

Archæologia Cantiana

EXCAVATION OF A ROMAN BARROW AT HOLBOROUGH, SNODLAND

By R. F. JESSUP, with contributions by N. C. COOK and J. M. C.
TOYNBEE

I—PREFATORY NOTE

In Britain, as is now well known, Roman barrows are not generally found outside an area bounded by the Wash, the Severn, and the North Downs. The best-known examples lie in the eastern part of this area, in Kent, Essex and Hertfordshire. Barrows outside these areas are usually smaller in size and less wealthy in content and presumably represent the margin of diffusion from a main area of influence. They occur singly or in small groups, often near Roman buildings, and they are of large size with a steep conical profile quite unlike that of a prehistoric burial mound. The central burial made with careful ritual is usually by cremation. Accessory vessels of pottery and glass are very common, but there are few objects of real luxury except at Bartlow Hills in Essex. In general these mounds were the burial places of well-to-do merchant settlers from Belgic Gaul, and their British connections, who together were responsible for the vigorous commercial development of the south-eastern part of Britain during the first half of the second century A.D. There is also the evidence of tombstones from Stanwix near Carlisle and from Phil Bach near the legionary fortress of Caerleon, and of one certain and another possible barrow at Lincoln, to show that this form of burial was sometimes used in army families and for discharged soldiers, classes among whom the attractions of Roman material civilization might be expected to linger.

Roman barrows closely like those in Britain have long been known in Belgium, where a strictly local distribution is found in the Hesbaye, particularly along the main Roman road from Cologne to Boulogne in its course between Bavay and Tongres. They are always in striking situations commanding a wide landscape, usually close to Roman settlements, and occur singly or sometimes in small groups. In height they may reach as much as 40 ft. and their shape is that of a flat-topped cone. Cremation and its barbaric apparel is general, and the burials are noted for their splendid furnishings of jewels, enamels, bronzes and glassware which belong to the end of the first and the earlier half of the second centuries A.D. The barrows

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of Gallia Belgica, it seems, cover the remains of the owners of the grand villas which rose with the remarkable commercial prosperity of this countryside. Now and again they are set up over the resting-place of some veteran soldier or administrator. In all cases they mark the Roman way of life and manners which became a tradition among the local aristocracy. In like manner, at a rather later date, grew that striking tradition of funerary sculpture which specialized in scenes from the everyday life of these successful and wealthy merchants.

II—INTRODUCTION

Some six miles south-west of Rochester and below Holly Hill, which is almost the summit of the steep western escarpment of the Medway Gap, the chalk downs fall away in an even spur towards the river at Snodland. The final crest of the spur, Holborough Hill, is an oval cap of chalk rising to a height of just over 200 ft. (Fig. 1), and on it, strongly outlined against the sky, once stood a Bronze Age barrow, close by the side of an ancient ridgeway which here started its descent towards a crossing of the Medway in the valley below. Just below the brow of the hill, and commanding a very wide view over the surrounding countryside, was a second barrow, tall and conical in shape, which many generations of local people had known as Holborough Knob.¹ It stood conspicuously on a shelf of the Melbourn Rock, the bed of hard creamy chalk which marks the base of the geological division of the Middle Chalk. The Bronze Age mound has long since been ploughed away, and indeed its existence was only made known by recent excavation, but the Knob, until it was removed by the present excavation, was a popular and very well known feature of the local landscape.

In recent years the hillside below has been progressively quarried to provide chalk for cement making and lime burning until the barrow was left standing on the very edge of the steep quarry face. The nature of the site was fully recognized by the landowners,² The Associated Portland Cement Manufacturers Ltd., and in May 1954, under the advice of the Ancient Monuments Inspectorate of the Ministry of Works, a rescue excavation was decided upon. The work was supervised for the Ministry by the writer, who had for most of the time the valued co-operation of Mr. N. C. Cook. The Company most generously met the whole cost of labour and equipment, and in addition provided technical facilities which set a new high standard of co-operation between industry and archaeology. Particular thanks are due to Mr. Rex Beal, the Area

¹ 1-inch Map reference Sheet 116, 140813.

² The Holborough barrow was included in 1936 in a list of barrows compiled for the guidance of future field work; Dunning and Jessup, *Antiquity*, March, 1936, p. 51.

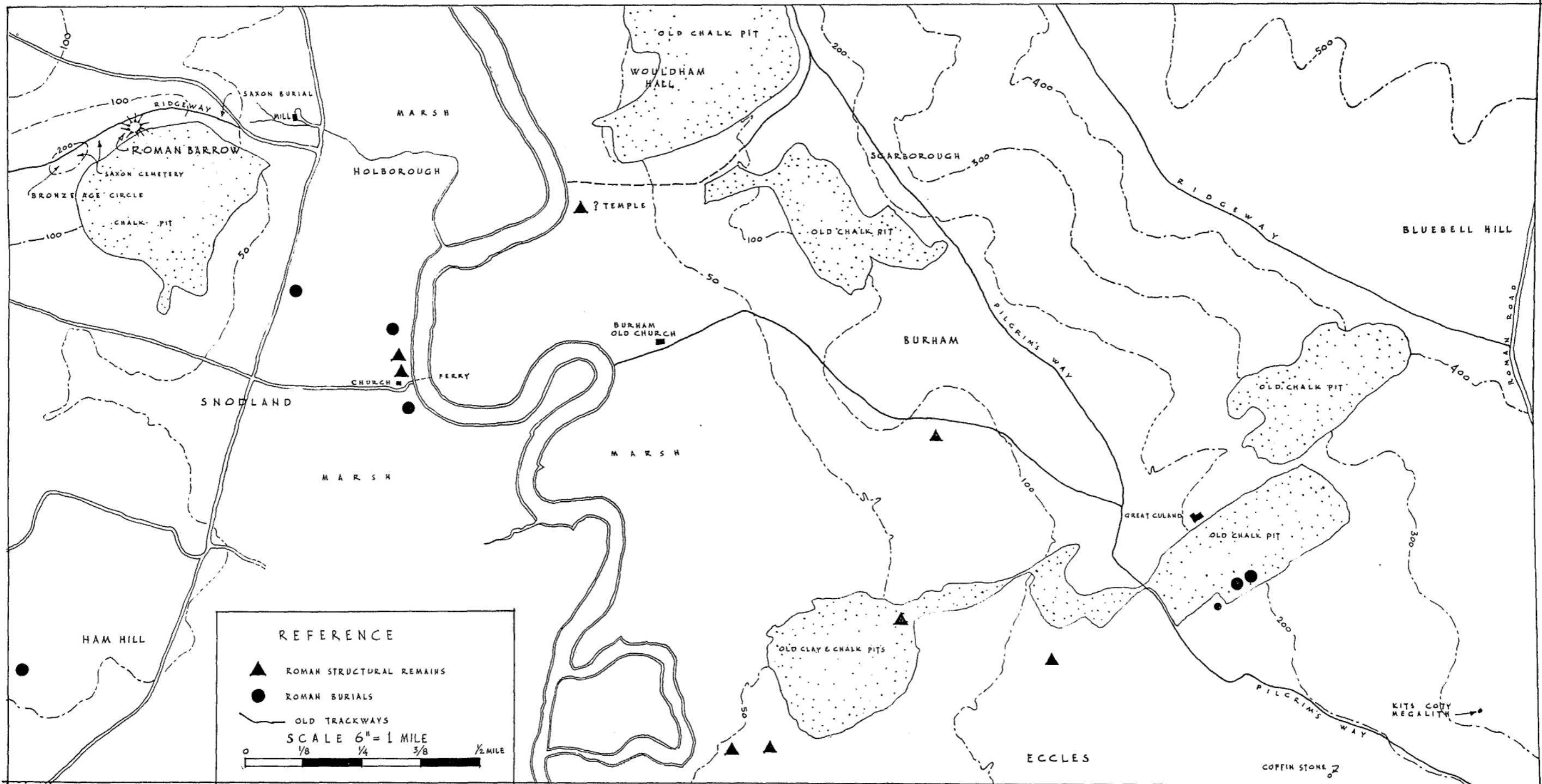


FIG. 1. ENVIRONS OF HOLBOROUGH

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Supervisor, to Mr. B. Buxton the Works Manager, and his Deputy, Mr. Morgan, to Mr. Coston and the geologists and chemists of the Company's Research Laboratories, and to Mr. Ralph Cook, their Surveyor.

Much help in the reconstruction of finds was given by Mr. and Mrs. Noël Hume. At Guy's Hospital, Professor J. Whillis, Dr. Keith Simpson, Dr. C. W. T. Shuttleworth and Mr. E. W. Baxter most kindly examined the human and animal remains. For examining glass and glass-slag thanks are due to Dr. D. B. Harden, and to Professor H. Moore and Dr. D. K. Hill of the Department of Glass Technology, University of Sheffield. Dr. A. J. Turner of the Linen Industry Research Association, and the British Leather Manufacturers' Association, kindly reported on materials from the secondary burial, and Dr. E. W. J. Phillips of the Forest Products Research Laboratory on charcoals and rust-patterns of timber. The Steel Company of Wales through Dr. A. J. K. Honeyman made an expert examination of certain ironwork. For examination of soil samples we are indebted to Mr. Coston, Dr. H. E. Quick, Mr. A. G. Davis, and Miss Camilla Lambert of the Botany School, Cambridge. Information from these specialist sources is incorporated in the text of this Report, which is published with the aid of a subvention from the Ministry of Works.

III—GENERAL SURVEY

(1) EARLY REFERENCES

An early reference to Holborough is that in a grant of A.D. 838 by Egberht (with the consent of his son Ethelwulf, sub-king of Kent) of four ploughlands at Snodland and Holborough to the Bishop of Rochester.¹ It recites:—

... ET UNAM MOLINAM IN TORRENTE QUI DICITUR
HOLANBEORGES BURNA ET IN MONTE REGIS
QU'NQUAGINTA CARRABAS LINGNORUM ...

The present mill on Holborough stream stands near enough upon the site of its Saxon predecessor. Of more particular interest here is the early mention of the King's Mount. It cannot be identified precisely, but in any consideration of its whereabouts, the claims of the large barrow at Holborough must surely be paramount. It lies close to the boundary between the Hundreds of Shamel and Larkfield, and set prominently as it is on the hillside it would have been an almost certain choice for a land-mark. Its contents, as shown by the present excavation, denote the burial-place of a man of some rank and fortune, and it may well be that before the middle of the ninth century tradition and a

¹ Birch, *Cart. Saxonicum*, No. 418, I, pp. 584-5.

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respectable antiquity had combined to award him a style to which he was not in truth entitled.

It is convenient to mention here that the graves of a pagan Saxon cemetery approached very close indeed to the barrow (see Fig. 1) but did not trespass upon it.

The second element of the place-name is a well-known derivative from the OE. *beorg*, a hill or mound, especially a grave-mound. The field-name of Borough Hill was still used to denote the whole area in the Title Apportionment map of 1834. The first element, according to one expert view, is derived from the OE. *hol*, a hollow. It may also be a personal name, but in the present context *Hol* or *Hola* seems as elusive a personality as the Saxon *Snodd* whose people were responsible for the settlement of the nearby village of Snodland.

(2) PREVIOUS EXPLORATION

The first suggestion that the hill above Holborough was a Roman burial mound came from the Kentish topographer, William Lambarde. He wrote in the second edition of his *Perambulation of Kent*, as follows¹:

“ As touching that Holboroe (or rather Holanbergh) it lieth in Snodland . . . and tooke the name of *Beorgh*, or the Hill of buriall, standing over it ; in throwing downe a part whereof (for the use of the chalke) my late Neighbour, Maister Tylghman discovered in the very Centre thereof, *Urnā cineribus plenā*, an earthen pot filled with ashes, an assured token of a Romane Monument. . . .”

Lambarde found little patience with history in the open air. His first concern, as a lawyer, was with history written in documents, and his unusually detailed account of this discovery is explained by the fact that he lived nearby at Lower Halling when it was made. It was, too, a convenient proof of the value of place-name study, an exercise to which he was closely devoted. Unfortunately it cannot now be known whether the earthen pot he recorded came from a secondary burial or, as seems more likely, from a ritual pit of the kind disclosed by the present excavation.

Indications of an early excavation on the north side of the barrow which may perhaps be that of Maister Tylghman are noted below.

In 1844 the barrow was opened by Thomas Wright, a well-known antiquary of his day. There are several accounts² of his work which provide an entertaining picture of the background of early Victorian

¹ William Lambarde, *Perambulation of Kent* (1596 ed.), p. 407.

² See R. F. Jessup, “Holborough: a retrospect,” *Arch. Cant.*, LVIII (1945), pp. 68-72, with detailed references.



(a) From the South-West



(b) From the South-East

THE BARROW BEFORE EXCAVATION



(a) The Barrow from the S.W. with trees removed, the ditch visible in the quarry face



(b) N.E. quadrant removed, showing line of silted ditch

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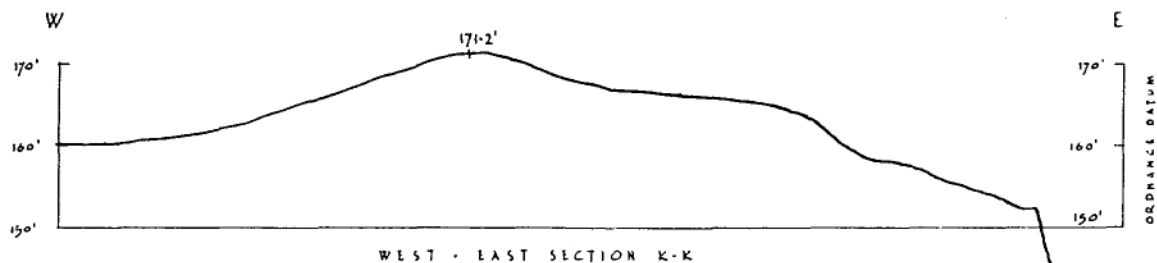
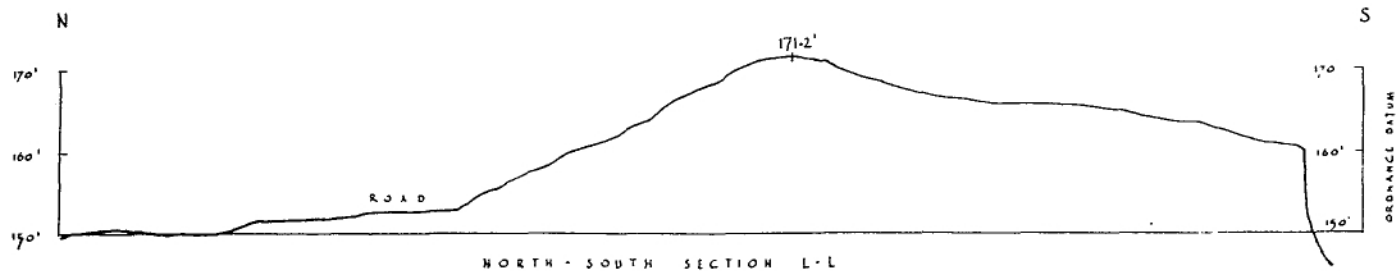
archaeology in the field. The results of the excavation may be quickly summarized. A few fragments of pottery came from the body of the mound. A trench between five and seven feet wide cut through the mound simultaneously from east and west disclosed what Wright described as a floor of fine earth about four inches deep. Upon it was a thin coating of wood ash, and in it a considerable number of very long nails, a few pieces of fire-stained pottery, and part of a Roman brooch. The floor was thought to be the site of a funeral pyre, and the nails, quite rightly, as we think, to be relics of the wood bier. The antiquities have long since disappeared, but both this and the Elizabethan discovery provide good presumptive evidence that the mound was a Roman barrow.

Other explorations have since been made in the mound, one as recently as the nineteen-twenties, but it is probable that in them nothing of material interest was found. It should be noted here that the numerous Roman antiquities from "Holborough" formerly in the Raven Collection, which was purchased by the late G. M. Arnold and is now dispersed, came not from the barrow but from a local chalk pit.

(3) ROMAN SETTLEMENT IN THE NEIGHBOURHOOD

In saying that there was scarcely a field close to the banks of the Medway here in which traces of Roman buildings or burials had not been found, Wright was not overstating the case. He had collected Roman tiles and potsherds, as have many people since, on the hillside below the barrow. Recent air photographs show in the area north-west of the barrow indications of buildings which appear to belong to the pattern of Roman settlement. About half-a-mile southward on the river bank traces of an extensive villa have been recorded from time to time since 1844.¹ The antiquities recovered range in time from the end of the first century to the fourth. A terra-cotta architectural mask, and the counter-plate of a bronze belt-buckle with portrait medallions relieved in niello, seem to indicate that the building and its inhabitants were of some consequence. The building evidently long served as a convenient quarry for the repair of the adjoining church. Nothing of interest is now to be seen, either on the site or in the river channel. A stone sarcophagus found in Church Field in 1933, a small cremation cemetery disclosed in 1923 in the garden at the back of "Holboro' Garage," $\frac{1}{4}$ mile to the westward, and other unpublished finds, show that this riverside plain was used equally for burial. (Fig. 1.) The same settlement pattern appears also on the eastern bank of the river between Aylesford and Burham.

¹ N. C. Cook, "Roman Site in the Church Field, Snodland," *Arch. Cant.*, XL (1928), p. 79.



R O M A N B A R R O W
 HOLBOROUGH SNODLAND, KENT
 PROFILE BEFORE EXCAVATION - SEE GENERAL PLAN



SCALE OF FEET

FIG. 2. PROFILE BEFORE EXCAVATION

ROMAN BARROW

HOLBOROUGH, SHODLAND, KENT

SECTION A-B ON GENERAL PLAN

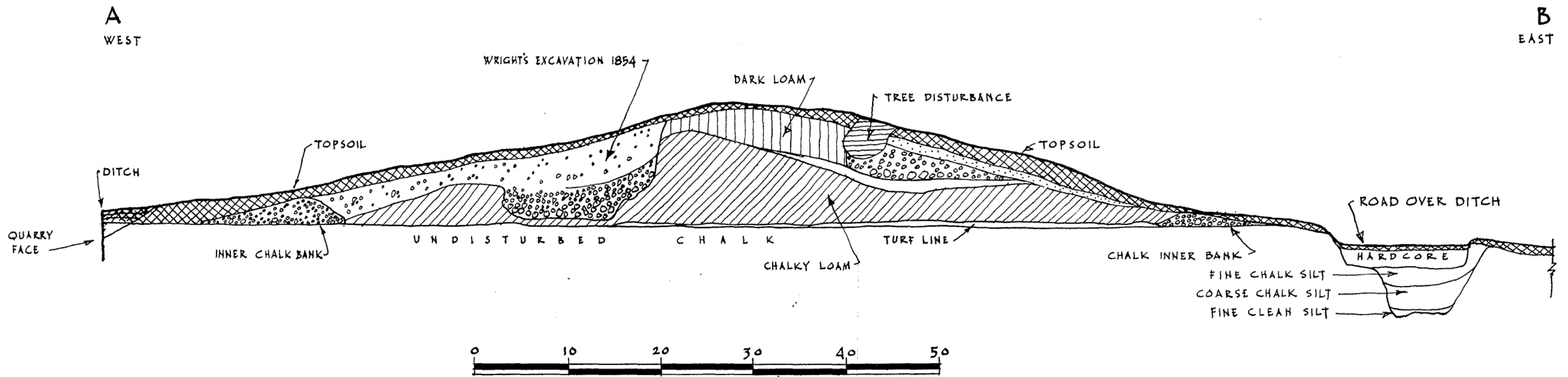


FIG. 3

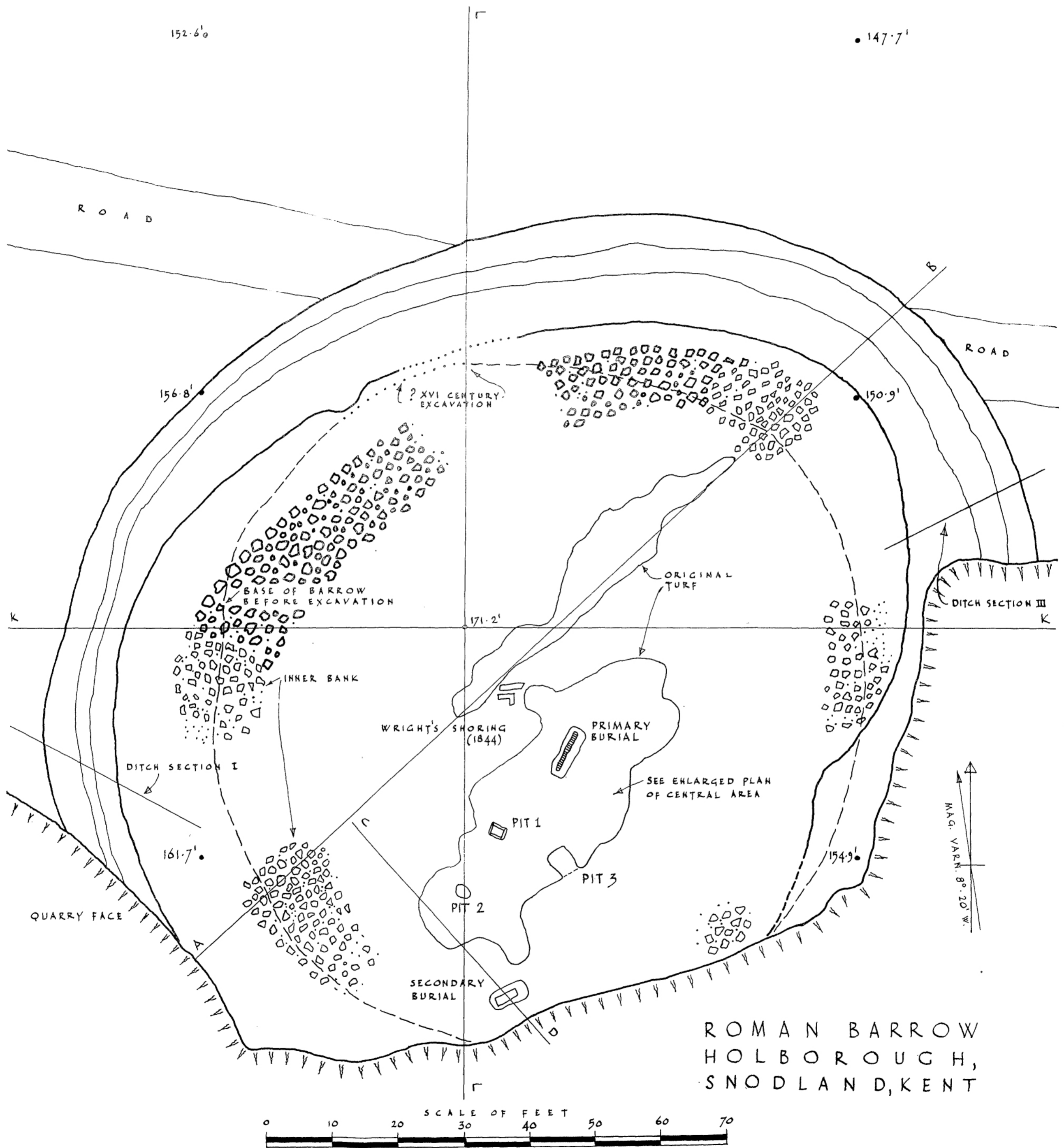


FIG. 4. GENERAL PLAN

IV—THE SITE

(1) METHOD OF EXCAVATION

The mound, which was ovoid in plan, a little over 100 ft. in diameter and 18 ft. in height, (Plate I and Fig. 2), was thickly covered by trees and undergrowth, and its surface burrowed by the holes of an extensive rabbit-warren. After the trees had been cleared, indications of four previous and apparently widespread diggings could be seen, the up-cast from the trench of one forming a false crest to the mound.

A start was made to remove the obvious recent fillings, but this proved unsatisfactory by reason of disturbances caused by deeply penetrating tree-roots, by the rabbit runs, and not least by blast damage from a war-time rocket projectile which fell nearby. A cutting 15 ft. wide and 130 ft. long was therefore made right through the barrow across its apparent centre on a bearing of 47 degrees true. When a key section had been obtained, the excavation was continued in quadrants in the usual way. The barrow was excavated completely—it contained, by calculation, a volume of 2,400 tons—and its buried ditch, which was almost complete, was then located and totally excavated.

(2) STRUCTURAL FEATURES

The structure of the barrow proved to be simple. (Figs. 3 and 4.) The core, which was symmetrical and rose to a maximum height of 11 ft. above the natural chalk, consisted of a mass of well consolidated chalky loam showing numerous tip-lines. It contained occasional worked flints with a bluish-white patina, Eocene pebbles and iron-stained flints derived from local solution-pipes in the chalk, and marcasite nodules and a fossil sea-urchin (*Holaster subglobosus*) from the Lower Chalk. The materials were thus of strictly local provenance. No macroscopic remains were identifiable; a report on the snail shells will be found on page 60.

Above the core and sealing it were irregular dumps of dark loam and of "curly burr," the local name for Melbourn Rock. Owing to the widespread damage to the surface, it was not possible to identify a consistent outer envelope.

The core contained two sherds of prehistoric pottery, several oyster shells, small bits of tile, and a very few abraded sherds of Roman pottery which are not further identifiable. A chipped fragment of Samian ware also came from this source. The relics are thus exactly what would be expected from scrapings of the neighbouring surface soils.

The line of Thomas Wright's excavation was clearly marked, crossing the barrow from approximately east to west. It had been loosely refilled with dirty chalk, but in part with clean chalk (Plate VIIIa)

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derived from a small inner bank, which delimited the barrow. At the bottom of the filling, on the surface of the undisturbed chalk was found a timber of his collapsed revetment containing an iron coach-bolt, and pieces of a contemporary wine-bottle. His excavation proved to have been extensive. The original outline of the south side of his trench was traced into the natural chalk; it missed the main burial (Plate VIa) by little more than 4 feet. The calculated centre of the barrow fell within the area of Wright's excavation.

The next features of structural interest are the inner bank, and the ditch. The small inner bank of clean broken "curly burr," 15 feet in width and never more than 3 feet in height, had spread considerably under the weight of the mound. Little of its course remained intact. There was no trace of a revetment in the sections remaining, which were not laid out with particular reference to the surrounding ditch. On the west side, a wide irregular berm was left between ditch and bank, while on the north and east the bank was thrown up almost on the edge of the ditch. The bank was devoid of relics. Retaining walls inside the mound have been seen in several of the Gaulish barrows.¹ It seems very likely that they represent a stage in the copying of classical Roman mausolea.

A wide ditch is an imposing feature of many Roman barrows. No certain trace was here visible on the ground or from the air. Trial trenches made at three points proved its line, however, and after the removal of the mound its ovoid course became clearly visible. It was not centred on the mound, the irregularity of its plan being due, it seems, to the difficulty of accurate digging in the hard Melbourn Rock. Some of the southern section had been lost in recent quarrying, but apart from this, it was fully excavated and all the filling removed. No causeway existed in the area examined. It had been cut through on the northern side by chalk-diggers, whose hole continued into the side of the mound (Plate IIIb); from the nature and condition of the filling it seems reasonable to suppose that the hole may have been the work of Maister Tylghman about 1596.

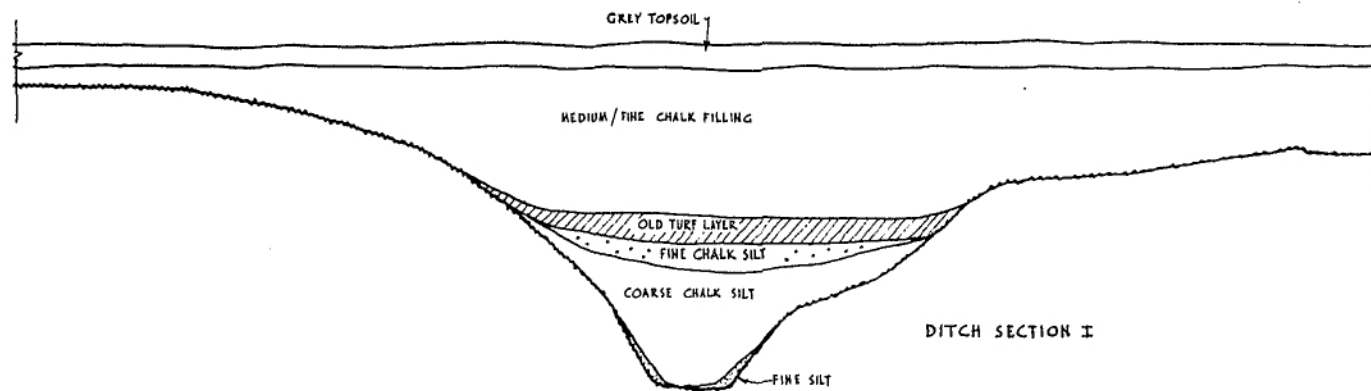
The ditch (Plates II, III, IVa and Figs. 4 and 5) was dug generally about 7 feet deep into the Melbourn Rock which preserved its basal outline so well that after a severe rain-storm it was possible to see the original pick-marks. The bottom was square-cut with a width varying from 18 in. to 3 feet, the sides rising very steeply on the outer bank but more evenly on the inner bank to a width of 10-13 feet at the original lip.

¹ e.g. at Penteville, Glimes, Cortil-Noirmont and Hottomont. See, for instance, F. Courtoy, "Le tumulus de Penteville," *Ann. de la Soc. arch. de Namur*. XLI (1934), pp. 3-27. This and other structural features may be studied in the excellent scale models of the barrows in the Cinquantenaire Museum, Brussels.

ROMAN BARROW
 HOLBOROUGH, SNODLAND, KENT
 DITCH SECTIONS I & III ON GENERAL PLAN

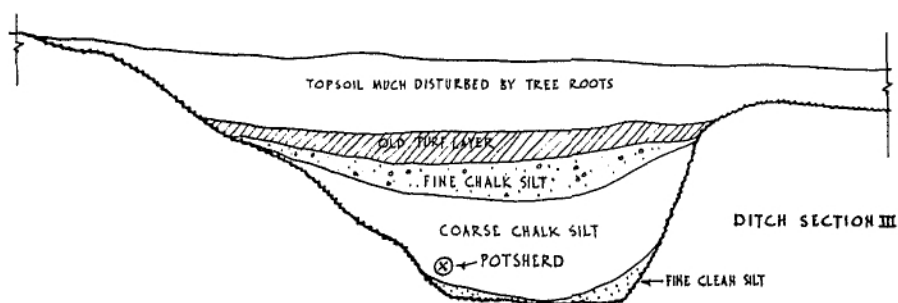
NORTH

SOUTH



WEST

EAST



SCALE OF FEET

FIG. 5



(a) S.W. quadrant. (The ditch is 13-feet wide at the lip)



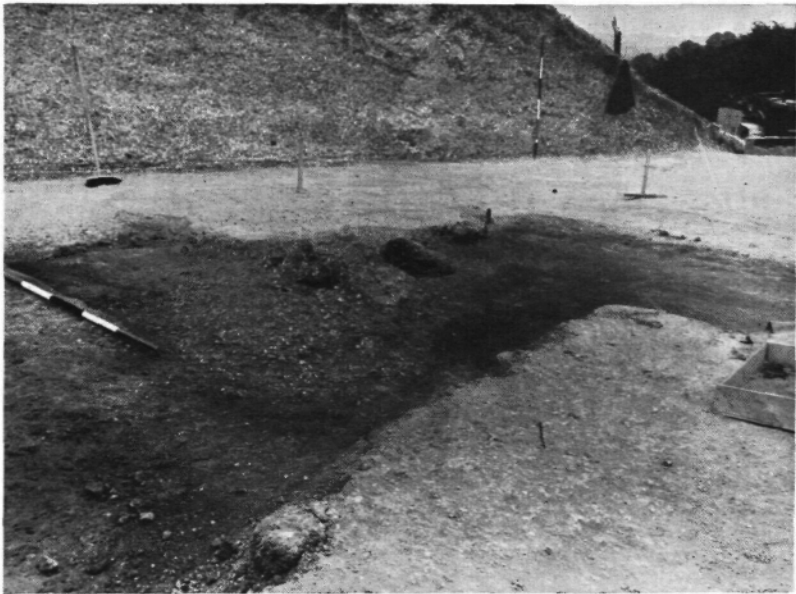
(b) Northern sector, with line of earlier excavation
THE DITCH



(a) Ditch, Section I



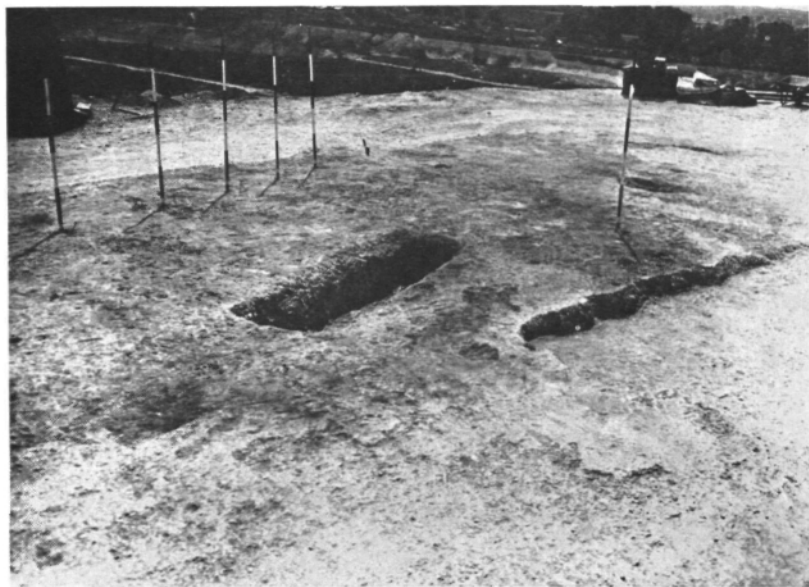
(b) The main burial with wood coffin



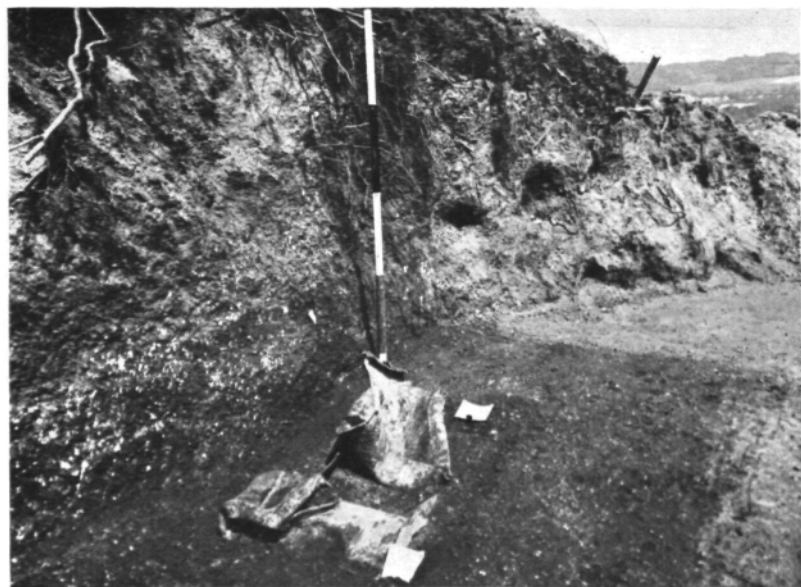
(a) The dome covering the grave partly excavated



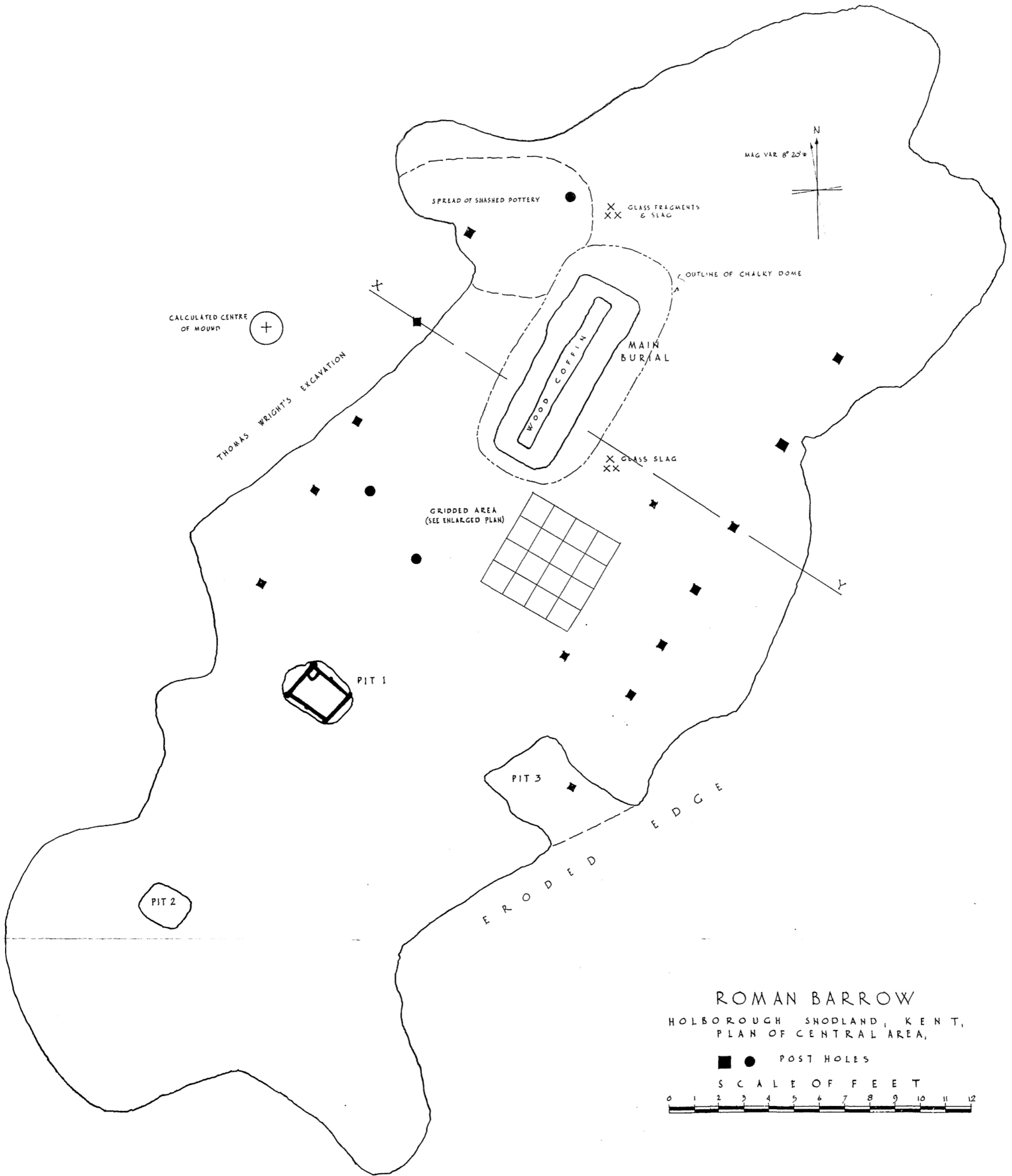
(b) Smashed amphoræ at N. side of grave
THE MAIN BURIAL



(a) Central area showing post-holes of enclosure round Main Burial and edge of Wright's excavation



(b) Secondary Burial : Lead Sarcophagus in grave



ROMAN BARROW
 HOLBOROUGH SNODLAND, KENT,
 PLAN OF CENTRAL AREA,
 ■ ● POST HOLES
 SCALE OF FEET
 0 1 2 3 4 5 6 7 8 9 10 11 12

FIG. 6

The filling was uniform. A small deposit of fine silt in the corners of the bottom was succeeded by some 2 feet of coarse chalk, a layer of fine chalk silt, and then by a well-marked turf layer which sealed the ditch at lip level. Between the turf layer and the present surface soil was a filling of medium and fine chalk with occasional Eocene pebbles, a hill-wash typical of this chalk downland.

Part of a cooking pot of grey ware with burnishing and right-angled lattice decoration was found lying on the bottom of the ditch. From the coarse chalk filling were recovered several pieces of two other cooking pots (see p. 51). The hill-wash above the turf layer contained isolated bones and teeth of a horse, the remains, perhaps, of a plough-horse which had died on the hillside above, its bones being washed naturally down into the ditch.

(3) THE CENTRAL AREA

In the central area the core of the mound rested upon decayed turf which was firmly bedded to the undisturbed chalk. The complete removal of the mound disclosed two elongated patches of turf running in a general NE-SW direction (Figs. 4 and 6). Between them was the line of Thomas Wright's excavation. The consolidated turf surface of the larger and southerly patch (hereafter referred to as the Central Area), was uniformly hard and separated easily with a trowel from the core material above. No items of botanical interest were reported other than charcoal, but the upper two inches contained many specimens of the shell of *Hellicella itala*, a mollusc which is reported on in page 60 below. In the upper portion were several hundred iron nails, numerous potsherds, and a very large quantity of fragmentary charred wood. These materials as they appeared exposed on the surface were widely scattered and heavily trampled; there was no intelligible pattern or sequence. A specimen surface area of 4 square feet, plotted in detail, may be seen in Fig. 7.

From the existing shape and extent of the two turf areas, it is impossible to recognize the original appearance of the central area. The turf from the periphery of the barrow site was clearly stripped off, and it may be that the central area remaining was roughly circular in plan, but excavation for the secondary burial (see page 18), the depredations of chalk diggers, and possibly drainage disintegration on the southern side, have all combined to alter its original outline. There was no evidence that this turf area, which is presumably to be equated with Wright's "floor of fine earth," covered, as he reports, an area of 20 feet in diameter.

Within the Central Area were located the main burial and three "ritual" pits, all of which were undisturbed and sealed by the core of the mound.

EXCAVATION OF A ROMAN BARROW AT HOLBOROUGH, SNODLAND

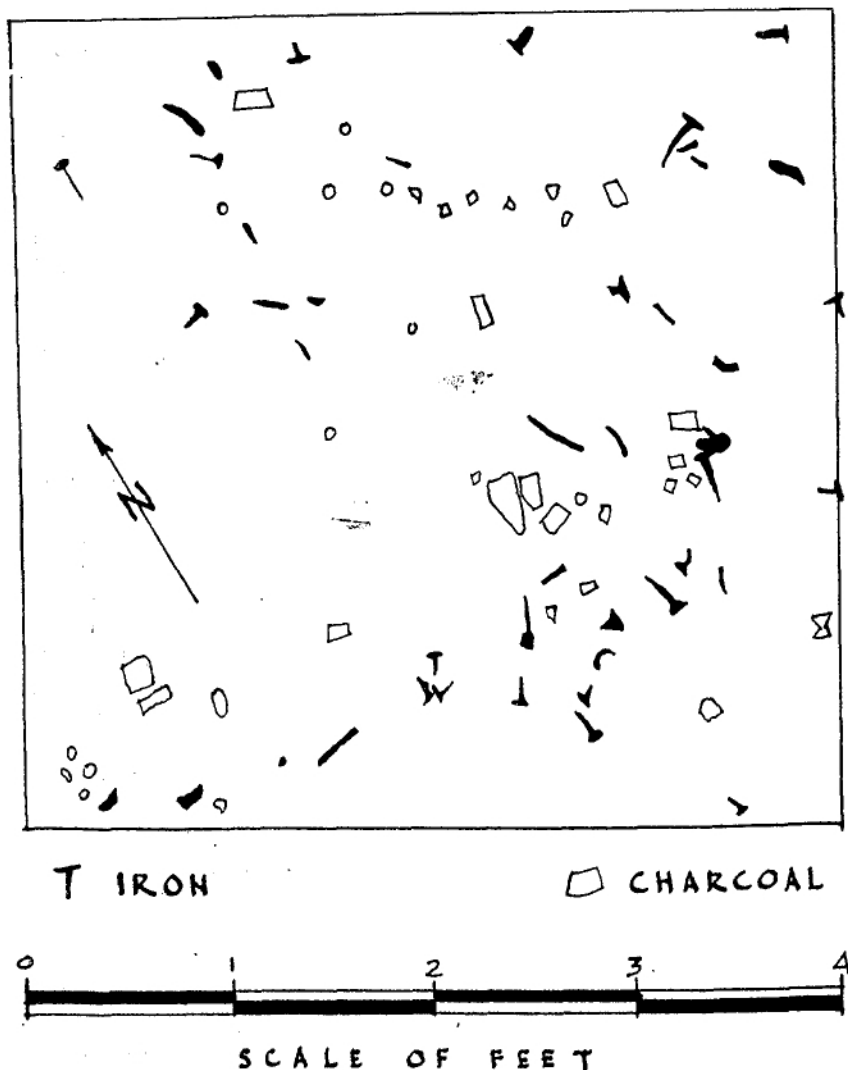


FIG. 7. PLAN OF GRIDDED AREA SE. OF MAIN BURIAL

(4) THE MAIN BURIAL

The main burial (Plates IVb, V, VIa, Figs. 6 and 8) was found 10 feet ESE of the calculated centre of the mound. It was not marked by a vertical stake, as is often the case,¹ and the irregular ovoid outline

¹ e.g. Mersea, *Trans. Essex Arch. Soc.*, XIII (1915), pp. 116-39; Plumberow Mount, Hockley, *op. cit.*, pp. 224-37; and six examples in Belgium noted by Baron de Loë in his report on the Tirlemont barrow, *Ann. de la Soc. d'Arch. de Bruxelles*, IX (1896), pp. 419-53.

ROMAN BARROW
 HOLBOROUGH, SNODLAND, KENT
 SECTION X-Y ON CENTRAL AREA PLAN



← CORE OF UNDISTURBED MOUND →

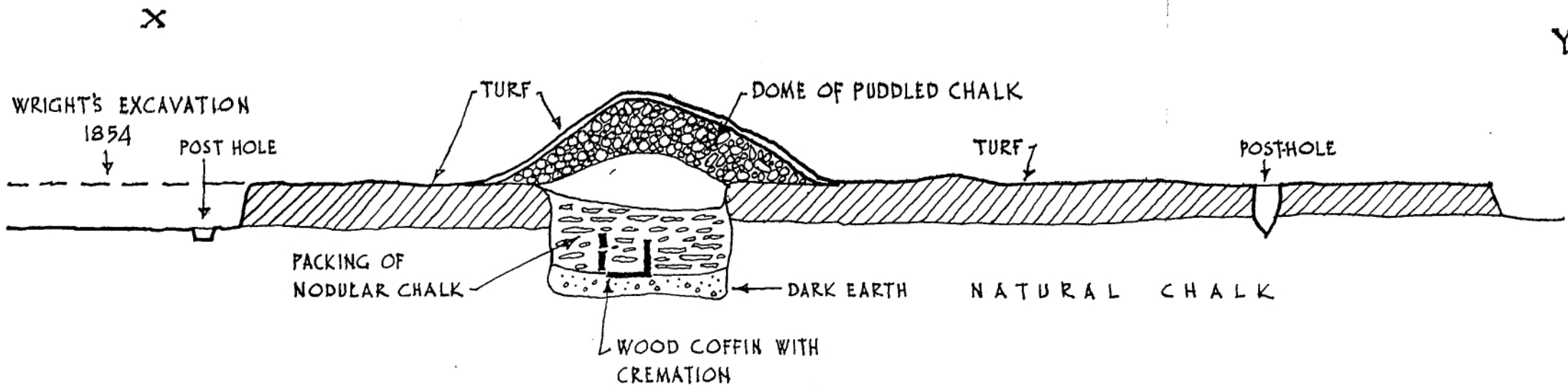


FIG. 8. SECTION THROUGH MAIN BURIAL (see General Plan)

of the mound may perhaps be due to the lack of a central setting-out mark above the burial. A grave aligned NNE-SSW, 7 ft. 8 in. in length, 2 ft. 6 in. in width, with smooth sides and slightly rounded ends, had been cut very neatly 1 ft. 6 in. deep into the natural chalk. The grave (Plate IVb) contained a wooden coffin 6 ft. 9 in. in length but only 6 in. in width and 5 in. in depth, made of two boards fastened together carvel-wise by long iron nails. The wood had decayed entirely to a fine brown dust. There was no trace of a lid, and only a stain remained to indicate the position of the base boards, which rested on a very thin layer of dark soil, the residue of some vegetable substance which, one would like to think, was boxwood.

Fortunately, sixteen iron nails which were in situ, retained in their rust superficial impressions of, and sometimes the actual internal structure of, the wood from which the coffin was made; the Forest Products Research Laboratory has been able to identify this as oak. Further, the rust impressions also show something of the method of construction. The side boards were of horizontal grain, and as four nails of the sixteen exhibit vertical wood grain for the upper 1.5 in. of their length and horizontal grain below, it is suggested that the four internal corners of the coffin had strengthening billets. Alternatively they could have been used to secure the four corners of a lid 1.5 in. thick, but it is unlikely that oak boards of such dimensions would have disintegrated in these surroundings without leaving a trace.

Scattered throughout the coffin, but concentrated towards the middle where the boards bulged outwards with the pressure, was a mass of oak wood ash. From this ash were recovered 109 iron nails, all of which exhibited a degree of burning, a wafer-thin dome of bronze 1 inch in diameter (the covering of one of the terminals of the chair described below), one burnt bone of a fowl, and many fragmentary calcined human bones, all of which belonged to the same subject, a man, probably, of about 40 years old (see p. 57 below). The remainder of the coffin was filled with small nodules of Melbourn Rock, and this material, which had been removed when the grave was cut, was put back as packing round the coffin.

Over the grave for the whole of its length was a 14-inch high domed mound of puddled chalk¹ (Fig. 8), and the dome itself had been thinly covered with turf before it was overspread by the core of the mound. The core material came away quite easily and cleanly from the dome, showing that the latter had been well consolidated before the building of the mound. The packing in the grave had shrunk so as to leave a considerable space under the dome: local legend which was soon

¹ A dome of mortar covered the tomb-chamber in the Mersea barrow, *q.v.* above. The tomb in the Youngsbury barrow was an oven-like structure with a roof of hard and stiff clayey soil, *Arch.*, LII (1890), pp. 287-96.

current about this "cave" and its alleged contents far exceeded in its effect the rumours with which Thomas Wright's excavations were attended.

The burial is particularly interesting in that it shows the rite of cremation in an inhumation setting. The tradition of a wood chest to hold the ashes is a very common one, but here the chest is in fact an unusual variety of coffin, a coffin, moreover, buried in a typical inhumation grave. There seems more than a hint of the approach of Christian practice towards this pagan ceremonial.

Deposits round the grave

On the northern side of the grave, close to it and in its remaining part sealed by the undisturbed material of the mound, was a great mass of broken pottery¹ (Plate Vb), a shapeless spread of rusted iron nails, a few small fragments of glass vessels, and some fused glass slag which had solidified by the time it was deposited here.² The pottery consisted entirely of pieces of five amphoræ, one of very large size, which had been deliberately smashed. Among several hundred pieces, many with fire-stains and matching fractures were found widely separated, and deposits of a thick black treacly substance were common not only on the interior surfaces but also on the fractures and the exterior surfaces. It was not possible to identify this substance but the analysts reported that it melted readily and gave off a resinous odour on heating. A similar material was examined by Michael Faraday for the excavators of the Bartlow Hills barrow in 1835, and both indicate the dried residue of a libation of wine or oil offered during the funeral ceremony, at Holborough after the ritual smashing of a group of amphoræ. The south-eastern edge of this spread of broken pottery was covered by the chalky dome of the main burial (Fig. 6), and it was clear therefore that the smashing had taken place before the grave was finally covered. The pottery spread also sealed two of the post-holes described on page 14.

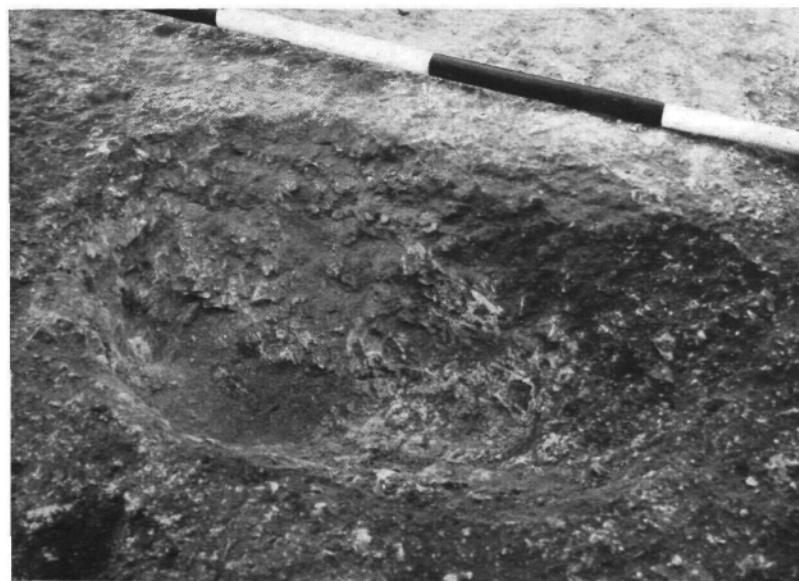
The surface of the original turf was flecked with small lath-like pieces of charcoal, chiefly of hazel (*Corylus avellana*), though a species of maple (probably *Acer campestre*) was also represented. In no instance did the length of the pieces exceed two inches, and there was no suggestion of arrangement in their position. Here and there the surface had

¹ In Plumberow Mount a thin layer of sherds on the original ground surface was thought to have been strewn there deliberately. In the Belgian barrows, e.g. Tirlémont, Fresin and Penteville, intentionally smashed glassware and pottery has often been found. See *Trans. Essex Arch. Soc.*, XIII (1915), pp. 224-37, and M. Courtoy's paper noted above.

² Cf. the second Bartlow Hills barrow, where fused glass, the remains of vessels, adhered to the cremated human bones; *Arch.*, XXV (1834), pp. 1-23. There are also instances where the glass vessels were evidently cracked by ashes put in whilst still hot.



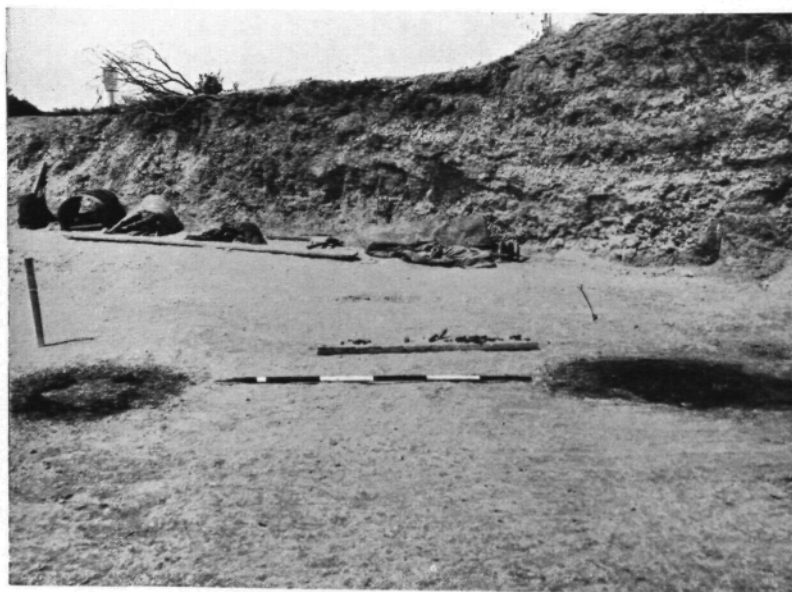
(a) Pit 1, showing framework of chair



(b) Pit 2, after excavation



(a) Refill of Wright's excavation abutting on the core of the Barrow



(b) Pit 1 and Pit 2 in the foreground; Wright's refill and the inner bank (left) at back

EXCAVATION OF A ROMAN BARROW AT HOLBOROUGH, SNODLAND

been lightly scorched, probably by hot ashes and hot glass-slag being thrown upon it, but there was no indication at all of a major conflagration which would provide heat sufficient to melt glass or to produce the degree of burning exhibited by the human bones in the primary burial and by the pottery, noted below, from the "ritual" pits.

The site of the pyre was not found during the excavation. On the evidence of the pyre sweepings in the main burial and in the "ritual" pits shortly to be discussed it cannot have been far away. Pyre and tomb are seldom found under the one barrow¹, and on general grounds the leeward slope of Holborough Hill seems here to be the most likely site. In this connection, extensive patches of burnt soil found during chalk quarrying on the southern side of the hill just below the barrow may not be without significance.

Enclosure

A series of 14 regularly spaced stake-holes, was located in the grave area well outside the spread of the puddled chalk mound² but sealed by the core of the barrow (Plate VIa, Fig. 6). They formed round the grave an almost square enclosure of 15 ft. by 16 ft., presumably open at its (conventional) eastern end, with two further posts prolonging the lines of the enclosure as if for a verandah 4 ft. 6 in. beyond its western end. Within this enclosure was an isolated stake-hole between the south side of the grave and the line of the enclosure, and two post-holes 14 ft. apart between the north side of the grave and the northern line of the enclosure.

The stake-holes were rectangular in outline, small and very clearly cut, none exceeding 4 in. by 4 in. in cross-section or 8 in. in depth. These small stakes sharpened to a four-sided point, were driven straight through the turf-layer barely to penetrate the tough chalk beneath. With one exception they were set vertical and square with the grave; none was packed or screwed in by the point. The holes were exceedingly clean, containing only small quantities of light brown mould and fine chalk. There was no trace of decayed wood, but occasionally the sides were streaked with charcoal, probably from fire-hardened stakes. The base of one hole was located in the bottom of Wright's excavation, its outline well preserved, while another (its significance is discussed below) penetrated one of the "ritual" pits. Two of the holes—one of

¹ Though they were so in the barrow at Riseholme near Lincoln excavated by Mr. F. H. Thompson in 1952. This, the first Roman barrow to be excavated in Britain for some 40 years, was unique in having Roman primary and secondary burials; within a year the same rare condition came to light at Holborough.

² Stake-holes noticed in Plumberow Mount could not be related to the structure. There are also records of isolated posts and post-holes elsewhere, but not, so far as I know, of internal structures of this kind.

the enclosure wall, the other, one of the pair of oval holes described in the following paragraph—were sealed by the spread of broken pottery at the northern end of the main burial. Most of the holes were located by scraping the turf surface, but four were not discovered until the turf layer had been removed. There can be no doubt that they were in use for only a very short time; there was no trace at all of decayed wood, and the inference must be that the stakes were withdrawn quite soon after they were erected, the holes becoming quickly filled with small debris from the surrounding turf.

The two post-holes on the northern side were oval in section and had held sharply pointed timbers 5·25 in. in maximum axis measurement; one hole was just over 12 in. in depth, the other 15 in., and each sloped at an angle of approximately 45 degrees, point towards the grave. The filling did not differ from that of the stake-holes, and the holes themselves were again extremely clean and well preserved.

The arrangement of the stake-holes implies the framework of a hut or shelter over the grave and its immediate environment. The hut appears to have been open at its eastern end, and while this may just possibly be of significance if there be any element of Christian influence in the burial itself, it may well be nothing more than the most convenient arrangement to give shelter against the prevailing west winds. Details of its structure, and particularly of its roof, remain uncertain. It was, however, a flimsy little building of shallow foundation, its walls of interlaced hazel wattle. There was no sign of wall lines or droppings in the turf, and the quantity of billets of hazel charcoal together with the clean condition of the stake- and post-holes suggests that the hut was quickly pulled down and burnt on the spot once its purpose was fulfilled.

The purpose seems to have been functional rather than symbolic. It could have afforded shelter during the funeral ceremony, but it was no obvious house to which the spirit of the departed might return and find itself amid familiar surroundings. There can be no direct link between this temporary hut and the permanent stone and tile chamber which, as exemplified at Rougham¹, was an integral part of the monument. Still less can there be any question of a connection with the timber mortuary-houses found in certain prehistoric burial mounds. Yet there is one feature to which attention might here be directed, namely the abundant evidence of ritual destruction found elsewhere in the barrow. It is not beyond possibility that the hut was destroyed so that its use, too, was denied to all but the spirit of the deceased.

The purpose of the two larger, oval, posts set at an angle inside the hut is not very certain. Probably they were guy-posts for bracers to

¹ In the fourth barrow. *Proc. Suffolk Inst. Arch. & Nat. Hist.*, IV (1874), pp. 257-81; *V.C.H., Suffolk*, I (1911), pp. 315-6.

strengthen a ridge-roof, though there were no corresponding posts on the opposite side of the grave. The isolated stake-hole, it is suggested, supported a small temporary table used to hold objects needed during the funeral ceremony.

Two, and therefore probably all, of the post-holes had served their purpose before the ritual smashing of pottery took place at the northern end of the grave.

(5) THE "RITUAL" PITS

Beyond the (conventional) west end of the grave, three small pits had been dug through the turf layer into undisturbed chalk. Each pit was sealed by the core of the barrow.

Pit 1

At a distance of 11 feet from the western end of the grave and just outside the verandah of the enclosure, the roof of which may indeed have sheltered it, was an irregular rectangular pit (Plates VIIa, VIIIb, Fig. 9) 2 ft. 11 in. in greatest length, dug to a depth of 8 inches. It was carefully finished and provided with a "lip" to give easy access. An upturned turf sealed the mouth. A flat rectangular framework of heavily corroded iron bars fitted into the pit, its four corners jammed tightly against the sides. Within the framework, immediately under the turf, were four large iron nails one of which was in a vertical position, minute fragments of very narrow and fragile bronze ribbon, and a billet of oak charcoal. Two nails had portions of oak charcoal adhering to them. Along one side of the pit, between its edge and the iron framework, was a row of 10 short iron nails lying horizontally at approximate equal intervals of 3 in. on the top of the pit filling. The seepage of iron oxide had preserved in one side of the pit a pattern of plaited straw or wicker-work. The pit was filled uniformly with very soft and fine wood ash which contained occasional further fragments of the wafer-thin bronze ribbon. A laboratory examination showed some unburnt oak charcoal, a little nitrogenous matter, and 1.56 per cent. of phosphorus pentoxide suggesting the presence of cremated bones.

It was at first thought that the pit contained an iron-bound casket of wicker-work, but a more detailed examination showed the framework to be that of a bronze-mounted and folded chair, placed in a horizontal position. It was, in fact, a *sella castrensis* of much the same type as that found in one of the Bartlow Hills barrows, the only one of its kind hitherto recorded in Britain. A detailed account of the chair and its kind will be found later in this Report, but one or two related matters may be noted here.

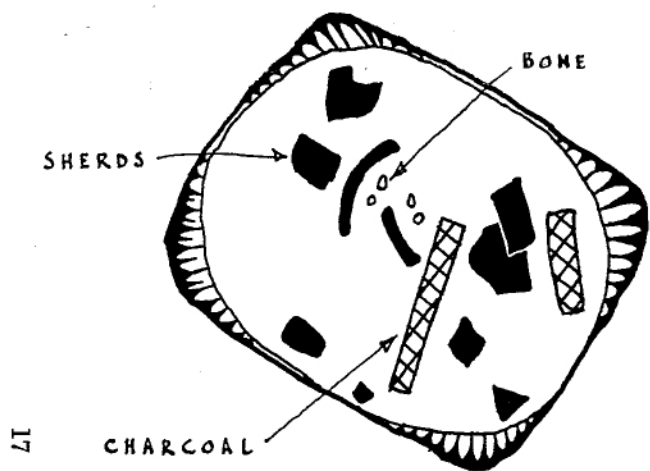
Adhering to the framework and partly incorporated in its rust were several pieces of what appeared to be bone, and as the bronze staining

on certain of the cremated lower limb bones from the main burial suggested the possibility that the owner might have been cremated sitting in his chair, expert advice was sought on this point. Dr. Keith Simpson tells us that the material does consist of a lime deposit, but that its cancellous nature could result from its forming in slowly decaying or "fossilized" vegetable matter; more than this cannot safely be said. It may be noted that a similar material was found attached to the Bartlow Hills chair. A detailed metallurgical examination proved it to have been severely burnt before corrosion set in, and there can be no reasonable doubt that the burning was that which took place on the funeral pyre. At the same time, the thin domes of bronze plating which covered the terminals of the chair were loosened and in part detached, one piece finding its way with the cremated remains into the main burial, and another with similar remains into one of the "ritual" pits. There was yet another indication that the chair was damaged when it was buried: the top bars, which would normally have been joined by a pliant seat, had collapsed outwards. Such a collapse would only have been possible after the seating material had been destroyed, and as the chair had been fixed immovably against the sides of the pit, this could not have occurred after its burial.

The bronze ribbon appears to have no direct connection with the chair. Conceivably it decorated a cushion of which there may be other evidence as noted on p. 23. Here again fragments occurred in another "ritual" pit. It is possible, too, that the bronze ribbon may have been the decoration of an oak box, the presence of which seems to be indicated by the four large nails. There can be no more certainty about the significance of the row of short nails and the impression of wicker-work: some sort of basket container seems implied.

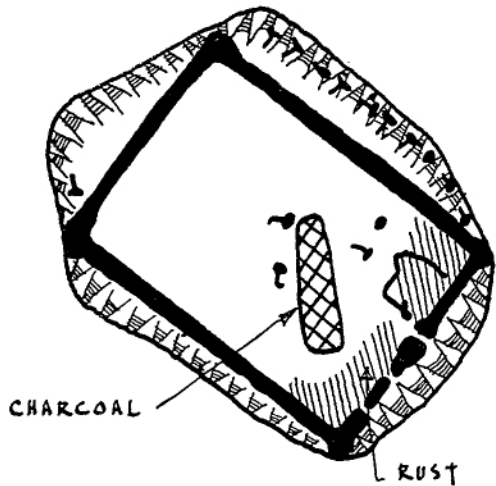
Pit 2

In line with the grave and 9 ft. west of Pit 1 a second pit was uncovered, a very roughly cut ovoid hole 8.5 in. deep and 2 ft. 7 in. long on its major axis (Plates VIIb, VIIIb, Fig. 9). It was completely sealed by the core of the barrow. This pit had an irregular sloping floor with one end 3 in. deeper than the other, but its filling was of uniform character throughout. The mouth was plugged with a mass of trodden chalk under which were two thin slats of carbonized oak with a scatter of small iron nails, the remains, it seems, of a small coffer. The filling of soft wood ash was similar to that in Pit 1 and contained occasional fragments of oak charcoal, fragments of cremated human bone, burnt bones of sheep, fowl (with cockspur), a smaller bird, broken and burnt pottery platters, and an unburnt beaker. The condition of the pottery left no doubt that it was broken in antiquity and thrown into the pit; another piece of one of the vessels represented here was found in the



17

PIT 2



PIT 1



SCALE IN FEET

FIG. 9. PLANS OF PITS 1 AND 2

Central Area¹ (see page 48). The character of the deposit denotes a votive or ritual offering as well as the remains of a funeral feast.

Pit 3

This pit, 10 ft. 6 in. south of the grave (Fig. 6), was a rough rectangular hole 5 ft. in length, 2 ft. 9 in. in width, but only 4 to 5 in. in depth, its bottom being merely scratched into the underlying "curly burr" chalk. It was sealed by the material of the barrow core, but the southern, shallow, lip was badly weathered and eroded. In the homogeneous filling of fine wood ash were two fragments of cremated human bone from the front of the face, a calcined human tooth, a large number of iron nails some of which had fragments of oak charcoal incorporated in the rust, fragments of bronze ribbon similar to those found in Pit 1, a dome of thin bronze like that found in the main burial and doubtless from the same source, and many fragments of heavily burnt pottery platters, together with sherds of a rouletted beaker. Attached to one of the nails by corrosion was a heavily burnt coin², a memorial issue to Antoninus Pius.

In the floor of this pit was a stake-hole which corresponded in position with another on the north side of the grave, forming at the same time the south-westerly point of the verandah to the enclosure round the grave. The stake-hole was filled with pellets of clean "curly burr" chalk and not with the pit-filling and, further, as the line of the stake did not continue into the pit-filling, there can be no doubt that the pit was cut after the stake-hole had ceased to serve its purpose. The rough character of the pit and the nature of its filling suggests that it was made hastily to contain debris which could not be accommodated elsewhere, the final sweepings, it may be, after the funeral ceremony. This careful preservation and separate burial of material remaining from the pyre is not unknown on other Roman sites. The dating evidence afforded by the pottery is considered below, but it may be observed here that the burnt coin, which by virtue of the pyre depicted on its obverse is likely to have been a deliberate ritual offering, cannot be accepted as a precise indication of the date of the burial.

(6) THE SECONDARY BURIAL

In the south-east quadrant of the barrow stratification had been destroyed by tree-roots, rabbits, and blast from a war-time projectile

¹ Similar instances of scattered pieces of pottery and glass belonging to the same vessels were found in a large Romano-British cemetery at York, excavated in 1951. It is also interesting to note that the rites of cremation and inhumation were here in contemporary use over a considerable period. *Arch. News Letter*, March-April 1952, p. 109.

² Coins were sometimes put on the funeral pyre. Several "burnt by hot cinders" were found in the lead cist of the Penteville barrow noted on p. 8 above.

EXCAVATION OF A ROMAN BARROW AT HOLBOROUGH, SNODLAND

which fell nearby. Tree-roots penetrated far down into a mass of soft loamy rubble which was at first thought to be the refill of a treasure-seeker's hole, but as the rubble gave place to a poorly defined tip of loose dark loam, it was seen that an excavation had been made to receive a secondary burial. (Plates VIb, XIII, XIV and Figs. 10, 11.)

The mound had been opened at ground level on its circumference and a rectangular grave 5 ft. 3 in. in length and 3 ft. 1 in. in width cut on an EW line through a trail of core and the underlying much weathered turf to a depth of 1 ft. into the natural chalk. The contour of the grave was also much weathered, and tree roots spread along its bottom which was 6 ft. 6 in. below the surface of the mound.

Towards the western end of the grave, head to the west, was a small decorated lead sarcophagus containing the skeleton of a very young child. At the corners of the sarcophagus four 4-inch round-headed iron nails remained upright in the grave filling, while four pairs of nails stood at equal intervals along the sides. The structure associated with the nails had disintegrated completely, and not even a stain remained to indicate its lines. It is possible, however, to regain some details from a study of the wood grain impressions in the rust of the nails. The wood appears to have been oak, and the impressions are consistent with the structure of a small frame or bier rather than with a wooden case of the kind which often encloses such sarcophagi.

The sarcophagus and its very interesting decoration is discussed later in this Report by Miss J. M. C. Toynbee. It contained the fully extended skeleton of a very young child (see below, p. 58), the skull tight up against the top end and the feet 12 in. from the bottom. The lower jaw had fallen into the top ribs, the skull onto the right shoulder. The bones, including even the auditory ossicles, were exceptionally well preserved owing to the absorption of a lead salt. The interior of the lid was encrusted with a deposit of crystalline basic lead carbonate, while below the skeleton was a layer of tough dark brown material itself underlaid by a thick deposit of a pinkish compacted powder. Both substances contained fatty acids and complex organic lead salts, compounds which resulted from the decomposition of the body in contact with the lead shell.

Two other features of some interest were the preservation of a patch of hair—young flaxen hair, matted, sometimes with clean cut ends and with healthy young roots from which the skin had disintegrated, as Dr. Keith Simpson kindly reports—and adhering to it a small piece of woven fabric. The fabric is identified by the Linen Industry Research Association as linen with a broken twill weave. It was possibly part of a head-dress, or less likely, perhaps, the sole remaining fragment of a shroud.

Below the child's feet lay the only other object in the sarcophagus,

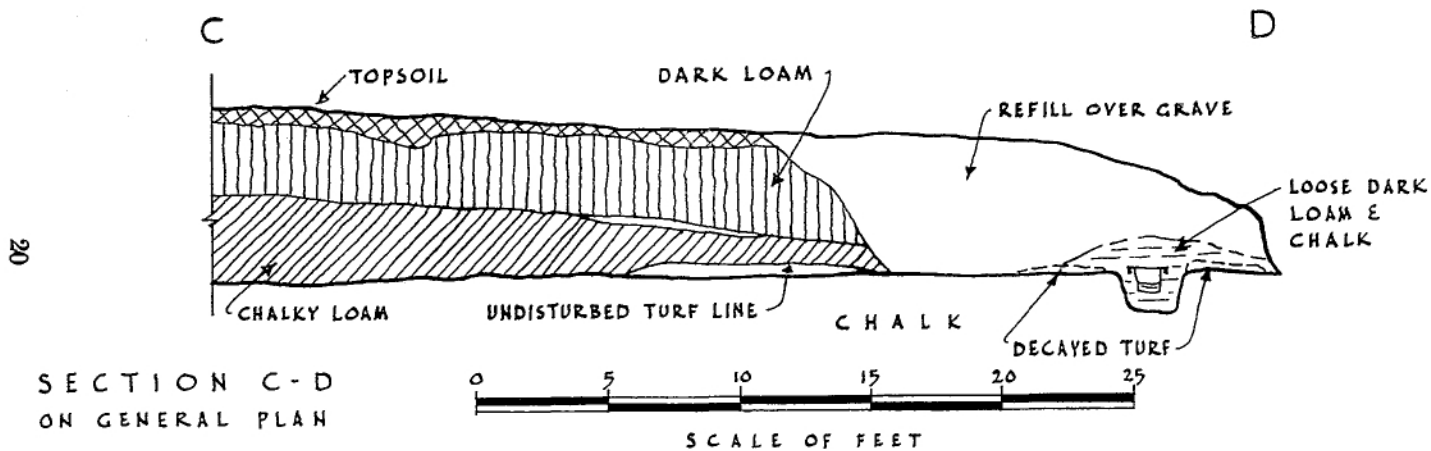
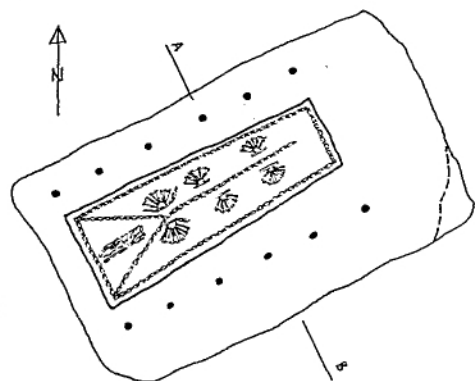
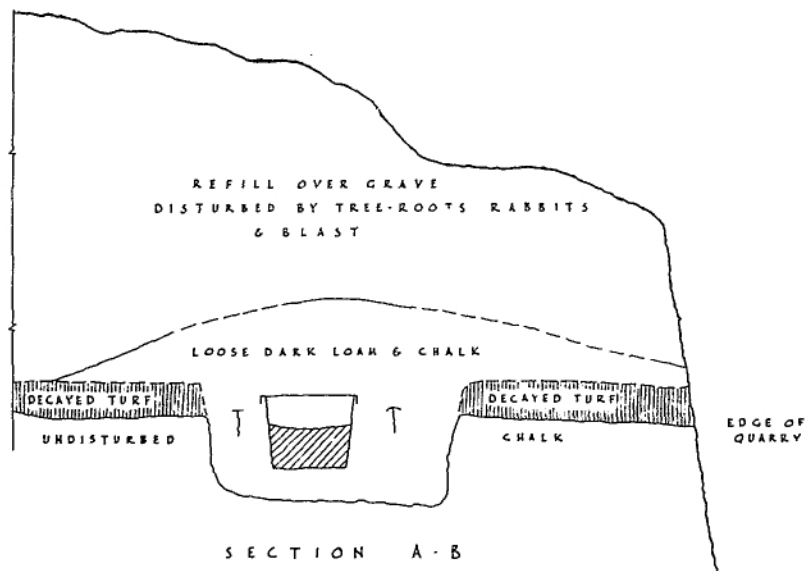


FIG. 10. SECTION THROUGH SECONDARY BURIAL



PLAN



SECTION A-B



SCALE OF FEET

FIG. 11. THE SECONDARY BURIAL

EXCAVATION OF A ROMAN BARROW AT HOLBOROUGH, SNODLAND

a bag-shaped shrunken mass of a grey material scored over its whole surface by reticulated fractures. So fragile and decayed was the material that it proved impossible to preserve the object. Upon detailed laboratory examination, it was found to have a multiple linen lining and the outer material was thought to be animal skin, both features suggesting that the object was in fact a purse. Detailed reports will be found on p. 55.

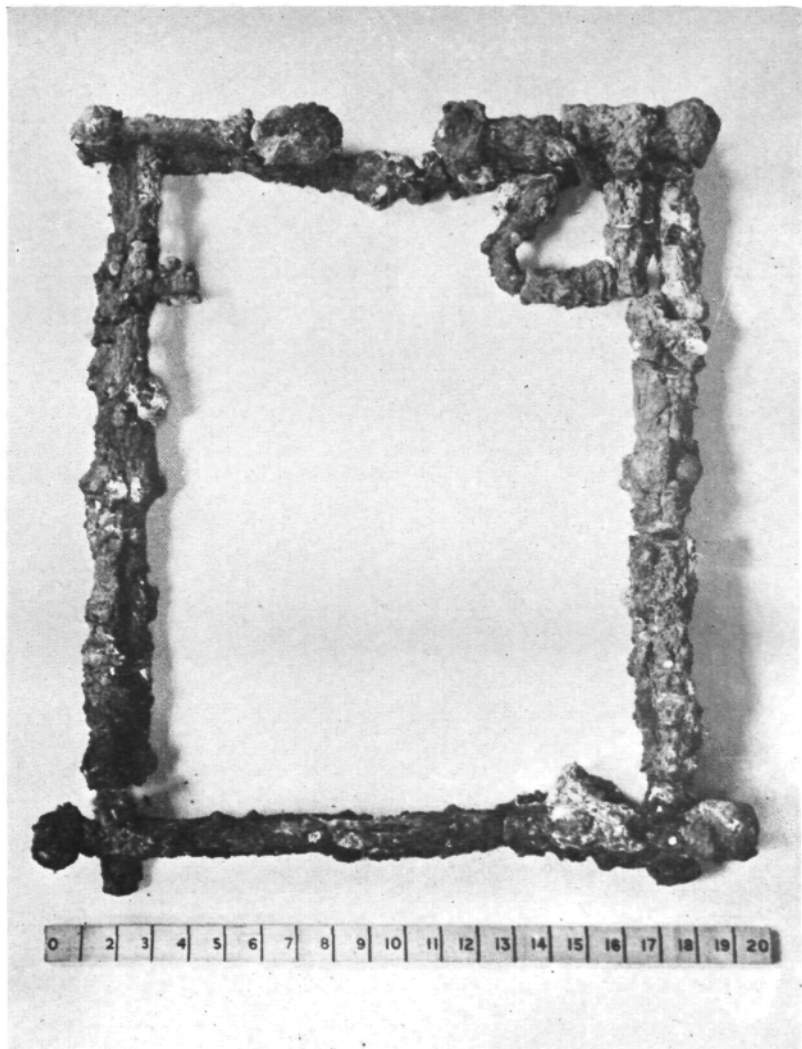
V—THE FOLDING CHAIR, WITH A NOTE ON THE TYPE

The wrought iron chair frame (Plate IX) is so badly burned and corroded that it has proved impossible to open it from the collapsed condition in which it was buried. Reference should be made here to the drawing (Fig. 12) and to the scale model (Plate X) kindly made by Mr. Noël Hume. The overall height is 22 inches; the overall width 16 inches.

Photo-micrographs made by the courtesy of the Steel Company of Wales Ltd., show that only a very small core of actual metal remains. Dr. Honeyman of that Company reports: ". . . the oxides consist of an inner layer of Fe_3O_4 which has undoubtedly been formed by the burning of the iron, while the outer layer of ferric oxide is a corrosion product. It is difficult to say to what extent burning has taken place as opposed to corrosion, but I would say that burning has been fairly extensive." Dr. Honeyman's remarks, and those of Dr. Keith Simpson already noted, are of special interest in connection with the probability of the chair's having been placed on the funeral pyre with the deceased. The numerous pieces of oak charcoal and burnt iron nails incorporated in its corroded surface give further support to this belief.

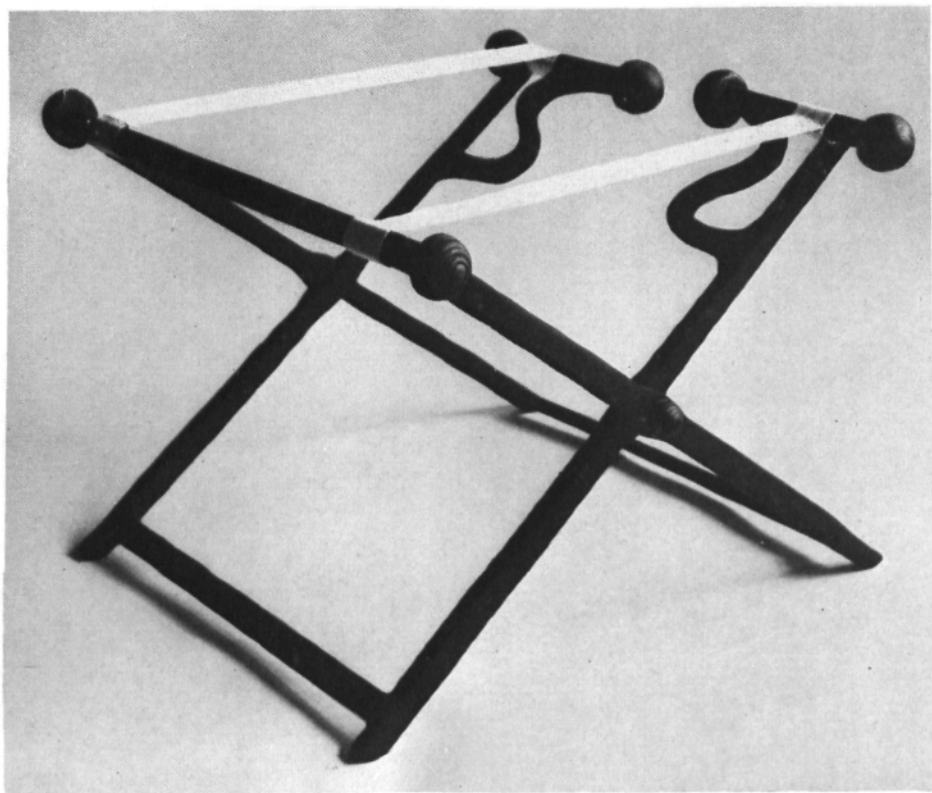
An X-ray examination disclosed nothing of interest.

The straight legs are hinged about the middle point with bronze-capped hinges and terminate, so far as can now be seen, in plain undecorated feet. Both the upper cross-bars terminate in horizontally placed knobs, simply moulded and covered with dome-shaped casings of thin bronze. Two of these casings remain, and two others were found detached elsewhere in the barrow, one in the main burial and one in a "ritual" pit. It will be noticed that the knobs are of unequal size; two only bear any attempt at decoration. The front upper cross-bar is not continuous, each of its two parts being originally attached to a leg by a supporting bracket, one of which remains while the other is represented by a broken stump. The inner ends of these two short cross-bars also terminate in bronze-covered moulded knobs. Perhaps the most interesting feature about the chair is its rather make-shift appearance. Not only are the terminals unmatched and clumsy: the iron bars are not uniform even in their own length, and it is difficult to



[Photo: Ralph Merrifield, F.S.A.]

THE FOLDING CHAIR
(Scale of inches)



FULL-SCALE MODEL OF FOLDING CHAIR

avoid the conclusion that the chair has been patched up in antiquity, and therefore that it was already of some age when it was deposited in the barrow.

There is no doubt that the chair was used in the fashion of a modern deck-chair. Any thought that it does not seem substantial enough for the purpose must be offset by the knowledge that its essential requirement was portability.

No trace of the seat remained ; on the analogy of similar chairs it is likely to have been of leather or some other pliant material. Apart from the surface deposit of whitish material on the framework (p. 15 above), there were on its upper portion a large number of yellowish brown fragments of a vegetable substance. Specimens examined by Dr. E. W. J. Phillips at the Forest Products Research Laboratory showed a ribbed structure similar to that found on the inner side of the leaf sheaths of cereal plants, and there is thus some confirmation of the presence of a straw or chaff-stuffed cushion. There are frequent representations of such chair cushions in Roman art, and the decorative fringe which is often indicated may, in this instance, have been laced with the bronze ribbon, fragments of which were found in the chair pit and in one other pit.

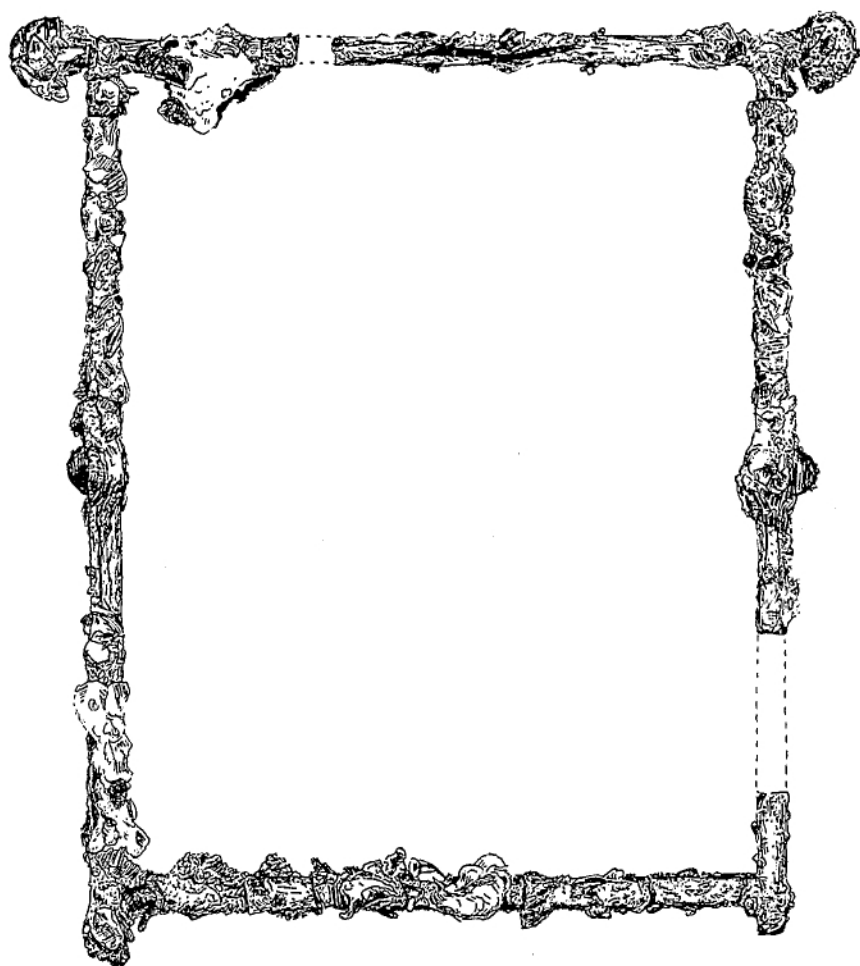
The folding chair of iron or cedar-wood with crossed legs standing on zoomorphic feet is one of the well-known pieces of Graeco-Roman furniture, and it features in both official and domestic life. It was the essential pattern of the chair of the curule magistrates, well known from literary sources, and in such "official" chairs the Emperor is often depicted in an idealized manner in Roman art. The domestic chairs, known from existing examples as well as from art sources, have been discussed by Miss G. M. A. Richter¹ in a general study of Roman stools and chairs. Two bronze curule chairs at Naples, a folding domestic chair from a wall-painting at Herculaneum and a bronze-mounted iron chair from a Roman cemetery at Nijmegen, provide examples of the two usages.² An especially elaborate type of magisterial folding chair, perhaps of wood, with no less than six pairs of folding legs is depicted, between fasces, on a tombstone in Avignon Museum.³ It was a widely practised custom to furnish the grave with domestic objects likely to be of use, comfort, or amusement to the soul of the dead in the next world and during the journey to it, or symbolizing the successful tasks or accomplishments through which the dead won immortality, and to represent such objects on the tomb itself. Hence it is not surprising to

¹ G. M. A. Richter, *Ancient Furniture* (1927), pp. 125-9.

² Ed. Trollope, *Illustrations of Ancient Art . . . at Pompeii and Herculaneum* (1854), pp. 46-7, and Plate XXII, 5 and 6.

³ J. Seutel and L. Imbert, *La Provence romaine* (1929), p. 74, where details of the cross-bars of the seat are well shown, and Daremberg-Saglio, *Dict. des Ants. Grecques et Romaines*, IV (1919), 1180, fig. 6289.

EXCAVATION OF A ROMAN BARROW AT HOLBOROUGH, SNODLAND

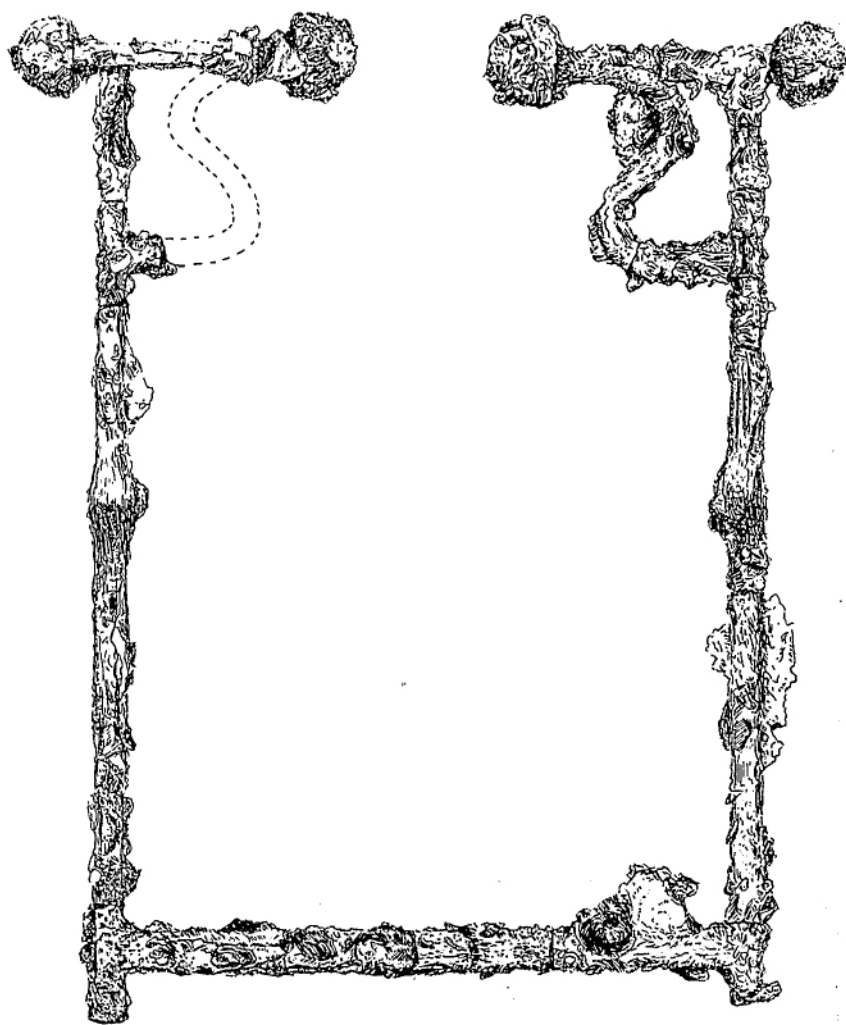


SCALE:  INCHES.

IVOR NOËL HUME.
1954.

FIG. 12. THE FOLDING CHAIR: THE TWO PARTS OF THE FRAME

EXCAVATION OF A ROMAN BARROW AT HOLBOROUGH, SNODLAND.



SCALE:  INCHES.

IVOR NOËL HUME.
1954.

find that the folding chair in one or other of its forms sometimes figures in Roman burials and often in funerary art. One or two notable examples may be cited. A sarcophagus from Simpelveld in Limburg is decorated inside with life-like sculptures, including a chair and other furniture which are clearly intended to be of benefit to the deceased and her spirit, for the outside is unornamented¹; it dates from late in the second century and contains a cremation burial. In a family tomb at Weyden near Cologne is a sarcophagus with reproductions in stone of two chairs which was recently noted by Miss J. M. C. Toynbee in her discussion of the Lullingstone busts.² A sculptured relief of a young girl and mourners from Rome in the Townley Collection at the British Museum³ shows a folding stool in considerable detail, while two reliefs from Ghirza⁴ in the interior of Tripolitania depict a very grand personage seated on a remarkable folding chair and accompanied by attendants as if at a funerary banquet. The list could easily be extended.

Two kinds of folding chairs may be distinguished. There is the heavy chair with wide and massive cruck-splayed legs hinged about a very prominent central pin (in some instances the hinge appears to be a vestigial structure), and supporting a deep cushion with fringe or pelmet. The second group consists of much lighter chairs with straight thin rectangular legs, centrally hinged, and these chairs usually carry a less bulky and simple form of cushion. When the chairs were open for use, the occupant sat upon them in the fashion of a modern deck-chair and not as a camp-stool.

The graceful forms in which the lighter variety of domestic chairs could be made is evident in the delightful frescoes of Psyche buying oil in the shop of the Erotēs⁵ still to be seen on the wall of the House of the Vettii in Pompeii. Representations of Psyche, with butterfly wings, seated in a doleful attitude, sometimes on an ordinary stool but sometimes on a folding stool, occur on some of the Roman lead coffins from Syria and Palestine (e.g., Plate XIb. *Brit. Mus. G. & R. Dept.*, 1921, 12-13); these stools also denote a domestic use. The handsome Bartlow Hills chair (Plate XIIa), which was of light construction (it is noticed further below) had within its framework a pair of bronze strigils and what may have been an oil-jar. There is therefore just a possibility that it was used as a bath-seat, but as several other votive and domestic bronzes, a lamp, and glassware were also buried in the cist, the matter cannot be certain.

It was essential that the magistrates' chairs, which generally

¹ Olwen Brogan, *Roman Gaul*, 1953, p. 177 and Fig. 40.

² *Arch. Cant.*, LXIII (1951), p. 42, with detailed references.

³ No. 2315.

⁴ Published by Mrs. Olwen Brogan, F.S.A., in a lecture to the Society of Antiquaries, 18th February, 1954.

⁵ See G. M. A. Richter, *op. cit.*

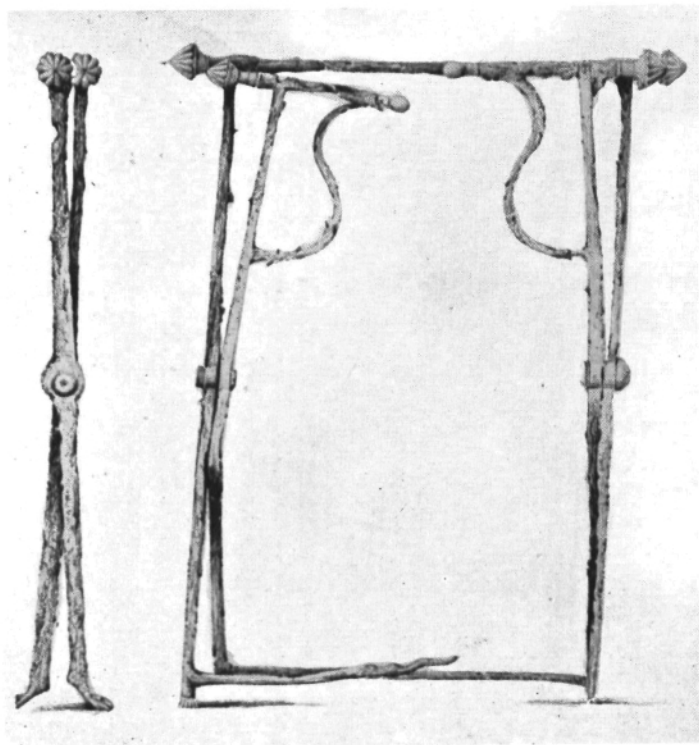


(a) Folding chairs represented on Coins

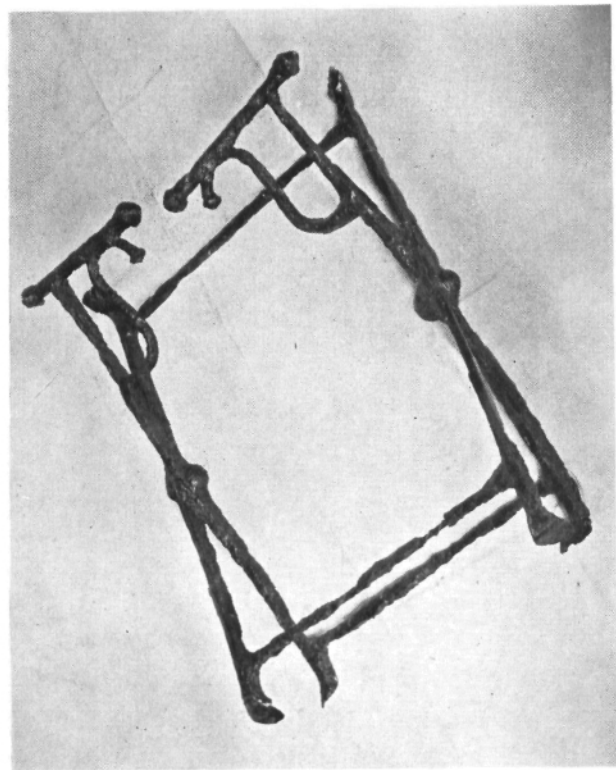


(b) Folding chair depicted on a lead sarcophagus from Syria

(By courtesy of the Trustees of the British Museum)



(a) Bartlow Hills, Essex



[Photo: Musée Curtius, Liège]
(b) Fouron-le-Comte, Liège

FOLDING CHAIRS

accompanied the officials when they appeared in public, should be readily portable, and the folding X-shaped seats could be conveyed easily in chariot or litter to the forum, bath or lecture-hall. The more ornate examples with griffin- and lion-head terminals, as seen, for example, in the Consular diptychs, seem to be of developed, later, types, and certainly belong to the realm of "official" art. The general features of the curule chair persisted over a long period: the round-backed seat of King Edward in the Bayeux Tapestry may mark a stage in its survival, and it has indeed been suggested that the chairs of medieval bishops were derived from the Roman curule chair. By way of footnote it may be remarked that curule chairs were occasionally awarded as an exceptional favour to officers and officials who had not attained the full rank of magistrate.

A special variety of the lighter folding chair, the *sella castrensis*, was used on campaign by army officers of high rank, and it is this use which is commonly portrayed in Roman art, usually in an "ideal" setting. On a silver drinking cup from the first century Boscoreale Treasure,¹ for example, Augustus sits upon such a stool to receive homage from the barbarians; the thin, flat, strip-like crossed legs, the hinge, and the fringed cushion are clearly indicated. On the Arch of Constantine, the Emperor is depicted on a folding chair with massive bowed, crossed legs, as alms are distributed to the people after the triumph of M. Aurelius in 176.² The same monument, in the representation of the Emperor receiving a wounded German, shows the rectangular framework of a folding chair with its straight, thin, flat legs, and on it a cushion ornamented with lions' heads.³ A further example of military use occurs on the Column of Aurelius; here the Emperor sits on a folding cross-legged chair of simple type to watch the progress of his cavalry after offering a sacrifice to ensure the smooth passage of a river.⁴

The representation of chairs on coins is also instructive. The curule chair appears frequently on commemorative issues. The denarius of P. Furius Crassipes struck c. 87 B.C. to commemorate the corn distribution made under this aedile, and the denarii of Q. Pompeius Rufus, c. 57 B.C., and of C. Considius Paetus, c. 45 B.C., may be cited as typical examples.⁵ The *sella castrensis*, depicted in position upon the tribunal

¹ E. Strong, *La scultura romana*, I (1923), p. 81, fig. 54, and S. Reinach, *Rep. de reliefs grecs et romains*, I (1909), p. 94.

² E. Strong, *op. cit.*, II (1923), p. 253, fig. 159. S. Reinach, *op. cit.*, p. 247. For the references to Strong I am much indebted to Miss J. M. C. Toynbee.

³ E. Strong, *op. cit.*, II (1923), p. 253, fig. 160. S. Reinach, *op. cit.*, p. 248.

⁴ S. Reinach, *op. cit.*, p. 299, 20. It has sometimes been suggested that such chairs are depicted with a single cross-joint merely for ease in representation, but such a theory does not account for a representation common to monumental sculpture, funerary reliefs and coins.

⁵ Convenient illustrations in H. Mattingly, *Roman Coins* (1927), Plate XVIII, 14; Plate XXI, 5, 6.

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with the commander addressing his troops or engaging in ceremonial purpose, was also a frequent item in coin design. The *aurei* and *sestertii* of Caligula, Trajan and M. Aurelius here selected (Plate XIa) are typical examples. It may be noted that a chair with six folding legs, instead of the more normal four, is occasionally shown on coins.

There is no direct evidence that the Holborough chair belonged to a military personage. It was apparently old and worn when it was placed on the funeral pyre, and it may have been a family heirloom, though the essentially personal nature of official chairs would seem to preclude this view. At a frank guess, it may have been a possession of the official in charge of the Roman town of Rochester, a retired army officer possibly, who had his country house on the bank of the Medway at Snodland and who was buried according to tradition under this striking mound on the hillside above. The maintenance of a classical way of life would come easily to such a man and, as will be seen later in this Report, there is evidence that his family could afford to import its own wines from the Mediterranean and to bury one of its children in a lead sarcophagus unique in Britain in the eastern character of its decoration.

Before the known examples of Roman folding chairs are listed, it is perhaps well to say that there are in Belgium a number of moulded bronze terminals, many still attached to pieces of iron framework, which at first sight appear to be parts of these chairs. They are usually of delicate design and fine craftsmanship, with the head and feet of an animal, often a lion or panther, as end- and foot-pieces. In many instances they have been excavated from known Roman burials.¹ Close examination shows them to be parts of elaborate bronze, and bronze-mounted iron, tripods, which were obviously too flimsy to carry the weight of a human body, but of a structure which would support movable bowls or table-tops for burning perfume, for lustration, for food, or even for displaying a work of art to advantage. A bronze tripod from Bavai in Douai Museum,² with a deep bowl and terminal heads of Bacchus, and the fine silver tripod with a shallow dish from the

¹ See, e.g., the pieces from the Grimde, Tirlemont barrow in the Musée du Cinquantenaire, Brussels. *Ann. Soc. d'Arch. Bruxelles*, IX (1895), p. 430 and Plate XXII, fig. 1 (not fig. 2 as there stated); hence *Mus. Roy. d'Art. Bruxelles*, Cat. III, *Période Romaine* (1937), p. 92, where this reference is wrongly given. A folding framework of bronze with crossed and hinged legs, at first thought to be a chair, was found in a wealthy Roman burial at Borsu, Liège. It is now in the Musée Curtius at Liège: *Bull. Inst. Arch. Liégeois*, XXIX (1900), p. 191; XXXII (1902), p. 339. Hence Franz Cumont, *Comment la Belgique fut Romanisée* (1914), p. 120, footnote 1. Another tripod, complete, and probably from the same source, is in the Musée du Cinquantenaire, Brussels. Two pieces of a small tripod with some characteristics of a folding chair were found with other luxurious bronzes on the site of a barrow at Herstal, Liège: *Bull. Inst. Arch. Liégeois*, XXIX (1900), p. 190; and see *Mus. Roy. d'Art. Bruxelles*, Cat. III, *Période Romaine* (1937), pp. 145-148.

² J. B. Lambiez, *Hist. Monumentaire du Nord des Gaules* (1900), p. 236.

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Augustan Hildesheim Treasure in Berlin¹ suggest two of such usages.

Such pieces of dignified and luxurious furniture, and the obvious remains of decorated bronze candelabra which are often found in Belgium in archaeological circumstances similar to those of the chairs, are excluded from the following list. It must be noted, however, that all this remarkably fine furniture is concomitant with the aristocratic culture of the Hesbaye.

LIST OF FOLDING CHAIRS OF THE HOLBOROUGH TYPE

BRITAIN

1. *Bartlow Hills, Ashdon, Essex*²

The largest of seven associated barrows in two straight lines. Excavated 1835. Burial in chest of oak planks on earth and chalk platform 1 ft. 6 ins. above ground level. Contents: *Glass*. Square wide-mouthed handled jug containing cremated bones of an adult; two long-necked phials, one empty, the other with dregs of honey or wine according to Michael Faraday who examined the material; two square handled jugs. *Ritual Bronzes*. Fine jug with a sphinx on its handle, lying on a patera with reeded handle ending in a ram's head. Handled globular bucket or casket enamelled in red, blue and green: such enamelling is a well-known craft in the area of Gallia Belgica in which Roman barrows are found. Two strigils. A very fine lamp with acanthus leaf above the handle, traces of oil and wick remaining. Ewer with lid. *Iron*. Folding chair. *Pottery*. Small beaker with prominent foot. Outside the chest was a large two-handled globular amphora with a flat disc-like mouth, filled with earth, ashes, and small fragments of bone, evidently the sweepings of a cremation and possibly of the funeral feast. The group of barrows as a whole is not likely to be later in date than the coin of Hadrian found in one of them.

Much of the interest of the Bartlow Hills barrows, and of this one in particular, lies in the evidence of "classical" ritual and ceremonial—the sacrificial bronzes, covered with a cloth, the remarkable enamelled casket, the wreathed lamp alight when the tomb was closed, the bones of a cock, and the offerings of wine, honey and oil and of sprigs of boxwood.

The Chair. With the exception of the casket, which is preserved, together with a replica, in the British Museum, all the objects from this barrow were destroyed in a fire at Easton Lodge, where they were kept, about 1859, and it is necessary to rely on the published account, supple-

¹ Pernice and Winter, *Der Hildesheimer Silberfund* (1901). Several tripods are conveniently illustrated in *Bull. Inst. Arch. Liégeois*, XXXII (1902), pp. 335-48, Plate B.

² *Arch.*, XXVI (1836), pp. 300-17.

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mented by reference to the original finely finished drawings (Plate XIIa) made for reproduction in *Archaeologia* by James Basire.¹ The chair was folded up on the bottom of the chest, the two strigils and the pottery beaker, possibly an oil-cup, being placed within its frame. Certain details emerge from Michael Faraday's careful examination made at the Royal Institution. Much of the iron-work of the frame remained in its original state under a coating of oxide. As at Holborough, a white incrustation of carbonate of lime, derived from calcareous matter with which the stool had been in close contact, lay upon the upper bars of the frame. At the corners of the upper horizontal bars, the pattern of hide straps forming the seat was preserved in the oxide concretions, and pieces of the straps seem also to have been preserved. These bars were decorated at each end with moulded bronze knobs, the form and decoration of which may be seen in Basire's drawing. The four feet also seem to have been in moulded bronze, in the form of a simple animal foot with five closed toes.² The simple caps of the centrally placed hinge-pins seem likewise to have been moulded in bronze. It will be noticed that one of the seat cross-bars—on pictorial evidence from sculpture and coins it is the front of the chair—is not continuous; a space is left in the central portion, each side being supported by a curved bracket attached to the leg of the chair and ending in a plain ovoid bronze knob where it joins the seat bar. The function of this discontinuous cross-bar, which is present in the Holborough chair, in the complete chair from Fouron-le-Comte, as well as in the "Seltman" chair (both are noticed below), does not seem to be of more than structural significance,³ and any attempt to see in it a ceremonial adjunct such as a sword- or standard-rest seems, to say the least, to be highly problematical. The dimensions of the chair are not recorded, but a height of 24 inches and an overall width of 19 inches along the seat bars computed from the drawings agrees well with the dimensions of the other two chairs already mentioned.

John Gage, the well-informed Director of the Society of Antiquaries, in publishing the Bártlow Hills chair remarked that he knew of no other in Britain and could only offer as a parallel a chair from an Egyptian tomb. His remarks are of particular interest in any consideration of the provenance of the "Seltman" chair noted below.

¹ *op. cit.*, Plate XXXI, fig. 3, Plate XXXII, fig. 2. The originals are in Society of Antiquaries Library: *R. B. Portfolios*, I, 29. See also Cyril Fox, *Arch. Camb. Region* (1923), pp. 191-4.

² Cf. the animal foot terminals of shale and timber furniture. Joan Liveridge, "Tables in Roman Britain," *Antiquity*, March 1950, pp. 25-9.

³ Miss J. M. C. Toynbee suggests to me that the purpose of the gap may have been to give a slightly greater pliancy to the seat at the front, under the thighs of the sitter, and so ensure rather more comfort.

2. *Hemel Hempstead, Herts.*

In 1837, the following objects were found together in a burial ground attached to Box Lane Chapel. (i) a globular urn of green glass containing human bones and "small particles of gold fringe, etc." (ii) a small pottery jug. (iii) a metal lamp-stand. (iv) various "ill-shaped encrusted nails," which were lying around these articles. (v) subsequently 4 feet from the main group a large square glass vessel containing human bones was uncovered.¹ The accompanying illustration suggests that the "nails" were possibly part of the framework of a folding chair, but there can be no certainty as the objects do not appear to have been preserved. The archaeological background is consistent with that of other folding chairs.

3. *Newstead, Roxburghshire*

The stock-in-trade of a smith recovered from a pit in this well-known Roman fort included five wrought iron bars with hammered discoidal mouldings, and three bronze terminals. The bars were scrap metal, but they were well forged and in their day had formed a considerable part of a carefully finished object. It is clear from the form of the bars and the disposition of the mouldings that they were intended for use in a horizontal position, and the excavator's suggestion that they were remains of a *sella castrensis*, the camp equipment of an officer of high rank, seems very probable.² The bronze knobs were perhaps terminals of three of the four legs, but there is a definite similarity between them and the disc-like ornaments of the Nijmegen chair³ (p. 23). The estimated width of the chair at 18 inches agrees with the others in the series.

4. *The "Seltman" chair*

In 1920 two objects described as a standard of the Ninth Legion and the camp-chair of a Roman general came up for sale at Sotheby's Auction Rooms. Together they did not fetch more than £200.⁴ Both items had been included without indication of provenance in the W. H. Forman sale in the same Rooms twenty years earlier. They were published in 1901 by E. J. Seltman⁵ as being found in England about

¹ *Arch.*, XXVII (1838), pp. 434-5.

² J. Curle, *A Roman Frontier Post* . . . (1911), pp. 286-7, and Plate LXIV, 1, 2, 4 and 5 for the bars; p. 287 and Plate LIV, 2, 3 for the terminals.

³ I am much indebted to Miss Joan Liversidge for a photograph of the reconstruction of this notable chair.

⁴ *Ant. Journ.*, I (1921), p. 141.

⁵ *Bull. de la Soc. Nat. des Antiquaires de France* (1901), pp. 168-9 and plate facing p. 168.

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50 years earlier, the previous owner, Mr. Forman, it was said, not having recognized their significance. In 1912 O. Seltman¹ recorded that the objects came from the collection of the late Mr. Forman who in 1827 made private excavations in Essex; he further claimed, by relating them to the Boudiccan episode, that they could be placed in a definite historical context. Prolonged search has failed to reveal any references to such excavation work, and it may be thought that John Gage would have heard at least a rumour of such an important discovery made but eight years before his own in the same county, a county, moreover, where the Society's interests were strongly represented. In the next publication, the standard is said to be in the Musée du Cinquantenaire, Brussels.² The chair is illustrated by Miss Richter³ with little comment. Dr. Charles Seltman, lately of Queens' College, Cambridge, who owned the chair until some two years ago, states that he has no reason to believe that it is necessarily from Essex, and that he has never held that the claims made for it in the French and Italian publications were capable of substantiation.

The dimensions given by O. Seltman, namely a height when folded of 24 inches and a depth and width each of 17 inches, agree quite closely with those of the Bartlow, Holborough and Fouron-le-Comte chairs. It is described as of wrought iron overlaid with silver and a gold-bronze alloy. The feet are in the form of animal (possibly goats') hooves. The legs, of unique form which permit of double folding somewhat on the principle of the folding tripods, are decorated with running pelta and diamond lattice patterns⁴ which appear to be inlaid. The upper terminals of the back legs are in the form of small heads, probably representations of Silenus; they continue the line of the legs as in the Fouron chair, but there are no decorated terminals to the top cross-bars as there are in the other chairs. The front cross-bar, as in the other chairs more particularly noted here, is also discontinuous, the two pieces, with terminals at the free ends, being supported from the legs by straight struts and not curved brackets. It would, therefore, be used deck-chair wise.

This chair cannot be safely accepted as an English find. It has some features in common with the chairs under discussion, but a modern laboratory examination with a view to determining the age and the structure of its various parts would be desirable.

¹ *Revista Italiana di Numismatica*, I (1912), p. 35.

² Daremberg—Saglio, *Dict. des Ants. Grecques et Romaines*, IV (1910), s.v. *Signa Militaria*, p. 1313.

³ G. M. A. Richter, *op. cit.*, (1927), fig. 301.

⁴ Cf. the Pavia chair, which is thought to date from the eighth, or more probably from the ninth, century; and a twelfth-century Byzantine folding chair of iron inlaid with copper and silver (898-1904) in the Victoria & Albert Museum. See *Arte del Primo Millennio* (1950), pp. 56-76 and plates 12-22.

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BELGIUM¹

1. *Avennes, Liège*

From a cist in a Roman barrow were recovered parts of a folding chair of iron, namely, two feet of moulded bronze of the same form as those at Héron (below), one with a piece of the iron framework intact, and two straight legs hinged at the central point. Musée Curtius, Liège. See *Bull. Inst. arch. Liégeois*, XII (1874), pp. 196-228.

2. *Bassenge, Liège*

Musée Curtius, Liège. An iron foot, plain, diameter on underside 1.06 inches, height 1.26 inches.

3. *Avernas-le-Baudin, Liège (la tombe de "Héron")*

In this burial were found six engraved and moulded bronze feet, shod with sandals, a cross-piece of iron, perhaps part of a hinge, and two bronze hinge-pins, all of which were purchased by the Musée Curtius, Liège, in 1862. Cf. *Guide sommaire du Musée arch. (Maison Curtius), sections belgo-romaine et franque* (Liège, 1909), 12. (A six-footed folding curule chair is represented at Avignon, see page 23.)

4. *Fouron-le-Comte, Liège*

An almost complete folding chair of iron found on the site of a Roman villa here is now in Musée Curtius, Liège. Height 21.6 inches; overall width 15.7 inches. In general design it is similar to the Holborough and Bartlow chairs, with curved supports to the two sections of the front horizontal bar. The large terminal knobs and the hinge are, however, not decorated or mounted in bronze, and the feet, fashioned to represent animal hooves, are likewise of plain wrought iron. The back legs are elongated to form terminals (as in the Seltman chair) which again are simple wrought knobs without decoration. The chair, as restored for exhibition, is illustrated in Plate XIIb. See *Guide sommaire du Musée arch. (Maison Curtius), sections belgo-romaine et franque* (Liège, 1909), 20; *Bull. Inst. arch. Liégeois*, XXXI (1901).

It does not seem possible to date any of the Belgian chairs from internal evidence.

¹ It gives me much pleasure to acknowledge the very ready help I have received from M. Marien of the Dept. de la Belgique Ancienne of the Cinquantaire Museum, Brussels, and from M. Joseph Philippe, of the Maison Curtius, Liège, in my study of the Belgian material.

THE LEAD SARCOPHAGUS

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1. GENERAL OBSERVATIONS

THE lead sarcophagus in the secondary burial (see p. 19) was found intact, with bottom, four sides, and lid complete.¹ Of the lid, torn and tortured as it was, probably by blast from a war-time projectile,² nothing was lost; and the remarkable skill of a local plumber has restored it virtually to its pristine state, with only a crack at one corner to betray the damage which it had once sustained. The coffin (Plate XIII) is of the tapering variety and measures, lid included, 3 feet 5 $\frac{3}{4}$ inches in length, 1 foot 6 $\frac{1}{2}$ inches in width, and 1 foot in depth at the head, and 11 inches in width and 10 inches in depth at the foot. The pottery-finds indicate that the barrow was not raised before the early years of the third century (see below, p. 52); and since the style of the decoration on the lead sarcophagus and the practice of inhumation in Roman Britain are consistent with a date in the first half of the third century, the child in the secondary burial could have been the child or grandchild of the occupant of the primary grave.

2. THE DECORATION

The body of the sarcophagus is decorated in a simple manner with large scallop-shells (*pectines*), three on each long side and one on each short side, that at the foot being almost defaced. All the shells are set with the hinge-lines next to the coffin-base. They are neatly and carefully rendered; but despite their naturalistic look they are not strictly true to nature, since the lateral, triangular ears, which should connect the two ends of the hinge with the sides of the fan-shaped valve, do not appear. This lack of ears is to be noted in scallop-shells on other Roman lead sarcophagi in Britain, for instance, on two fragments in the British Museum, one from East Ham,³ the other from Shadwell Dock,⁴ and on

¹ The sarcophagus is now in the Maidstone Museum, where the writer studied it in July 1953. She wishes to record her gratitude to Mr. Alan Warhurst, Archaeological Assistant in the Museum, for his kindness and helpfulness on that occasion, and for supplying the photographs of the decorated lid here reproduced. Mr. Jessup and Mr. Warhurst gave valuable assistance with the compilation of the table of Roman lead sarcophagi found in Kent, which is printed on pp. 42-5.

² See the photographs in *The Times* for 15th May, and *Illustrated London News* for 23rd May, 1953.

³ Inv. No. 64, 3-18.4. RCHM *Roman London*, 1928, pl. 58, No. 3; C. Roach Smith, *Collectanea Antiqua*, VII (1880), Plate XIX, Nos. 3, 4. All but a fragment was stolen from the British Museum in November, 1950.

⁴ Inv. No. 58.11-2.I. Short side. The lid, also decorated with scallop-shells, was stolen from the British Museum in November, 1950.



(a) General view
(Scale of inches)



(b) The lid from above

THE LEAD SARCOPHAGUS



[Photo: Alan Warhurst

THE LEAD SARCOPHAGUS : DETAIL OF LID

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a complete coffin, decorated all over with shells and rings, in the Colchester and Essex Museum.¹

The surface of the lid (Plate XIIIa) is edged with four bead-and-reel rods, two short rods at head and foot and two long ones on each side. The ends of the short rods extend into the four corners, while the long rods terminate just short of them. Three more similar rods, which do not make contact either with one another or with the rods aligned along the edges, are laid on the field in the form of a Y, of which the two diagonal strokes or arms start near the corners of the head-end and converge just before reaching the centre of the lid; while the stem of the Y, running towards the foot, roughly bisects the rest of the space. A similar Y-shaped scheme, with cable rods and a scallop-shell at the junction of the arms and at the foot of the stem, occurs on the lid of a lead coffin found at Battersea Fields in 1794.² There four scallop-shells are arranged in pairs on either side of the stem of the Y, while five more shells occupy the triangle between its arms. On the lid of the Holborough piece six scallop-shells, of the same type as those on the body, are set in pairs to right and left of the central bead-and-reel rod, each with the hinge-line next to it. The two shells of the pair nearest to the foot are exactly opposite to one another; but in the case of the central pair, and of that set at the point of convergence of the arms and stem of the Y, the shells are asymmetrically placed, those on the right (as one looks towards the head) being nearer to the head than those on the left. The two shells nearest to the head show a curious feature—two thin, diagonal lines running out, like *antennae*, at an obtuse angle from the ends of the hinge-line on either side of the valve.³ It is noteworthy that of the fourteen scallop-shells adorning the sides and lid of this coffin, no two are precisely identical.

What gives the Holborough piece its unique interest among Roman lead sarcophagi from Britain so far known, is the group of three full-length human figures arranged in two tiers between the arms of the Y. Of the thirty-one other decorated coffins from this country known to the present writer as surviving, or lost but recorded, only three bear or bore full-length figures. These are the fragment of a lid from Cefn On, Glamorgan, recently published, with its horseman and charioteer,⁴ a lost lid from the Old Kent Road, bearing two diminutive figures of Minerva,⁵ and a lost lid from Colchester, with a group, twice shown,

¹ Roach Smith, *op. cit.*, III (n.d.), Plate XIV, No. 3. Thanks are due to Mr. M. R. Hull, F.S.A., Curator of the Colchester and Essex Museum, for a large-scale, detailed drawing of one of these shells.

² RCHM *Roman London*, 1928, Plate 58, No. 1; Roach Smith, *op. cit.*, III (n.d.), Plate XIV, No. 2. The present location of the piece is unknown.

³ It is just possible that these lines represent the edges of the block or plaque on which the stamp was carved or modelled (see below, p. 40).

⁴ *Art. Journ.*, XXXIII (1953), pp. 72-4, fig. 1 on p. 73 and Plate XVII.

⁵ *Archaeologia*, XVII (1814), pp. 333-4, Plate 25, No. 2.

described as that of two figures offering a sacrifice.¹ But the Holborough figures are, so far as we can judge, on a different artistic level from those just quoted; and they belong to a world of funerary imagery hitherto unrepresented on sarcophagi from Roman Britain—the world of the Dionysiac mysteries.

The three figures (Plate XIV) were cast as a single unit from an oblong stamp some ten inches high. The impressions made, unintentionally, in the matrix by the lateral and lower edges of the stamp-plaque (see below, p. 40) appear on the lid as slight ridges clearly visible at the sides of and beneath the group. Small as they are, these figures are rendered in relatively high relief and in a lively, naturalistic style, with softly rounded contours and plastically modelled heads, bodies, and limbs. Above, nearest to the coffin-head, is a half-draped Maenad standing to front, naked save for a cloak caught over her left arm and wrapped across her legs. With her right hand she grasps the top of a long *thyrsus*, held vertically. Her features have vanished, but in her hair are traces of what may have been a vine-garland.² Beneath the Maenad's feet is a slightly convex horizontal border containing five circles with deeply incised outlines; and below this are the other two members of the trio. A naked man dances towards the right, with his right leg and foot swung forward in advance of his left leg and foot, on which the weight of his body rests. His left arm and hand are not shown; but with his right hand he seems to be leading by the left hand a naked child, who trots along beside him. That the naked man is a Satyr accompanied by a baby-Satyr may be reasonably inferred both from his gait and from the presence of the certainly Bacchic figure of the Maenad just above.

The funerary role of Dionysus as saviour and conqueror of death, and of the Maenads, Satyrs, Pans, Silenoi, etc., in his train as symbols of the rescued souls of Bacchic initiates in the bliss of paradise, is well known to all students of Roman eschatological art and thought. Marble sarcophagi carved in Rome, Italy, Greece, and other Mediterranean areas with the story of Dionysus and Ariadne, ecstatic Bacchic processions, or bands of riotous Cupids, are familiar items in most European and American collections of ancient sculpture. Some such reliefs show child-Satyrs among the revellers—that, for instance, on the front of a fine piece found in Rome and now in Baltimore.³ There can be little doubt that the Holborough figures are extracts from a Bacchic scene of this kind. As to whether the child-Satyr's appearance here bears any relation to the fact that the coffin was a child's, we can only speculate.

¹ Roach Smith, *op. cit.*, II (n.d.), p. 53, Plate XIV, No. 4.

² The forms of the breasts, abdomen and hip are certainly female and preclude the interpretation of the figure as an effeminate featuring of Dionysus himself.

³ K. Lehmann-Hartleben and E. C. Olsen, *Dionysiac Sarcophagi at Baltimore* (1942), p. 15, fig. 19.

The Baltimore sarcophagus just mentioned was that of an adult. But we can surmise that the kinsmen of the Holborough child were, if not members of a Dionysiac sect, at least conversant with the common stock of doctrines and picture-symbols of Dionysiac other-world "theology."

The scallop-shells, like the dolphins which figure so persistently and prominently on Roman lead sarcophagi of eastern provenance (see note 2 below), most probably allude to the journey of the soul across the Ocean to the Islands of the Blessed.

3. THE SOURCE OF THE MOTIFS

These Dionysiac figures are, as we have seen, new to Roman sarcophagi, whether of lead, stone, or marble, found in this country so far. The writer cannot claim acquaintance with all existing or recorded decorated lead coffins cast in the western provinces. She has, for example, had no opportunity of studying the Spanish or North-African material. But her researches, so far as they go, in the museum-collections and archaeological literature of Roman Germany and Gaul have revealed no lead sarcophagus with Bacchic motifs from those provinces, with the possible exception of a stamp showing two figures standing beneath a vine-tree on a now vanished piece from Nîmes.¹ For Bacchic figures in this context we must turn to the east, to Syria and Palestine, where decorated lead coffins were produced in large quantities during the second, third, and fourth centuries of our era.² The motifs on these eastern pieces include such Bacchic subjects as Satyr-masks,³ masks of Dionysus,⁴ a Maenad riding on a panther,⁵ full-length figures of the youthful Dionysus,⁶ a Silenus playing on a double pipe,⁷ a Pan,⁸ a naked Satyr standing in profile with a *pedum*,⁹ and a frontal Satyr with *nebris*, *thyrsus*, and *cantharus*.¹⁰ Thus, in his rendering

¹ *Mémoires de la Société des Antiquaires de France*, XIV (1830), p. 98 ff., Plate IV.

² See especially *Quarterly Depart. Ant. Pal.*, I (1932), p. 136; II (1933), p. 185; IV (1935), p. 87 ff., 138 ff.; *Journ. Hellen. Stud.*, L (1930), pp. 300 ff.; LII (1932), p. 262 f.; *Syria*, X (1929), p. 230 ff.; XV (1934), p. 337 ff.; XVI (1935), p. 51 ff.; *Arch. Anzeiger (Jahrb. Deutsch. Arch. Inst.)*, XLVII (1932), col. 387 ff.; LI (1936), col. 252 ff.; *Berytus*, III (1936), p. 51 ff.; V (1938), p. 27 ff.; VI (1939-40), p. 27 ff.; *Mélanges de l'Université Saint Joseph, Beyrouth*, XXXI (1937), p. 203 ff.

³ *Syria*, XV (1934), pl. XLIV.

⁴ *Syria*, XV (1934), p. 349, fig. 22.

⁵ *Syria*, XV (1934), pls. XLVI, XLVII.

⁶ *Berytus*, III (1936), pls. XII, No. 2, XVI; VI (1939-40), pl. XIV.; *Arch. Anz.*, XLVII (1932), col. 388, figs. 1, 2; col. 391, fig. 5; *Mélanges de l'Univ. St. Joseph*, XXI (1937), pl. LIII.

⁷ *Syria*, XVI (1935), p. 58, fig. 38.

⁸ *Berytus*, V (1938), pl. V; *Journ. Hellen. Stud.*, L (1930), pl. XII.

⁹ *Berytus*, III (1936), pl. XI, XIV; V (1938), pl. IX; VI (1936), pl. XIII; *Arch. Anz.*, XLVII (1932), col. 388, figs. 1, 2; *Quarterly Depart. Ant. Pal.*, IV (1935), pl. LV; *Journ. Hellen. Stud.*, L (1930), pl. XII.

¹⁰ Clermont Ganneau, *Album d'antiquités orientales* (1897), pl. I, No. 5; *Berytus*, V (1938), pl. X.

of Bacchic figures, the designer of the Holborough coffin would seem to betray east-Mediterranean affinities; and the newly-discovered piece raises in an acute form the problem of where, by whom, and under what influences the decorated lead sarcophagi found in Britain were made.

P. Thomsen, reviewing in *Philologische Wochenschrift* for 23rd September, 1939, col. 1025, articles on eastern lead sarcophagi contributed by E. von Mercklin to *Archäologischer Anzeiger* and *Berytus* (see above, page 37, note 2), remarked on the importance of answering by detailed study the question as to whether the lead coffins found in the western provinces were imported wholesale from the east or represent western versions of fashionable eastern products; and he suggested that these objects would, in the latter case, furnish evidence, additional to that already furnished by glass,¹ of the migration westwards of Syrian craftsmen. The discovery of the Holborough coffin may be said to have gone some way towards establishing the truth of the second alternative.² It is unlikely that this piece was made in an eastern workshop and traded into the province. The bead-and-reel motif used for its borders and Y-design, a motif which it shares with many another British, Gaulish, and German lead sarcophagus, is ubiquitous for outlining borders, lozenges, squares, rectangles, triangles and other geometric patterns on Syrian and Palestinian pieces. But the Y-shaped arrangement has, to the writer's knowledge, no counterpart on eastern sarcophagi. More significant still, the Bacchic figures, while eastern in character and content and Mediterranean in style, have no exact parallels among the Dionysiac subjects listed above. Again, the large scallop-shells would appear to be a specifically British motif in this context, perhaps reflecting the taste of local workmen or of local patrons. They occur on none of the German or Gaulish lead sarcophagi which have come to the writer's notice; and when shells appear, as they do occasionally, on eastern pieces, they are of the smaller, cockle-shell (*cardium*) variety, real shells, it seems, being used to produce the impressions in the matrix.³ Finally, the tapering form of the coffin, with the main axis of the lid-design set lengthwise, as though to be viewed by a spectator standing at the foot, a form commonly found in Britain,⁴

¹ D. B. Harden, *Greece and Rome*, III (9th May, 1934), p. 143; *Journ. Rom. Stud.*, XXIV (1934), p. 54 f.

² But a thorough, systematic study of all decorated lead sarcophagi found in the western provinces, comparable to the studies already devoted to the eastern pieces, is urgently needed.

³ Clermont Ganneau, *op. cit.*, pl. I, No. 5 (Brussels); *Berytus*, V (1938), pl. XII (Metz); pl. XIII (Copenhagen); pl. XI (Rome, Museum of Papal Biblical Institute); *Quarterly Depart. Ant. Pal.*, II (1933), p. 185. Cf. *Berytus*, V (1938), p. 44.

⁴ e.g., RCHM *Roman London* (1928), pls. 57, No. 4; 58, Nos. 1, 2, 3; *Archaeologia*, XVII (1814), pl. 25, No. 2; XXXI (1846), fig. on p. 308; *Ant. Journ.*, XXXI (1953), pl. XVII; Roach Smith, *op. cit.*, III (n.d.), pl. XIV, No. 4; VII (1880), pl. XIX A, figs. 1, 6, 7. All these are decorated sarcophagi.

we may take to be a local feature, rarely, if ever, met with in Gaul and Germany and almost non-existent in the eastern areas,¹ where decorated lead sarcophagi are normally rectangular, with centripetal lid-designs viewable from all sides. Indeed, the evidence strongly suggests that the Holborough coffin was made in Britain and that its ornament was designed either by a Syrian craftsman settled in or visiting this island and fusing local taste and custom with eastern tradition, or by a Gaulish, or even British, pupil of a Syrian craftsman, or through the medium of a stamp executed in a Syrian artist's western workshop. Another Kentish lead sarcophagus tells much the same story. Found at Milton-next-Sittingbourne and now in the Maidstone Museum, it is decorated on its long and short sides with a series of "St. Andrew's Crosses" formed by bead-and-reel rods, with a Medusa-mask medallion in each quarter of each cross.² A very similar, if slightly more elaborate, version of this scheme appears on the lid of a lead sarcophagus in the Musée National Libanais, Beirut.³ It seems not unlikely that this design was brought to Britain by an eastern craftsman or in an eastern pattern-book.

4. THE PURPOSE OF THE DECORATION ON ROMAN LEAD SARCOPHAGI

What was the purpose of all the elaborate and often minutely symbolic ornamentation lavished on lead sarcophagi, eastern and western? Sculptured marble sarcophagi were set in chamber-tombs or ranged along road-sides, where they could be seen, admired, and pondered over by the eyes and minds of relatives or passers-by. Lead coffins, on the other hand, were hidden away from human sight—encased in outer receptacles of wood⁴ or stone or, as was the Holborough piece, enveloped directly in the earth. Once the interment had taken place the decoration could have no effect on any living persons. It could neither please them aesthetically, instruct or comfort them spiritually, or even gratify a taste for display. This fact throws not a little light on Roman after-life ideas. The motifs and patterns on these coffins must have been mainly designed for the benefit of the dead, whose souls, while located in paradise, were believed, according to the vague and often confused and inconsistent "theology" of the age, to

¹ Of all the coffin-lids illustrated in the articles quoted in note 2 on p. 37, only one appears to taper slightly (*Syria*, XV (1934), pl. XLIII, No. 9). Another tapering eastern lid, on a late piece with Christian symbols, is in the Musée Lycklama, Cannes. In this case the motifs, the Sacred Monogram in an *aedicula* thrice repeated, face towards the head of the deceased, that is, towards the wider end (*Gazette des Beaux Arts* (1931), II, p. 334, fig. 25).

² *Arch. Cant.*, IX (1874), p. 165 ff., with plate and seven figures; Roach-Smith, *op. cit.*, VII (1880), p. 182 f., with figure.

³ *Syria*, XV (1934), pl. XLVIII, No. 23.

⁴ *Cf. Quarterly Depart. Ant. Pal.*, IV (1935), p. 70 ff.

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inhabit, in some sense, or at least to visit from time to time, the place
in which their bones reposed.

5. NOTES ON THE TECHNIQUE AND DISTRIBUTION OF ROMAN LEAD SARCOPHAGI

The method used in manufacturing Roman lead sarcophagi was that of open sand-casting. Matrices of wet sand of the sizes required for the lead sheets were first prepared. A coffin could be made in two sheets, a smaller one for the lid, a larger one for the bottom and sides. In such cases the second sheet was cast in a matrix shaped like a rectangle from which four small squares of identical size had been cut out, one at each of the four corners, in such a way that the inner corner of each square coincided with one of the four corners of the central oblong area reserved for the base; the four sides were then bent up into the perpendicular; and the four angles of the "trough" so formed were soldered together. Alternatively the base and two short sides could be cast in one sheet, the short sides being beaten up, while the two long sides were cast separately and soldered on to the rest. Or the base and two long sides could be cast in one sheet, the long sides being beaten up, while the two short sides were cast separately and soldered on. Or, again, the bottom and four sides could be cast in five separate sheets and all united by soldering. The body of the Holborough sarcophagus was cast in one sheet. The sheet for the lid was always slightly larger than the area of the base, so that its four edges could be beaten down to overlap the sides.

The ornament was almost certainly produced by a series of positive stamps, either modelled in clay or, much more probably, carved in wood in relief on square, oblong, circular, or elliptical plaques or blocks, or on long strips, as in the case of borders of running scrolls or garlands. Each figure, mask, shell, vase, column, rosette, etc., or each small group of such motifs, in a given design, was modelled or carved on a separate plaque or block; while modelled terracotta or carved wooden rods served as the stamps for cable or bead-and-reel edgings and outlines of geometric patterns. These stamps were pressed face downwards into the matrix of wet sand so as to imprint it in sharp negative impressions arranged according to a pre-conceived scheme selected by the craftsman from his pattern-book. The stamps, having made their impressions, were then removed; and when the molten lead was poured on to the matrix, the negatives left in the sand produced positive figures and patterns standing out in relief on the surface of the sheet. If the plaque or block of a stamp were so pressed into the sand that the background of the figure, etc., was not just flush with, but a little below, the surface of the matrix, slight ridges would appear in the finished product on one or more sides of the design, as in the case of the Holborough figure-group. It seems unlikely that negative terracotta moulds or wooden blocks

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carved in "intaglio" were prepared and left in the matrix when the lead was poured on to it. No terracotta moulds, corresponding to well-known coffin-motifs, have, so far as the writer is aware, come to light; and in the case of "palimpsest" designs, that is, of criss-crossing rods or scroll borders or of figures superimposed on bead-and-reel and cable lines, moulds, whether of clay or wood, left in the sand-bed were clearly out of the question. In such "palimpsests" the upper motif was obtained by pressing the stamp firmly into the bed: that stamp was then removed and the stamp for the lower motif laid circumspectly across the first impression, so as not to blur its outlines, and pressed more lightly into the matrix. It is noteworthy that no positive terracotta stamps for lead sarcophagus ornamentation are mentioned in the standard accounts of Syrian and Palestinian coffins (see p. 37, note 2) as found in excavations or surviving in museums. Nor are any known from Roman Britain. This negative evidence strongly suggests that such stamps were of perishable wood; and wooden stamps are, in fact, used for casting decorated lead in this country in modern times.

A further argument for holding that the decorative motifs were not mass-produced in terracotta moulds lies in the fact that when the same motifs are repeated on the same side of a sarcophagus they are seldom completely mechanical replicas of one another. Cases in which such replicas seem to occur could be explained by supposing that a stamp having made its impression in one part of the matrix was quickly taken out and pressed in again in another part of it. Indeed, stamps could obviously have been re-used in different portions of the same coffin or in a number of different coffins; and while it is likely that each workshop had its special repertory of motifs and designs, both stamps and pattern-books could clearly have circulated from factory to factory, or even from country to country. The irregularities and lack of symmetry displayed by the schemes of some of even the most handsome and elaborate eastern products indicate that the stamps were laid in the matrix mainly by eye. A central motif is, in fact, seldom quite mathematically centred: masks, busts, and figures are often out of the perpendicular; and balancing motifs, such as the shells on the Holborough lid, are frequently out of line. Such blemishes must have been chiefly caused by careless setting, sometimes, perhaps, by unavoidable shifting of the sand-bed.

The main areas of the manufacture of Roman lead sarcophagi were, apparently, first and foremost Syria and Palestine at one end of the Empire, and secondly Britain and Gaul at the other. There are also records of, or statements about, lead sarcophagi discovered in Italy, Switzerland, Spain, and North Africa.¹ In Britain, lead coffins, whether

¹ *Arch. Anz.*, XLVII (1932), col. 403; LI (1936), cols. 267, 277, 278; *Syria*, XVI (1935), p. 66.

ROMAN LEAD SARCOPHAGI AND CISTS FROM KENT

In the bibliography : Smith=C. Roach Smith, *Collectanea Antiqua*, 7 vols., 1848-80 ; Payne=G. Payne, *Collectanea Cantiana*, 1893 ; *V.C.H.*=Vict. County Hist. Kent, vol. III, 1932.

PROVENANCE, ETC.	PRESENT LOCATION	BRIEF PARTICULARS	BIBLIOGRAPHY
1 CHATHAM Found 1878 in the New Cemetery	No longer in Public Library, Chatham. Presumed destroyed	Scallop-shell in cable triangle on one end of lid. Two open scallop-shells on one short side. Middle-aged man, in lime, with glass vessel, glass and pottery outside. N-S position	<i>P.S.A.</i> , ser. 2, vii, 1876-8, 415. <i>J.B.A.A.</i> , xxxiv, 1878, 259. <i>A.C.</i> , xii, 1878, 430 ; xiii, 1880, 168 Payne, 145. Smith, vii, 1880, 186-7, pl. xix, A, 7-9. <i>V.C.H.</i> , 149.
2 CRAYFORD Found 1878 on Watling Street between Crayford and Bexley	Reburied	Five scallop-shells in cable triangles on lid, two scallop-shells on one short side. Young woman	<i>A.C.</i> , xii, 1878, 429. <i>J.B.A.A.</i> , xxxiv, 1878, 259. Smith, vii, 1880, 188-90, pl. xix, A No. 6. <i>V.C.H.</i> , 151.
3 FRINDSBURY Found near Quarry House before 1838		Crossed-cable. Contained pottery vessel	J. Phippen, <i>Desc. Sketches of Rochester and Chatham</i> , 1862 235. <i>A.C.</i> , xvii, 1887, 189. <i>V.C.H.</i> , 154.
4 SNODLAND, HOLBOROUGH Found in R.B. barrow, 1953	Maidstone Museum	Maenad, Satyr, baby-Satyr, and scallop-shells on lid. Scallop-shells on sides. Very young child, with probable leather purse	The present publication. <i>The Times</i> , 15 May, 1953, 7 July, 1953. <i>Ill. Lond. News</i> , 25 May, 1953.

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|----|--|-------|------------------|--|---|
| 5 | MILTON-NEXT-
SITTINGBOURNE
Found 1868 at
Bex Hill | (i) | Maidstone Museum | Series of bead-and-reel " St. Andrew's Crosses " with Medusa-mask medalion in each quarter of each cross. Unguent bottle. Outside, two-handed cylindrical green glass jar stamped I BONI. Late 2nd cent. | Gents. Mag., 1868, i, 225-6.
P.S.A.L., ser. 2, vi, 1873-6, 46.
A.C., ix, 1874, 165-8.
Payne, 24.
Smith, vii, 1880, 182-3, with fig.
The Antiquary, xliii, 1907, 373.
with photo (upper fig.).
V.C.H., 96-7. |
| 6 | MILTON-NEXT-
SITTINGBOURNE
Found 1871 at
Bex Hill | (ii) | British Museum | Bead-and-reel panels and " St. Andrew's Crosses "; Medusa-masks, lions, vases with torches. Outside, green glass jug with crimped handle. Late 2nd cent. | P.S.A.L., ser. 2, vi, 1873-6, 46.
A.C., ix, 1874, 168-71, with figs.
Payne, 24-8, with plate and figs.
1-4.
Smith, vii, 1880, 184-6 and fig. on p. 185.
V.C.H., 97.
B.M. Guide to Ants. R.B., 1951, 65, fig. 32, No. 3; 66 with wrong reference to glass vessels. |
| 7 | MILTON-NEXT-
SITTINGBOURNE
Found 1868 at
Bex Hill | (iii) | — | Both undecorated. Bodies in lime. | Gents. Mag., 1867, i, 506-7. |
| 8 | SITTINGBOURNE
Found 1868 at
Bex Hill | (iv) | — | (iii) Male, with unguent bottle of blue glass. Glass jug outside. Probably late 2nd cent. (iv) Female, with two pottery vessels outside. | P.S.A.L., ser. 2, v, 1870-3, 381; vi, 1873-6, 46.
Payne, 23-4.
A.C., ix, 1874, 164-5.
Smith, vi, 1868, 263-4; vii, 1880, 182.
V.C.H., 96. |
| 9 | MILTON-NEXT-
SITTINGBOURNE
Found 1871-3 at
Bex Hill | (v) | — | Both undecorated. In (vi) two finger-rings of gold wire and three jet pins with faceted heads | P.S.A.L., ser. 2, v, 1870-3, 381; vi, 1873-6, 153.
Arch. Journ., xxx, 1873, 296.
A.C., ix, 1874, 171.
Smith, vii, 1880, 186. |
| 10 | SITTINGBOURNE
Found 1871-3 at
Bex Hill | (vi) | — | | |

" Four, if not six, other lead coffins," undecorated, came from this site (Payne, 29). They may include the two here listed. From particulars given by Payne in *P.S.A.L.*, ser. 2, vi, 1873-6, it seems that this site was a natural mound and not a barrow; in any case, it lacks the usual commanding geographical situation. The site has been entirely destroyed for brickearth.

PROVENANCE, ETC.	PRESENT LOCATION	BRIEF PARTICULARS	BIBLIOGRAPHY
11 MURSTON, NR. SITTINGBOURNE Found 1869 in Eleven Acres Field	Melted down, metal used to seal joints in gas mains at Sittingbourne.	Cable "St. Andrew's Crosses" on lid, sides and ends. Fragments of glass vessels	<i>A.C.</i> , x, 1876, 183. Payne, 43. Smith, vii, 1880, 190. <i>V.C.H.</i> , 97-8.
12 PETHAM Found 1775 near Garlinge Green	—	Cable "St. Andrew's Crosses" on lid and four sides. Child, with Castor-ware urn, an urn stamped BIBE, and another urn	B. Faussett's Note, <i>Soc. Ant. MS.</i> No. 723, folio 6. Smith, iv, 1857, 173-5, pl. xl, No. 1. <i>V.C.H.</i> , 162.
13 PLUMSTEAD Found 1887	Maidstone Museum	Cable round edges of lid and "St. Andrew's Cross" incised on one end of lid. N-S position. Young girl. Traces of wood shell	<i>P.S.A.L.</i> , ser. 2, xi, 1885-7, 308-9; xii, 1887-9, 6; xiii, 1889-91, 245. <i>A.C.</i> , xvii, 1887, 10-11, with plate. <i>V.C.H.</i> , 163.
14 RAMSGATE Found 1846 on site of Saxon cemetery at Ozingell	Rolfe Collection, hence Mayer Collection, but not at Liverpool. Loca- tion now unknown	Unornamented. In a grave.	<i>J.B.A.A.</i> , ii, 1847, 85. T. Wright, <i>Wanderings of an Antiquary</i> , 1854, 82. <i>A.C.</i> , xii, 1878, 334. Smith, vii, 1880, 190. <i>V.C.H.</i> , 162.
15 ROCHESTER Found c. 1927 in Love Lane (Boley Hill Roman cemetery)	Sold to a dealer in old metal. Published frag- ment not in Rochester Museum	Scallop-shells; panels of cable, prob- ably triangular. Child. N-S position	<i>A.C.</i> , xxxix, 1927, 159-64 and fig. <i>V.C.H.</i> , 87.

- | | | | | | |
|-------|---|-------------|---|---|---|
| 16-19 | SITTINGBOURNE
Found 1879 at
Chalkwell, on
Watling Street | (i) | Stolen from British
Museum in Nov., 1950 | Cable, lozenges and "St. Andrew's
Cross," with yokes (?) and circles.
Head to W. Child of 6 years, with
bracelets of jet and twisted gold
wire, and gold finger-ring of 3rd
cent. Pottery and glass vessels
outside | <i>P.S.A.L.</i> , ser. 2, viii, 1879-81.
210-211.
<i>A.C.</i> , xvi, 1886, 9-10 with plate.
Payne, 54-5 and pl. xviii.
Smith, vii, 1880, 186-7.
<i>V.C.H.</i> , 98.
<i>Daily Telegraph</i> , 15 Nov., 1950.
<i>B.M. Guide to Ants. R.B.</i> , 1951,
62, 65, fig. 32, No. 2. |
| | do.
(Circular cist) | (ii) | — | Cist contained <i>calcined</i> human bones,
bronze vase and bowl, a glass
vessel, and cup of Castor ware.
Probably enclosed in wood coffin. | <i>A.C.</i> , xvi, 1886, 10-11.
Payne, 57. |
| | Found 1934 at
Highest Quarry | (iii) | Maidstone Museum | Undecorated. Young woman | <i>Ant. Journ.</i> , xv, 1935, 209, 210
fig. 2. |
| | do.
(Canister lid) | (iv) | — | Flanged canister-lid, probably used
here as a pot-cover. Male skeleton,
with four pots of 4th cent. date | <i>Ant. Journ.</i> , xv, 1935, 209-12, and
fig. 3, where scale should read
(x $\frac{1}{2}$). |
| 20-21 | SOUTHFLEET
Found at Spring-
head, on Watling
Street 1807 | (i)
(ii) | —
— | Two undecorated coffins, each with a
child's skeleton, within a stone
tomb. One contained a pendant-
chain, a pair of bracelets and
finger-ring, all of gold. 3rd cent. | <i>Arch.</i> , xiv, 1808, 38-9, pl. vii,
3 and 4.
Smith, i, 1848, 110.
R. F. Jessup, <i>Arch. Kent</i> , 1930,
213, and jewellery, pl. ix.
<i>V.C.H.</i> , 91.
<i>B.M. Guide to Ants. R.B.</i> , 1951,
pl. 1, 7, for chain. |
| 22 | WESTBERE (STURRY)
Found 1755 near
Whatmer Hall | | — | Inside stone coffin. Pottery-flagon
near | E. Hasted, <i>Hist. Kent</i> , ix, 1800,
76-7.
<i>A.C.</i> , ix, 1874, 172.
Smith, vii, 1880, 190.
<i>V.C.H.</i> , 174. |

(Compiled by J. M. C. Toynbee, R. F. Jessup, and Alan Warhurst)

plain or decorated, have come to light predominantly in Kent (see pp. 42-5), the London area, eastern England south of the Wash (especially at Colchester), and in the cemeteries of Roman York, while sporadic finds have been made north and south of the Wash (Horn-castle in Lincolnshire, Chesterton-on-the-Nene near Peterborough, Ipswich, Great Wenham in Suffolk), in the Midlands (Leicester, Ircchester, Verulamium), and in the western districts (Cirencester, Glamorgan). Britain, as everyone knows, was particularly rich in lead¹ and partly supplied with this commodity the markets of Gaul, which also had her own lead-mines, mainly in the north.² Spain, too, was notably lead-producing.³ On the other hand, Syria and Palestine, the cradle and centre *par excellence*, so it seems, of this branch of decorative art, contained no lead-mines.⁴ The nearest mines were in Asia Minor.⁵ Whence and by what routes did these countries import their lead? And how did it happen that the craft flourished most brilliantly in lands of which the essential raw material was not a native product? These are questions still awaiting answers. No previous student of the subject has, to the writer's knowledge, so much as posed this problem, still less attempted to solve it.⁶

VII. OTHER FINDS

(1) POTTERY

By N. C. COOK, B.A., F.S.A.
(Keeper of The Guildhall Museum)

THE pottery came from the following sources :

- A. A great pile of sherds on the northern side of the Main Burial.
- B. The Central Area.

¹ L. C. West, *Roman Britain: the Objects of Trade* (1931), pp. 31-4, 39-41; ed. F. Tenny Frank, *An Economic Survey of Ancient Rome*, III (1937), p. 42 ff. (R. G. Collingwood).

² L. C. West, *Roman Gaul: the Objects of Trade* (1935), pp. 69-70, 76, 77; ed. F. Tenny Frank, *op. cit.*, III (1937), pp. 461, 587, note 95, 501 (A. Grenier); O. Brogan, *Roman Gaul* (1953), p. 137.

³ L. C. West, *Imperial Roman Spain: the Objects of Trade* (1929), pp. 45, 51, 52; ed. F. Tenny Frank, *op. cit.*, III (1937), p. 139 f., p. 158 ff. (J. J. van Nostrand); *Journ. Rom. Stud.*, XVIII (1928), p. 129 ff.

⁴ No mention is made of lead-mines in Syria or of the importation of lead into the country in ed. F. Tenny Frank, *op. cit.*, IV (1938), p. 156 f., p. 201 ff. (F. M. Heichelheim).

⁵ Ed. F. Tenny Frank, *op. cit.*, IV (1938), p. 622 f. (T. R. S. Broughton).

⁶ Lead was exported in considerable quantities from the West to India, where it was used mainly for native coinages (E. H. Warmington, *The Commerce between the Roman Empire and India* (1928), p. 267 f.). One of the lead-routes eastward may well have passed through Syria and have stimulated interest there in exploiting that commodity for funerary purposes. For the lead-industry in the Roman Empire in general see M. Besnier, *Revue Arch.*, XI (1920), pp. 211 ff; XIII (1921), p. 36 ff.; XIV (1921), p. 98 ff.

- C. Pits 2 and 3.
- D. The core of the barrow.
- E. The ditch silt.

It is immediately apparent that the sherds from the first three sources, with the exception of the rouletted beaker, have been subjected to great heat after manufacture. The plates are, in places, burnt almost to cinders. The amphoræ, though split, and discoloured by fire, have not suffered such intense heat, but the two beakers show no signs at all of having been burnt.

The suggestion is that the plates were in the funeral pyre, the amphoræ burnt in the purificatory or clearing up fire on the site of the barrow after the funeral rites, but before the mound was raised, but that the drinking cups were not placed in the pits until the fires were over.

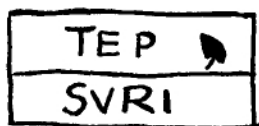
All the pottery, except that from the ditch, was recovered in very small fragments, and there can be little doubt that it was deliberately smashed.

A. POTTERY FROM THE NORTHERN SIDE OF THE MAIN BURIAL

This consisted of about one hundredweight of small sherds which, when sorted, proved to be the remains of five amphoræ.

1. The largest amphora, Fig. 13, left, has a cylindrical body, sagging slightly in places. The ware is hard, reddish brown in colour, and covered with a creamy-buff slip. The collar is cylindrical, and the neck conical. Just below the junction of collar and neck is an impressed stamp with an incised square panel. The stamp is fractured, and parts of the letters are missing. Dr. M. H. Callender kindly reports on this stamp:—

“ The stamp reads



and is exactly paralleled from the Monte Testaccio, Rome (C.I.L., xv, 2817 b), although the latter is in hollow letters. There is a further example TEP

SVRI, also in hollow letters (*idem*, 2817 a).

Other possibilities are FT EP retrograde and in frame, and FT EP retrograde and in double frame (*idem*, 2809, a, b). Incidentally, the TEP || SVRI examples were stamped on the necks of small amphoræ.

Expansions:

1. F(iglinae) or [ex] F(iglinis), T.EP () or T. E () P ().
2. [figlinae, etc.] T.E () P () ||
SVRI [vilici]

EXCAVATION OF A ROMAN BARROW AT HOLBOROUGH, SNODLAND

On the basis of numerous parallels, I am fairly confident in offering these expansions. From the general style it may possibly be of South Spanish origin, which would imply that this particular vessel was imported sometime before *c.* A.D. 200, but at any time during the course of the period *c.* A.D. 10-200. I have reached the tentative conclusion, however, that wine, olive oil and fish sauces were no longer imported into Britain from Spain and Italy after the victory of the Severi at Lyons in A.D. 197. If any such commodities came into the country, they were from Aquitaine and possibly Gallia Narbonensis, where the cask rather than the amphora was the main vessel for the transportation of such goods—although the amphora was used on occasion.

2. The four smaller amphoræ were all of the same size and form, and only one of them is here illustrated (Fig. 13, right). They have shallow ribbed vertical collars, slightly undercut at their lower edge, short necks, and pear-shaped tapering bodies which swell out again at the base to end in a spherical knob. The two handles spring from almost the base of the neck, rise to about the bottom of the collar, and join the body of the pot at the bulge. The paste, which is reddish in colour and contains very finely powdered grit, has been dipped in a cream coloured slip.

B. POTTERY FROM THE CENTRAL AREA

From this area came numerous sherds, including small splintered fragments of the smashed amphoræ, and two pieces which actually join on to the plate No. 2 from Pit 3. There were also fragments of tile, and of the rouletted beaker from Pit 2.

C. POTTERY FROM PIT 2

The remains of two straight-sided plates. In each case the coarse ware of the fabric has been covered with a fine slip which now, doubtless owing to changes due to fire, appears as a pink, merging to yellow, colour. It is likely that these were originally fumed wares, and that the carbon deposit has been consumed in the open fire in which the plates were subsequently burnt.

1. Diam. 10 in., height 1·9 in. The outside of the walls of the plate are ornamented with shallow tooling in the form of overlapping arcading. The base is flat and decorated beneath with shallow tooling in the form of a circle of running loops around its edge.

2. Diam. 7·8 in., height 1·6 in. Rounded base on the inside of which is a small isolated shallow tooled ornament, identical with that on the plate from Pit 3, Fig. 14.

3. A rouletted beaker, max. diameter 6·2 in., Fig. 14, of fine buff clay with black "varnished" surface. Conical neck with no marked

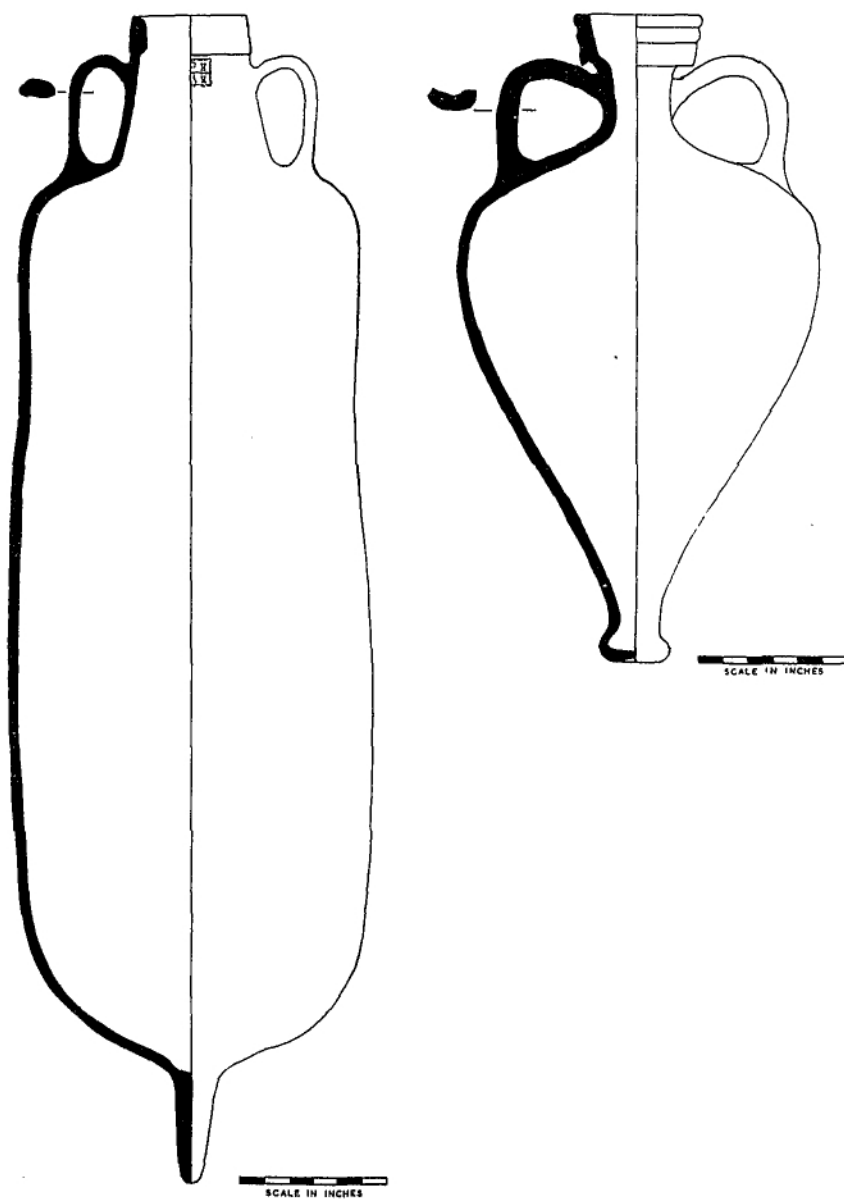


FIG. 13. AMPHORAE FROM N. SIDE OF MAIN BURIAL

EXCAVATION OF A ROMAN BARROW AT HOLBOROUGH, SNODLAND
offset at the junction of neck and body. Base missing. No signs of
burning.

POTTERY FROM PIT 3

1. Many sherds of a rouletted beaker of similar type to No. 3 from Pit 2, but the sherds were very small and only a small part of the whole vessel was thrown into this Pit.

There are also the remains of at least six, and possibly seven, straight-sided plates. They are not all complete, and as several of them are almost identical in size and form, one cannot always be certain that what appear to be parts of the same plate are not, in fact, parts of two separate plates.

2. Diam. 10 in., height 2 in. There is ornament on the outside of the walls and beneath the base identical with that of No. 1 from Pit 2, of which this plate is practically a duplicate. Fig. 14.

3. Diam. 13 in., height 1.8 in. Unornamented. Flat base. Much burnt.

4. Diam. 6.7 in., height 1.5 in. Rounded base on the interior of which is an ornament identical with that on No. 2, Pit 2. This ornament does not continue right round the plate; the illustration, Fig. 14, shows the whole of it.

5. Diam. 7.8 in., height of uneven rim varying from 1.5 to 1.8 in. Body cracked and distorted by fire. Rounded base.

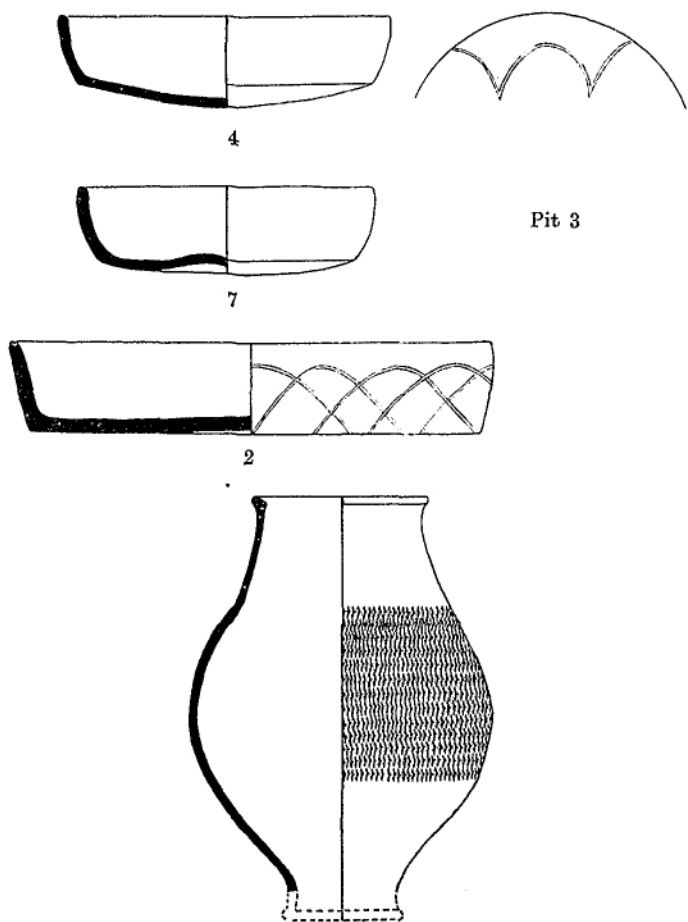
6. Fragments of one, or perhaps two, plates, similar in size and paste to No. 5, with the same ornament on the inside of the base as No. 4. The sherds are so badly damaged by fire that it is not possible to be quite certain that some of them do not, in fact, belong to No. 5 from Pit 3, or even No. 2 from Pit 2.

7. Plate of grey paste with black surface, Fig. 14. Diam. 6 in., height 1.5 in. Rounded base with a rise towards the centre, perhaps a distortion due to heat. On the inside of the base is the same ornament as on No. 2 from Pit 2, or No. 4 from Pit 3. Though cracked and distorted by heat, this plate still retains the black fumed surface which was, perhaps, characteristic of all these plates before they were burned in the funeral pyre. It may well have been completely covered by ashes, and therefore in the absence of a reducing atmosphere, the carbon deposit on the surface was not consumed.

D. POTTERY FROM THE CORE OF THE BARROW

There were a few very abraded sherds of indeterminate Roman date, though there is one sherd which is certainly a small rim fragment from one of the plates found in Pits 2 and 3. There are also two small much worn sherds of gritted ware which are prehistoric in character, and perhaps associated with the Bronze Age folk who built the round barrow

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 on the hill above this Roman barrow. There is one splinter of Samian
 ware, a fragment of the rim of Drag. Form 27 or 18 and dating from
 A.D. 60-80, and fragments of tiles.



Pit 2, 3.

FIG. 14. POTTERY FROM PITS 2 and 3 ($\times \frac{1}{4}$)
 (Platters 4, 7, 2 from Pit 3. Beaker from Pit 2)

E. POTTERY FROM THE SILT OF THE DITCH

1. The greater part of the body and one rim fragment of a fumed
 ware pot with cavetto rim and two smooth bands of black at the bulge
 and at the base. Lying on the bottom of the ditch. Early third
 century.

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2. Sherds from the middle section of the body of a large cooking pot of reddish brown ware with black fumed surface. Not sufficient to reconstruct the form of the pot. Coarse chalk filling.

3. Part of the shoulder of a large cooking pot of brown sandy ware with two parallel grooves around the shoulder. Ditch Section III, coarse chalk filling.

The dating evidence afforded by this pottery is as follows. While the plates may be of any date from Antonine times onwards, the rouletted beakers belong to the third century. This date is also that of the cavetto rim pot found at the bottom of the ditch. The beaker whose form it is possible to reconstruct is an early example of its type and, in general, one might place the erection of the mound to the first quarter of the third century A.D.

The bulk of the pottery is of native manufacture, but the five amphoræ are of Mediterranean origin. The large cylindrical type is a form common to the western parts of this area—Spain, North Africa and Italy—but the four smaller amphoræ are from the eastern Mediterranean and are a well-known Grecian type. These had all previously been brought to this country, perhaps as deck cargo, but certainly full of wine which was consumed at the funeral feast.

(2) GLASS

The ten fragments of glass vessels recovered were not sufficient for restoration. At least four vessels seem to be represented. Dr. D. B. Harden, who most kindly examined the pieces, suggests that they could very well fit in with a third century date, but that there is not sufficient information for even one complete shape.

There is no doubt that the glass vessels were melted almost completely on the pyre.

GLASS-SLAG

The specimens were examined in the Department of Glass Technology, University of Sheffield, by whom the following comments were made :—

“The glassy material of the crushed sample was sorted by hand, washed, and measurements of its refractive index were made. The values obtained ranged from 1.503 to just over 1.520 for different small fragments. It was noted that the fragments were of quite good colour, being only faintly tinted, but were weathered heavily on the surface. The weathering process tends to remove alkali from the glass, leaving a low-refractive index layer richer in

silica. It was also noted that in the other samples of slag the glassy material surrounded and included, without any zone of partial fusion, pieces of charcoal, soil, etc. The only suggestion that foreign material had been picked up occurred with one of the samples of 'run glass' where the surface showed some discolouration.

"Regarding the fragments of more massive glass which were found, refractive index measurements were again made on small flakes removed for this purpose. The values obtained were approximately 1.509 and 1.518. The glass was not very homogeneous, showing heavy striae where the broken edges had weathered. It would appear, particularly from the colour of the glass, that the fragments are derived from at least three vessels, if indeed not four or more. Some of the thinner pieces show distortion which can only be the result of heating to a fairly high temperature. The more massive pieces have not been distorted; this suggests that the temperature to which the pieces were subjected was not very much higher than about 550°-600° C.

"The evidence indicates the strong probability that the so-called slag is actually the fused remains of various vessels. In favour of this view are (a) the comparatively good colour, (b) the values of refractive index, and (c) the non-fusion of included material. Had the glass been derived from wood potash and materials from the soil where it was found it is unlikely that all these features would have been shown. Such an 'accidental' glass would have shown wide variations in refractive index, probably a considerable amount of small bubbles, partial incorporation of sand from the soil, and it would probably have had very poor resistance to the attack of moisture. A probable explanation for the presence of fragments of unmelted glassware is that under the influence of sudden strong heat the vessels would shatter, and some pieces would be thrown into the cooler outer parts of the cremation pyre. The temperature towards the centre of the fire would be considerably higher, probably more than 1,000° C., and would be sufficient to cause the fusion of this glassware. The molten glass would then drip to the bottom of the fire, and pick up bits of ash, etc., before cooling to a solid mass.

"In summary, then, we feel that the samples may be accounted for by the suggestion that several glass articles were included in the funeral pyre, that under the influence of heat the articles were shattered, and that the pieces remaining near the centre of the fire fused to form the 'slag,' while a few fragments falling outside the hottest zone remained substantially unaffected."

(3) IRON NAILS

Upwards of 350 iron nails were saved for examination ; a large number from the central turf area were not saved, but it is likely that the total number seen by us and by Thomas Wright approached 500. Iron nails, chiefly the fastening of wood chests, are frequently found in Roman barrows, but such a large number, matched only by the 200 found by Sir John Evans in the Standon, Herts., barrow,¹ is rare. Apart from the relatively few nails associated with the coffin of the Main Burial, the bier of the Secondary Burial, the small coffer in Pit 2 and the nails of unknown purpose in Pit 1, the bulk was doubtless derived from the funeral pyre, a tiered structure of timber poles and battens, such as that represented on the coin described below. A considerable but smaller number is likely to have come from the timber-framed shelter round the Main Burial. To none of the examples recovered could a magic or ceremonial significance be attached. In length undamaged nails ranged from 4.1 inches to 2 inches ; all were of the usual rectangular cross-section, with tabular or cushion heads, and no decoration. Many had been hammered over to serve as hold-fasts, but none were roved.

A representative series of nails from the site was examined in the Laboratories of the National Steel Company of Wales, Ltd. All were of wrought iron of exceptionally high quality. The outer scale, as expected, proved to be a corrosion product from the chalky soil. On nails from the Main Burial and the surrounding turf area, the analysis of the innermost scale is typical of burnt iron, while the intermediate second layer is typical of both. In some examples, including nails incorporated in the corrosion of the chair, the action of fire was to change the surface to a smooth unbroken skin of oxide which gave complete protection to the metal and a surface appearance of bronze ; this technical information is kindly provided by Mr. F. W. Biek of the Ministry of Works. Information obtained from an investigation of rust-patterns is noted on page 11 above.

The analysis of a nail from the Main Burial is appended :—

C.	·02
S.	·023
P.	·065

¹ Youngsbury, Standon, near Ware, excavated 1888. *Arch.*, LII (1890), pp. 287-296. Only one nail was found in the Bartlow Hills barrow which contained the folding chair.

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Spectrographic Analysis, by Mr. K. J. Butler, Messrs. Edgar Allen & Co.

Silicon	·05	Niobium	—
Manganese	<·01	Tantalum	—
Nickel	·05	Copper	·022
Chromium	<·01	Aluminium	·03
Molybdenum	·017	Tin	<·01
Tungsten	<·01	Lead	<·05
Vanadium	<·01	Zr. Nb	Not detected
Cobalt	<·01	Boron	<·001
Titanium	<·01	Magnesium	·012

Non-magnetic Oxide : outside layer. Light brown colour.

Total Fe.	44·0	Al ₂ O ₃	2·78
FeO	tr.	CaO	13·1
Fe ₂ O ₃	62·92	MgO	tr.
SiO ₂	2·36	MnO	Nil
		Loss	19·0

Magnetic Oxide : second layer. Blue-brown colour.

Total Fe.	58·0	Al ₂ O ₃	1·86
FeO	5·14	CaO	2·2
Fe ₂ O ₃	78·1	MgO	tr.
SiO ₂	1·68	MnO	Nil
		Loss	12·0

Magnetic Oxide : third or inner layer detached from nail by hammer blows. Grey-blue colour with few brown spots.

Total Fe.	63·0	Al ₂ O ₃	3·71
FeO	18·9	CaO	·92
Fe ₂ O ₃	69·1	MgO	tr.
SiO ₂	·10	MnO	tr.
		Loss	6·6

(4) THE PURSE

The sample was an organic material heavily impregnated with lead compounds. The usual tests for tannin with boiling water and with dilute acid failed. The caustic soda test for tannins however gave a positive reaction, and there was also evidence for the presence of fatty acids. The usual tests for proteins failed. There was much nitrogenous matter present. These tests, made by the A.P.C.M. Research Organization, were sufficiently encouraging to suggest the presence of

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leather or hide and a sample was sent to the British Leather Manufacturers' Association, who very kindly report :—

“ The sample consisted of large portions of rather flaky pieces of a brittle substance with an earthy appearance though much infiltrated by lead from the coffin. It contains 40 per cent. of ash and when it is ignited there is a substantial formation of lead droplets. Two determinations (by Kjeldahl method) on the whole thickness of this material gave 1·2 per cent. and 1 per cent. of nitrogen, which would correspond to about 6 per cent. of leather. An inner layer separated from this material showed on examination under the microscope what might be the remains of the characteristic fibre structure of skin and leather. This inner layer contained 1·4 per cent. of nitrogen corresponding to about 15 per cent. of leather.

“ We do not think we can offer an absolutely certain conclusion about this material, but in our opinion it is probable that it does represent the remains of the leather part of a purse.”

The inner lining was examined by the Linen Industry Research Association, who kindly report :—

“ The lining consists of seven layers of a fine fabric with a patterned weave. The fibres are from the bast of a plant and have the characters of flax. The outer portion is not a fabric, and may be an animal skin.”

(5) COIN

Memorial coin of Antoninus Pius struck under M. Aurelius (161-180).
M. & S., vol. III, p. 315, No. 1266.

Obv. DIVVS ANTONINVS

Rev. CONSECRATIO S. C.

Pyre of four tiers, decorated with hangings and garlands, surmounted by a quadriga.

The coin is in worn condition, distorted by heat, and corroded by contact with the iron nail to which it was firmly attached when it was found. It was evidently one of the offerings on the funeral pyre which was later collected up with other material from the same source and placed in the “ ritual ” pit in which it was found. It was no doubt of some age when it was so used. No other coin was found on the site, and the particular interest of this one lies in its representation of a cremation pyre, a feature which no doubt accounts for its presence.

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(6) THE HUMAN REMAINS

By J. WHILLIS, F.R.C.S., and C. W. T. SHUTTLEWORTH, F.D.S.,
M.R.C.S.
(of *Guy's Hospital*)

CALCINED BONE FROM MAIN BURIAL

All the bones show features similar to those of modern cremated remains. They are twisted and fissured and show the transverse and parallel splitting characteristic of exposure to intense heat. Moreover all the bones have been purposefully broken into fragments so that any attempt at complete reconstruction is impossible.

Human bones

There is no evidence of there being more than one individual, no duplicates having been found. The bones are adult. There are indications which enable an approximate estimate of age to be made :

(a) Jaws. Fragments of the left side of the upper jaw and of the right half of the lower jaw both show tooth sockets, some of which contain roots of teeth. There are indications that all the teeth were originally present in these fragments during life ; there is no evidence of alveolar absorption which would follow loss of teeth.

(b) Skull fragments. One or two fragments of the outer table of the skull show that some of the sutures were still open on the outside surface. There is no evidence of sutures on the inner surfaces of any of the skull fragments. If the features shown by these fragments were general throughout the skull an estimate of age of the individual at about 40 years would be justified.

(c) One fragment of vertebral body shows some inflammatory change probably indicative of localized disease (? tuberculosis) during life.

(d) Fragments of long bones (ulna, radius, humerus, femur and tibia) are robust and show fairly well-marked muscular attachments. The fragment of occipital bone shows a very pronounced superior nuchal line. All these features indicate that the individual was probably male.

(e) Axis vertebra. This is almost complete. Its vertical height is 40 mm. and to this it is estimated about 3 mm. should be added because of loss of the tip of the odontoid process and the anterior lip of the lower edge of the body. 44·9 mm. is the mean measurement for males ; 29·8 mm. the mean for females. This makes it extremely likely the individual was a male of average stature.

(f) Fragments of hip-bone, especially that showing a portion of the great sciatic notch, conform to the features of male bones.

It should be noted that fragments showing green (bronze) staining are recognizable as belonging to the hip-bone, the femur, the fibula and the metatarsus. No such staining is to be found on any other fragments.

EXCAVATION OF A ROMAN BARROW AT HOLBOROUGH, SNODLAND

These remains are therefore probably those of a man of average stature aged about forty years.

Bone from Pit 3

There are two fragments of the central portion of the hard palate and lowest part of the nasal septum. There is not enough of these bones to state whether they are human, but there is nothing to indicate that they are not. There is also a human tooth, an upper molar; the crown has disappeared and the apices of the roots are much charred but sufficient remains to say that it was fully developed.

Bone from Pit 2

There is a fragment of the right zygomatic bone (almost certainly human) and a portion of the neural arch of a vertebra (probably human).

BONES OF CHILD FROM LEAD COFFIN

This skeleton is almost complete. The bones are of a peculiar brownish colour, due to the absorption of lead salts from the metal of the coffin during the process of decomposition.

The age of the child was about one year, the following features being salient in making this estimate.

(1) Lower jaw : The symphysis between the two halves is on the point of closing (end of first year). The lower central incisor teeth have erupted. The lower lateral incisors are on the point of eruption (10 months-1 year).

(2) Upper jaw : The central incisors appear to be just erupting. The crypts of the unerupted teeth contain the calcified crowns and partly formed roots of all the milk dentition together with the calcified tips of the permanent central incisors and the occlusal surface and cusps of the first permanent molars. From the amount of root formed on the incisors of the milk dentition the age of the child would be 9-12 months.

(3) Vertebrae : The neural arches in the cervical region are still in two halves. Those in the lower thoracic region (1st year) are united.

(4) Foot bones : Only the calcaneum, talus and cuboid are ossified. The lateral cuneiform centre is not present (latter part of 1st year), but this may have been lost.

(5) Humerus : The centre is present for the head of one humerus (1st year). That for the other side may have been lost.

The state of the above bones justifies an estimate of age as between eight months and one year. The size and state of the other bones supports this estimate.

(7) ANIMAL BONES

By E. W. BAXTER, B.Sc., F.L.S.

(*Department of Biology, Guy's Hospital*)

From amongst the many fragments examined it has been possible to identify the following :

- A. *From Lead Coffin (Secondary) Burial* : the bony shaft together with neck and tubercle of an anterior rib (3rd or 4th) from the R. side of a young rabbit. This was the only animal remains in the coffin burial. Further, unlike all the animal remains from the other pits this bone showed no signs of having been burnt. [Recent]
- B. *From Main Burial* : Two parts of one radius of a fowl.
- C. *From Pit 2* :

(1) *Remains of Sheep*

- (a) R. and L. condyles of skull.
(b) Portions of R. radius.
(c) Portion of R. ulna.
(d) Neural spine of a lumbar vertebra.
(e) Ischial portion of aitchbone.
(f) Part of spine of shoulder blade.

(2) *Remains of Fowl*

- (a) Distal end of tibio-tarsus (drumstick).
(b) Portion of proximal end of shaft of same.

(3) *Remains of Smaller Bird*

Several portions of bones, of wings and leg.
Adult (epiphyses fused).

As noted above, all the remains from both the Main Burial and Pit 2 had been burnt. Furthermore, no entire bones were found, although in several instances two or more fragments could be pieced together, thus assisting in the identification of the bone.

In no instance did the remains suggest the presence of more than one animal of each kind, there being no duplication of any part or fragment, and the several parts of each animal appeared to be of the same age.

(8) MOLLUSCA

By A. G. DAVIS, F.G.S.

The material studied consisted of two soil samples : A.—from the turf layer of the central area, and B.—from the undisturbed core of the mound. Sample A consisted of approximately 25 per cent. of chalk lumps and pellets and 75 per cent. of humus and soil. In Sample B both the chalk and humus were in approximately equal proportions. Some fragments of fossil *Inoceramus* and ossicles of crinoids were present in both samples and are derivatives from the chalk. Molluscan remains are plentiful in both samples and suggest that the site both before and during the construction of the mound was a favourable one for snails.

FAUNAL LIST

	A.	B.
<i>Pomatias elegans</i> (Müller)	5	20
<i>Cochlicopa lubrica</i> (Müller)		1
<i>Vertigo pygmaea</i> (Draparnaud)	5	5
<i>Pupilla muscorum</i> (Linné)	24	13
<i>Vallonia costata</i> (Müller)	18	13
<i>Vallonia excentrica</i> (Sterki)	10	11
<i>Clausilia bidentata</i> (Ström)		2
<i>Cepaea</i> sp. ? <i>nemoralis</i> (Linné)	4	C
<i>Trichia striolata</i> (C. Pfeiffer)		1
<i>Trichia hispida</i> (Linné)	1	6
<i>Helicella itala</i> (Linné)	14	40
<i>Arion</i> sp.	C	C
<i>Limax</i> sp.	2	3

This snail fauna is typical of many Roman sites except that *Helix aspersa* Müller, which usually occurs, is absent. There is no great difference between the faunas of either sample. Most of the species lived on for a time after the construction of the mound but in reduced numbers.

The fauna is one which suggests a dry calcareous grassy scrub. The soil contained sufficient calcium to support such lime-loving species as *Pomatias elegans* and *Helicella itala*. Both these species no longer live on the site ; they shun man and his works. *P. elegans* requires a crumbly soil and the mound may have become too consolidated for it to live there. The remaining species may be expected to be still living in the vicinity—the writer has lately taken most of them in a post-Roman deposit at Ham Hill, Snodland, not far from the barrow.

The climate at the time of the construction of the mound was probably dryer than at present—the mollusca suggest such conditions.

(9) ANALYSIS OF LEAD FROM COFFIN

(By courtesy of the Britannia Lead Co., Ltd.)

Estimation of impurities :

Antimony	Trace
Arsenic	Not detected
Bismuth	Nil
Copper	0·015 per cent.
Zinc	Trace
Cadmium	Not detected
Silver	0·003 per cent. (1 oz. troy/ton avoird.)
Tin	0·69 per cent.

(For analyses of Roman lead, see *Arch.* LVII (1901), pp. 402-3 *et seq.* and O. Davies, *Roman Mines in Europe* (1935), p. 161, etc.)

NOTE : All the antiquities recovered from the barrow have been presented by the Associated Portland Cement Manufacturers, Ltd., to Maidstone Museum, with the exception of the human remains which have been given to the Gordon Museum at Guy's Hospital.

NOTE.—Two lead sarcophagi found in Canterbury are not included in the preceding table on p. 42.

1. A sarcophagus found by treasure-seekers in one of the Dungeon Hills is recorded by Leland in a well-known passage (*Itinerary*, L. Toulmin Smith's ed., IV, 69-70). On general grounds the Hill is likely to have been one of the important group of Roman barrows at Canterbury (Dunning and Jessup, *Antiquity*, X, 1936, 50).

2. A lead coffin with central ornament suspiciously like a Tudor rose but accepted as Roman by Roach Smith (*Arch.*, XLIII, 1871, 160-1. *Arch. Cant.*, XIV, 1882, 35 and plate) was found in the main drainage operations of 1868 at the upper part of Bridge Street. Mr. William Urry has pointed out that this is the site of Salt Hill, a mound probably destroyed late in the Middle Ages, and he argues convincingly for its inclusion in the Canterbury group of Roman barrows (*Arch. Cant.*, LXI, 1948, 141).

If these were inhumations contained in barrows, there is no indication whether they were secondary burials as at Holborough, but in any case their occurrence in this context is of distinct interest.