</sup> *Op. cit.* in note 82, pp. 278–9.

preservation, perhaps more water-logged. Vegetable debris is completely absent from the copper alloy objects, except for vestigial traces on FIG. 17, no. 5.

'FIG. 16, no. 12. The arrow-head is a relatively crude object; the X-ray evidence tends to confirm the first impression that it was made of one piece of metal, and that the socket is deep, extending up to the base of the head proper, but the state of preservation precludes certainty.'

#### BONE (FIG. 16, nos. 19-23<sup>95a</sup>)

The bone objects are of types found on Anglo-Saxon settlements of all dates. 'Thread-pickers'<sup>96</sup> (nos. 21 and 22) were found at Wykeham, Yorks.,<sup>97</sup> (early Saxon), Sutton Courtenay<sup>98</sup> (early and middle Saxon) and the Clarendon hotel site, Oxford,<sup>99</sup> (late Saxon); triangular-headed pins (no. 19) at Sutton Courtenay, and at St. Neots<sup>100</sup> (late Saxon); and double-sided three-piece bone combs (no. 23) at the three former sites, an example from Sutton Courtenay<sup>101</sup> being very closely similar. In addition a fragment of a pin (no. 20), a simple awl and several other sharpened bones (not illustrated) were found.

### THE SCIENTIFIC EVIDENCE

By L. Biek

*Ancient Monuments Laboratory*

Altogether over 1,800 artefacts, specimens and samples representing 11 material groups—among them 1,510 countable pieces of animal bone and 102 items of stone—were examined at the Laboratory and/or by other specialists. Geological data are given where appropriate (pp. 20 and 58) and descriptions of the artefacts on p. 58 f.; results of the pottery examination and related details appear in the appropriate section on pp. 50 ff., and the same applies to metal objects (p. 63 f.). The remainder of the information follows below.

In the circumstances it proved impossible to evaluate all the pieces of ecological information furnished by the excavation, and the present report should be seen as a preliminary account; it is hoped that all the data will be integrated into a general summary covering the results from this and several other sites in the area at present being investigated by the Welland Valley Research Committee.

The background for the present excavation, in very broad outline, would appear to be as follows. With the exception of the lava querns, all the stone objects and fragments are of reasonably local ultimate origin, however this may be modified by the suggestion that the (building-) stone fragments were obtained by robbing. Apart from the limestone, the area also holds abundant raw materials for pottery making and iron smelting, and water is plentiful. The last was possibly a mixed blessing. This aspect of the scientific results, here, perhaps most clearly shows the benefits of correlation at a scientific level. Observations made on the site, the soil samples, the clay and pottery, the surfaces of iron objects, and the fragments of unburnt wood and bark, all point to conditions where water was more easily contained than dispersed. The relative permeability of immediate sub-surface strata would suggest that little water would actually

<sup>95a</sup> The find-spots were: no. 19, topsoil; no. 20, topsoil near Structure A; no. 21, P1; no. 22, P12; no. 23, P10.

<sup>96</sup> *Trans. Leicesters. Archaeol. Soc.*, xxviii (1953), 50.

<sup>97</sup> Scarborough Museum.

<sup>98</sup> *Sutton Courtenay* 1, 2 and 3 (*opp. cit.* in note 41).

<sup>99</sup> *Oxoniensis*, xxiii (1958), 73, fig. 25.

<sup>100</sup> *Proc. Cambridge Antiq. Soc.*, forthcoming.

<sup>101</sup> *Sutton Courtenay* 3 (*op. cit.* in note 41), pl. xxii, c.

be found standing for very long except in pits; but despite considerable fluctuation the general water-table is likely never to have been very far below the surface, and the same permeability would have permitted rising damp.

Against this background must be seen the rather meagre evidence of activity. The obvious proficiency in timber-building apart—and even this is indicated only indirectly—we have no definite evidence of manufacture. To judge from the burnt daub, clay was clearly used on the spot in building, and it is possible that the ‘clay puddling-hole’ (p. 38) in fact represents this activity rather than pottery making of which, despite the possibly quite ‘local’ origin of its clay, there is no immediate indication. This assumes an Anglo-Saxon date for the ‘puddling-hole’, which seems probable in the circumstances. The slaggy material has similarly been interpreted as coeval with the settlement, such minor indications as may be significant being taken to weight the evidence, however slightly, in that direction. But in view of the presence of the many stone fragments, the possibility of a near-by Roman origin for the slag—and of a similar date even for the ‘puddling-hole’—although perhaps unlikely, should not be dismissed out of hand. There is no evidence, either, to connect any iron making with the objects found. The only really definite scientific evidence reflecting Anglo-Saxon activity specific to the site is found in the animal remains and, less significantly, in the charcoals. The animal economy is indicated, provisionally, by an equal proportion of cattle and sheep/goat (over a third each), with far smaller amounts of pig, horse and bird (about a tenth each) of which the last was noticeably frequent. Two-thirds of the pigs were killed before they were eighteen months old, but the majority of the other animals were two or more years old at death (p. 71).

#### SOIL

Thirty-two samples, mainly of different layers in pits and features, together with suitable controls, were taken by the excavator. In addition, four samples were supplied from Mr. Fennell’s work. A selection of the former material was subjected to a mechanical analysis by the excavator at the School of Agriculture, University of Cambridge, under the supervision of Dr. R. M. S. Perrin, who kindly visited the site and made facilities available, and to whom we are indebted for helpful discussion. In addition, ignition tests<sup>102</sup> were carried out on twenty-five samples (including Mr. Fennell’s) at the Ancient Monuments Laboratory by Mr. W. E. Lee, who also took X-radiographs of, and observed the effect of hydrochloric acid on, Mr. Fennell’s (‘clay’) samples and associated wood fragments, for comparison with the ‘burnt daub’ and pottery. The results are shown in Table III (see also Table II, opp. p. 50).

During Dr. J. Alexander’s excavations near by in 1959, and again during the present excavations in 1960, a series of simple traverses was carried out by the Ministry’s Engineering Test Branch, using a Tellohm soil resistance meter. It is worth recording that, whilst little or no contrast could be obtained from pits in 1959, the investigations in 1960 were generally successful. Circumstances did not permit a full investigation of the reasons, but it is thought that the difference in water retention between the gravel and the pit-fillings was largely responsible. Under such conditions it is possible for clayey fillings of shallow pits above the water-table, normally regarded as ‘wetter’ than the surrounding gravel, at certain time intervals after the end of rain to be either as wet (giving no contrast) or even drier (showing *high* resistance, such as would normally be taken to indicate a ‘wall’). There would seem to be an optimum ‘interval after rain’ also in a more general sense, for the development of maximum contrast in normal resistivity work and on the seasonal scale.<sup>103</sup>

On the basis of one site visit, and from a consideration of all the evidence, the following generalized picture emerges. The background is clearly calcareous throughout—even at their lowest, the acid soluble ‘stones’ are not below 5%—but depletion to

<sup>102</sup> L. Bick, *Archaeology and the Microscope* (1963), p. 223.

<sup>103</sup> *Bonner Jahrb.*, CLXII (1962), 266–71.

TABLE III  
Soil samples

Sample no.	Feature no.	Layer no.	Field description	Clay	Silt	Fine sand	Coarse sand	Stones	'Calcium'	'Iron'	Organic matter	Remarks
1	F18	4b	Charcoal and dark loam	m	l	l	h	l	m	l	h	Slag iron hook (14), slag, charcoal
2	F18	3	Charcoal line									
3	F18	4c	As b but more ye'low									
4	F18	7	Grey-yellow clay (centre)	m	l	h	l	l	l	l	h	Slag Unburnt bark, charcoal
5	F18	7	Grey-yellow clay (edge, higher level)									
6	F18	5	Mobile yellow clay	l	l	m	h	m	l			
7	F18	8	Clay and gravel	m	l	h	m	l	l			
9	K14	1	Plough-soil (general profile)	m	l	m	m	l	l	m	m	Control
10	K14	2	Second layer (? mobile clay layer)	m	l	m	h	m	l	h	h	Control
11	F 2	Natural	gravel	l	l	l	h	h	h	l	l	Control
12	F 2	2	Very dark powdery soil— ? rotted wood	m	l	m	m	l	m	m	h	Consistent with field description
13	F 2	3		m	l	m	m	m	h	m	m	
14	F 2	4		m	l	m	m	m	h	m	m	
15	F 2	5a										
16	F 2	9										
17	F 2	11	Brown loam, merges into 8; richer, lighter type of 6	l	l	m	h	h	h	m	l	Gleying
18	F 2	12		m	l	m	m	l	l	m	h	
19	F12	2								m	m	
20	F12	3	Homogeneous brownish non-gritty clay									
21	F12	6	Brown grit and gravel in loam							m	h	
22	F12	6B	Brown stiff clay loam grading into 6B							m	m	
23	F12	7A	Grey-black clay; at bottom iron-stained spots							l	h	
24	F12	7A	Pale sand and gravel							h	m	Charcoal
25	F12	Natural	Brown clay patch in sand gravel							l	l	

l=low (less than 20%), m=medium (20-40%), h=high (more than 40%). The figures in brackets apply to all columns except those for 'iron' and organic matter, where appraisals are qualitative only.



this level has evidently occurred in the upper layers of the undisturbed profile, as compared with over 60% in the underlying gravel, and 'calcium' is equally low in several other samples. At the same time no well-defined calcium pan was detected either in the field or from the analyses. This lack of an enriched zone may possibly be connected with the oscillation of the water-table. The change in grading, down the undisturbed profile, both in 'fines' and 'stones', is evident from Table III, nos. 9-11, the silt fraction remaining uniformly low, in fact throughout the whole range of samples. As noted elsewhere,<sup>104</sup> the 'second layer' here appears to contain more iron and organic matter than the 'topsoil'.

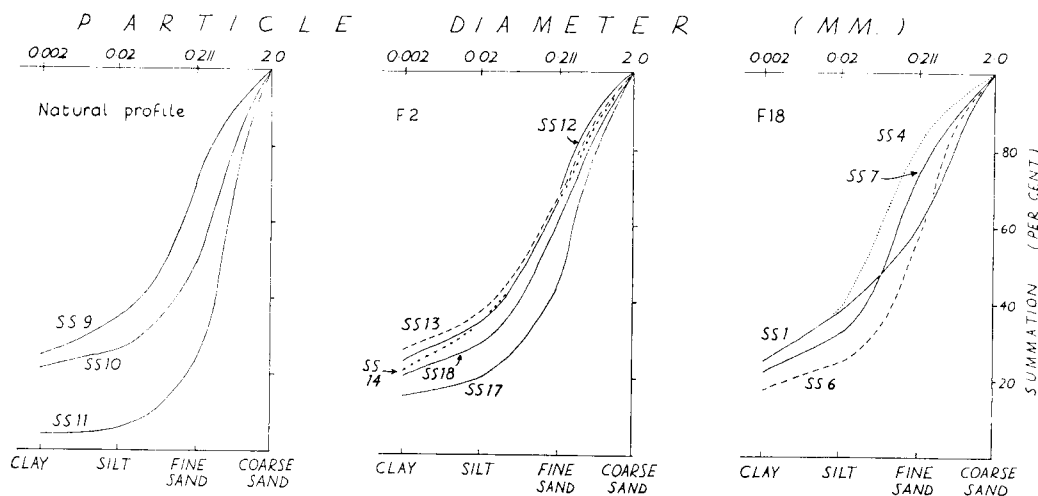


FIG. 18  
MAXEY, NORTHANTS.

Summation curves showing the insoluble residue from soil samples from the natural profile, and from pits F2 and F18 (p. 33 f.)

On the whole, the summation curves (FIG. 18) are all sufficiently similar to suggest that the 'fines' could, in the circumstances, be regarded as having all been derived from the same general source—in some cases slightly modified probably by natural sorting, following on artificial disturbance—except for no. 1, which is distinguished not only by its anomalous grading but also by a high calcium/stone ratio. It is clearly an artificial, introduced mixture, and the presence of charcoal might be taken to account for the anomalies both of particle size and, at least partly, of calcium content. The only other sample similar in the latter, though not the former, respect is no. 12, which could probably be regarded as the same general type of material.

Closer examination reveals some minor, but possibly no less significant, anomalies. Thus samples nos. 4 and 7 are texturally very similar to the topsoil (no. 9) but show curiously high levels for fine sand. They are distinguished from each other very slightly, not so much in their stone content (suggested by the field description) as by the greater amount of coarse sand present in no. 7. It is difficult to explain their nature, and relation to each other and the underlying gravel, without invoking some measure of artificial disturbance. Once present as the lower filling in the pit—possibly by silting-in from a contaminated 'topsoil'—no. 7 might conceivably separate from no. 4 over a period, in the frequent presence of standing water, partly by settlement of heavier

<sup>104</sup> *Antiq. J.*, forthcoming.

particles and partly by seepage into the surface of the gravel below. In the same way, it is tempting to suggest that no. 6 represents a 'secondary second layer' of the same kind as no. 10.

If this can be accepted, the following sequence of events might be postulated for F18, and presumably for other pits with similar stratification, although only truncated profiles were available for study, topsoil having been removed. The pit was dug, probably to almost the depth now regarded as the interface between filling and 'natural', but with sides that were almost certainly steeper than they now appear. On weathering, apart from minor amounts of collapse from the gravelly sides, the primary silting would take place largely, and quite rapidly, by the transfer of material from the topsoil and 'second layer' of the undisturbed profile (no. 9 and no. 10), involving perhaps a certain amount of water-sorting. At the same time, and subsequently to a diminishing extent, further transfer with some sorting would seem to have been necessary to account for the present state of affairs. This redistribution is seen largely as the movement of fine particles, in suspension in slowly moving or even static water, into gravel relatively deficient in material of such grade. Such movement could occur particularly in the upper levels of gravel freshly exposed in the sides of the pit, as a result of two different mechanisms, (a) by (slow) percolation from above, and (b) from a rising water-table; (b) is theoretically feasible on two levels, roughly those of the individual pit, and of the general area, but it is here thought to have been due very largely to conditions determined within a pit.

In these terms, in F18, layer 8 (no. 7) is seen as the primary silting and penetration of the bottom of the pit, 7a as an early fall of gravel from the side, 7 (nos. 4, 5) as subsequent (but not much later) silting without further penetration of the now 'sealed' gravel bottom, and 5 (no. 6) as permeation of gravel sides by lateral transfer of fine particles from water rising in the pit during accumulation after rain. The strata above 7 would be consistent with a combination of further silting, falls and rubbish deposits.

Considering all the evidence of pit-fill contents and ambient conditions together, the most likely interpretation which would seem to fit all the observed facts is in terms of water-supply. The pits would have been dug as water-holes, and would clearly have been quite effective without excessive labour or refinement, but presumably for a relatively short time only. In the later stages of their existence they would go out of use much as deeper wells do, eventually becoming rubbish-pits, the oscillating water-table promoting rapid disposal of waste. The presence of partly-fired stones may probably be seen, at least to some extent, as an attempt to produce 'better drainage' during the last stages, and thus to make possible their use for the burning of rubbish, but a large proportion of their contents in charcoal and slag had clearly been fired elsewhere. In F15 and F41 was found a 'white, limy and/or clayey substance', mostly in chunks but also in thin layers, and described as 'burnt' or 'ash'. This material was shown to be a very pure calcareous tufa similar to that found in association with areas of limestone burnt to an elevated temperature—i.e. above about 1000°, as in a lime-kiln. Although natural formation, not involving heat, cannot in the circumstances be ruled out, the evidence is consistent with the recarbonation, *in situ*, of very pure (iron-free) calcareous matter that had been calcined. Although these temperatures were clearly not reached inside such pits, it is possible that F15 and F41, and perhaps other pits, were in fact principally used for burning.

#### SLAGS

Altogether about 12 lb. of slag were submitted for laboratory examination. Most of it was from stratified locations in the present excavation (1960); one large piece was similarly stratified (A.M. 600384) from F8, submitted as a possible 'iron object', weighing nearly 2 lb.; and a few pieces were from Mr. Fennell's work. They are all considered together here and appear (from comparative visual examination only) to fall into two main categories.

The first directly indicates iron smelting on a fairly large and adequately competent level, most of the usual forms of material being present: dense and lightweight fayalite slag, mixed slag-and-cinder conglomerate with charred-wood imprints in places, lightweight and heavy cinder, and almost completely reduced ore (two pieces, one A.M. 600384, the other from F16). As might perhaps be expected, the lightweight cinder (of least possible value) was most abundant, but both geographical and material distribution seemed to be entirely random. In addition there were some fragments of white sandy clay fired to a high temperature (F15) and indicating some special preparation as perhaps near a furnace lining, and some slagged furnace lining (F18).

The second group need not be inconsistent with iron smelting but seems to be fused charcoal ash slag of varying degrees of impurity, indicating only the use of charcoal fuel at a fairly high temperature without involving necessarily a specific activity such as iron smelting. In only one example, from F50, is there any suggestion from the apparent purity of the material that it may be due to the fusion of some vegetable ash from material other than wood, probably grain,<sup>105</sup> although material such as thatch cannot be altogether ruled out.

Whilst similar to the average kind of iron-smelting residue, which appears to be found throughout the whole period from Saxon to late medieval times (*cf.* Norwich<sup>106</sup>), and containing reduced ore no different from specimens found in an iron-age context,<sup>107</sup> it lacks the quantity (and perhaps quality) of true slag normally associated with Roman material and also of lightweight, glassy material (only one piece, F18). This would indicate a generally lesser degree of heat and, possibly, control, although selective dumping must be taken into account.

## FAUNA

By D. Seddon, D. Calvocoressi and C. Cooper, with E. S. Higgs

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The following animals have been identified: Cattle; Sheep or Goat; Goat; Horse; Pig; Dog; Cat; Bird (including domestic fowl); Canid (*cf.* Fox). Recognizable bones and teeth constitute 32.2% of the collection. 1,023 fragments were unrecognizable (67.8%). Frequencies of the various animals are as follows:

36.5%	bovid	194 specimens
36.0%	sheep/goat	191 specimens
		(2 horn cores identified as goat)
11.1%	pig	59 specimens
7.9%	horse	42 specimens
8.5%	bird	45 specimens

In addition there were the remains of a foetal lamb, a young dog (? new born) and a young cat.

Of the domestic food animals the following percentages were immature: bovid 10%, sheep/goat 27%, pig 25% and horse 2.3%.

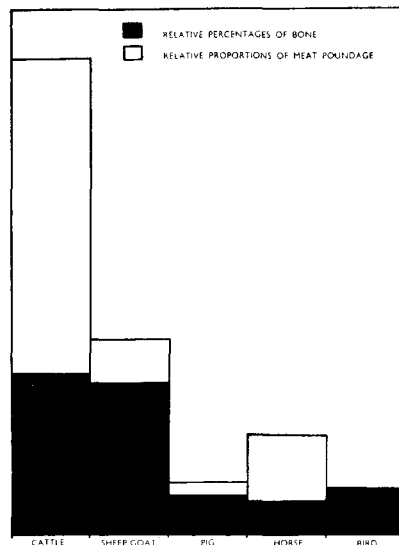


FIG. 19

Proportions of meat poundage:  
cattle, 58%, sheep/goat, 11%, pig, 5%,  
horse, 21%, bird, 0.5%

<sup>105</sup> *Chew Valley Lake*, H.M.S.O., forthcoming.

<sup>106</sup> *Norfolk Archaeol.*, xxxiii, 2 (1963), 171.

<sup>107</sup> At St. Eval, Cornwall, report forthcoming.

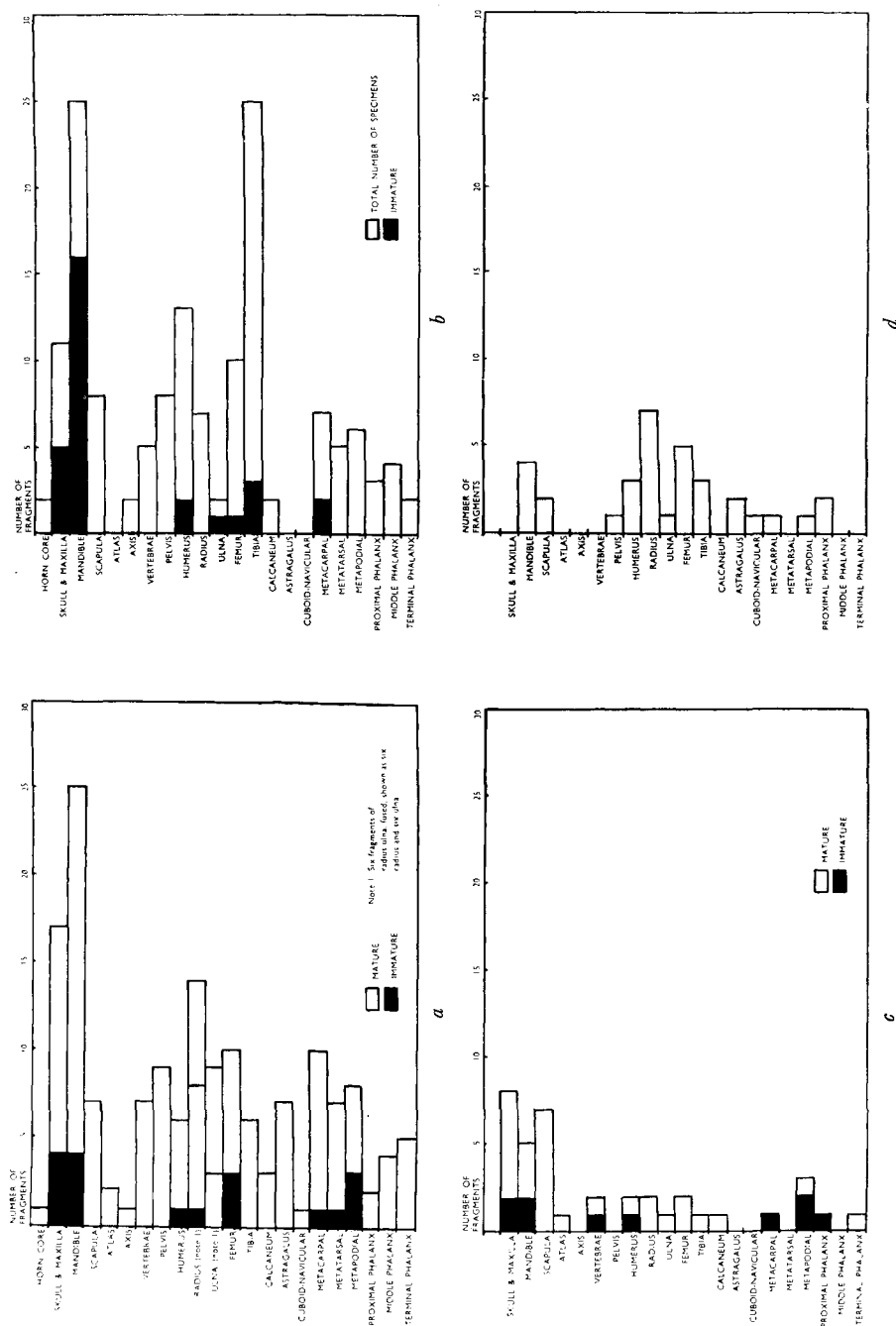


FIG. 20, *a-d*  
 MAXEY, NORTHANTS.  
 Graphs showing relative numbers of types of animal bones (p. 71). *a*, cattle; *b*, sheep and goat; *c*, pig; *d*, horse

Teeth were also of value in estimating age at death (see Table IV). It will be seen that of cattle only 10·2% were definitely younger than two years whereas 35·4% were over two years. Of sheep 12·2% were younger than one year, 12·2% between one and two years and 39% over two years. Of pig over a third were younger than one year while two-thirds were under eighteen months. Horse bones showed only one animal under two-and-a-half years at death and there was no sign of old age among these specimens. It is therefore suggested that the horse may have been used for transport until about five years old when it was slaughtered for food. All animals are not, of course, of equal size. Taking, as a basis for calculation, 1,120 lb. for both horse and cattle, 200 lb. for pig and 140 lb. for sheep, we have estimated the relative proportions of these animals in meat poundage (FIG. 19). Bird remains, though noticeably frequent, would have constituted only ·05% of the total meat supply.

It is of interest that a preference for sheep limb bones is shown, especially for the tibia. (It is probable that the femur would have been better represented but for the fact that it is usually less well preserved.) There is not a single example of a sheep astragalus, which may be fortuitous, but may also be due to the use of this bone for some purpose. Long bones are also predominant among the horse remains. One of the two sheep axes showed that the head was cut off at this point. Both sheep and cattle show a high frequency of mandible fragments, while the pig has a large proportion of scapula fragments. (For this and the relative numbers of various parts of the body, see FIG. 20, *a-d*.)

It has been noted that 3·4% of the cattle did not live through one winter; 6·8% passed only one winter; 54·4% passed at least one; and 35·4% lived through two winters. Of the sheep 12·2% did not live through one winter; 12·2% passed one winter only; 36·6% passed one at least; and 39·0% passed through at least two.

TABLE IV  
Age grouping of the domestic animals in percentages

Age	Cattle	Sheep/Goat	Pig	Horse
Less than 12 months .. .. .	3·4	12·2	39·1	
More than 12 months .. .. .	54·4	36·6		
12 to 24 months .. .. .	6·8	12·2		
12 to 18 months .. .. .			33·3	
More than 18 months .. .. .			27·6	
More than 24 months .. .. .		39·0		
24 to 36 months .. .. .	13·6			
Less than 30 months .. .. .				11·15
More than 30 months .. .. .				33·3
More than 36 months .. .. .	21·8			
40 to 50 months .. .. .				11·15
50 months to 5 years (approximately) ..				44·4

#### ADDENDUM

A SHERD OF STAMPED POTTERY FROM STIXWOULD, LINCOLNSHIRE

by W. G. SIMPSON

The sherd illustrated in FIG. 20 *bis* was found by Mr. J. Hoyes on his farm at Stixwould, near Bardney, Lincolnshire, in a field about 250 yards N. of Stixwould station (TF/159650), about 8 ft. above O.D. on the N. bank of the Witham. The field was deep-ploughed for the first time for many years in 1963. The sherd was found, together with several undecorated ones of similar fabric, on the surface of a mound about 100 ft. in diameter and about 3 ft. high. 12th- to 15th-century pottery was also found, and building-stones,

tiles, animal bones and areas of fired clay, which were turned up by the plough over the surface of the mound, suggested it was an habitation-site.

The sherd is from a steep-sided bowl, about 16 in. diam., of a coarse hard sandy fabric containing flint and calcareous (possibly shell) grits, and varying in colour from black to almost brick-red. The vessel was coil-built, the junctions being not entirely smoothed over internally before it was trimmed and the rim squared with a knife. The exterior was more carefully finished. The junctions of the coils are nowhere visible and a slip of finer clay about 1 mm. thick was applied to the surface and carefully wiped or brushed smooth.

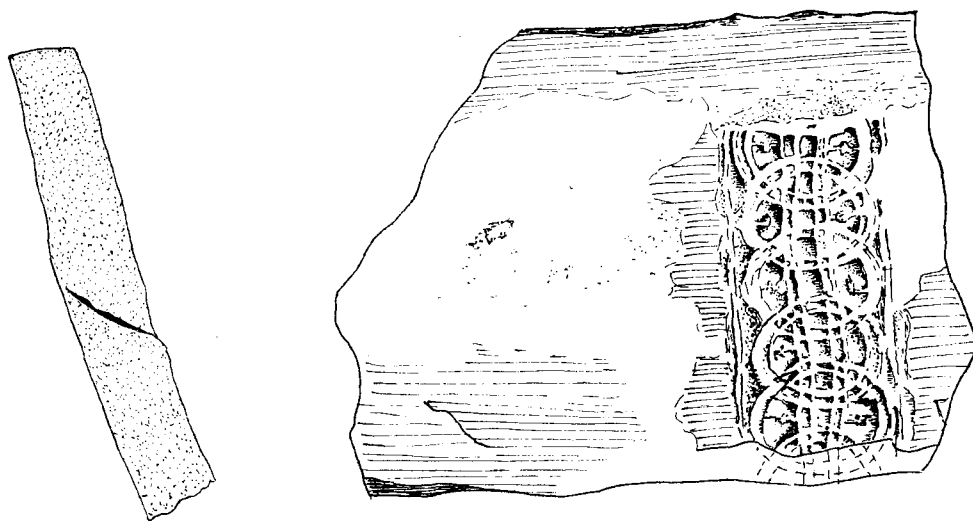


FIG. 20 bis

#### STIXWOULD, LINCS.

Decorated Saxon sherd similar to group-III assemblages of pottery at Maxey. Sc.  $\frac{1}{2}$

The sherd bears an impressed interlace pattern which seems to have been made with a wooden stamp. The basic element is an oval disk defined by a double line which has a small L-shaped projection ending in a minute rosette (?) internally on either side. Five of these overlap (part of a sixth is visible) and are crossed by two pairs of lines parallel to the rib and groove edging the vertical strip of interlace on either side.

This piece closely resembles vessels of the group-III assemblages at Maxey (p. 49). The method of manufacture is identical and the fabric is very similar to fabric G, though the form of vessel is not closely paralleled there. The extraordinary decoration—surely a unique example of stamped interlace on pottery—leaves no doubt that it is dark-age, and must reinforce the arguments put forward (p. 49 f.) for a similar date for the Maxey pottery.

This and other pottery from the Stixwould site will be deposited in the Lincoln Museum.

#### ACKNOWLEDGEMENTS

The excavation was undertaken at the instigation of the Welland Valley Research Committee of the Council for British Archaeology, the members of which have been ready throughout with help and advice. Particular thanks are due to its secretary, Mr. K. R. Fennell, whose report on his earlier excavations appears here, and to Mr. J. R. C. Hamilton, who organized the excavation for the Ministry of Works. Permission for the work to be done was readily given by Mr. A. Crowson, for whose hospitality and material help in clearance of topsoil and other ways we are most grateful. Arduous scraping by volunteers too numerous to mention individually made the work possible, but special thanks are due to M. G. Hebditch, J. Gurney and R. E. Hailey, and to members of the Cambridge Archaeological Field Club,

the Oxford University Archaeological Society and the Peterborough Museum Society. Mr. L. Tait and Miss E. Philipson of the Peterborough Joint Education Board and the late Mr. J. Kingston gave valuable help with organization. Mr. P. Howard helped with the photography.

During the preparation of the report Professor E. M. Jope and Mr. J. G. Hurst have given much advice, and many others have helped on specific points, particularly the pottery. Thanks are also due to the various experts who have contributed specialist reports, and to Mr. L. Biek who has advised and encouraged me throughout, as well as collating the scientific work, and providing his own valuable contribution.

#### NOTE

*The Society is much indebted to the Ministry of Public Building and Works for a grant towards the cost of publishing this paper.*