

EXCAVATION OF THE BELL-BARROW IN DEERLEAP WOOD, WOTTON

BY

J. X. W. P. CORCORAN, M.A., PH.D., F.S.A.

THE bell-barrow in Deerleap Wood, Wotton, lies immediately south of a track through a plantation of conifers between the railway line and the main road (A25) from Guildford to Dorking (Fig. 1).¹ Its builders did not choose the highest ground in the vicinity, which would have been on the North Downs (White Downs) 1,400 yards to the north and 700 feet above Ordnance Datum. Similarly, a much less prominent ridge, 150 yards to the north of the barrow, was ignored. To the west and east, however, the ground is approximately level until it slopes into a small valley 350 yards to the north-east. The barrow is approximately 420 feet above sea-level, its highest point being 428 feet above Ordnance Datum.

Prior to excavation the condition of the mound was similar to that described by Grinsell in 1931.² Since that date young conifers have been planted around the site; none grow on the mound proper, but the outer bank for most of its circumference and the ditch on the west side are hidden in the plantation. Nine older trees crowned the summit and traces of earlier trees were found during the preliminary clearance of the site. The mound itself and its immediate environment are covered by bracken, which grows in profusion to a considerable height during the summer.

The barrow lies on a narrow strip of the Sandy Folkestone Beds of the Lower Greensand, which have an east-west orientation at this point and a width of approximately 800 yards. To the north and south respectively lie Gault and Sandgate Beds, the latter also forming a division of the Lower Greensand. The Sandy Folkestone Beds are composed mainly of light-coloured, coarse and well-rounded sands with thin veins of ironstone. In places the sand is iron-stained. Ironstone, or carstone, usually lies in narrow veins, one or two inches thick, and composed of pebbles up to approximately 1½ inches in diameter.³ Each of these features was identified during excavation, and sections cut into undisturbed sand underlying the barrow

¹ National Grid Reference TQ (51) 1185 4805. Ordnance Survey Six-Inch Sheet XXXIII NW, One Inch Sheet 170.

² Grinsell, *Sy. A.C.*, XL (1932), 62-4, pl. xv.

³ Geological Survey One Inch Sheet 286. Cf. H. G. Davies and F. H. Edmunds, *The Geology of the Country around Aldershot and Guildford* (Memoirs of the Geological Survey, England and Wales), London (1929), 30-5.

revealed a diversity of colour, ranging from almost pure white to deep iron-stained orange; but some of these colour changes under the original mound have taken place since the barrow was built. Some seams of ironstone found in the Sandy Folkestone Beds are more than 1 foot in thickness, and although no such seam was identified on the site, the ironstone capping of the inner mound, particularly the larger blocks, must have been derived in part from such a seam.

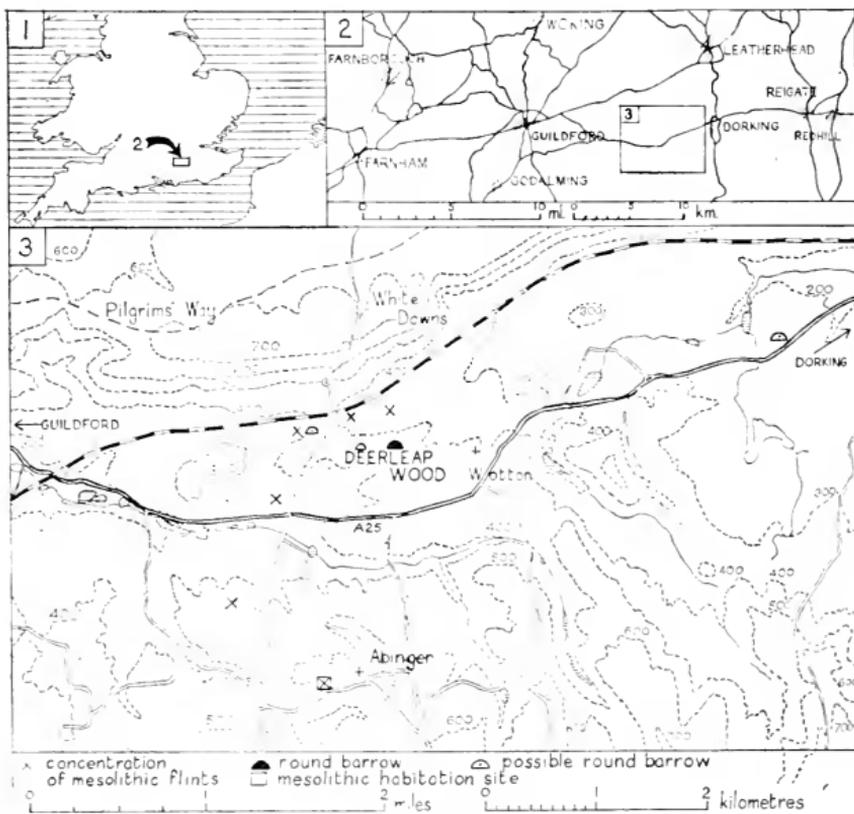
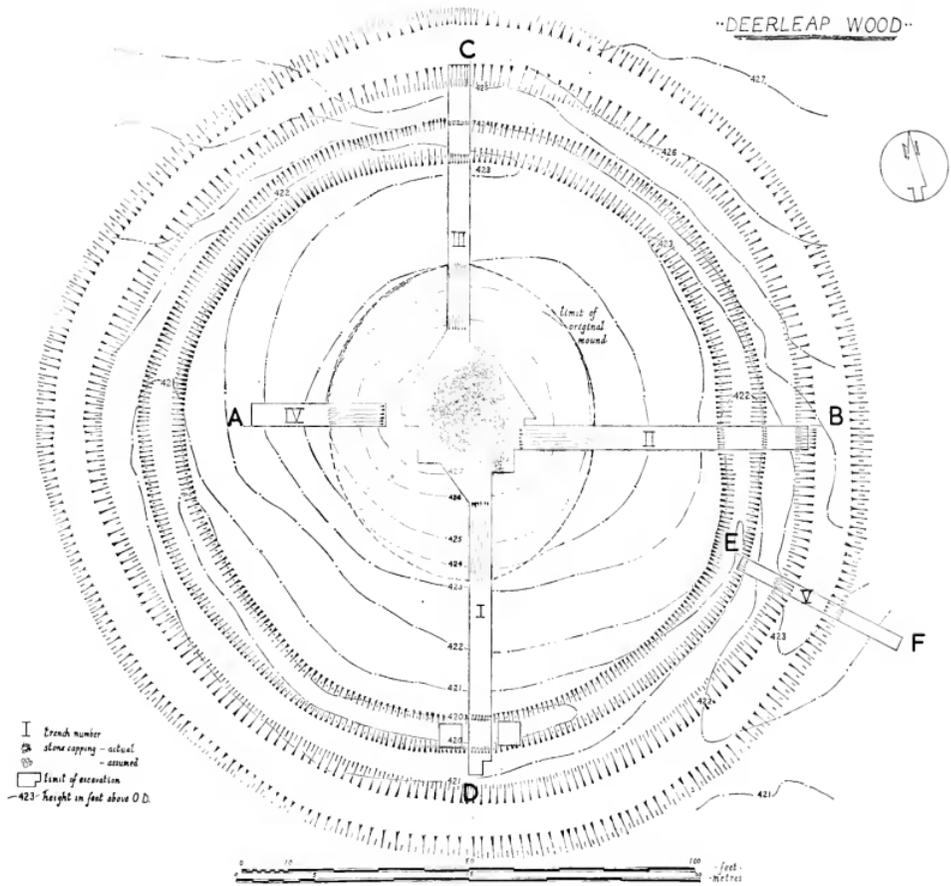


FIG. 1.—MAP.

The barrow was excavated from April to July 1960 by students of Archaeology classes organized by the Department of Extra-Mural Studies in the University of London. Permission to dig was readily given by Major the Hon. S. Stonor, acting for the owner of the Wotton Estate, Mr. C. J. A. Evelyn.

EXCAVATION

The aim of the excavation was to determine the structural details of the site, locate the primary and any possible secondary burials, and identify its cultural associations. Owing to its size it was not



facing p. 3

FIG. 2.—GENERAL PLAN.

possible to excavate the entire mound, and a modification of the quadrant method was used. Four offset trenches were planned to meet at the centre of the site with a subsequent extension of the central area as far as was necessary for an examination of the structural features and burial. Trench I cut into the centre of the mound from the south, trench II from the east, trench III from the north and trench IV from the west. An area some 500 feet square was gradually uncovered in the centre. Trench V was subsequently cut in the south-eastern quadrant in an attempt to determine the nature of the outer bank (Fig. 2).

Once trench I had been completed the structural history of the site was revealed, and the other trenches cut through the mound proper provided the necessary confirmation (Fig. 4 and pl. 1a). To the south a flat-bottomed, originally straight-sided, ditch was located, cut into the firm and bright orange sand of the Folkestone Beds. It was 8 feet wide from lip to lip, 7 feet wide at the bottom and originally 5 feet deep. There was a hard layer of iron-pan in the upper part of this cutting and many of the flints found in the ditch area were heavily iron-stained. North of the ditch the section showed that the wide berm was merely the natural ground surface at the time that the mound was erected. It was subsequently overlaid by considerable down-wash from the mound. A deposit of orange sand marked the outer limits of the mound proper which was built of turves, the tip-lines of which could be identified (pl. 1b). At the time of construction this mound must have stood higher than it does today, perhaps 2 feet or more at the summit, and this would have presented a rather steeper profile.

At the northern limit of trench I many loose stones were found, but it was impossible to uncover them *in situ* without disturbing them. It was not until this trench had been completed that their significance could be appreciated. In section these stones appeared as a loosely laid capping, one course in thickness. They overlay an inner mound, also built of turves, the tip-lines of which were similarly visible (pls. IIa and b). Throughout the length of this trench the barrow lay on the natural sand which varied in colour from white under the mound to the bright orange of the ditch area.

The sequence of construction as revealed in trench I was confirmed later. It appeared that the assumed burial was placed on the original ground surface, marked by an unbroken buried soil, and a turf mound, some 25 to 30 feet in diameter and 3 feet 6 inches in height, built over it. To this was added a stone capping of greater complexity than was at first recognized in trench I. The mound proper, also built of turf, was 68 feet wide from north to south and 59 feet wide from east to west. It was originally approximately 7 or 8 feet high and was built over the capping. Finally, the ditch was dug, 130 feet in diameter, and separated from the edge of the mound by a berm whose average width was 28 feet. It seems probable that the top-soil was thrown outwards to form a bank but that the bright orange sand of the subsoil was heaped around the edge

of the turf mound, perhaps partially for deliberate visual effect. Without complete excavation it is impossible to be certain that the ditch was continuous, but there were no surface indications of a causeway and the ditch may be traced without difficulty on the surface throughout its circuit. There was no trace in any part of the site excavated of post-holes suggestive of timber circles or other uprights.

Since the barrow was built, a well-developed podsol profile of the Humus Podsol sub-type⁴ had formed on the mound, and was clearly defined in section although the A₂ horizon was indistinct in places, due to recent disturbance from tree roots (Fig. 4). It continued laterally beyond the mound proper into the berm area, and similar podsols had developed in the ditches. In many places, particularly in the inner mound, the thin irregular bands of alluviated humic material, typical of Dutch Bronze Age barrows built on sand,⁵ had formed (pl. Ib). The turf line of a buried soil was clearly visible in many places, particularly below the inner mound, but it does not appear to have survived to the same extent beyond the limits of the mound proper (pls. Ib and IIa). This is probably due to the dense structure of the inner turf mound and its stone capping, which have tended to inhibit percolation from upper levels. The buried soil was a dark band, varying from $\frac{1}{2}$ inch to 4 inches in thickness, and composed of amorphous humic materials. In some places a second thinner humus line lay beneath it. Beneath the mound the subsoil was leached to an almost pure white, but its colour in the ditch area was the bright yellow-orange of iron-stained sand. The predominant colours of the subsoil in the berm area were light browns and fawns. Under the buried soil beneath the inner mound traces, in the form of sand discoloration, of a decayed tree-trunk and its roots were identified (pl. IIa).

It was possible to cut only one trench through the outer bank as it was either covered by the trees of the plantation or destroyed by the track running immediately north of the site. Despite this, it is possible to trace this low bank through most of its circumference. Details of its construction are not absolutely clear, but it appears that a low mound of sand, possibly from the top-soil of the ditch, was built, and that it was perhaps 20 feet wide (Fig. 4). At present it is no more than 2 feet high, and it is not clear to what height it originally stood. Silting in the ditch sections, however, shows that there was some infilling from without, which suggests that the bank was originally higher. A clearly defined podsol had formed under the bank.

The Stone Capping. When the central area was finally uncovered, a stone capping was exposed. It has already been shown that in trench I a single layer of stones marked the limits of the capping, but when the whole of the capping was revealed it could be seen that to the north of the assumed centre of the mound the capping

⁴ Cornwall, *Soils for the Archaeologist*, London (1958), 110-11.

⁵ Cf. barrow II on Ermelose Heide in the parish of Ermelo. Modderman, *B.R.O.B.*, V (1954), 20, pl. iv, xxxiii.

was 18 inches thick, built of six courses of ironstone blocks at its greatest extent and tapering to its outer limits (pls. II, III, and Fig. 4). Some of these blocks measured 2 feet in length. The limits approached the original ground surface towards the north, west and south: on the eastern side, however, the capping ended abruptly in a straight horizontal line at a maximum height of 4 feet above original ground level but curving to the original ground surface at its north-

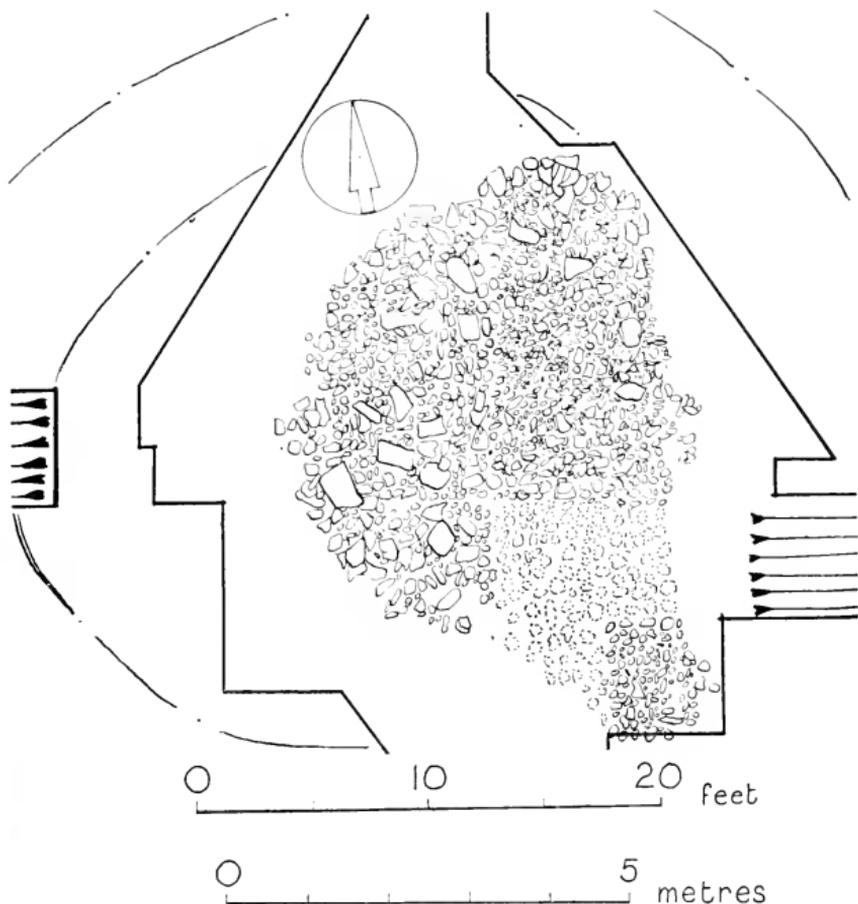


FIG. 3.—PLAN OF STONE CAPPING.

eastern and south-eastern extremities (pl. IIb and Figs. 3 and 4). This gave a dome-like appearance to the capping with the eastern side cut away although, of course, this overlay the inner mound of turf, which itself may also have had a straight eastern edge. As the eastern edge was so carefully finished it cannot be suggested that this capping was left incomplete by its builders. With plentiful supplies of suitable stone available in the vicinity this would hardly be consistent. The remainder of the barrow structure is of such

high quality that the shape of the capping can only have been planned deliberately.

It is difficult to cite an exact parallel to this structure. Stone cappings of inner mounds within Bronze Age barrows are known⁶ but, although they vary considerably in size, they cover the whole of the inner mound and are circular in plan. D-shaped settings of stones have been found under round cairns in Scotland, but these are clearly distinct from cappings.⁷ The cairn-ring under Tregulland Burrow, Treneglos, Cornwall,⁸ was also D-shaped in plan, with the flattened side towards the east, but this may not have been deliberate. A crescentic setting of stones, open to the west, lay within and touched the peristalith of a cairn at Foulden, Berwickshire.⁹ This cairn contained cists within an inner oval setting, and the grave-furniture included Food Vessels, an axe-hammer and flints. Similar crescentic settings of stone of the same date have been found in Ireland.¹⁰ A plan of the capping at Deerleap Wood taken at ground level would give the appearance of such a setting of stones but, in the examples cited from Scotland and Ireland, there is no indication that these were ever anything more than simple crescentic settings. There is no evidence that an inner mound of the Deerleap Wood type had been destroyed. These settings may have been constructed in response to a ritual need similar to that which produced the horned forecourts of the gallery-graves of the Irish Carlingford Culture and elsewhere, and the horseshoe-shaped arrangements of the trilithons and inner bluestone setting at Stonehenge.¹¹

The stone structure at Deerleap Wood differs from normal inner cairns and approximates more closely to the idea of a timber "mortuary house," the remains of which have been found under several Bronze Age barrows in southern Britain.¹² These may be regarded as copies of the houses of the living, consecrated to the use of the dead during and after the period of burial ritual. In shape the inner stone structure at Deerleap Wood forms a kind of protective shell, open towards the east. It is tentatively suggested that this might have been intended to represent ritually, and in stone, a simple tent-like structure. Such shelters, it is visualized, were

⁶ E.g. Inner cairns in Dorset barrows; Grinsell, *Dorset Barrows*, (Dorchester 1959), 47; Garrowby Wold (M. 169), Mortimer, *Forty Years' Researches in British and Saxon Burial Mounds of East Yorkshire*, London (1905), 138-40; Ysceifog, Flintshire, Fox, *Arch. Camb.*, LXXNI (1926), 48-85.

⁷ E.g. Drannandow, Minnigaff, Kirkudbright, Edwards, *P.S.A.S.*, LVII (1922-3), 66-7 (with cists and Food Vessels); Inverlael, Inverbroon, Ross-shire, Cree, *P.S.A.S.*, XLVIII (1913-14), 114-20 (with cists and Bronze Age flints). These were both orientated with the flat side of the "D" towards the west.

⁸ Ashbee, *Antiq. Journ.*, XXXVIII (1958), 177, 180.

⁹ Craw, *P.S.A.S.*, XLVIII (1913-14), 316-25.

¹⁰ E.g. Corrower, Co. Mayo, Raftery, *P.R.I.A.*, LXI (C) (1960), 79-93. This cairn contained at least thirteen cremations with Food Vessels. The crescentic setting was open to the south. Other similar structures in Ireland have varied orientations (*ibid.*, 91-2).

¹¹ Corcoran, *P.P.S.*, XXVI (1960), 133.

¹² Ashbee, *The Bronze Age Round Barrow in Britain*, London (1960), 52-4.

perhaps built of skins with a pole holding open one side, or with a wicker-work frame, suitable for temporary occupation. The open side here faced away from the prevailing wind. If, as is suggested below, there was a strong tradition of hunting remaining in the economy in this part of Surrey at the time the barrow was built, it would not have been inappropriate for burial ritual to have incorporated some memory of such a shelter, but rendered in a more durable stone structure.

The Burial. No traces of any primary burial were found, and it must be assumed that this had been destroyed by the acidic soil.¹³ It may also perhaps be assumed that the burial rite was that of inhumation placed on the original ground surface, as it is unlikely that adequately cremated human remains would have disappeared completely without trace. There were no indications of any pits cut into the subsoil and, as has been noted, a buried soil, apparently unbroken, underlay the inner mound. Similarly, any grave goods that might have been placed with the body must have been of perishable substances. Neither flint of post-Mesolithic date nor pottery was found under the centre of the inner mound. Neither were secondary burials found in any of the cuttings made, nor were there any surface indications in the south-eastern quadrant of the mound which was completely cleared of undergrowth. Although tree roots and rabbits have caused some disturbance in the upper levels of the barrow there was no suggestion of human interference. The stone capping remained intact.

1,014 struck flints of characteristic Mesolithic technique were found at the level of the old surface and in the make-up of the mound. This suggests that the barrow had been erected on the site of a Mesolithic working-floor. The only artifacts found which appear to date to the construction of the barrow were a broken whetstone, found in the berm area in trench II but sealed beneath 3 feet of downwash from the mound, and a flint fabricator from the stone capping. Both are paralleled among artifacts from the barrows of the Wessex Culture. The Mesolithic flints and Bronze Age artifacts are discussed below.

¹³ Tests revealed that the pH value of the soil from the original ground surface underlying both the inner mound and mound proper was pH 5.7. This is sufficiently close to pH 5.6 at which value calcium phosphate, $\text{Ca}_3(\text{PO}_4)_2$, is attacked by acids in humus and plant roots. In the present circumstances it is probable that any traces of bone were leached out and lost in the drainage. (Cf. Cornwall, *Soils for the Archaeologist*, 195.) The value of pH 5.7 was obtained by the electrical method using a Marconi pH meter (TF 889) at a temperature of 22°C. Samples were also tested by the colimetric method using a B.D.H. "Capillator" (Cornwall, *ibid.*, 163-4) and this gave a value of pH 6.0. A cross-check was made using a Doran Mini pH meter. The acidity of the soil would also account for the absence of activity by earthworms. Using the Marconi meter a value of pH 6.1 was obtained for soil from under the orange sand at the outer limits of the mound, of pH 6.4 from a clay layer in the ditch (trench I) and of pH 7.0 from a black overlying layer. I am grateful to Mr. B. J. Rickard for his assistance in obtaining these readings.

DISCUSSION

The absence of a primary burial was not unexpected in view of the known acidity of the soil. Before excavation, however, it was hoped that some artifacts might be found which would suggest that the builders of the barrow were in some way associated with the Wessex Culture, perhaps in connection with trade between that area and Scandinavia. Contacts with Wessex seem possible both by the mere existence of a mound of bell-barrow form and from the whetstone, which has parallels in the burial-deposits of the Wessex Culture. The bell-barrow is one of those types whose distribution is mainly concentrated in Wessex, and whose *floruit* is similarly restricted to that of the Wessex Culture.¹⁴ The existence of outliers might suggest that their builders had some connection with Wessex either through trade, as in Cornwall, or through the territorial expansion of the Wessex Culture itself, as is perhaps indicated by the bell-barrows to the north of Wessex.¹⁵ Neither hypothesis would seem to account for the existence of bell-barrows in Surrey. The environment is unlikely to have attracted settlers from an area such as Wessex, and Surrey would not appear to have had much to offer the inhabitants of Wessex either as manufactures or as raw materials. Furthermore, there is little to suggest that the bell-barrow in Deerleap Wood was built as a result of contact from trade passing along the North Downs. The distribution of objects of Scandinavian flint found in south-eastern England shows that such trade-routes passed to the north and favoured the Thames Valley,¹⁶ although a flint axe-head, possibly Scandinavian, was found at Bury Hill, near Dorking.¹⁷ Similarly, a route to the south of the Weald might be suggested by the rich furnishings, including the amber cup and a whetstone, from the barrow at Hove.¹⁸ Whatever influences may have been active in this part of Surrey, it was perhaps a local person who initiated the construction of the barrow rather than that the latter marked the burial of some immigrant. The thin scatter of bell-barrows in Surrey¹⁹ suggests that, although most of the county must have remained unattractive to immigrant settlers in the Neolithic and Bronze Ages, the indigenous inhabitants, strong in their Mesolithic tradition, may have developed a society which boasted an embryonic aristocracy. The paucity of natural resources of the area would have prevented the acquisition of imported artifacts comparable to those of Wessex. In the absence of human remains it has been suggested that there may have been an inhumed burial in the Deerleap Wood barrow as some traces of cremation would have survived. Were this so, it might argue for an early date within the series, as the majority of bell-barrows in Wessex contained primary cremations.²⁰ It must be

¹⁴ Grinsell, L. V., *The Archaeology of Wessex*, London (1958), 94.

¹⁵ Ashbee, *op. cit.*, 33.

¹⁶ Piggott, *P.P.S.*, IV (1938), 80-1.

¹⁷ Frere, *Sy.A.C.*, XLIX (1944-5), 92-3.

¹⁸ Curwen, *Archaeology of Sussex* (London, 1954), 152-4.

¹⁹ Grinsell, *Sy.A.C.*, XL (1932), 57.

²⁰ Grinsell, *The Archaeology of Wessex*, 98.

allowed, however, that cremation may have been foreign to local tradition, and that the adoption of inhumation burial under a bell-barrow need not imply an early date.

While allowing that the sandy heathlands of Surrey would have been ill-suited to the emergence of a rich Bronze Age culture, the size and construction of the bell-barrow in Deerleap Wood compares favourably with others in Britain, not excluding Wessex, details of which are known from recent excavation. The bell-barrow on Black Down, Dorset,²¹ for example, resembles that in Deerleap Wood although the overall measurements of the mound and berm of the latter were greater, whereas the ditch of the Dorset barrow was nearly twice the average width of that in Deerleap Wood. This Dorset barrow was also constructed from turf and no trace was found of a primary burial, which may have been an inhumation and therefore possibly early in the series. Similarly, a bell-barrow at Bishop's Waltham, Hampshire,²² somewhat larger than that in Deerleap Wood, was also built on sandy soil, but its primary burial deposit, a cremation with traces of an inhumation placed above it, was preserved in a wooden coffin, the whole complex being set in a pit. Two daggers accompanied the cremation, and a Food Vessel was associated with the inhumation. Unlike that in Deerleap Wood, the ditch of the Bishop's Waltham barrow was V-shaped, a shape more appropriate to one cut in loose sand.

The barrow in Deerleap Wood, therefore, offers little evidence of the cultural background of those who built it, and the two artifacts, the whetstone and the fabricator, which are presumably contemporary with it, merely add support to the conclusion that this part of Surrey was in some way influenced by the contemporary culture-pattern in Wessex. There is similarly no evidence of occupation and little of activity in the immediate vicinity of Deerleap Wood between the Mesolithic period and the construction of the barrow. It may be shown, however, that in the interim period the county was not entirely devoid of human occupation. The possibility exists that small hunting bands survived, still formally Mesolithic in basic equipment; and it is not impossible that the leader of such a group might have had constructed for himself a barrow such as this. Details of construction and the contemporary artifacts, however, suggest something more than the casual acquaintance with this type of barrow which might have been acquired by nomadic hunters from this area.

Within the county as a whole conclusive evidence of Neolithic occupation is slight, although the many casual finds of flint and other stone axe-heads perhaps imply activities of a less transitory nature than those suggested by the similarly numerous finds of Neolithic arrowheads. In West Surrey, for example, Neolithic axe-heads have been found in recent years, among other places, at Kingston-upon-

²¹ Thompson and Ashbee, *P.P.S.*, XXIII (1957), 124-36.

²² Ashbee, *P.P.S.*, XXIII (1957), 137-66—includes a list of "authentically" excavated bell-barrows.

Thames,²³ Woking,²⁴ Frensham,²⁵ Farnham,²⁶ Guildford,²⁷ Westhumble,²⁸ Ashtead,²⁹ and Ewhurst.³⁰ The Farnham area has been particularly productive of surface finds of Neolithic axes and leaf-shaped arrowheads, sometimes in such quantities within a restricted area that they suggest a form of settlement rather than a mere hunting camp.³¹ Further evidence suggestive of Neolithic occupation is given by the destroyed unchambered long-barrow at Badshot, near Farnham,³² the pits with Secondary Neolithic pottery at Wisley,³³ Secondary Neolithic pottery from Thorpe³⁴ and the possibility of flint quarrying at East Horsley in the Neolithic period.³⁵

Neolithic artifacts from the neighbourhood of Deerleap Wood include, in addition to the polished flint axe-head from Bury Hill already cited,³⁶ a broken polished flint axe-head from Holloway's Farm,³⁷ and axe-heads from Holmbury³⁸ and Wotton.³⁹ At Abinger Common leaf-shaped arrowheads were included among surface finds together with barbed-and-tanged arrowheads,⁴⁰ the latter probably indicative of hunting by Beaker groups. Early Bronze Age activity in Surrey is less well documented than that of the Neolithic although the Farnham area has yielded many examples of barbed-and-tanged arrowheads.⁴¹ A perforated hammer, part of an Early Bronze Age flint dagger and sherds of a necked beaker have been found at Weybridge.⁴² The perforated mace-head found on Ranmore Common⁴³ offers some evidence of Bronze Age activity closer to Deerleap Wood. Finally, in Deerleap Wood itself some 350 yards west of the bell-barrow there is a mound⁴⁴ which may possibly be a round barrow; and a little more than 800 yards west-north-west of the former, close to Leasers Barn, is a similar mound.⁴⁵ To the east a third mound at Sondes Place, on the western outskirts of Dorking,⁴⁶ may also

²³ Rankine, *Sy.A.C.*, LI (1949), 141.

²⁴ Lowther, *Sy.A.C.* LV (1957), 120.

²⁵ Rankine, *Sy.A.C.*, L (1946-7), 135-6.

²⁶ Rankine, *Sy.A.C.*, L (1946-7), 134-5.

²⁷ Frere, *Sy.A.C.*, XLIX (1944-5), 90-2.

²⁸ Rankine, *Sy.A.C.*, LII (1950-1), 80.

²⁹ Lowther, *Sy.A.C.*, LI (1949), 141; LV (1957), 118.

³⁰ Lowther, *Sy.A.C.*, LV (1957), 118.

³¹ Oakley, Rankine and Lowther, *Sy.A.S.*, *Prehist. Farnh.*, *passim*.

³² *Ibid.*, 133-9.

³³ Smith, *Antiq. Journ.*, IV (1924), 40-5.

³⁴ Grimes, *Excavations on Defence Sites 1939-45*, I (London, 1960), 181-85.

Piggott, *Neolithic Cultures of the British Isles*, 385.

³⁵ Wood, *Sy.A.C.*, LII (1950-1), 11-15.

³⁶ Frere, *Sy.A.C.*, XLIX (1944-5), 92-3.

³⁷ Whimster, *Archæology of Surrey* (London, 1931), 227.

³⁸ *Ibid.*, 55.

³⁹ Frere, *Sy.A.C.*, XLIX (1944-5), 92. Whimster, *op. cit.*, 240.

⁴⁰ Leakey, *Preliminary Excavation of a Mesolithic site at Abinger Common* (Sy.A.S. Research Paper No. 3, 1951), 42, Fig. 30.

⁴¹ Oakley, Rankine and Lowther, *op. cit.*, 158-9.

⁴² Frere, *Sy.A.C.*, XLIX (1944-5), 100-2.

⁴³ Rankine, *Sy.A.C.*, LI (1949), 141.

⁴⁴ Grid Reference, TQ (51), 1155 4801.

⁴⁵ Grid Reference, TQ (51) 1110 4818.

⁴⁶ Grid Reference, TQ (51) 1532 4900.

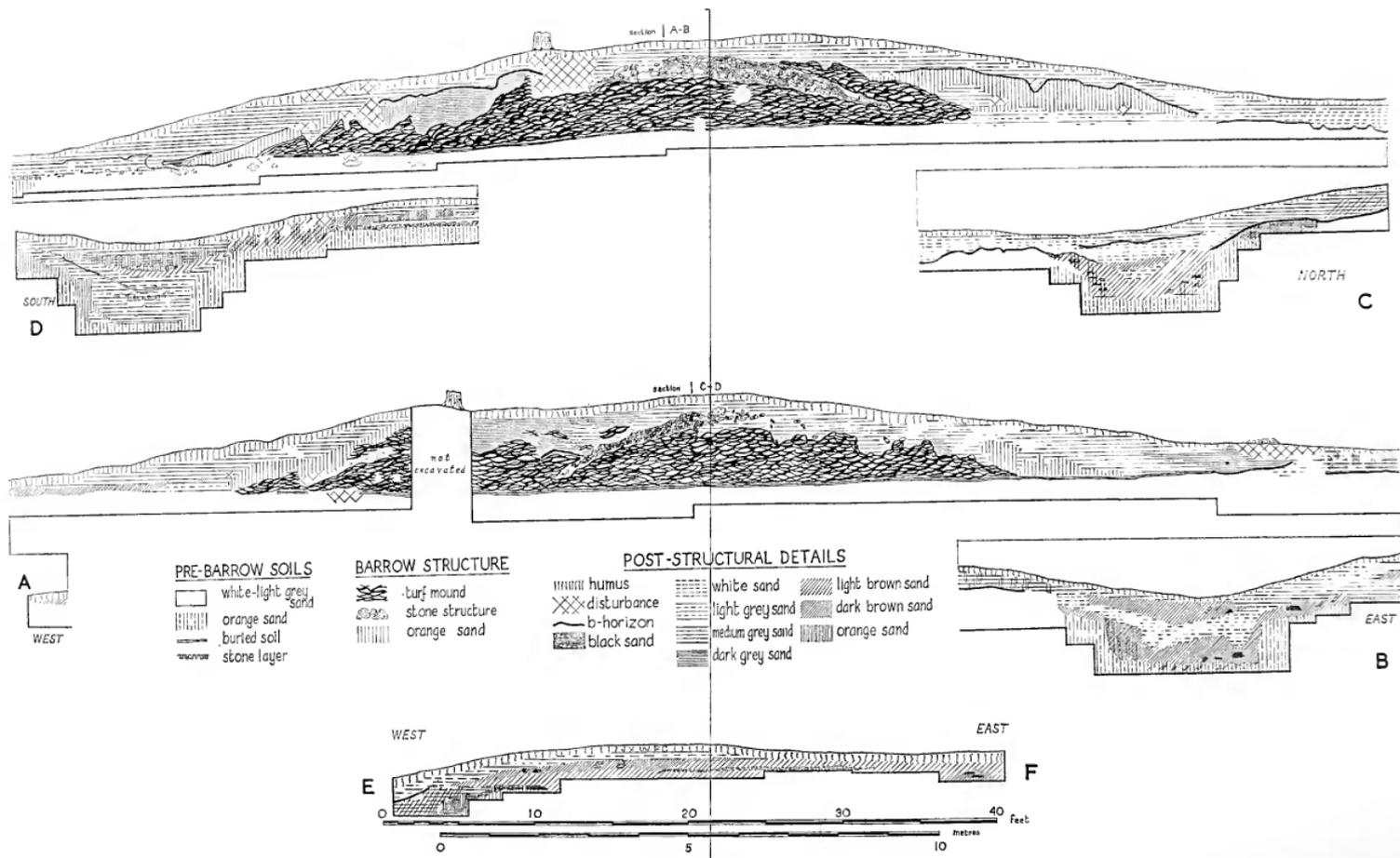


FIG. 4.—SECTIONS.

be a barrow, although, as has been shown,⁴⁷ some mounds located on the Greensand may be of natural formation.

This evidence has been cited to demonstrate that Surrey was not completely devoid of activity by people using artifacts of Neolithic and Bronze Age type between the end of the Mesolithic period and the building of the bell-barrow in Deerleap Wood. The nature of this activity in the immediate vicinity of this bell-barrow is not clear, although the available evidence suggests rather more the activity of hunters than that of permanent settlers. It does suggest, however, that the Mesolithic hunters on this part of the Greensand did not continue to exist in isolation and in complete ignorance of post-Mesolithic artifacts and culture. In such a context it is easier to understand how contact could have been made in the Early Bronze Age between this part of Surrey and Wessex, although the means by which that contact was made and the cultural implications to be deduced must remain obscure.

THE FINDS

BRONZE AGE

(a) *Whetstone* (Fig. 5, 1). Part of a broken whetstone⁴⁸ was found in the berm area in trench II, 34 feet from the centre of the barrow, a little below the original ground surface and over 3 feet beneath the present surface of the slipped mound at that point. It measures $3\frac{7}{12}$ inches in length at its greatest extent, is $1\frac{1}{8}$ inches broad and $\frac{1}{16}$ inch thick. The upper and lower surfaces are flat and worn and the sides more rounded, giving a somewhat oval cross-section. On both the upper and lower faces at $\frac{7}{16}$ inch from the intact end of the whetstone a shallow hollow, approximately $\frac{1}{2}$ inch in diameter, was formed. These occur in the same relative position as the perforations made through some of the whetstones found in barrows of the Wessex

⁴⁷ Corcoran, *Sy.A.C.*, LVIII (1961), 87-91.

⁴⁸ In the hope that spectrographical analysis of a thin section of the whetstone might give some indication of the source of the stone used, and a possible cultural association, it was submitted to Dr. Norman Holgate of the Department of Geology in the University of Glasgow. His findings show that it is made from a fine-grained chamositic ironstone with some angular detrital quartz. Although the often interlaminated chlorite and sericite form ovoid bodies the constituent laminae forming these are strictly parallel in any one grain. The cleavage direction in all grains lies nearly parallel to a vague bedding. Neither oolitic grains were identified nor was there any sign of carbonate minerals or of recognizable fossils. Free hæmatite is present in patches.

The nearest parallel to this rock known to Dr. Holgate has been reported from the Penrhyn Iron Mine near Bangor in North Wales (*cf.* H. F. Hallimond, *Memoirs of the Geological Survey, Special Report on Mineral Resources*, XXIX (1925), 70-2). Incipient fracture, transverse to the bedding in the slice of the whetstone examined, may be compared with the crushing which appears to be characteristic of the Welsh ironstone. In the absence, however, of comparable studies of ironstone deposits closer to, or within, Surrey it cannot necessarily be assumed that the source of the ironstone of the Deerleap Wood whetstone was in North Wales.

Culture, and may perhaps be regarded as the result of the first stages of an unsuccessful attempt to make such a hole.⁴⁹ The hollows do not appear to have been drilled. In the absence of a perforation, possibly through lack of sufficient skill or perseverance, an alternative method of securing a suspension cord was achieved by incising

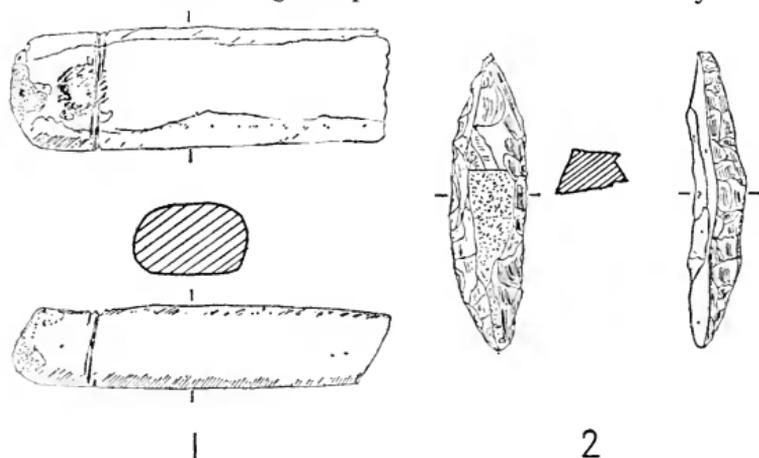


FIG. 5. 1, WHETSTONE. 2, FABRICATOR. ($\frac{1}{2}$)

a pair of discontinuous narrow grooves around the object, cutting through the hollows. This would have provided some grip for a cord tied tightly around the whetstone and, although crude when compared with the neat perforations of some similar objects, would

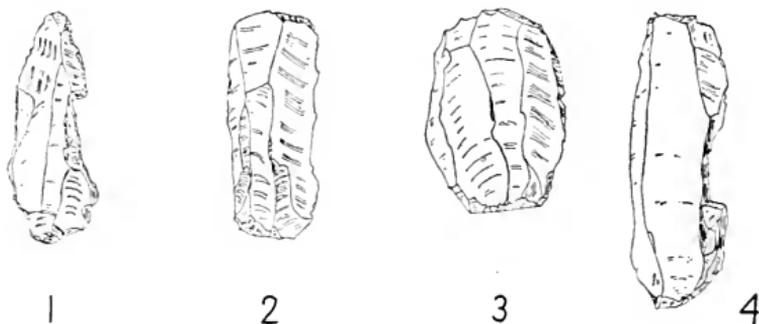


FIG. 6.—MESOLITHIC FLINTS. ($\frac{1}{2}$)

have enabled it to have been securely suspended from a belt or around the neck.

Both perforated and unperforated whetstones have been found in graves, usually of males, in Wessex. Within the former category

⁴⁹ A whetstone of micaceous schist with an incomplete perforation was found which, together with a flint knife, accompanied an inhumation burial in a cist under a round cairn at Meiklerigg, East Lothian. Marjoribanks, *P.S.A.S.*, XIV (1879-80), 221.

two types may be distinguished, those with perforated tangs as from Normanton, Barrow 139,⁵⁰ and those without tangs as from Arn Hill, Warminster.⁵¹ The whetstone from Deerleap Wood approximates more closely to the latter type. Although it is difficult to reconstruct the original length of the former, it is obvious that it is larger than many from Wessex which are approximately 3 inches long. A somewhat larger example has recently been discovered in Dorset in a bell-barrow at Avenue Lodge, Edmondsham (barrow 2). It was found with a single cremation burial together with a bronze dagger, bone tweezers and a decorated bone pin. The barrow itself was constructed of turf with a chalk capping, and the whole complex dates to c. 1450 B.C. (Wessex II).⁵² A perforated whetstone from Camerton, Somerset,⁵³ is similar in general proportions and cross-section to the Deerleap Wood example, although it is little over 3 inches long, a little over $\frac{1}{2}$ inch wide and under $\frac{1}{2}$ inch thick. The Camerton whetstone was found with a cremation in a barrow with a grooved dagger, an Aldbourne Cup and an Aunjetitz bulb-headed pin. Several other whetstones have been found in similar contexts in Wessex barrows and clearly the type is a distinctive type-fossil of that culture.

Although the whetstone from Deerleap Wood was not found in the area of the presumed burial it is possible that it dates to the construction of the barrow. Lying as it did beneath the old surface and subsequently sealed by downwash from the mound proper it seems possible that it was lost or possibly discarded, having been broken, as the barrow was being constructed. Its upper and lower surfaces show signs of its having been used, although it has not been possible to prove that this wear was caused by sharpening metal objects.

As has been demonstrated, whetstones of this type formed an integral part of the grave furniture of the Wessex Culture of the Early Bronze Age. The similarity of the Deerleap Wood whetstone to those of the Wessex Culture, and the dating evidence for bell-barrows in general, support the conclusion that this Surrey bell-barrow should date to the same period.

(b) *Flint fabricator* (Fig. 5, 2). The fabricator was found lying on the stone capping and is of a type again common in, although not exclusive to, the British Early Bronze Age.⁵⁴ It is made of brown flint with rather rough secondary working and retains part of the cortex on its upper surface. It is $2\frac{2}{5}$ inches long, $\frac{7}{16}$ inch broad at its greatest extent and is roughly trapezoidal in cross-section. Together

⁵⁰ *Devizes Museum Catalogue* I (1896), 31.

⁵¹ *Ibid.*, II (1943), 33, Fig. 5a.

⁵² Information from Mrs. Bruce Proudfoot (Miss Edwina Field).

⁵³ Piggott, *P.P.S.*, IV (1938), 103, 76 (Fig. 14).

⁵⁴ A similar artifact of closely comparable dimensions and proportions, with steep working down the long sides and retaining part of the cortex on the upper surface, was found with the primary urn cremation in a cairn at Simondston, Coity, Glamorganshire. Fox, *Archæologia*, LXXXVII (1937), 167-8, pl. xlvii, 1.

with the whetstone it supports the dating already offered for the barrow.

MESOLITHIC FLINTS

During excavation 1,014 Mesolithic flints, ranging in colour from white through fawn to dark grey, and perhaps indicative of mixed origins, were found. They occurred in each of the cuttings made, in the make-up of the mound, both below and above the stone capping in the ditch, under the bank and on the former ground-surface. The find-spot of each was plotted and showed that the greatest concentration occurred in trench II and, to a lesser extent, in trench I. For the size of the cutting trench V also yielded a high proportion. Relatively few were found in trenches III and IV. As may be appreciated this marks a wide scatter, but the distribution suggests that the focal point was in the south-eastern quadrant of the barrow, and this suggestion is supported by the fact that all the cores and core-rejuvenators were found in trenches I and II and in the eastern part of the central area. A small tranchet-axe and a backed microlithic blade were found in trench V. As the flints were found in circumstances indicative of disturbance by the builders of the barrow, no attempt is made to discuss them in terms of a Mesolithic settlement site. It appears that the barrow was partially built on a site used by Mesolithic flint-workers.

Of the 1,014 flints found, 116 (11.44%) are illustrated (Figs. 6-9). The majority are waste flakes although several of these may have been utilized (Fig. 6). Among those illustrated a small number of types common on the Greensand of West Surrey may be recognized. The small tranchet-axe (Fig. 9, 1) was found between the bank and ditch in trench V, 3 feet 6 inches away from the microlithic backed blade (Fig. 7, 8). The former is paralleled on many sites in Surrey as, for example, in the Tilford area⁵⁵ and, closer to Deerleap Wood, at the Mesolithic site at Abinger Common.⁵⁶ The microlith is similarly paralleled in the industry from the latter site⁵⁷ and elsewhere. Among the other flints illustrated "saws" (Fig. 8, 47 and 49), microburins (Fig. 7, 2 and 5), graters (Fig. 7, 27 and 28) and "borers" (Fig. 7, 29, 31 and 46) may be noted. The "saws" are paralleled in material derived from Heath Brow near Farnham,⁵⁸ and these and the other artifacts have numerous parallels from among the rich Mesolithic industry of Surrey.⁵⁹ Nodules of flint retaining their cortex and the existence of cores (Fig. 9, 5, 9 and 10) and core-rejuvenators (Fig. 9, 6 and 7) are strongly suggestive of flint-working on the site. In the cuttings made there was neither evidence of hearths nor any

⁵⁵ Oakley, Rankine and Lowther, *Sy.A.S. Prehist. Farnh.*, 112-13.

⁵⁶ Leakey, *op. cit.*, 19, Fig. 9, 9.

⁵⁷ *Ibid.*, Fig. 5.

⁵⁸ Oakley, Rankine and Lowther, *Prehist. Farnh.*, 116-17.

⁵⁹ Rankine, *Mesolithic Survey of the West Surrey Greensand* (Sy.A.S. Research Paper No. 2), *passim*. Rankine, *The Mesolithic of Southern England*, (Sy.A.S. Research Paper No. 4 (1956)), 25-30.

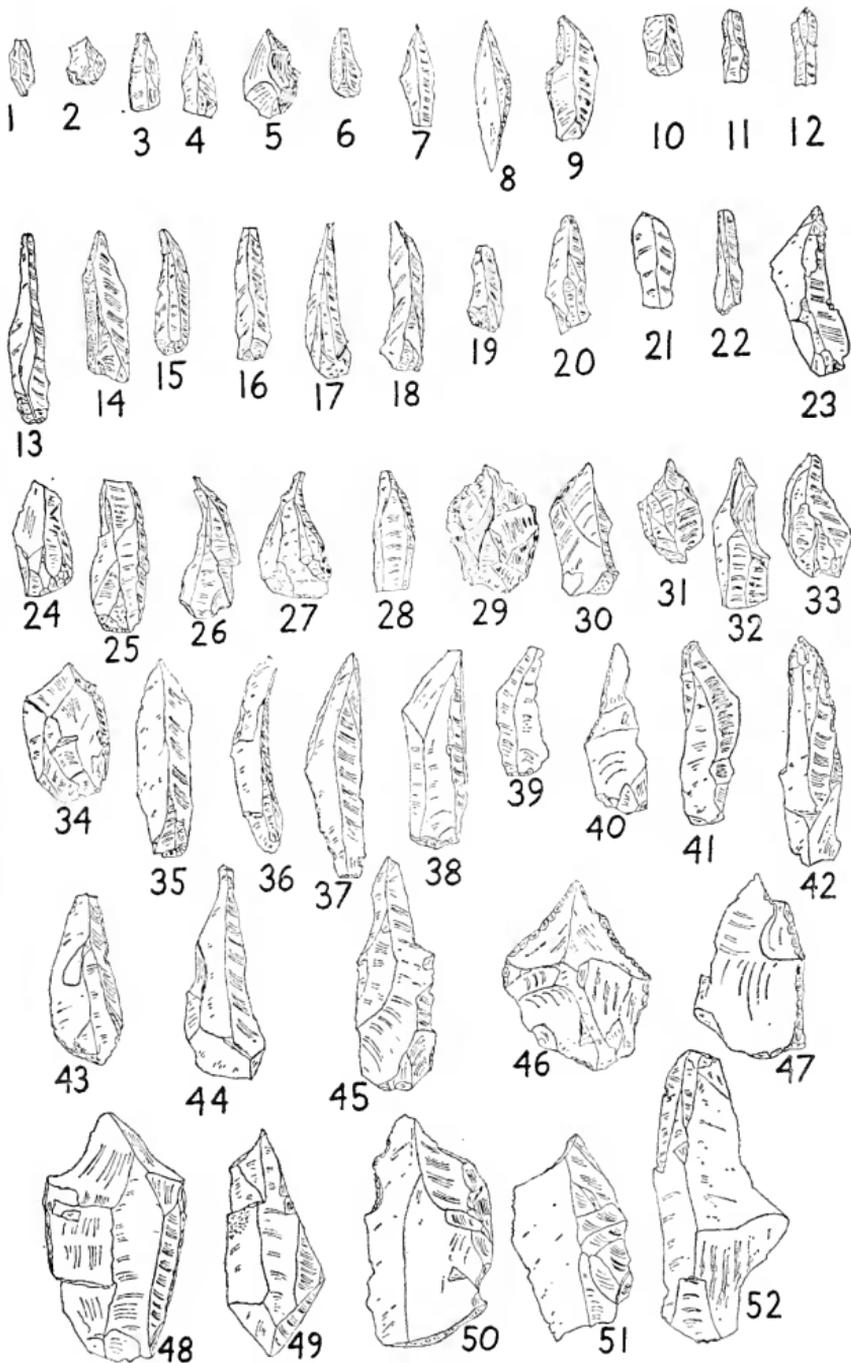


FIG. 7.—MESOLITHIC FLINTS. ($\frac{1}{2}$)

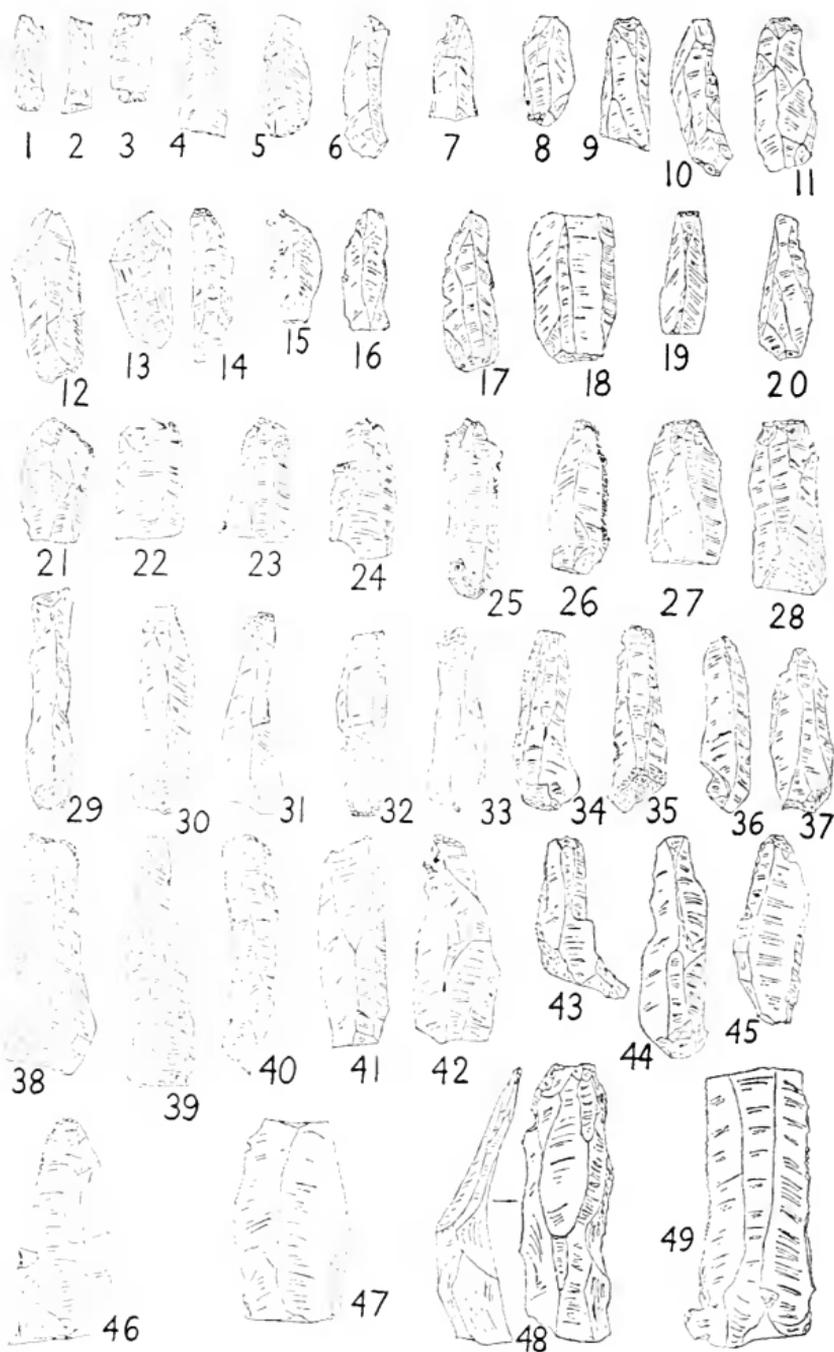


FIG. 8.—MESOLITHIC FLINTS. (b)

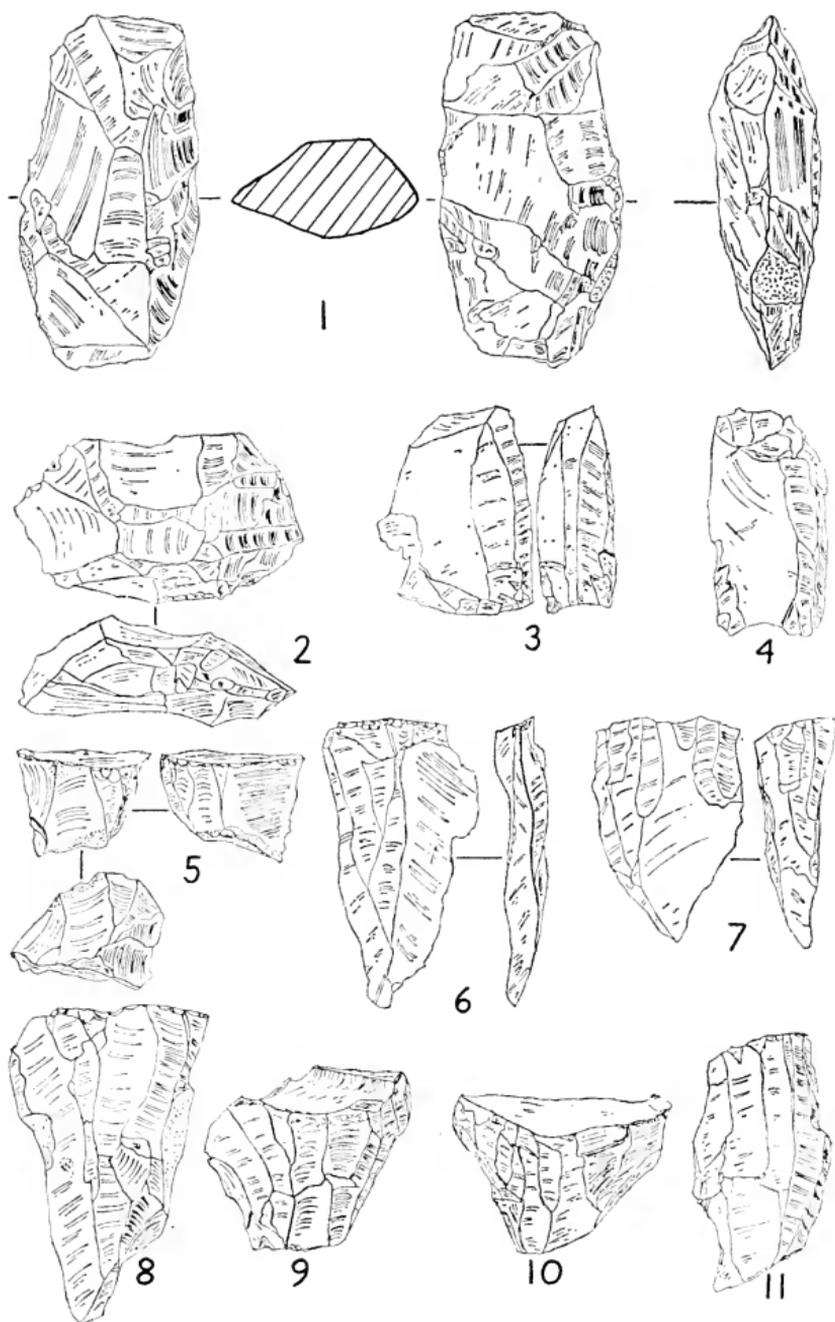


FIG. 9.—TRANCHET-AXE (1), CORES AND CORE-REJUVENATORS. ($\frac{1}{2}$)

indication that the site had been used in Mesolithic times for anything more than flint-knapping.

Close to the barrow five sites, also suggestive of Mesolithic flint-working, have been identified.⁶⁰ They and the habitation site at Abinger Common, 1½ miles to the south, are shown on the map (Fig. 1).

Acknowledgments

During and after the excavation I have received much help from many people. Among those I wish to thank individually are: Dr. I. W. Cornwall, B.A., Ph.D., F.Z.S., for valuable discussion on the site in connection with soil problems; Dr. Norman Holgate, M.Sc., Ph.D., for the spectrographical analysis of a thin slice of the whetstone; Mr. Lionel O. Joseph for photography; Mr. Basil J. Rickard, B.Sc., for his assistance in obtaining pH values of soil samples. Miss Edna Durrell, F.S.A. Scot., and my wife acted as deputy directors throughout the excavation.

Considerable assistance was also given by Mr. Marc Antony Caesar, Mr. W. A. Evans, Mrs. I. A. M. Everett, Mr. Peter Hall, Mrs. Noel Hall, F.S.A. Scot., Mr. F. A. Hastings, Mrs. Marjorie Jordan, Mr. David Piggins, Mr. David H. Robbins, Mrs. Ruth Robbins, Mr. E. G. Slaughter and Mr. Christopher W. Suddaby.

⁶⁰ I am indebted to Mr. F. A. Hastings for this information. The Grid References are TQ (51) 1140 4827, TQ (51) 1178 4835, TQ (51) 1035 4659, TQ (51) 1074 4751 and TQ (51) 1095 4817.



(a) DEERLEAP WOOD SOUTH-EASTERN QUADRANT AFTER EXCAVATION
(FROM ENE).



(b) DEERLEAP WOOD MOUND PROPER, SHOWING TURF STRUCTURE AND
BURIED SOIL.



(a) DEERLEAP WOOD INNER MOUND, SHOWING TURF STRUCTURE AND STONE CAPPING IN SECTION (FROM NW).



(b) DEERLEAP WOOD STONE CAPPING, SHOWING STRAIGHT EASTERN EDGE (FROM SE).



(a) DEERLEAP WOOD STONE CAPPING (FROM NW).



(b) DEERLEAP WOOD STONE CAPPING (FROM S.) (THE SOUTH-EASTERN QUADRANT HAS BEEN CUT AWAY).



(a) DEERLEAP WOOD DITCH-SECTION - WEST FACE IN TRENCH I, FROM NE).



(b) ALICE HOLT: THE KILN FROM THE SOUTH-EAST.

(Scale = tenths of a metre).