



PLATE II. HARROW HILL AND NEW BARN DOWN, LOOKING NORTH. Site of late Bronze Age Farm in foreground.

Copyright Air-photo by A. G. Head.

A LATE BRONZE AGE FARM AND A NEOLITHIC PIT-DWELLING

ON NEW BARN DOWN, CLAPHAM, NR. WORTHING.

*Excavation Report prepared on behalf of the Worthing
Archæological Society*

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NEW BARN DOWN¹ is the local name given to the south-eastern spur of Harrow Hill, running down to Michelgrove, and lying for the most part within a detached portion of the parish of Clapham, some $5\frac{1}{2}$ miles north-west of Worthing.

The earthworks which form the subject of this paper were discovered and surveyed by Dr. Eliot Curwen and the writer shortly after the War.² They consist essentially of a roughly rectangular *compound*, about 220 ft. long by 130 ft. wide, enclosed by a low bank or by a bank and ditch, and containing five shallow pits (Fig. 1). Only along the north side is there an external ditch, while parts of the enclosing bank on the south are broken up and only with difficulty discernible. There appears to have been an obliquely placed entrance on the south, and a small postern gate on the east, but the main entrance was at the north-west corner where a sunken and embanked road enters the compound.

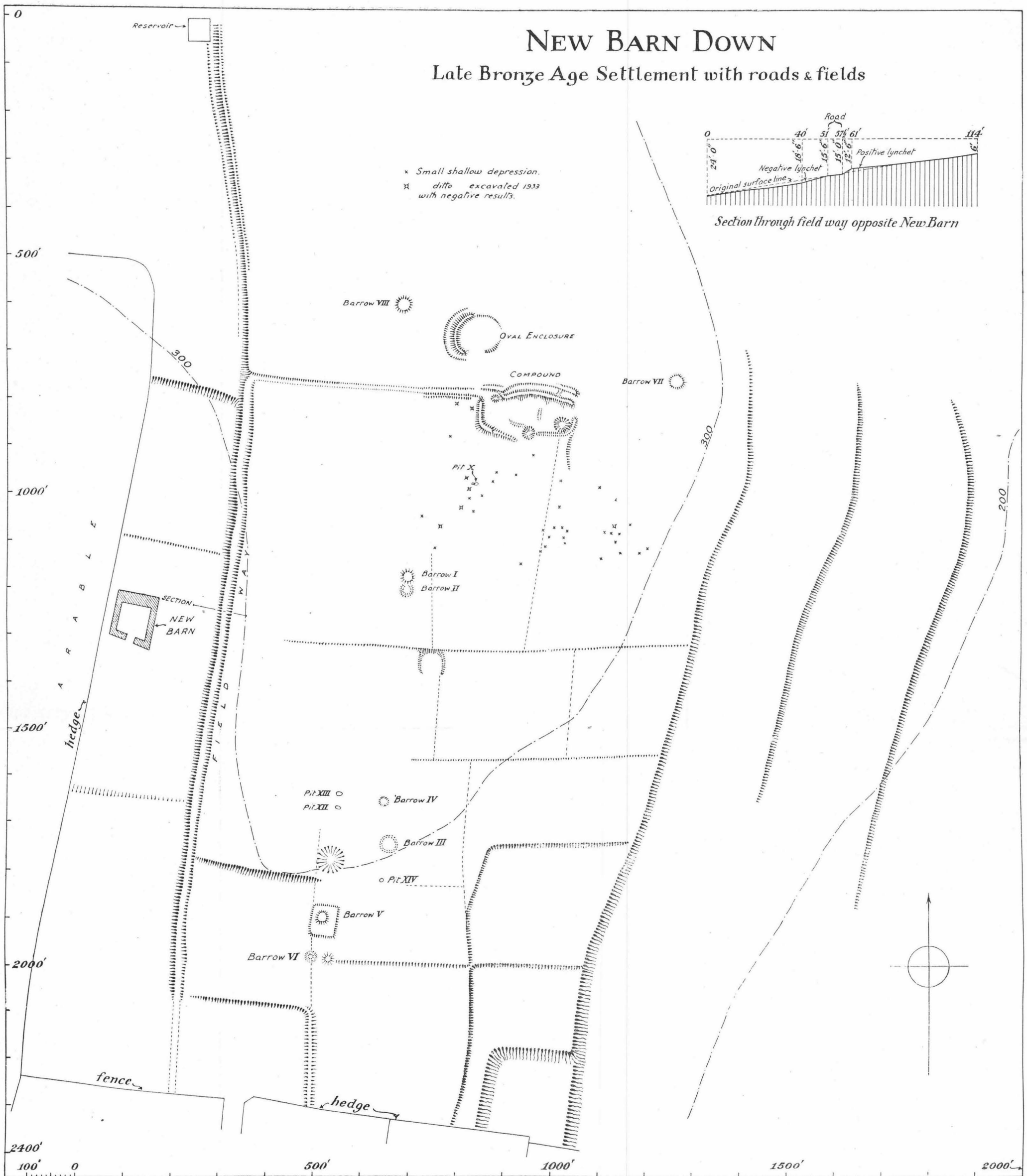
This *road*, which must be contemporary with the compound, runs west for 500 ft., and then turns south at a right angle to continue as a fine double-lynchet road for a further 1500 ft. till it fades out on the edge

¹ 6 in. O.S., L., S.E. The name is not marked on the map, but was given to the writer by Mr. Bailey, the shepherd of Myrtle Grove Farm. Not to be confused with New Barn, nearly $\frac{1}{2}$ mile east of Blackpatch Hill.

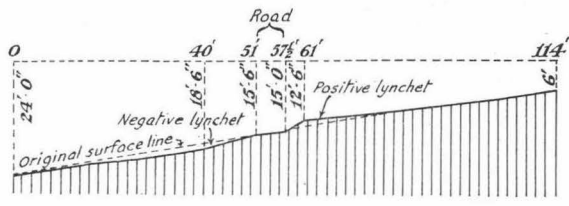
² *S.A.C.*, LXIII., pp. 32-5.

NEW BARN DOWN

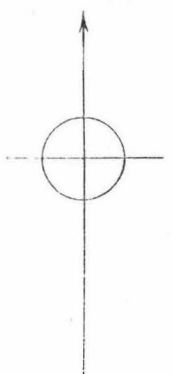
Late Bronze Age Settlement with roads & fields

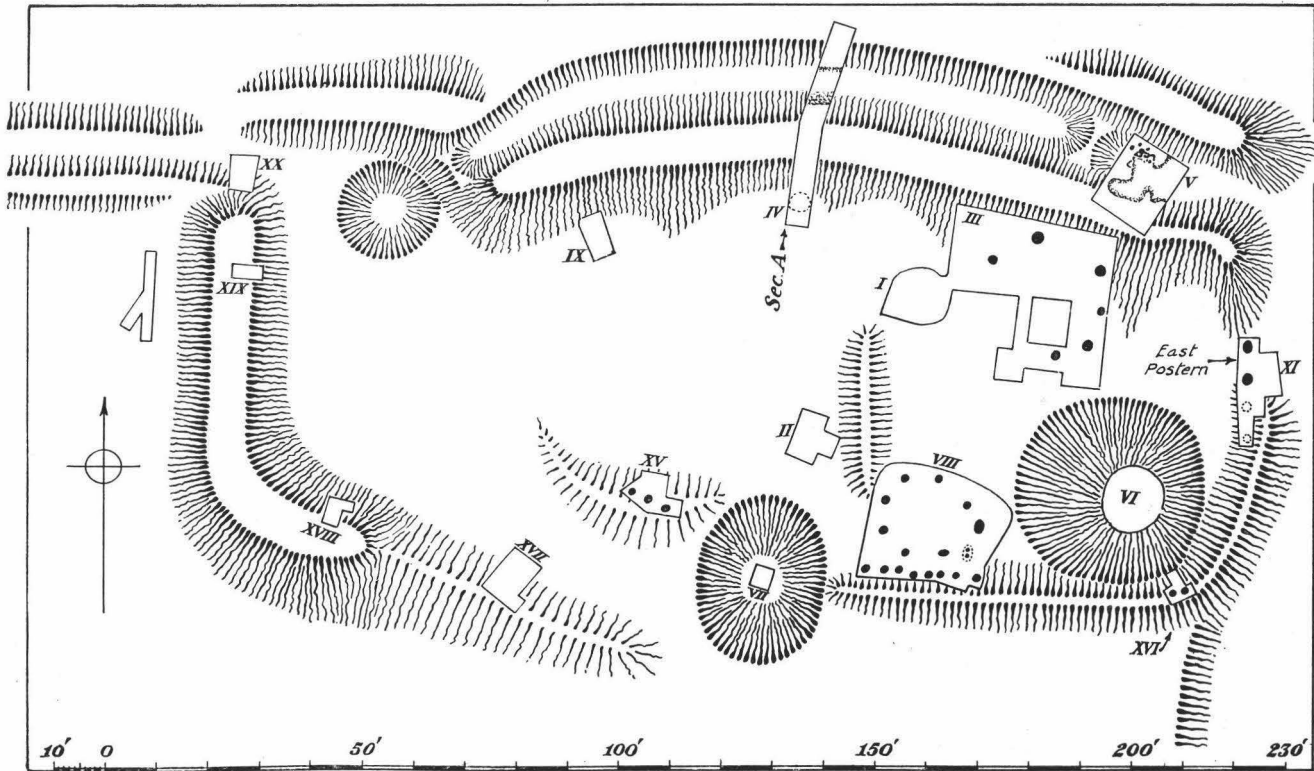


* Small shallow depression.
 x ditto excavated 1933 with negative results.



Section through field way opposite New Barn





R. Gurd. 1933.

FIG. 1. PLAN OF LATE BRONZE AGE, SHOWING CUTTINGS (Roman Numerals).

of the modern enclosed fields by Michelgrove (Plate I). A typical section (Plate I) shows this part of the road to be about 6 ft. wide, and to be bounded by well-marked negative and positive lynchets, each some 2 to 3 ft. high. Three lateral lynchets run westwards from it, but are soon lost in the arable belonging to Lower Barpham Farm. From the angle where the road bends a bank with subjacent ditch runs northwards for 750 ft., ending abruptly beside the modern reservoir. Several lynchets, forming a system that conforms to the road, are traceable on the southern part of the Down and along its eastern edge, while eight small barrows have also been observed.

The arrangement of the *lynchets* can best be appreciated from the general plan (Plate I). They are for the most part well-marked and clearly defined, but there are some extremely faint ones, scarcely to be discerned on the ground, but visible in the air-photographs that have been taken of the site.³ These are marked on the plan by broken lines only, and they appear to represent the latest phase of the ploughing of the hill—a short-lived phase, apparently, but one which conformed more or less to the previous disposition of field-boundaries. Moreover the shape and area of the fields in each case are the same, both being typical of the so-called Celtic field-system. The long parallel lynchets along the east flank of the hill bound strips of land which were no doubt transversely divided into squarish plots, but as field-divisions which run straight up and down hill do not usually form lynchets they are seldom perpetuated. The plots will be seen to be very nearly square, favourite dimensions being in the neighbourhood of 200 or 250 ft., so that the area of such plots as are still complete is commonly from 1 to $1\frac{3}{4}$ acres. A field near the south-east corner of the series is entered from the south by a double-lynchet road, of which only a short length survives. How far to the west and south this system of lynchets

³ Air-photographs, of which Plate II. is an example, were specially taken by Mr. A. G. Head, of Hove, at the Society's expense.

formerly extended cannot now be determined, but it does not appear to have extended north of the compound. It is sufficiently evident that the group of fields which they represent must be contemporary with the road and therefore with the compound.

A few yards north of the compound is a curious semi-circular bank with external ditch—part of the enceinte of a small oval *enclosure*, the remaining limits of which are just traceable as a slight heave in the ground. Percussion reveals that the ditch never continued further than is at present visible, so that it has not been destroyed by ploughing (see air-photograph, Plate II).

In the part of the Down immediately south of the compound there is the appearance of numerous slight depressions resembling filled-in pits which also sounded more or less hollow on percussion. The positions of most of these are indicated on the plan (Plate I) by crosses; those few which were examined with the spade are marked by a cross within a circle. With one notable exception to be described presently these turned out to be rather vague, shallow depressions in the chalk, and yielded no relics.

Excavations were undertaken by the Worthing Archæological Society in June, 1933, with the object of investigating the nature of this compound and the other features associated with it. For permission to dig we record our thanks to H. G. the Duke of Norfolk, and to the tenant, Mr. J. G. Jenkin, of Myrtle Grove, who kindly allowed us to encamp in the neighbourhood, and gave us every assistance. We also have to thank Mr. G. Holleyman for great help in digging, washing and cataloguing the finds, and Miss M. Lane for digging Cutting VII. Three to four labourers were employed for three weeks, after which ten days were spent filling in.

The work done consisted in making a number of trial holes and cuttings, widening out where this seemed advisable (Fig. 1). These are all numbered consecutively in one series with Roman numerals, whether

cuttings or pits. The principal ones will be described first.

CUTTING VIII—HUT (Plate III. and Fig. 2).

This is situated in the southern part of the area between two shallow depressions, VI. and VII. On widening out our original trial holes, post-holes were

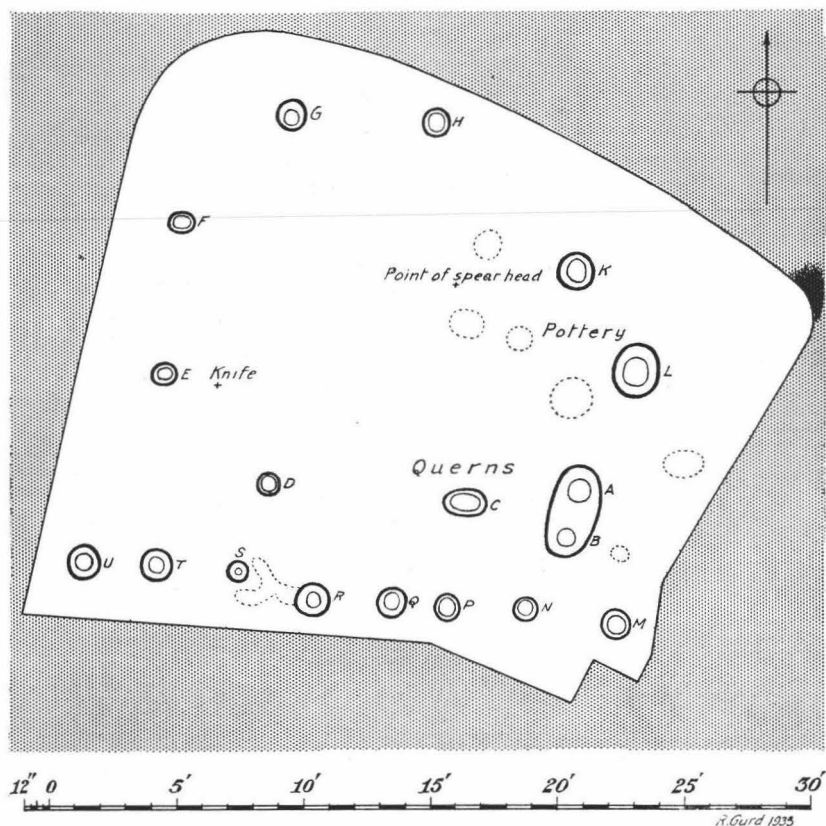


FIG. 2. PLAN OF HUT IN CUTTING VIII.

found in the solid chalk which lay about a foot below the turf, and the ground-plan of a round hut was gradually made out. Ten post-holes were found, arranged in an oval, 20 ft. long by 15 ft. wide. In addition there were six slight depressions irregularly

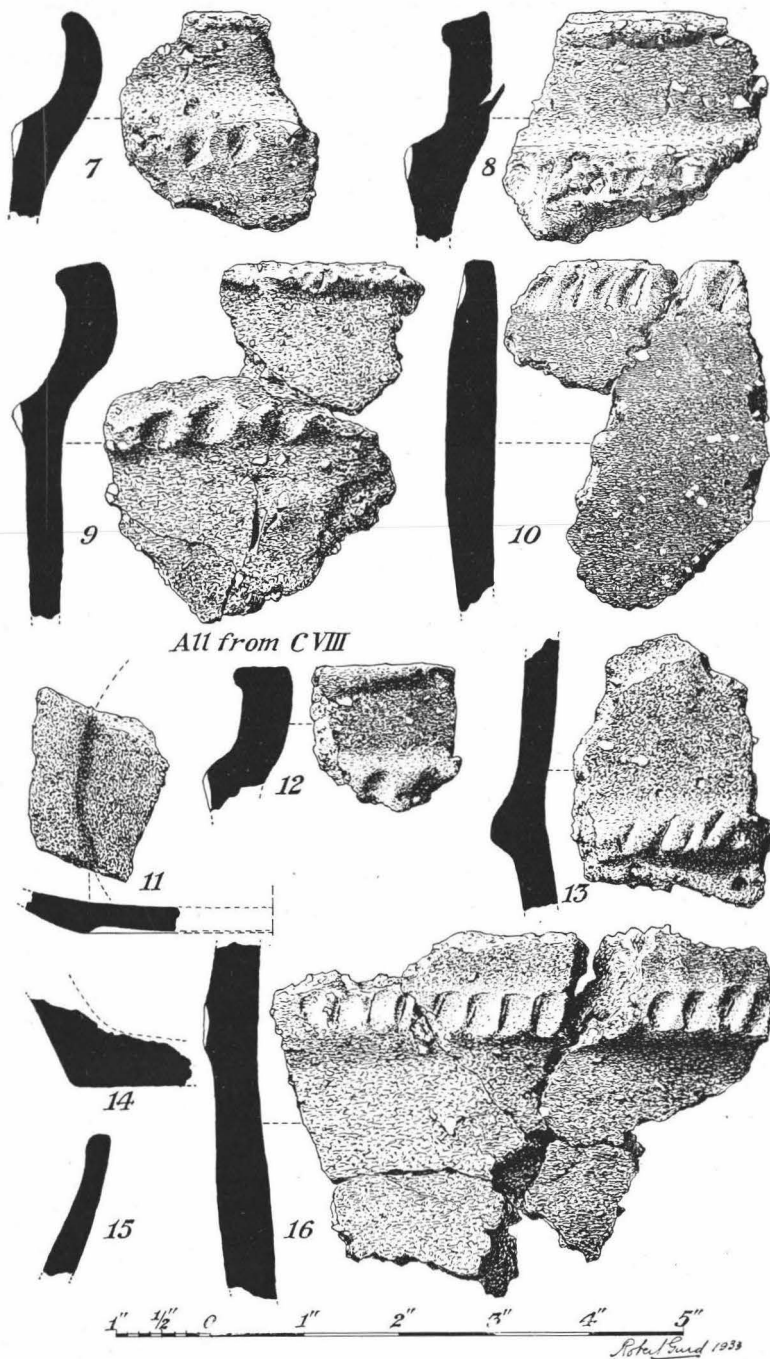
disposed about the eastern half of the hut, as shown on the plan by dotted circles (Fig. 2). No signs were observed indicating the position of the original entrance, but having regard to the surroundings of the hut this is most likely to have been in the middle of the north side, though it could have been at the east end. The average diameter of most of the post-holes was from 10 to 12 ins., the depths varying from 6 to 14 ins. in the chalk. Hole D was the neatest example, narrow and cylindrical, indicating that the posts had been set vertically in the holes, and had not merely been sloping wigwam poles.

A fair quantity of shards of late Bronze Age pottery was found, almost all of it in the north-east part of the hut, near holes K and L. Characteristic pieces are here illustrated (Figs. 7-16). South of the pottery, near hole C, were numerous fragments of saddle-querns, from which two complete lower stones have been pieced together, besides fragments of three other lower stones and of one top-stone. The rest of the area of the hut only yielded the blade of a bronze knife (Fig. 40), and the point of a bronze spear-head (Fig. 39). No trace of a hearth was found.

This cutting also revealed a row of eight palisade post-holes running along its southern edge, and evidently forming part of the southern wall of the compound. These holes underlie the very slight bank which is here visible on the surface. The shallowness of the holes—from 3 to 12 ins. in the chalk—is a surprising feature, hardly suitable for a free-standing fence. This line of stockade holes was picked up again at the south-east corner of the compound, and also in Cutting XV., to the west of the hut.

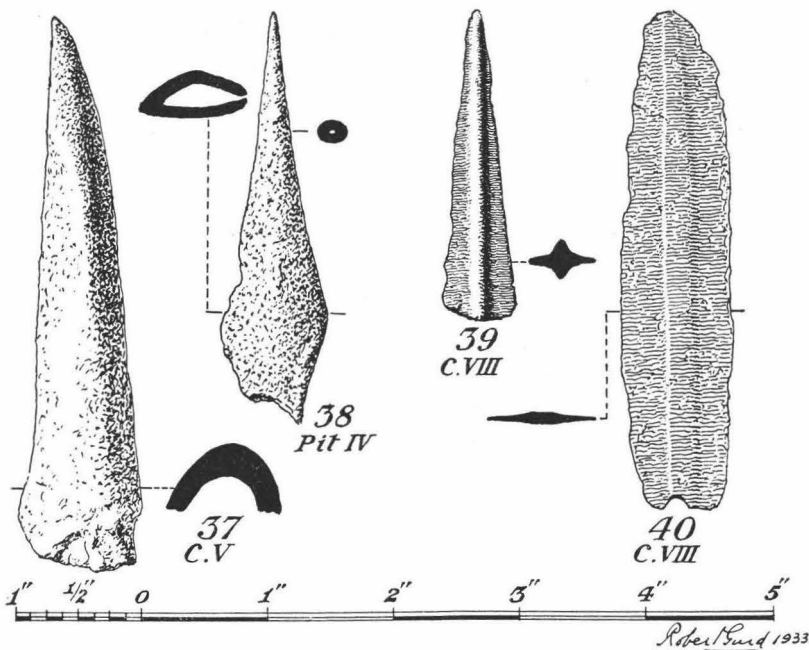
CUTTING III.—HUT (Fig. 1).

Cutting III. also revealed the site of a round hut, of which we were able to recover six of the post-holes. Lack of time prevented its complete exploration. Before digging, the site was marked by a shallow hollow encroaching on the north bank of the compound,



FIGS. 7—16. LATE BRONZE AGE POTTERY FROM HUT-SITE (Cutting VIII).

forming one of five similar bays which no doubt mark the sites of other huts similarly placed. The three northern post-holes which conform to the bay encroaching on the bank, were much larger than the others, measuring from $1\frac{1}{2}$ to 2 ft. in diameter, and from 1 to $1\frac{1}{2}$ ft. in depth in the chalk. The remainder were comparable in size to those in Cutting VIII. The



FIGS. 37, 38. BONE OBJECTS; FIGS. 39, 40. BRONZE OBJECTS.

floor of the hut was somewhat sunk into the solid chalk.

The finds were extremely scanty, and include only 6 shards of coarse pottery, of which two are rims (Figs. 21, 27). A complete lower stone of a small saddle-quern was found in the southernmost post-hole—presumably placed there as packing for the post. Forty-eight calcined flints were counted, and a few animal bones. A specially interesting find was a chalk

cup closely resembling neolithic examples from Whitehawk Camp and the Trundle⁴ (Fig. 52). In view of the proximity of a neolithic occupation-site (described below), one is tempted to regard this chalk cup as a

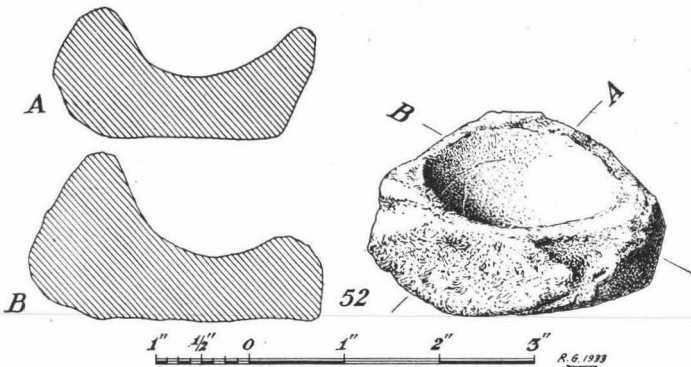


FIG. 52. CHALK CUP.

stray, antedating the late Bronze Age hut in which it was found. It came from the slope of the bank close to the northernmost post-hole.

CUTTING V.—COOKING-PLACE? (Plate III. and Fig. 3).

Seen on the surface before excavation, the eastern end of the ditch which protects the north side of the compound appeared to be divided off by a slight transverse ridge, as if it was intended to serve some distinct purpose. The occurrence of several calcined flints (or "pot-boilers") in the surface soil here called for investigation. On clearing out the loose soil the hollow was found to consist of a curious irregular excavation in the chalk, distinct from the ditch to its west, and separated from it by a ridge of solid chalk. The pit, if such it may be called, encroached on the chalk in a series of irregular bays, each of which was filled up with calcined flints, about two thousand of which were counted, besides innumerable fragments. The floor of the pit varied in depth from 8 to 34 ins.

⁴ *S.A.C.*, LXXI., p. 78, Fig. 1; LXXII., p. 140, Fig. 37; see also *Antiquity*, VII., pp. 172-3.

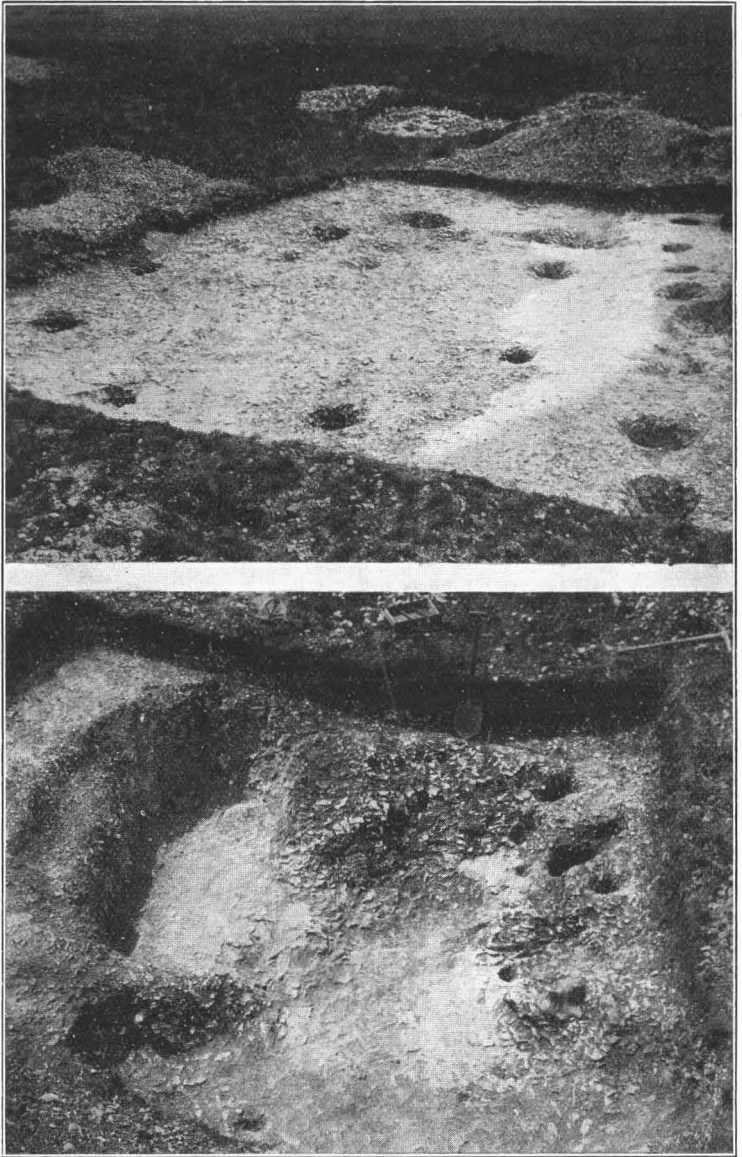


PLATE III. *Above:* CUTTING VIII, post-holes of oval hut and of palisade.
Below: CUTTING V, cooking-place?

below the top of the chalk, being deepest on the west. It is probable that it was entered from outside the compound on the east—just beyond the limits of our

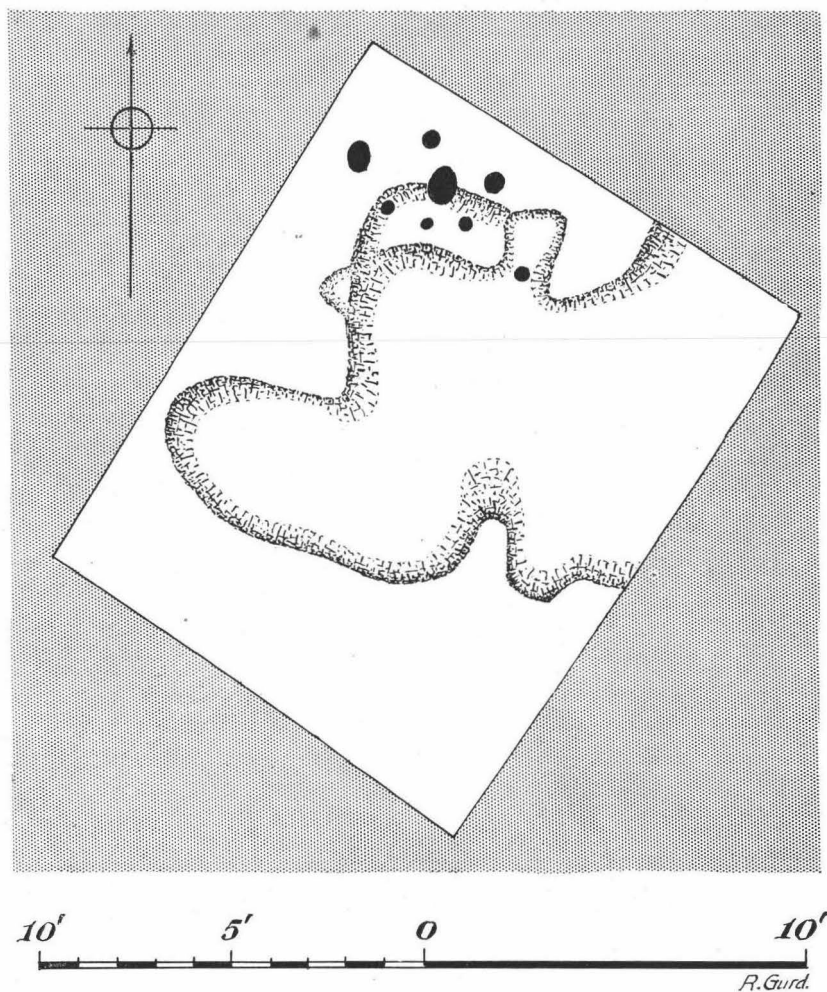


FIG. 3. CUTTING V.

cutting. On the chalk bank on the north edge of this pit were eight small post-holes irregularly disposed, the purpose of which was not clear. They varied

from 3 to 10 ins. in diameter, and from 3 to 15 ins. in depth. The small south-eastern bay yielded part of the side of a large cylindrical late Bronze Age vessel ornamented with a row of finger-tip impressions (Fig. 19), besides which some 30 small gritty shards were found in various parts of the pit, together with one pointed bone tool (Fig. 37), two fragments of quern, and a few small scraps of animal bone. Very little charcoal was found, which indicates that we have not yet located the fires in which the flints were heated. One cannot help suspecting that the bays filled with cooking-stones may have served as some sort of cooking-place for the community, perhaps performing the same function as the modern hay-box. The absence of hearths in huts III. and VIII. suggests fear of igniting thatched roofs, which view is perhaps corroborated by the situation of this supposed cooking-place outside the north-east corner of the settlement so that the prevailing south-west wind might carry the sparks away from the huts.⁵

As an alternative suggestion it is just possible that this separate unit may have been a bath-house. Certain lines of evidence make the suggestion possible, though one cannot say more than that. At the present day the Finns take their baths as follows. The bath-house is separate from the farm and contains a hearth where stones are heated red-hot. Water is poured on the stones, producing volumes of steam to which the bathers expose their bodies.⁶ If flints were used for this type of vapour-bath the result would be a mass of calcined flints or "pot-boilers." From its mention in the traditional Finnish epic "Kalevala" we may infer that this practice is very ancient:

"Stones she gathered from the river,
Heated them till they were ready;
Cheerfully she fetched the water,
From the holy well she brought it."⁷

⁵ Similarly, Dr. R. C. C. Clay noted that at the Early Iron Age village on Fifield Bavant Down, Wilts., the hut attributed to the village blacksmith was situated on the east away from the other pits, and he suggests that this may have been so in order that the prevailing S.W. winds might blow sparks away from the thatched roofs of the village. See *Wilts. Arch. Mag.*, XLII., p. 471.

⁶ G. Renwick, *Finland To-day* (1911), pp. 44-5; R. Travers, *Letters from Finland* (1911), p. 333; A. Reade, *Finland and the Finns* (1915), pp. 82-3.

⁷ Cited by Reade, *op. cit.*, p. 129.

That the habit was widespread in antiquity is shown by Herodotus (fifth century B.C.), who describes the method by which the Scythians cleansed themselves with vapour-baths by throwing Cannabis seeds on to red-hot stones⁸; and also by Strabo (first century B.C.), who says that certain peoples near the River Douro in Spain used "vapour-baths from red-hot stones—after the manner of the Laconians."⁹ There is thus no inherent impossibility in the view that the practice may have been known in Britain at the period with which we are dealing.

PIT IV. AND SECTION A (Fig. 4).

It has already been noted that five bays encroach on the south side of the bank which forms the northern

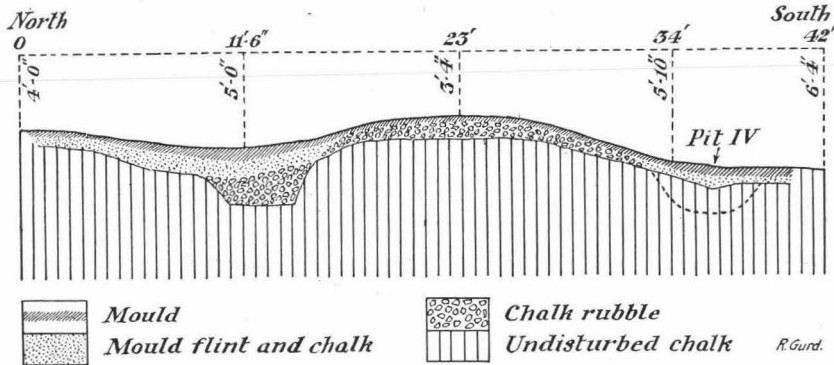


FIG. 4. SECTION A.

edge of the compound, and that Cutting III showed that one of these bays marks the site of a hut. The inference is, therefore, that each of the five bays also contained a hut. A small trial hole dug in the second bay from the west disclosed a cup-shaped pit, $2\frac{1}{2}$ ft. deep below the turf, 2 ft. wide at the bottom, and some 5 ft. wide at the top. This contained some oak charcoal and a few calcined flints. Other finds from this cutting included a hammerstone, two quern fragments, a bone awl (Fig. 38), 12 coarse gritty shards (one bearing comb-markings, Fig. 20), and 9 shards from

⁸ Herodotus IV., 73-75. Herodotus is considered to have confused the ordinary vapour-bath with a practice of addiction to cannabis intoxication (see *Encyc. Brit.*, s.v. SCYTHIANS).

⁹ Strabo III., iii. 6 (Casaubon, p. 154).

one grey Romano-British vessel. The last came from the top soil and seems to be a relic of some Roman picnic.

If there had been time, a widening of this cutting might have proved the existence of another hut here, whether or not the small pit represented a large post-hole comparable to those on the north side of Cutting III. The cutting was, however, carried northwards across the bank and ditch (Section A), revealing a flat-bottom for the latter, $3\frac{1}{2}$ ft. wide, and filled to a depth of 3 ft. with silt. In this silt were found 6 coarse gritty shards, one of which was at the bottom, and one Romano-British shard in the top-soil. The bank consisted of 15 ins. of rubble piled on the chalk. No post-holes were found under it. South of the bank the surface of the solid chalk fell away towards Pit IV.

OTHER CUTTINGS (Fig. 1).

Cutting I. This was made to investigate a visible hollow in the grass. The chalk was reached 1 ft. below the turf and $2\frac{1}{2}$ ft. below the average surrounding ground level (turf). The objects found were: 11 shards of coarse gritty pottery; 1 shard of Romano-British pottery; 1 quartzite hammer-stone; 1 small quern-fragment; 4 "pot-boilers"; 5 fragmentary animal bones; 1 small beach pebble of the sling-stone variety familiar in Iron Age forts.

Cutting II. This also was made to investigate a visible hollow in the grass. Again the chalk was reached 1 ft. below the turf, and $2\frac{1}{2}$ ft. below the average surrounding ground level (turf). The objects found were: 8 shards of coarse gritty pottery, including one with finger-tip decoration on top of a flat rim (Fig. 17); 1 shard of Romano-British ware; 13 cockle shells (*Cardium edule*, Linn.); 3 "pot-boilers"; a few fragmentary animal bones; 2 flint sling-stones.

Cutting VI. This was made to investigate a large saucer-shaped hollow in the south-east corner of the compound. The chalk was, as usual, reached 1 ft. below the turf, and 4 ft. below the average surrounding

ground level (turf). The objects found were : 3 small gritty shards ; 16 Romano-British shards, mostly from one vessel, and including four pieces of its rim ; one flint scraper, patinated white ; 8 "pot-boilers" ; a few fragmentary animal bones.

In the case of Cuttings I., II. and VI. no conclusions were drawn as to the purpose or origin of the hollows, but it seems likely that they formed an integral part of the late Bronze Age settlement, and that the Romano-British shards were later intrusions.

Cutting VII. This was made into a very similar saucer-shaped hollow. The bottom was reached at 4 ft. below the average surrounding turf level. In this case the lowest few inches of filling consisted of chalk sludge, probably deposited by water, and suggesting that this hollow may have been a catchment pond. Its position athwart the line of the southern palisade of the compound is compatible with this view, for it is not uncommon for a modern farm pond to be crossed by a fence so that it may be accessible to animals both inside and outside an enclosure. Two small gritty shards and 2 "pot-boilers" were found.

Cutting IX. This was a trial hole made into the westernmost bay on the north side of the compound. Neither relics nor post-holes were found, but a wider exploration is needed to determine whether a hut formerly stood there.

THE PALISADE.

It has already been noted that in Cutting VIII. part of the line of the palisade delimiting the southern side of the compound was revealed. A small cutting (XVI.) in the south-east corner of the compound disclosed two more holes of this series, again found in the line of the slight bank visible on the surface. The westward continuation of the palisade, west of the pond (VII.) is marked by so slight a bank that only the most practised eye can see it ; nevertheless the seeing eye was vindicated by Cutting XV., which revealed three more holes of this series.

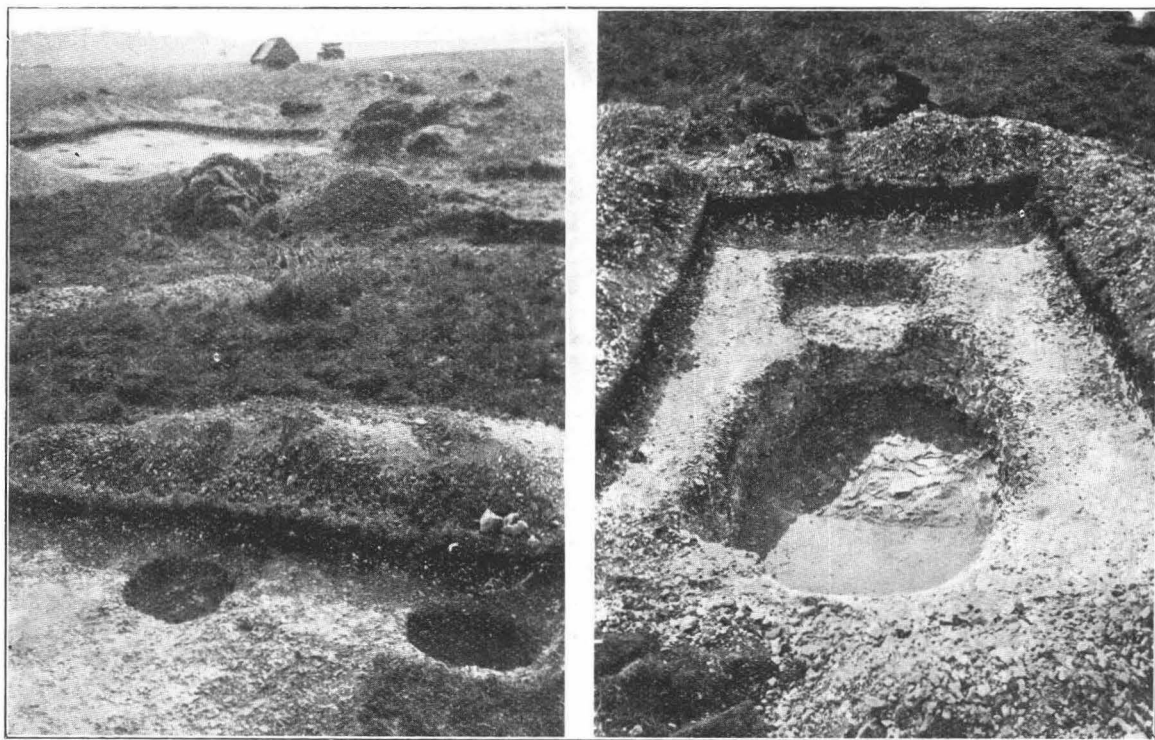


PLATE IV. *Left*: POST-HOLES OF EAST POSTERN GATE IN FOREGROUND; CUTTING VIII BEYOND.
Right: NEOLITHIC PIT-DWELLING (Pit X and Xa).

At the east end of the compound a small gap in the bank suggested a postern gate. Cutting XI. at this point confirmed this suggestion by disclosing two larger holes suitable for gate-post-holes (Plate IV.). Of these the northern hole measured $2\frac{1}{2}$ ft. by $1\frac{1}{2}$ ft. and 15 ins. deep in the chalk, and the southern $2\frac{1}{2}$ ft. across and 11 ins. deep in the chalk. An attempt was made to trace the palisade post-holes up to this gate, but only two rather doubtful depressions were found south of the gate. Three gritty shards and one roughly worked flake, patinated white, were found in this cutting.

Cuttings XVII. and XIX. were made in an attempt to discover the palisade on the western and south-western sides of the compound, but these were not successful. Wider exploration will be needed on another occasion. In Cutting XX. we hoped to find the post-holes of the main gate of the compound—this seeming to be the most likely position for them—but we were again disappointed.

It seems evident that the palisade was not intended as a defence against enemies, but was a mere fence to enclose or exclude domestic animals, and to protect from wolves. In fact, it may have served much the same purpose as the mud and thatch wall that surrounds many a Wessex farmyard to-day.

There was no time to examine the oval enclosure that lies north of the compound, but it was noted that an apparent gap in its south side lies opposite a gap in the road-bank near the main entrance of the compound, as if the two were connected. In the absence of excavation we might, perhaps, hazard the guess that this enclosure may have served as a sheep-fold.

NEOLITHIC DWELLING-PIT—PIT X. (Plate IV. and Fig. 5).

Mention has already been made of a number of small hollow-sounding depressions scattered over the ground immediately south of the compound. The first of these to be examined proved to be an oval pit (Pit X.),

8½ ft. long by 6 ft. wide by 2 ft. deep below the chalk (3 ft. below the turf), with a second shallower pit

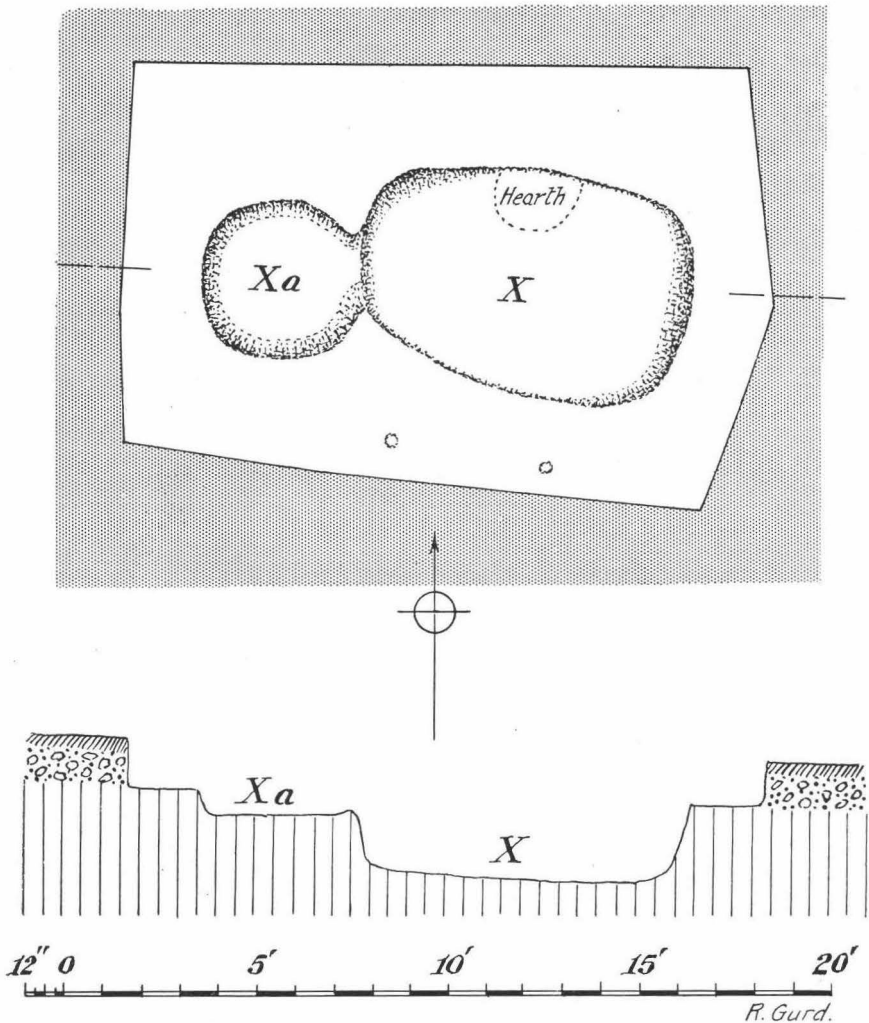


FIG. 5. PITS X AND Xa.

contiguous with it on the west (Pit Xa.), measuring 4 ft. across each way and 9 inches deep below the chalk (nearly 2 ft. below the turf). The walls of

Pit X. were almost vertical and the floor nearly flat. The latter was covered with black soil and ashes from a hearth which was situated against the middle of the north wall. This hearth contained, besides charcoal, a considerable quantity of soot which must have fallen from some soot-collecting surface, such as that provided by a flue made of wood or leather. All the objects found in this pit came from the floor and not from the filling above it. Most of them had been more or less damaged by fire. The floor of *Xa* was likewise

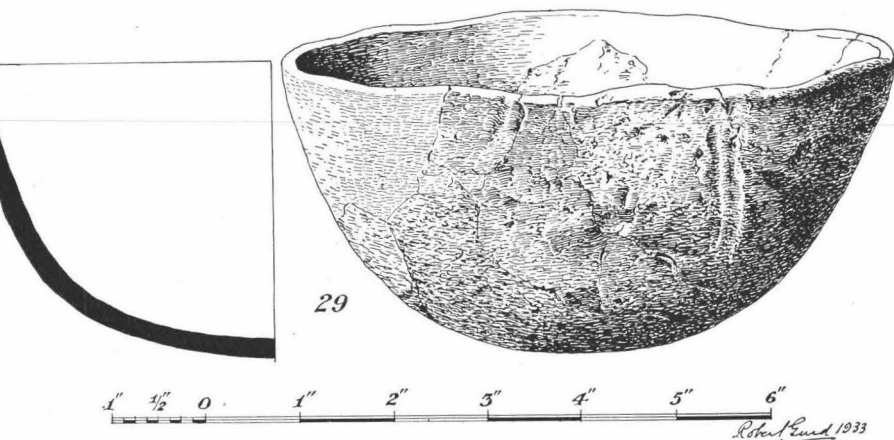


FIG. 29. RESTORED NEOLITHIC BOWL FROM PIT X.

covered with black soil and ashes, and the objects found there have also been to some extent burnt. The surface of the solid chalk was cleared back from the edge of the pits for $2\frac{1}{2}$ to 3 ft. in order to determine whether or not any post-holes existed for roof-timbers, but, with the exception of two small and rather doubtful cavities on the south side, none such were found. The pit had evidently been filled in when deserted, and had not been left to silt naturally.

The following objects were found in Pit X. :

Pottery.—A quantity of shards of neolithic pottery of Windmill Hill type. From these it has been possible to piece together the greater part of a small hemispherical, round-bottomed bowl, without ornament, lugs or carination (Fig. 29).

Flint Implements.—The greater part of a flint celt of Cissbury type, broken by heat, was found among the ashes of the hearth (Fig. 48). There were also three scrapers and two knife-flakes. The quality of the flint resembles that which was mined for in the Harrow Hill flint-mines, just over half a mile away. The celt and one scraper, which had been lying in ashes, were almost entirely unpatinated; the remainder were either mottled blue or pale grey, depending, apparently, on the relative proportions of ash and chalk in which they were lying. A few flakes were also found.

Miscellaneous.—A small quantity of animal bones, nearly all more or less charred by fire; part of a fine-grained sandstone rubber, showing signs of rubbing and hammering on its edges and faces; a small piece of a grain-rubber of lower greensand, including a part of the grinding surface; 2 small pieces of ferruginous sandstone¹⁰; 4 lumps of half-baked clay covered with impressions of grass, etc., one beach-worn "top-shell" (*Calliostoma zizyphinus*, Linn.).¹¹

The following objects were found in Pit Xa :

Pottery.—Fourteen shards of neolithic pottery, similar to those found in Pit X.

Flint Implements.—Part of a ground and polished flint celt, fractured by heat, was found lying in the ashes, and almost unpatinated (Fig. 49). Before being burnt it had been broken and re-chipped. There were also one elongated scraper and one knife-flake with trimmed edge, besides certain other flakes that show more or less dubious signs of use as knives. Observations on patination are the same as in the case of Pit X.

Miscellaneous.—A few animal bones, mostly unburnt; 4 small pieces of ferruginous sandstone.

The discovery of the neolithic pit (X.) led to hopes of further similar finds among the scattered pits in this area, but, though several were examined, all were found to be shallow depressions devoid of relics. Some 850 ft. south of the compound traces of three rather larger pits were noted on the surface—Pits XII., XIII. and XIV. These were opened with the following results.

PIT XII.

This proved to be a vague saucer-shaped hollow, about 10 ft. in diameter. The only finds consisted of 7 pieces of quern, 4 pieces of coarse sandstone, and

¹⁰ Dr. Bernard Smith says this "closely resembles 'Carstone,' which occurs in the Lower Greensand at Midhurst."

¹¹ Kindly identified by Mr. A. S. Kennard, A.L.S., F.G.S.

17 shards of pottery, of which 12 resembled the late Bronze Age ware of the compound, and 5 have smoother and softer paste.

PIT XIII.

This pit resembled Pit XII. in size and shape. The finds were also similar, including 3 large pieces of saddle-quern, 6 other pieces of sandstone, one sandstone rubber (?), some flint flakes patinated white, one piece of daub without wattle-impressions, very little charcoal, and 29 shards of late Bronze Age pottery. Among the latter was one piece bearing finger-tip ornament.

PIT XIV.

This pit was similar to the two preceding, but yielded nothing but two small and slender flint flakes, patinated white.

SAXON BARROWS (Fig. 6).

A round barrow (Barrow I.), situated 350 ft. south of the compound, was examined in case it might yield interments contemporary with the settlement. It presented the shape of a flat-topped bowl-barrow without ditch, 18 ft. across the top, and 35 ft. in diameter at the base, and rather less than 2 ft. high. A cutting 14 ft. by 7 ft. was made into the central part of the mound, which in due course revealed a bath-shaped grave cut in the solid chalk a little south of the centre. This grave was 8 ft. long and orientated east and west; it was 44 ins. wide at the west end and 33 inches wide at the east end, and the depth below the chalk varied from 18 ins. at the east end to 24 ins. at the west. The inhumation which formed the primary interment had been disturbed by previous investigators, and the bones thrown in pell-mell. The lower jaw was found, but no skull. The length of the grave makes it probable that the primary interment was that of a Saxon, whose stature, estimated from the length of the right femur, would have been about 5 ft. 8 ins.

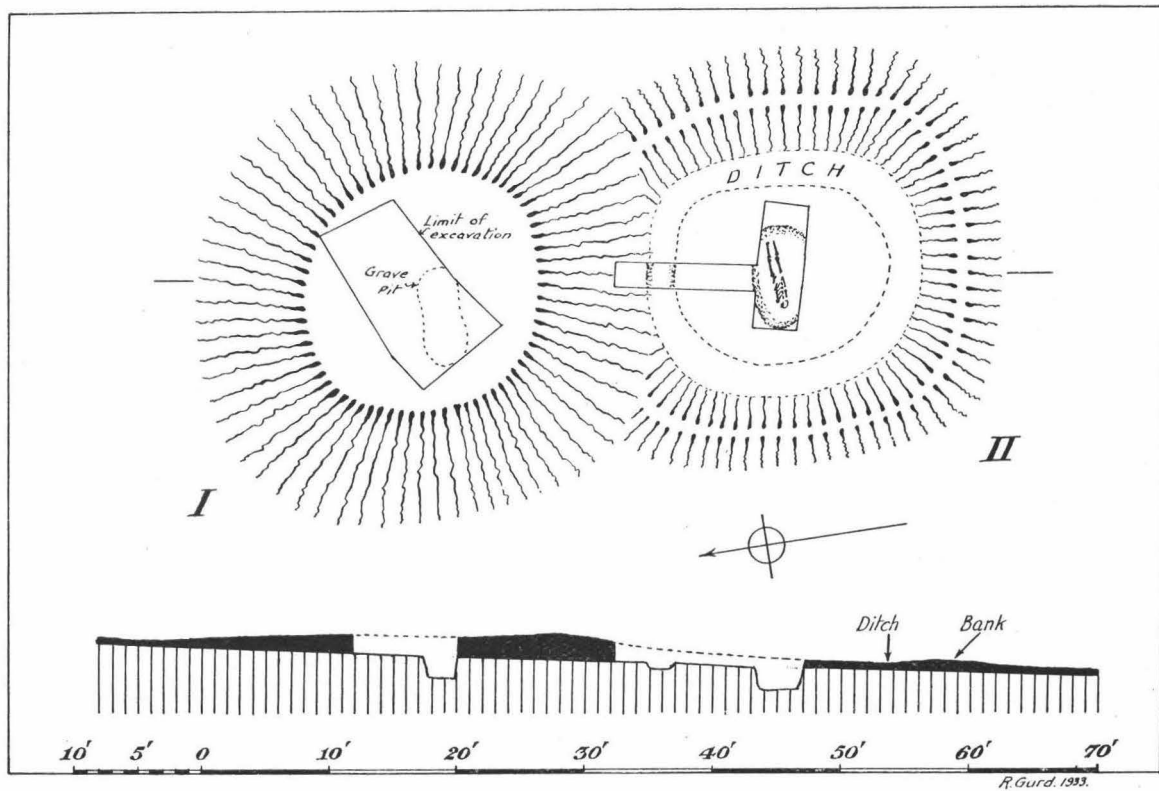


FIG. 6. SAXON BARROWS I AND II.

Barrow II. is contiguous with the preceding, on its south side, and consists of an exceedingly faint ring-ditch with an equally faint outer bank forming a very poor circle about 30 ft. in diameter. The credit of seeing this barrow at all, falls to Mr. Holleyman, who had some difficulty in making the writer see it. In the centre of this ring another bath-shaped grave was found, $7\frac{1}{2}$ ft. long, $3\frac{1}{2}$ ft. wide and $1\frac{1}{2}$ ft. deep below the chalk. This contained the skeleton of a young man, aged 20, extended on its back with head to the west. Parallel to the right arm, and between it and the ribs, lay a long iron knife or scramasax with the handle towards the head (Fig. 41). A small shapeless piece

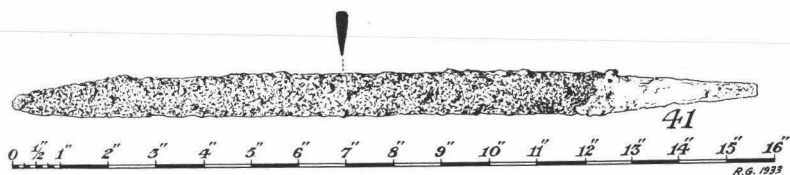


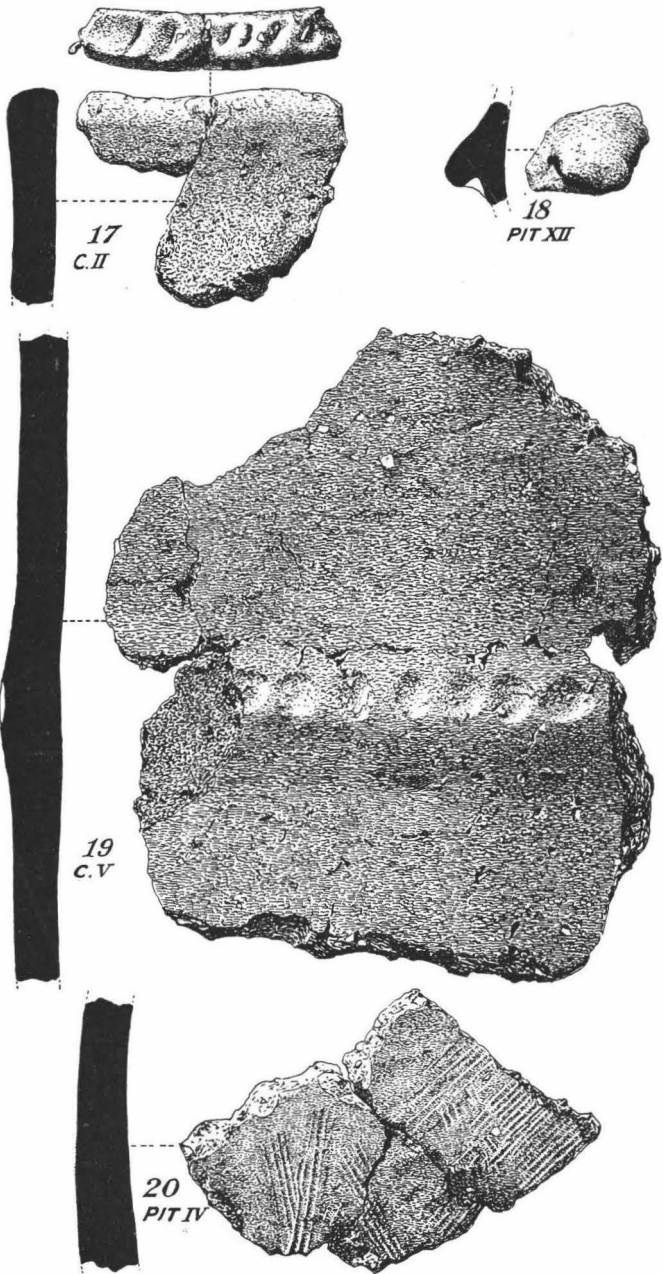
FIG. 41. SCRAMASAX FROM BARROW II.

of iron lay in contact with the right side of the skull. It was a striking fact that all the bones which lay near the iron had decayed almost to powder, their form being just visible as they lay, but incapable of being preserved. The other bones, such as those of the lower limbs, are well preserved as is usual with bones buried in chalk.

Measured *in situ* in the grave the stature of the skeleton appeared to be about 5 ft. 3 ins., but based on calculations from the length of the left femur and left humerus it works out at between 5 ft. 5 ins. and 5 ft. $6\frac{1}{2}$ ins.

The iron knife (Fig. 41) has been submitted to Mr. T. D. Kendrick, M.A., who very kindly reports that it is a scramasax of the seventh or eighth century A.D., indicating that the grave is not one of the earliest Saxon period.

Six other barrows have been noted on the Down. As far as appearance goes these may well have been of



FIGS. 17—20. LATE BRONZE AGE POTTERY (provenance indicated).

the same period as the two that were opened, and some of them appear to be later than the lynchets. Barrow V. (see plan, Plate I.) is peculiar in being situated eccentrically on a rectangular platform, about 65 by 55 ft. Barrows III., IV. and VI. are very low mounds surrounded by inconspicuous ring-ditches of small diameter.

THE POTTERY (Figs. 7-36a).

The pottery found in the excavation falls into four groups: (1) late Bronze Age; (2) doubtful, but probably late Bronze Age or Hallstatt; (3) neolithic; and (4) Romano-British. The last of these is intrusive. With regard to the first two groups I have to acknowledge very gratefully the advice of Mr. Christopher Hawkes, F.S.A.

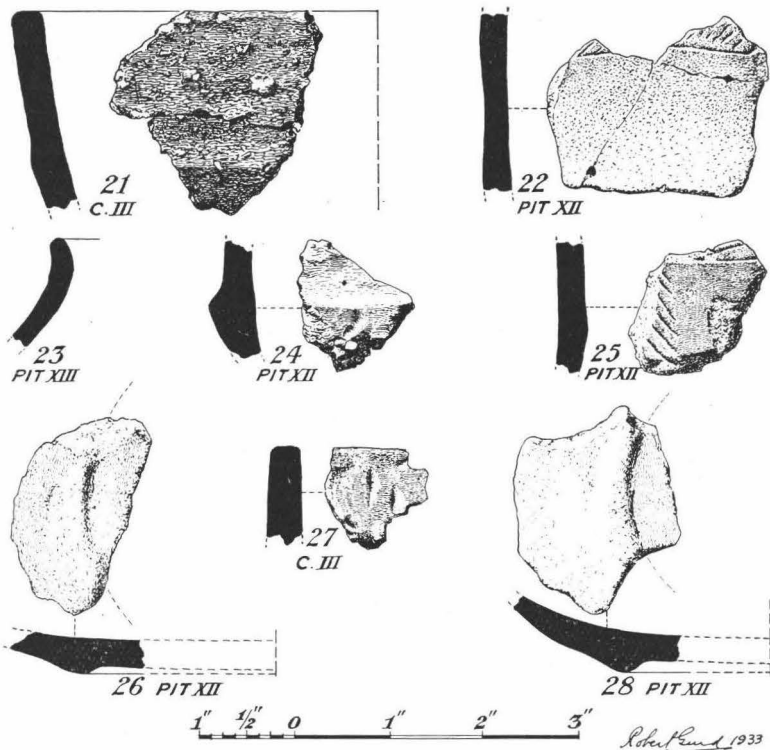
(1) The late Bronze Age pottery (Figs. 7-20) consists mostly of fragments of bucket or barrel urns of Deverel-Rimbury type, of the usual badly-baked buff or reddish ware, full of coarse flint grit, and ornamented in many cases with rows of finger-tip decoration either on a raised band or shoulder (Figs. 7, 9, 16) or on the body of the vessel (Fig. 10), or in one case on the flattened lip of the rim (Fig. 17). One piece bears oblique slashes on a raised band (Fig. 13), and another is covered with comb markings intersecting in various directions, which is unusual (Fig. 20). Some vessels have the usual shoulder, neck and flattened rim (Figs. 8, 9), while others have straight sides rising to a flattened lip (Figs. 10, 17). Two shards bear traces of a peculiar type of base which consists of a circular sunken area in an otherwise round bottom (Fig. 11), and which resembles two bases in group (2) (see below). Another shard bears a small lug (Fig. 18). With only two exceptions the pre-Roman pottery from the compound belongs to this late Bronze Age group.

(2) The doubtful group (Figs. 21-28) comprises two shards from the compound, five from Pit XII., and one from Pit XIII.

The two shards from the compound—both from Cutting III.—are both rim shards of grey, smoothish paste, but full of coarse grit, and rather thinner than the bucket urns (Figs. 21, 27). They have flattened rims without shoulders, and one has finger-nail impressions just below the lip. These might equally well be late Bronze Age or Hallstatt, as far as form and paste go.

Of the shards from Pit XII. two (Figs. 26, 28) show bases similar to the late Bronze Age example already mentioned, but the paste is in each case finer and smoother and the ware thinner and containing only fine grit. There is also round the margin of the sunken area a slight but definite foot-ring. The vessels were apparently globular, and the bases resemble that of the covered

Hallstatt vessel from Park Brow (*Archæologia*, LXXVI., p. 18, Fig. 7). Another shard of similar paste bears a row of parallel oblique incised lines bounded by a single horizontal line (Fig. 22). Yet another shard of harder, rougher and rather more gritty ware bears a similar incised ornament (Fig. 25). Another shard is of the same ware as the two from Cutting III. described above (Figs. 21, 27), but possesses the late Bronze Age raised band with traces of finger-tip ornament on it (Fig. 24).



FIGS. 21—28. POTTERY OF DOUBTFUL GROUP.

One shard from Pit XIII. is of fine hard red ware with some fine to medium grit showing in its broken edges, and has a slightly everted lip (Fig. 23).

(3) The neolithic pottery (Figs. 29–36a) has been examined by Mr. Stuart Piggott, who most kindly reports on it as follows:

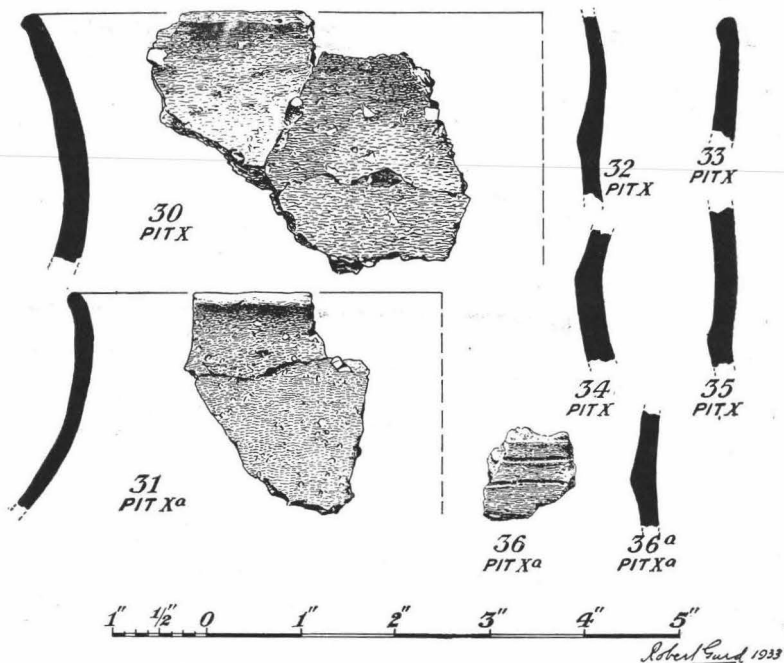
The shards represent perhaps nine pots in all, of which only one can be reconstructed.

Ware.—The majority of the shards (including Nos. 29, 30, 31, 33, 34, 35) are of rather coarse but thin ware with large flint backing.

Both surfaces are well smoothed and tooled, but are irregular owing to the lumps of grit. This ware is identical with the type *d* ware from Whitehawk described in my report on the 1933 pottery from this site (*Antiq. Journ.*, XIV., Apr. 1934), p. 114).

Nos. 32 and 36a are of compact ware, grey-brown to red-buff, with backing of small quartz grains.

A number of shards probably from a bowl of Form G are of good compact black ware with fine-grained flint and quartz backing, with smooth surfaces. This is very similar to the type *b* ware from Whitehawk.



FIGS. 30—36a. NEOLITHIC POTTERY.

Two small shards of thin grey ware have a pitted surface resulting from the decomposition of the backing.

The decorated shard (36) is of entirely different ware from any of the other shards from the site; poor and crumbly, black interior and buff exterior, with no backing.

Forms.—No. 29 is a restored bowl of which two-thirds are preserved. It is a simple open shape (Form A), with a somewhat squat and flattened lower part. Cf. pots from Abingdon, *Ant. Journ.*, VII., 454, Fig. 8a; *ib.*, VIII., Pl. LXXIV., Fig. 1, b, c.

Nos. 30, 33, 34, 35, and about 25 other unillustrated body shards appear to belong to one vessel, as they are of identical consistency. The bowl would be of Form G or GH, with slightly everted neck and rim and an inconspicuous shoulder.

No. 31 represents the upper part of a bowl of Form J.

The remaining shards include four simple rims, as No. 29, and the fragments of a bowl probably of Form G mentioned above under "ware."

Decoration.—There is only one decorated shard, No. 36, with parallel incised lines. [This may be intrusive.—E. C. C.]

Conclusions.—The pottery appears to form a homogeneous group of neolithic A ("Windmill Hill") ware. So far as can be seen from so small a group, it is comparable with the Whitehawk pottery, and may therefore be placed in the A2 phase rather than in the A1.

THE FLINT IMPLEMENTS.

Dr. Grahame Clark, M.A., Ph.D., F.S.A., has very kindly examined the flint implements from Pits X. and Xa, and reports as follows.

Raw Material.—From the character of the cortex and the size of many of the specimens it is clear that the raw material must have been in the form of large nodules, and not of either weathered or pebbled flint. It is possible that this flint was obtained from outcrops, but the more likely explanation is that it came from the Harrow Hill flint mines in the immediate neighbourhood.

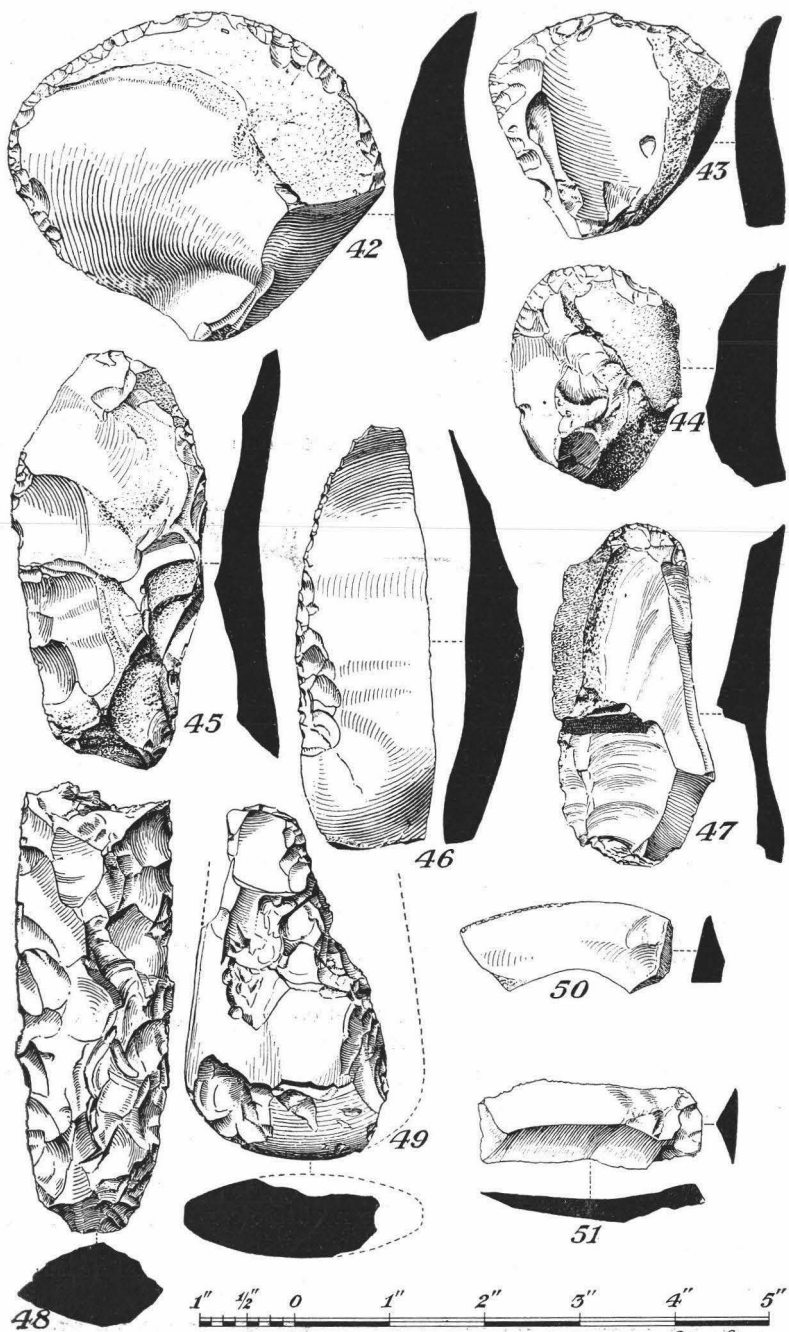
Preservation.—Of the ten specimens five are patinated to a considerable extent (Figs. 42, 45–47, 50), and five show signs of having been in the fire (Figs. 43, 44, 48, 49, 51). It is interesting to note that among the five calcined specimens are the four showing little or no signs of patination (Figs. 43, 48, 49, 51); in the case of the fifth specimen (Fig. 44) it is not possible to determine whether its white colour is due to extreme calcination or to patination. The interesting point arises whether or not the calcination of unpatinated flint arrests the process of patination. The relationship which appears to exist between calcination and relative freedom from patination in the series submitted from New Barn Down may of course be fortuitous, as the numbers involved are too small to counteract the factor of chance.¹²

Typology.

(1) *Axes.*

Fig. 49. The remains of a polished flint celt with flattened sides of the type found in the 1933 excavations at Whitehawk Camp,

¹² As noted above in describing Pit X., only those flints that were lying in ashes escaped patination.—E. C. C.



FIGS. 42—51. FLINT IMPLEMENTS FROM PITS X AND Xa.

Brighton. The axe seems to have been fractured about the middle, and then the stump appears to have been chipped down on one side to form a handle. Further damage has been done by fire.

Fig. 48. The greater part of a chipped flint celt, of which the business end is missing; the damage appears to have been done by fire. The implement, as far as one can judge in its present state, does not differ markedly from that obtained from the Harrow Hill flint-mine excavated by the Worthing Archæological Society in 1924-5.¹³

(2) *Scrapers.*

Fig. 42. A remarkably large scraper of horseshoe form (4 ins. by $3\frac{3}{8}$ ins.) showing unweathered cortex.

Fig. 43. A scraper of similar form, also with unweathered cortex.

Fig. 44. A scraper of rather more oval form with similar cortex.

Fig. 47. A scraper on the end of a long flake with similar cortex.

(3) *Knives.*

Fig. 45. A flake struck from a prepared core, as in the case of many flakes from the flint-mine chipping floors. One edge has been blunted in parts, while the other is sharp. Possibly used as a side-scraper, but more probably as a knife.

Fig. 46. A long flake of which one edge has been blunted along the greater part of its length by secondary flaking, the other edge being sharp. The blunting has been achieved from the upper face of the flake so that the secondary flake scars are to be seen on the bulbar flake surface.

(4) *Miscellaneous.*

Fig. 50. An oblong flake, scalene triangular in section. The flake edge opposite the almost vertical back has been trimmed for half its length from the upper face and for the other half from the bulbar face of the primary flake. This edge and especially the extremity opposite the butt end of the flake is smooth with use. The smoothness has presumably resulted from some such action as sawing. The concave blunt back provides a very suitable place for the forefinger.

Fig. 51. One edge shows signs of use. There is no secondary working.

Conclusion.—As a whole the flints show an absence of either techniques or forms peculiar to the Early Metal Age, and differ in no way from specimens from the neolithic camps. The nature of the raw material makes it probable that they are contemporary with the neighbouring flint-mines. Certain typological features (Figs. 48 and 45) point in the same direction.

¹³ *S.A.C.*, LXVII., p. 131, Fig. 13.

THE QUERNS.

The querns found in the excavations are all of the saddle variety, and because they are closely dated to the late Bronze Age are specially worthy of careful record.

Three complete lower stones have been preserved, and two others of which less than half is missing. Of upper stones only two fragments survive.

The lower stones are in each case relatively flat elongated pieces of lower greensand, the upper surface of which has been pecked into the required shape. This surface is slightly concave longitudinally, and either flat or very slightly convex transversely.

The upper stones are too incomplete to judge their original form, but as a rule in the Iron Age they were bolster-shaped, the lower surface being pecked to the required shape. This surface is flat longitudinally and slightly convex transversely, the upper stone lying *across* the lower so that the transverse convexity of the upper corresponded with the longitudinal concavity of the lower. In use the upper stone was pushed backwards and forwards the length of the lower stone.

No. 1. Lower stone from hut, Cutting VIII. Length, 10 inches; breadth, 9 inches; greatest thickness, 4 inches. Pieced together from 17 fragments. Not much worn by use. This is the largest lower stone found, and is peculiarly shaped, in that when lying on a flat surface it is tilted so that one end of the grinding surface is $3\frac{1}{2}$ ins higher than the other. Judging from ancient Egyptian models and the practice of modern negroes, the lower stone of a saddle-quern was normally so tilted that the meal might run off the end furthest from the operator.

No. 2. Lower stone from hut, Cutting VIII. Length, 10 ins.; breadth, 6 ins.; thickness, 2 ins. Pieced together from nine fragments. Not much worn by use.

No. 3. Part of lower stone from hut, Cutting VIII. Length, about $9\frac{1}{2}$ ins.; breadth, originally about 6 ins. (?); thickness, $1\frac{1}{2}$ ins. Much worn by use. Evidently a worn-out specimen, broken and thrown away.

No. 4. Part of lower stone from hut, Cutting VIII. Length, $9\frac{1}{2}$ ins.; breadth, originally about 6 ins. (?); thickness, $2\frac{1}{4}$ ins. A large and a small fragment fitted together. Much worn by use and therefore broken and thrown away.

No. 5. Lower stone from hut, Cutting III., post-hole 6. Length, 9 ins.; breadth, 6 ins.; thickness, $1\frac{3}{4}$ ins. Not much worn by use.

THE CHARCOAL.

The few specimens of charcoal found have been submitted to Mr. J. Cecil Maby, B.Sc., for identification. His report may be summarised as follows:

Late Bronze Age (Cuttings IV. and V.).—Common oak (*Quercus sp.*) young and medium-aged wood.

Neolithic (Pit. X.).—Hazel (*Corylus sp.*), mature wood of good growth; Hawthorn (*Crataegus sp.*), medium age and mature; Ash (*Fraxinus sp.*), mature, but rings rather narrow.

CONCLUSIONS.

(a) *The Neolithic Pit-dwelling.*—Pit-dwellings of the neolithic period are extremely rare in Britain. The writer has on a previous occasion given reasons for believing that the second neolithic ditch at the Trundle may in reality consist of a string of elongated pit-dwellings, each considerably larger than the present example.¹⁴ The existence of the latter at a distance of a little over half a mile from the Harrow Hill flint-mines is very suggestive of contemporaneity with them, though scarcely proof of it. But the presence in the dwelling of a celt so characteristic of the type manufactured on Harrow Hill strongly suggests that the dwelling may have belonged to one of the people concerned in the mines. The presence of Windmill Hill pottery, and the absence of Peterborough and Early Bronze Age wares is therefore of special interest in view of the question of the precise dating of the mines—whether, for instance, they should be attributed to the full neolithic (Windmill Hill) or to the Early Bronze Age (beakers, etc.), or to that other neolithic culture (Peterborough),¹⁵ which, though probably contemporary with Windmill Hill culture in Eastern England, succeeded it in certain southern English sites. The Harrow Hill and Cissbury mines have much in common; Windmill Hill pottery was found by Pitt Rivers at Cissbury, therefore there would be

¹⁴ *S.A.C.*, LXXII., pp. 106–111.

¹⁵ See Clark and Piggott, "The Age of the British Flint Mines," in *Antiquity*, VII., pp. 166–183.

nothing difficult in accepting our pit-dwelling with its Windmill Hill pottery as contemporary with the neighbouring Harrow Hill mines. It is only to be regretted that more such dwellings were not found.

(b) *The Late Bronze Age Farm.* The importance of this site lies in its being a unique and practically complete example of a late Bronze Age agricultural settlement, unobscured by any later prehistoric occupation. It provides the most definite proof yet obtained that the so-called Celtic agricultural system had been introduced as early as the late Bronze Age—a fact which has hitherto been inferred only from rare examples of lynchets overlaid by earthworks of the late Bronze Age or Hallstatt period in Wessex, such as “Wuduburh,”¹⁶ the Angle Ditch and South Lodge Camp.¹⁷

A late Bronze Age hut—one of several—was excavated by the Society of Antiquaries on Park Brow, near Cissbury, a few years ago, but it was not possible definitely to associate any of the numerous lynchets on the hill with these huts because the same ground was occupied and cultivated throughout the Early Iron Age and Roman period.¹⁸

That the lynchets on New Barn Down are contemporary with the settlement there can be no doubt, for the lynchets border the road and conform to it, and the road leads directly into the compound and nowhere else. Moreover, with the exception of a few stray shards of ubiquitous Romano-British pottery, there has been no trace of occupation during the Iron Age or later.

The arrangement of huts round the circumference of a compound is a feature not infrequently met with among the hut-circle settlements on the western moorlands of Britain, some of which are attributed to the Bronze

¹⁶ Crawford and Keiller, *Wessex from the Air*, pp. 131–7 (article by Dr R. C. C. Clay).

¹⁷ Pitt Rivers, *Excavations*, IV., pp. 58 ff. See H. S. Toms, “Bronze Age, or earlier, Lynchets,” *Proc. Dorset Field-Club*, XLVI., pp. 89–100. p. 106.

¹⁸ *Archæologia*, LXXVI., pp. 1–6.

Age. A characteristic example occurs on Bodmin Moor, Cornwall, on the western slope of Rough Tor,¹⁹ though this may well be earlier in date; similar groups in Wales are attributed to post-Roman times.²⁰ The arrangement is an interesting one from the point of view of the evolution of the agricultural community. Does the compound, for instance, represent the stockaded village of a community, or is it, as seems more probable, the farmyard or garth of an individual owner?

It is hoped that the objects found in the excavation will, by the kindness of H.G. the Duke of Norfolk, be preserved in the Worthing Museum.

¹⁹ See plan, *Antiquity*, I., p. 282, the northernmost group in Fig. 24.

²⁰ Information of Mr. Stuart Piggott.